



**State of New Mexico
General Services Department
Purchasing Division**

Price Agreement Amendment

Awarded Vendor:
3 Vendors

Number: 10-80500-20-16874

Amendment No.: Four

Term: April 28, 2021 - April 27, 2025

Ship To:
**New Mexico Department of Transportation
Various Locations in District 6**

Procurement Specialist: Mikayla Trujillo

Telephone No.: (505) 469-1092

Invoice:
**New Mexico Department of Transportation
PO Box 2160
Milan, NM 87021**

Email: Mikayla.Trujillo@gsd.nm.gov

**For questions regarding this contract please contact:
Morris Hurtado (505) 490-7201**

Title: Foamed Asphalt Stabilized Base D-6

This amendment is to be attached to the respective Price Agreement and become a part thereof.

In accordance with Price Agreement provisions, and by mutual agreement of all parties, this Price Agreement is extended from April 28, 2024 to April 27, 2025 at the same price, terms and conditions.

Except as modified by this amendment, the provisions of the Price Agreement shall remain in full force and effect.

Accepted for the State of New Mexico

Dorothy Mendonca

Date: 4/22/2024

Dorothy Mendonca
New Mexico State Purchasing Agent



**State of New Mexico
General Services Department
Purchasing Division**

Price Agreement Amendment

Awarded Vendor:
3 Vendors

Number: 10-80500-20-16874

Amendment No.: Three

Term: April 28, 2021 – April 27, 2024

Ship To:
New Mexico Department of Transportation
Various Locations in District 6

Procurement Specialist: Karen G. Acosta Gonzalez *KGA*

Telephone No.: (505) 372-9264

Email: Karen.Acosta-Gonzal@gsd.nm.gov

Invoice:
New Mexico Department of Transportation
PO Box 2160
Milan, NM 87021

For questions regarding this contract please contact:
Angela Martinez – (505) 570-7940

Title: Foamed Asphalt Stabilized Base D-6

This amendment is to be attached to the respective Price Agreement and become a part thereof.

In accordance with Price Agreement provisions, and by mutual agreement of all parties, this Price Agreement is extended from April 28, 2023 to April 27, 2024 at the same price, terms and conditions.

Except as modified by this amendment, the provisions of the Price Agreement shall remain in full force and effect.

Accepted for the State of New Mexico

Valerie Paulk

Date: *3/21/2023*

New Mexico State Purchasing Agent

X **This Agreement was signed on behalf of the State Purchasing Agent**



**State of New Mexico
General Services Department
Purchasing Division**

Price Agreement Amendment

Awarded Vendor:
3 Vendors

Number: 10-80500-20-16874

Amendment No.: Two

Term: April 28, 2021 – April 27, 2023

Ship To:
New Mexico Department of Transportation
Various Locations in District 6

Procurement Specialist: Karen G. Acosta Gonzalez *KGA*

Telephone No.: (505) 372-9264

Invoice:
New Mexico Department of Transportation
PO Box 2160
Milan, NM 87021

Email: Karen.Acosta-Gonzal@state.nm.us

For questions regarding this contract please contact:
Angela Martinez – (505) 570-7940

Title: **Foamed Asphalt Stabilized Base D-6**

This amendment is to be attached to the respective Price Agreement and become a part thereof.

In accordance with Price Agreement provisions, and by mutual agreement of all parties, this Price Agreement is extended from April 28, 2022 to April 27, 2023 at the same price, terms and conditions.

Except as modified by this amendment, the provisions of the Price Agreement shall remain in full force and effect.

Accepted for the State of New Mexico

Valerie Paulk

Date: 3/15/2022

Mark Hayden, New Mexico State Purchasing Agent

× **This Agreement was signed on behalf of the State Purchasing Agent**



State of New Mexico
General Services Department
Purchasing Division

Price Agreement Amendment

Awarded Vendor:
3 Vendors

Number: 10-80500-20-16874

Amendment No.: One

Term: April 28, 2021 through April 27, 2022

Ship To:
New Mexico Department of Transportation
Various Locations in District 6

Procurement Specialist: Susan Inman

SI

Telephone No.: (505) 795-5551

Email: susan.inman@state.nm.us

Invoice:
New Mexico Department of Transportation
P.O. Box 2160
Milan, NM 87021

For questions regarding this contract please
contact: Angela Martinez (505) 570-7940

Title: Foamed Asphalt Stabilized Base D-6

This amendment is to be attached to the respective Price Agreement and become a part thereof.

This amendment is issued to reflect the following effective immediately:

Correct Agreement Term date to April 28, 2021 through April 27, 2022.

Except as modified by this amendment, the provisions of the Price Agreement shall remain in full force and effect.

Accepted for the State of New Mexico

Valerie Paulk
Mark Hayden, New Mexico State Purchasing Agent

Date 5/3/2021

x This Agreement was signed on behalf of the State Purchasing Agent



State of New Mexico General Services Department

Price Agreement

Awarded Vendor:
3 Vendors, see page 6

Price Agreement Number: 10-80500-20-16874

Payment Terms: Net 30

F.O.B.: Destination

Delivery: See page 6

Ship To:
New Mexico Department of Transportation
Various Locations in District 6

Procurement Specialist: Susan Inman

Telephone No.: (505) 695-7551

Email: susan.inman@state.nm.us

Invoice:
New Mexico Department of Transportation
P.O. Box 2160
Milan, NM 87021

For questions regarding this agreement please contact:
Angela Martinez (505) 570-7940

Title: **Foamed Asphalt Stabilized Base D-6**

Term: **April 28, 2021 through April 29, 2022**

This Price Agreement is made subject to the "terms and conditions" as indicated on subsequent pages.

Accepted for the State of New Mexico

Valerie Paulk

Date 4/27/2021

New Mexico State Purchasing Agent

This Agreement was signed on behalf of the State Purchasing Agent

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Terms and Conditions
(Unless otherwise specified)

1. **General:** When the State Purchasing Agent or his/her designee issues a purchase document in response to the Vendor's bid, a binding contract is created.
2. **Variation in Quantity:** No variation in the quantity of any item called for by this order will be accepted unless such variation has been caused by conditions of loading, shipping, packing or allowances in manufacturing process and then only to the extent, if any, specified in this order.
3. **Assignment:**
 - a. Neither the order, nor any interest therein, nor any claim thereunder, shall be assigned or transferred by the Vendor, except as set forth in Subparagraph 3b or as expressly authorized in writing by the State Purchasing Agent or his/her designee. No such assignment or transfer shall relieve the Vendor from the obligations and liabilities under this order.
 - b. Vendor agrees that any and all claims for overcharge resulting from antitrust violations which are borne by the State as to goods, services, and materials purchased in connection with this bid are hereby assigned to the State.
4. **State Furnished Property:** State furnished property shall be returned to the State upon request in the same condition as received except for ordinary wear, tear and modifications ordered hereunder.
5. **Discounts:** Prompt payment discounts will not be considered in computing the low bid.
6. **Inspection:** Final inspection and acceptance will be made at the destination. Supplies rejected at the destination for nonconformance with specifications shall be removed at the Vendor's risk and expense, promptly after notice of rejection.
7. **Inspection of Plant:** The State Purchasing Agent or his/her designee may inspect, at any reasonable time, the part of the Contractor's, or any subcontractor's plant or place of business, which is related to the performance of this contract.
8. **Commercial Warranty:** The Vendor agrees that the supplies or services furnished under this order shall be covered by the most favorable commercial warranties the Vendor gives for such to any customer for such supplies or services. The rights and remedies provided herein shall extend to the State and are in addition to and do not limit any rights afforded to the State by any other clause of this order. **Vendor agrees not to disclaim warranties of fitness for a particular purpose of merchantability.**
9. **Taxes:** The unit price shall exclude all state taxes.
10. **Packing, Shipping and Invoicing:**
 - a. The State's purchasing document number and the Vendor's name, user's name and location shall be shown on each packing and delivery ticket, package, bill of lading and other correspondence in connection with the shipments. The user's count will be accepted by the Vendor as final and conclusive on all shipments not accompanied by a packing ticket.
 - b. The Vendor's invoice shall be submitted duly certified and shall contain the following information: order number, description of supplies or services, quantities, unit price and extended totals. Separate invoices shall be rendered for each and every complete shipment.
 - c. Invoices must be submitted to the using agency and NOT the State Purchasing Agent.
11. **Default:** The State reserves the right to cancel all or any part of this order without cost to the State, if the Vendor fails to meet the provisions of this order and, except as otherwise provided herein, to hold the Vendor liable for any excess cost occasioned by the State due to the Vendor's default. The Vendor shall not be liable for any excess costs if failure to perform the order arises out of causes beyond the control and without the fault or negligence of the Vendor, such causes include but are not restricted to, acts of God or the public enemy, acts of the State or Federal Government, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, unusually severe weather and defaults of

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subcontractors due to any of the above, unless the State shall determine that the supplies or services to be furnished by the subcontractor were obtainable from other sources in sufficient time to permit the Vendor to meet the required delivery scheduled. The rights of the State provided in this paragraph shall not be exclusive and are in addition to any other rights now being provided by law or under this order.

12. Non-Collusion: In signing this bid the Vendor certifies he/she has not, either directly or indirectly, entered into action in restraint of free competitive bidding in connection with this offer submitted to the State Purchasing Agent or his/her designee.

13. Nondiscrimination: Vendor doing business with the State of New Mexico must be in compliance with the Federal Civil Rights Act of 1964 and Title VII of the Act (Rev. 1979) and the Americans with Disabilities Act of 1990 (Public Law 101-336).

14. The Procurement Code: Sections 13-1-28 through 13-1-199 NMSA 1978, imposes civil and criminal penalties for its violation. In addition the New Mexico criminal statutes impose felony penalties for bribes, gratuities and kickbacks.

15. Items: All bid items are to be NEW and of most current production, unless otherwise specified.

16. Payment for Purchases: Except as otherwise agreed to: late payment charges may be assessed against the user state agency in the amount and under the conditions set forth in Section 13-1-158 NMSA 1978.

17. Workers' Compensation: The Contractor agrees to comply with state laws and rules pertaining to Workers' Compensation benefits for its employees. If the Contractor fails to comply with Workers' Compensation Act and applicable rules when required to do so, this Agreement may be terminated by the contracting agency.

18. Submission of Bid: Bids must be submitted in a sealed envelope with the bid number and opening date clearly indicated on the bottom left hand side of the front of the envelope. Failure to label bid envelope will necessitate the premature opening of the bid in order to identify the bid number.

19. Contractor Personnel: Personnel proposed in the Contractor's written bid to the Procuring Agency are considered material to any work performed under this Price Agreement. Once a Purchase Order or contract has been executed, no changes of personnel will be made by the Contractor without prior written consent of the Procuring Agency. Replacement of any Contractor personnel, if approved, shall be with personnel of equal ability, experience, and qualifications. The Contractor will be responsible for any expenses incurred in familiarizing the replacement personnel to insure their being productive to the project immediately upon receiving assignments. Approval of replacement personnel shall not be unreasonably withheld. The Procuring Agency shall retain the right to request the removal of any of the Contractor's personnel at any time.

20. Subcontracting: The Contractor shall not subcontract any portion of the Price Agreement without the prior written approval of the Procuring Agency. No such subcontracting shall relieve the Contractor from its obligations and liabilities under this Price Agreement, nor shall any subcontracting obligate payment from the Agency.

21. Records and Audit: The Contractor shall maintain detailed time and expenditure records that indicate the date, time, nature, and cost of services rendered during this Price Agreement's term and effect, and retain them for a period of three (3) years from the date of final payment under this Price Agreement. The records shall be subject to inspection by the Agency, State Purchasing Division, Department of Finance and Administration, and for Information Technology contracts, State Chief Information Officer. The Agency shall have the right to audit billings, both before and after payment. Payment for services under this Price Agreement shall not foreclose the right of the Agency to recover excessive or illegal payments.

22. Subcontracts: The foregoing requirements for Contractor Personnel, Subcontracting, and Audit shall be inserted into all subcontracts from the prime contractor to the subcontractor.

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New Mexico Employees Health Coverage

A. If Contractor has, or grows to, six (6) or more employees who work, or who are expected to work, an average of at least 20 hours per week over a six (6) month period during the term of the contract, Contractor certifies, by signing this agreement, to have in place, and agrees to maintain for the term of the contract, health insurance for its New Mexico Employees and offer that health insurance to its New Mexico Employees if the expected annual value in the aggregate of any and all contracts between Contractor and the State exceeds \$250,000 dollars.

B. Contractor agrees to maintain a record of the number of its New Mexico Employees who have (a) accepted health insurance; (b) declined health insurance due to other health insurance coverage already in place; or (c) declined health insurance for other reasons. These records are subject to review and audit by a representative of the state.

C. Contractor agrees to advise all of its New Mexico Employees of the availability of State publicly financed health care coverage programs by providing each of its New Mexico Employees with, as a minimum, the following web site link to additional information: <https://bewellnm.com>.

D. For purposes of this Paragraph, the following terms have the following meanings:

- (1) "New Mexico Employee" means any resident of the State of New Mexico employed by Contractor who performs the majority of the employee's work for Contractor within the State of New Mexico, regardless of the location of Contractor's office or offices; and
- (2) "offer" means to make available, without unreasonable restriction, enrollment in one or more health coverage plans and to actively seek and encourage participation in order to achieve the goals of Executive Order 2007-049. This could include State publicly financed public health coverage programs such as *Insure New Mexico!*

Department Price Agreement

Article I – Statement of Work

Under the terms and conditions of this Price Agreement, the using agency may issue orders for items and/or services described herein.

The terms and conditions of this Price Agreement shall form a part of each order issued hereunder.

The items and/or services to be ordered shall be listed under Article IX – Price Schedule. All orders issued hereunder will bear both an order number and this Price Agreement number. It is understood that no guarantee or warranty is made or implied by either the New Mexico State Purchasing Agent or the user that any order for any definite quantity will be issued under this Price Agreement. The Contractor is required to accept the order and furnish the items and/or services in accordance with the articles contained hereunder for the quantity of each order issued.

Article II –Term

The term of this Price Agreement for issuance of orders shall be as indicated in specifications.

Article III –Specifications

Items and/or services furnished hereunder shall conform to the requirements of specifications and/or drawings applicable to items listed under Article IX - Price Schedule. Orders issued against this schedule will show the applicable price agreement item(s), number(s), and price(s); however they may not describe the item(s) fully.

Article IV -- Shipping and Billing Instructions

Contractor shall ship in accordance with the instructions of this form. Shipment shall be made only against specific orders which the user may place with the contractor during the term indicated in Article II – Term. The Contractor shall enclose a packing list with each shipment listing the order number, price agreement number and the commercial parts number (if any) for each item. Delivery shall be made as indicated on page 1. If vendor is unable to meet stated delivery the State Purchasing Agent must be notified.

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Article V - Termination

The Agency may terminate this Agreement for convenience or cause. The Contractor may only terminate this Agreement based upon the Agency's uncured, material breach of this Agreement. Contractor shall give Agency written notice of termination at least thirty (30) days prior to the intended date of termination, which notice shall (i) identify all the Agency's material breaches of this Agreement upon which the termination is based and (ii) state what the Agency must do to cure such material breaches. Contractor's notice of termination shall only be effective (i) if the Agency does not cure all material breaches within the thirty (30) day notice period or (ii) in the case of material breaches that cannot be cured within thirty (30) days, the Agency does not, within the thirty (30) day notice period, notify the Contractor of its intent to cure and begin with due diligence to cure the material breach. Termination of this Contract, however, shall not affect any outstanding orders. This provision is not exclusive and shall not waive other rights and remedies afforded either party in the event of breach of contract or default. In such instances the contract may be cancelled effective immediately.

Article VI – Amendment

This Price Agreement may be amended by mutual agreement of the New Mexico State Purchasing Agent or his/her designee and the Contractor upon written notice by either party to the other. An amendment to this Price Agreement shall not affect any outstanding orders issued prior to the effective date of the amendment as mutually agreed upon, and as published by the New Mexico State Purchasing Agent or his/her designee. Amendments affecting price adjustments and/or the extension of a price agreement expiration date are not allowed unless specifically provided for in the bid and price agreement specifications.

Article VII – Issuance or Orders

Only written signed orders are valid under this Price Agreement.

Article VIII – Packing (if applicable)

Packing shall be in conformance with standard commercial practices.

Article IX – Price Schedule

Prices as listed in the price schedule hereto attached are firm.

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Awarded Vendors:

(AA) 0000047738

Albuquerque Asphalt, Inc.
PO Box 66450
Albuquerque, NM 87193
(505) 831-7311
dan@alb-asphalt.com

Payment Terms: Net 30
Delivery: As Requested

(AB) 0000079240

Fisher Sand & Gravel- NM Inc.
PO Box 2340
Placitas, NM 87043
(505) 867-2600
mmoehn@fisherind.com

Payment Terms: Net 30
Delivery: Destination

(AC) 0000047577

Mountain States Constructors, Inc.
3601 Pan American Freeway NM, Suite #111
Albuquerque, NM 87107
(505) 292-0108
rob@smconstructors.com

Payment Terms: Net 30
Delivery: As Requested

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Specifications

The purpose of this Invitation to Bid (ITB) is to establish a Price Agreement for Foamed Asphalt Stabilized Base Pavement, Cold Central Plant Recycling or Full Depth Reclamation for the New Mexico Department of Transportation (NMDOT) District 6. This Price Agreement includes materials, labor and equipment as per the specifications contained herein.

Minimum Requirements:

All work performed under this Price Agreement shall meet the specifications as set forth in this Invitation to Bid, and all applicable New Mexico State Department of Transportation Standard Specifications for Highway and Bridge Construction, special provisions, standard drawings and supplemental specifications (current edition). They are available on the NMDOT website, at the following link: <http://dot.state.nm.us/content/nmdot/en/Standards.html> and they are available for purchase at the General Office Financial Control Section (505) 827-5159.

The Vendor shall perform with its own organization at least 40% of the work based on the total purchase order amount and comply with section 108.1 of the New Mexico State Department of Transportation Standard Specifications for Highway and Bridge Construction, current edition.

Pursuant to the Contractor Prequalification Rule 18.27.5 NMAC, Vendors shall obtain prequalified status with the NMDOT as a condition to submitting a bid.

Vendors are required to ensure that the products used in conjunction with this Price Agreement have been submitted and approved through the NMDOT Product Evaluation Program prior to placement on a project. Any Questions regarding the NMDOT Product Evaluation Program shall be directed to Product Evaluation Coordinator at (505) 216-8777.

Term:

The term of this price agreement shall be for one (1) year from date of award with the option to extend for a period (s) of three (3) additional years, on a year-by-year basis, by mutual agreement of all parties and approval of the New Mexico State Purchasing Agent at the same price, terms and conditions. This price agreement shall not exceed four (4) years

Performance, Payment and Material Bonds:

Upon the issuance of a purchase order, the awarded Vendor(s) must provide a performance bond, payment and materials bond equal to 100% of the total purchase order. Said bonds must be provided to the requesting District Engineer or their designee prior to the commencement of work. Failure to comply shall result in the purchase order being issued to another awarded vendor and difference being charged back to the originally awarded Vendor(s).

The performance bond is to secure the NMDOT for losses and damages sustained by reason of default by Vendor. A payment bond is to guarantee that subcontractors and material suppliers on the project will be paid. The materials bond is to guarantee availability of equipment and acceptance of product.

Tax Note:

Price shall not include State Gross Receipts or Local Option Tax. Taxes shall be added to the purchase order and invoice at current rates as a separate item to be paid by NMDOT.

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Bidding Information:

The conditions and specifications set out in the invitation to bid are inseparable and indivisible. Any Vendor, by submitting a bid, agrees to be bound by all such conditions and/or specifications. All conditions and specifications in the invitation to bid, and all other documents required to be submitted, shall be submitted by the Vendor in their bid package. Failure to do so or any attempt to vary or change the conditions or specifications of the invitation to bid shall, at the discretion of the State of New Mexico, constitute grounds for rejection of the entire bid.

The prices quoted herein represent the total compensation to be paid by the State of New Mexico for goods and/or services provided. It is understood that the vendor providing said goods and/or services to the State of New Mexico is responsible for payment of all costs of labor, equipment, tools, materials, federal taxes, permits, licenses, fees, and any other items necessary to complete the work provided. The prices quoted in this price agreement include an amount sufficient to cover such costs. When bidding, enter the amounts for the respective bid item unit prices to a maximum of three (3) decimal places.

The Vendor shall be considered an independent Contractor and not an employee of the State of New Mexico. The NMDOT shall provide direction regarding the time and place of performance and compliance with rules and regulations required by this price agreement.

Bid Review:

NMDOT shall perform a bid analysis of all bids received for this Invitation to Bid that require the technical expertise of an engineer. This includes a determination of qualification in accordance with the technical standards and requirements of the specifications. The analysis and recommendation for award will be sent to the State Purchasing Division (SPD) for final determination and awarding.

Method of Award:

Method of award shall be to multiple Vendors. For a bid to be considered for award, Vendors must submit bids for all items in District 6 (See Attachment A, page 60).

Utilization of Vendors:

The following procedure for the utilization of Vendors shall be used on multiple award price agreements.

1. The selection of a Vendor from a multiple award price agreement to complete a project shall be based on the purchase order utilizing pricing contained within this price agreement.
2. The District Engineer or their designee shall evaluate the estimated quantities, unit costs, total costs per item, and total project costs for each awarded Vendor.
3. The Vendor selected to perform the work on the project shall be the Vendor providing services for the specific project estimate at the lowest overall cost to the NMDOT and able to meet all project delivery requirements including project schedule. A Vendor **not** offering the lowest cost to the NMDOT can be used for the specific project if the Vendor providing the lowest overall cost is unable to meet all project requirements as determined and documented by the District Engineer or their designee. Any changes to the original purchase order will require a modification form signed by the District Engineer or their designee. All supporting documentation shall be maintained in the project file.

Public Works minimum Wage Act:

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This is a Public Works Price Agreement subject to the provisions of the Public Works Minimum Wage Act, Section 13-4-11 through 13-4-17, et. Seq. NMSA 1978 as amended. Minimum Wage Rates as determined and published by the New Mexico Department of Workforce Solutions (NMDWS), Santa Fe, New Mexico shall be in effect and utilized by the Vendor during the life of this Price Agreement.

If a Vendor or Sub-contractor is willfully paying employees covered by the Public Works Minimum Wage Act, lower rates than required, the Vendor or subcontractor may lose their right to proceed with the work.

Price Agreement Order:

For projects over \$60,000.00 where a purchase order has been issued, a Wage Rate Decision number must be requested by the NMDOT. The Wage Rate Decision number can be obtained through the New Mexico Department of Work Force Solutions, Public Works Section. NMDOT must be registered through the Public Works website that can be accessed at:

<http://www.dws.state.nm.us/pwaa/LRDEmployer/Core/Login.ASPX>

The Vendor Agrees To:

- A. Provide competent supervision and skilled personnel to perform all work covered by this price agreement.
- B. Comply with all local, state, and federal laws governing safety, health and sanitation. The Vendor shall provide all safeguards, safety devices and protective equipment, and take any other needed actions necessary to protect the safety and health of employees on-the-job, the safety of the public, and to protect property in connection with the performance of the work covered by the price agreement.
- C. Indemnify and hold harmless The State of New Mexico, its officers and employees, against liability, claims, damages, losses and/or expenses arising out of bodily injury to persons or damage to property caused by, or resulting from, Vendor's and/or its employees, own negligent act(s) or omission(s) while Vendor, and/or its employees, perform(s) or fails to perform its obligations and duties under the terms and conditions of this price agreement. This hold harmless and indemnification clause is subject to the immunities, provisions and limitations of the tort claims act (41-4-1, et seq., N.M.S.A. 1978 comp.) and section 56-7-1 N.M.S.A. 1978 comp. and any amendments thereto.

It is specifically agreed between the parties executing this price agreement that it is not intended by any of the provisions of any part of the price agreement to create the public or any member thereof a third party beneficiary or to authorize anyone not a party to the price agreement to maintain a suit(s) for wrongful death(s), bodily and/or personal injury(ies) to person(s), damage(s) to property(ies) and/or any other claim(s) whatsoever pursuant to the provisions of this price agreement.

- D. Comply with state laws and rules pertaining to worker's compensation insurance coverage for its employees. If the Vendor fails to comply with the Worker's Compensation Act and applicable rules when required to do so, the purchase order may be cancelled effective immediately.
- E. Be responsible for all cleanup work on the project site and at the equipment storage areas prior to the final inspection and acceptance.

Insurance Requirements:

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The Vendor shall procure and maintain at the Vendor's expense, insurance of the kinds and in amounts herein provided. This insurance shall be provided by insurance companies authorized to do business in the State of New Mexico and shall cover all operations under the price agreement, whether performed by the Vendor, the Vendor's agents or employees or by Sub-Contractors. All insurance provided shall remain in full force and effect for the entire period of the work, up to and including final acceptance, and the removal of all equipment, employees, agents and Sub-Contractors therefrom.

(A) Public Liability and Automobile Liability Insurance

1. General Liability: bodily injury liability and property damage liability insurance applicable in full to the subject project shall be provided in the following minimum amounts:

Bodily Injury Liability:

\$1,000,000 each person; \$2,000,000 each occurrence
(annual aggregate)

Property Damage Liability:

\$2,000,000 each occurrence
(annual aggregate)

- a. The policy to provide this insurance is to be written on a Comprehensive General Liability Form or Commercial General Liability Form which must include the following:
 1. Coverage for liability arising out of the operation of independent Contractors
 2. Completed operation coverage
 3. Attachment of the Broad Form Comprehensive General Liability Endorsement
- b. In the event that the use of explosives is a required part of the price agreement, the Vendor's insurance must include coverage for injury to or destruction of property arising out of blasting or explosion.
- c. In the event that a form of work next to an existing building or structure is a required part of price agreement, the Vendor's insurance must include coverage for injury to or destruction of property arising out of:
 1. The collapse of or structural injury to building or structures due to excavation, including burrowing, filling or backfilling in connection therewith, or to tunneling, cofferdam work or caisson work or to moving, shoring, underpinning, razing or demolition of building or structures or removal or rebuilding of structural supports thereof.
- d. Coverage must be included for injury to or destruction of property arising out of injury to or destruction of wires, conduits, pipes, mains, sewers or other similar property or any apparatus in connection therewith below the surface of the ground. If such injury or destruction is caused by or occurs during the use of mechanical equipment for the purpose of excavating, digging, or drilling, or to injury to or destruction of property at any time resulting there from.

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2. Automobile liability insurance coverage for the Vendor (whether included in the policy providing general liability insurance or in a separate policy) must provide liability for the ownership, operation and maintenance of owned, non-owned, and hired cars. The limits of liability for automobile liability insurance shall be provided in the following amounts:

Bodily Injury Liability:

\$1,000,000 each person; \$2,000,000 each occurrence
(annual aggregate)

Property Damage Liability:

\$2,000,000 each occurrence (annual aggregate)

- (B) **Worker's compensation insurance:** The Vendor shall also carry Worker's Compensation Insurance or otherwise fully comply with provisions of the New Mexico Workman's Compensation Act and Occupational Disease Disablement Law.

If the Vendor is an "owner-operator" of such equipment, it is agreed that the State of New Mexico assumes no responsibility, financial or otherwise, for any injuries sustained by the "owner-operator" during the performance of said price agreement.

- (C) **Certificate of Insurance/Department as Additional Insured:** The Vendor being awarded this Price Agreement shall furnish evidence of Vendor's insurance coverage by a Certificate of Insurance. The Certificate of Insurance shall be required before the "Notice to Proceed" is issued.

The Vendor shall have the New Mexico Department of Transportation named as an additional insured on the Comprehensive General Liability Form or Commercial General Liability Form furnished by the Vendor, pursuant to Paragraph (A) 1 and (A) 2, of this subsection. The Certificate of Insurance shall state that the coverage provided under the policy is primary over any other valid and collectible insurance.

The Certificate of Insurance shall also indicate compliance with these specifications and shall certify that the coverage shall not be changed, cancelled or allowed to lapse without giving the NMDOT thirty (30) days written notice. Also, a Certificate of Insurance shall be furnished to the New Mexico Department of Transportation on renewal of a policy or policies as necessary during the terms of this price agreement.

The NMDOT shall not issue a notice to proceed until such time as the above requirements have been met.

- (D) **Umbrella Coverage:** The insurance limits cited in the above paragraphs are minimum limits. This specification is no way intended to define what constitutes adequate insurance coverage for individual Vendor. The NMDOT will recognize following form excess coverage (Umbrella) as meeting the requirements of Subsection (A) 1.a of this price agreement, should such insurance otherwise meet all requirements of such subsections.

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- (E) **Other Required Insurance:** The Vendor shall procure and maintain, when required by the NMDOT form and types of bailee insurance such as, but not limited to, builder's risk insurance, Vendor's equipment insurance, rigger's liability property insurance, etc. in an amount necessary to protect the NMDOT against claims, losses, and expenses arising from the damage, disappearance or destruction of property of others in the care, custody or control of the Vendor, including property of others being installed, erected or worked upon by the Vendor, his agents, or Sub-Contractors.
- (F) **Railroad Insurance:** In the event that railroad property is affected by the subject price agreement, the Vendor, in addition to the above requirements, shall be required to furnish a Railroad Protective Liability policy in the name of the railroad company involved. In addition, on those rails that are used by the National Railroad Passenger Corporation (NRPC), the Vendor will also obtain a Railroad Protective Liability Policy in the name of NRPC.

The limits of liability for the Railroad Protective Liability Policy (or policies) must be negotiated with the railroad company on a hazard and risk basis. In no event will the limits exceed the following:

Bodily Injury Liability, Property Damage Liability:

\$2,000,000 each occurrence

Liability and Physical Damage to Property:

\$6,000,000 aggregate

The limits of liability stated above apply to the coverage's as set forth in the Railroad Protective Liability Endorsement Form, subject to the terms, conditions, and exclusions found in the form.

The policy must afford coverage as provided in the Standard Railroad Protective Liability Endorsement (AASHTO Form).

The conditions listed in the above paragraphs are an integral part of this bid and shall be the conditions regulating the performance of any price agreement between the Bidder and the State of New Mexico and any Commission, Divisions, or Department thereof.

Payments and Invoicing:

Within fifteen (15) days after the date the NMDOT receives written notice from the Vendor that payment is requested for services, construction or items of tangible personal property delivered on site and received, the NMDOT shall issue a written certification of complete or partial acceptance or rejection of the services, construction or items of tangible personal property. If the NMDOT finds that the services, construction or items of tangible personal property are not acceptable, it shall, within thirty (30) days after the date of receipt of written notice from the Vendor that payment is requested, provide to the Vendor a letter of exception explaining the defect or objection to the services, construction or delivered tangible personal property along with details of how the Vendor may proceed to provide remedial action. Upon certification by the NMDOT that the services, construction or items of tangible personal property have been received and accepted, payment shall be tendered to the Vendor within thirty (30) days after the date of certification. If payment is made by mail, the payment shall be deemed tendered on the date it is postmarked. After the thirtieth day from the date that written certification of acceptance is issued, late payment charges shall be paid on the unpaid

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balance due on the purchase order to the Vendor at the rate of one and a half (1½) percent per month. For purchases funded by state or federal grants to local public bodies, if the public body has not received the funds from the federal or state funding agency, but has already certified that the services or items of tangible personal property have been received and accepted, payments shall be tendered to the Vendor within five (5) working days of receipt of funds from that funding agency.

Final payment shall be made within thirty (30) days after the work has been approved and accepted by the New Mexico Department of Transportation's Secretary of his/her duly authorized representative. The Vendor agrees to comply with state laws and rules pertaining to worker's compensation insurance coverage for its employees. If Vendor fails to comply with the workers' compensation act and applicable rules when required to do so the purchase order may be canceled effective immediately.

Escalation Clause:

In the event of a product cost increase, an escalation request will be submitted for review to the NMDOT on an individual basis. This measure is not intended to allow any increase in profit margin, but is solely intended to allow compensation for actual cost increases directly related to bid items.

To facilitate prompt consideration, all requests for price increase must include all information listed below:

1. Price Agreement Item Number
2. Current Item Price
3. Proposed New Price
4. Percentage of Increase
5. Mill/Supplier Notification of price increase indicating percentage of increase including justification for increase.

The NMDOT upon review of an escalation request may require additional supporting documentation prior to providing a written recommendation to the SPD. Final determination on the approval or disapproval of the escalation request will be made by SPD.

All quantities are to be measured by the District Engineer or their designee and shall be considered to be final and all payments for the same will be made on this basis.

Quantities:

The approximate quantities for each item are estimated and are for bidding purposes only. Actual requirements will be as determined by the District Engineer or their designee and quantities may be increased or decreased as necessary to meet actual field requirements. The State of New Mexico does not guarantee any amount of work.

Contract Order:

The Contractor Agrees to:

- A. Furnish and install materials as specified by written notification.
- B. Be responsible for cleaning, removal and disposal of all debris emanating from work performed and disposal of all debris generated by repair operations, as approved by the District Engineer or the

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District Engineer's designee. Final payment may be withheld subject to written approval by the District Engineer or the District Engineer's designee.

- C. Mobilization: The Contractor must designate one home office in the State of New Mexico for the terms of this agreement; the Contractor shall furnish the District Engineer or the District Engineer's designee with mileage for every move of thirty (30) miles or more, one way. No payment shall be made for moves less than 30 miles. Payments will be for one way movement only. In cases where the Contractor moves for his convenience, he will not be paid for the mileage upon returning to his previous worksite or to a location within thirty (30) miles of the previous worksite.
- D. Traffic Control: The Contractor (or through an approved sub-contractor) shall submit for approval the necessary traffic control plans (TCP) for the location(s) specified by the work. The TCP shall be in conformance with the MUTCD, be computer generated, and be submitted for approval by the District Traffic Engineer at least five (5) working days before work is to commence. The Contractor or approved subcontractor shall furnish all necessary traffic control devices required by the approved TCP. No traffic control at a given location shall be paid for if no work is being performed and the location could be (or is) open to traffic. For payment purposes, this item will be paid from setting up of the traffic control to when the work is completed and will not include the breakdown of the devices for the day.
- Urban Traffic Control is defined as within corporate limits of urban areas as designated by District Engineer or designee to include all traffic control devices required for adequate handling of traffic in accordance with the approved TCP.
- Rural Traffic Control is defined as areas not within designated corporate limits or as designated by District Engineer or the District Engineer's designee to include all traffic control devices required for adequate handling of traffic in accordance with the approved TCP.
- E. Temporary Pavement Markings: The Contractor shall delineate the travel lanes by the following methods: provide and install temporary pavement tabs; install temporary painted markings; or provide and install temporary tape. The Contractor shall properly maintain all reflectorized markings for a period of two (2) weeks after placement. The Engineer of the using agency or his/her designee will have the option to decide which type of markings the Contractor is to provide. Pavement markings shall be installed at the end of each day's operations and shall be immediately tamped after application until it thoroughly adheres to the finished asphalt surface. Construction staking will be considered incidental to the work and no separate payment will be made.
- F. Permanent Pavement Markings: The Contractor shall apply pavement markings when the pavement surface is dry and the weather is not foggy, rainy, excessively windy, or otherwise detrimental to the application of markings. Pavement markings must be installed per the manufacturer's recommendations. Ensure the surface is free from excess asphalt or other deleterious substances before applying traffic paint or beads. Remove dirt, debris, grease, motor oils, rocks, or chips from the pavement surface before applying markings. Apply paint at a minimum rate of 19.75 gallons per mile of paint for a solid four (4) inch line and 4.94 gallons per mile for a broken four (4) inch line, based on a ten (10) foot stripe and a 30 foot gap. Apply other widths of striping at appropriate multiples of these minimum rates for solid and broken paint stripes. Construction staking will be considered incidental to the work and no separate payment will be made.

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- G. Cold Milling: The Contractor shall perform this work in accordance with 2019 Standard Specification Section 414, Cold Milling.
- H. Unstable Subgrade Stabilization: The Contractor shall perform this work in accordance with 2019 Standard Specification Section 203-A, Unstable Subgrade Stabilization.
- I. The Contractor shall be liable for satisfactory workmanship of all operations for a period of One (1) year after initial acceptance. Any defects attributed to faulty workmanship or faulty material shall be satisfactorily repaired, all at no cost to the State, in an acceptable manner and within the time limits set by the District Engineer or the District Engineer's designee. Defects attributed to faulty material will be resolved by the Contractor, supplier and/or manufacturer. If warranties are called for in the specifications or given by manufacturer in excess of one (1) year, all defects shall be corrected as stated previously for the warranty period.

Special Precautions: Whenever work is to be done at intersections where wire loop sensors are imbedded into the existing pavement, the Traffic Engineer of the using agency shall be notified in advance so that necessary adjustments may be made to replace any damaged wire loop sensors.

Scope of Work:

This work consists constructing a stabilized base composed of reclaimed asphalt pavement (RAP), reclaimed aggregate material, new aggregates, mineral filler, or any combination of the above, stabilized with foamed asphalt binder. Placing Minor Pavement over the stabilized base. When necessary, the work will include cold milling.

General Notes:

- 1. For the determination of any design parameters for Minor Pavement, the estimated traffic shall be greater than or equal to three (3) million to less than ten (10) million ESAL's.
- 2. Vendor is to supply certified scale weigh ticket indicating gross, tare, net weight and purchase order number.

**SPECIAL PROVISIONS
FOR
SECTION 301-A: FULL DEPTH RECLAMATION - FOAMED ASPHALT
STABILIZED BASE**

All provisions of the New Mexico Department of Transportation Standard Specifications for Highway and Bridge Construction, 2019 Edition, shall apply in addition to the following:

301-A.1 DESCRIPTION

Full Depth Reclamation Foamed Asphalt Stabilized Base (FDR) is defined as those processes in which all of the asphalt pavement layers (either un-milled or the milled remaining) and some portion of the underlying unbound layers are pulverized and stabilized primarily with foamed asphalt and mineral filler and compacted in place by a self-propelled machine to the lines, grades and depths indicated in the Contract.

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Corrective RAP is a Department furnished source of reclaimed asphalt pavement (RAP) which shall be used by the Contractor to supplement existing Materials when specified as Corrective RAP in the Contract. Existing RAP stockpile locations will be designated in the Contract.

301-A.2 MATERIALS

301-A.2.1 Composition of Job Mix Formula (JMF)

The Contractor shall furnish a mixture composed of RAP, reclaimed aggregate, Corrective RAP (when specified), mineral filler, or any combination of the above as indicated in the Contract, stabilized with a foamed asphalt binder to meet the gradation and mix requirements of Table 301-A.2.1:1 "Gradation Requirements" and Table 301-A.2.1:2, "Mix Requirements".

**Table 301-A.2.1:1
Gradation Requirements**

| Sieve Size | Minimum Percent Passing |
|------------|-------------------------|
| 3.0 in | 100 |

**Table 301-A.2.1:2
Mix Requirements**

| Design Parameters | Value |
|--|----------|
| Marshall Compacted Specimen, AASHTO T 245 Compaction, number of blows each end of test specimen | 75 |
| Marshall Stability, AASHTO T 245, min, lbs. ¹ | 1625 |
| Indirect Tensile Strength, AASHTO T 283^{1, 2} (1) Tensile Strength DRY, min. psi (2) Tensile Strength CONDITIONED, min. psi | 45 30 |
| Foamed Asphalt Binder Expansion Characteristics @ 320, 338, & 356°F³ (1) Half-Life of foamed expansion, min, second. ⁴ (2) Expansion Ratio, min | 8 10 |

¹Cure sample to constant mass at 104°F before testing.

²AASHTO T 283 Section 7 Preparation of Field-Mixed, Laboratory-Compacted Specimens shall be followed. Compact the mixture to the design air voids. In lieu of subsection 7.5 cure pucks for 72 hours in a 104°F (40°C) oven. The Contractor shall follow Section 10, Preconditioning of Test Specimens and Section 11, Testing. The air voids requirements, loose mix curing, and freeze-thaw cycles will not be required per AASHTO T 283 test procedure. Conditioned samples shall be soaked for 24 hours.

³Graph half-life to expansion ratio for the three temperatures and percentages of water (1-3%) to determine the minimum foamed asphalt characteristics. PG binders shall meet the requirements of Standard Specifications Section 402, "Asphalt Materials and Mineral Admixtures".

⁴Total time for foamed asphalt to settle to half of the maximum foamed volume.

The ratio of residual asphalt in the bituminous binder to dry cement (mineral filler) shall be at least 3:1. In addition, the cement (mineral filler) shall be limited to not more than 1.5 percent by dry weight of RAP Material.

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301-A.2.2 Submittal of JMF's

The Contractor shall submit written JMF's for approval at least 14 Days before production to the Project Manager and the State Pavement Engineer. The Contractor shall not commence FDR Work until JMF's are approved. The Contractor shall develop enough mix designs to account for variations in pavement section and Material thickness along the Project length. Samples of existing Materials shall be taken along the Project length, and at Department furnished RAP sources (when specified), at appropriate intervals sufficient enough to develop mix designs that represent the pavement section variability to the depth of reclamation as indicated in the Plans. The mix design shall be performed by an AASHTO resource certified Laboratory with the proper Equipment for determining a foamed asphalt mix design(s) and the requirements of Table 301-A.2.1:2 "Mix Requirements".

301-A.2.3 Determination of JMF's

For each JMF, the Contractor shall provide samples and perform the following tests to determine the JMF's:

1. Aggregate: Provide samples representing the RAP, reclaimed aggregate, existing aggregate base, and Corrective RAP (when specified);
 - 1.1 Gradation of processed Material (AASHTO T 27 & T 11);
 - 1.2 Plasticity Index (AASHTO T 89 & T 90);
2. Foamed Asphalt Binder: Provide a minimum of five 1-gallon samples of the asphalt binder and the identity of the source of binder;
 - 2.1 Measure the expansion ratio and foam half-life of the asphalt binder at the three (3) temperatures per Table 301-A.2.1:2 "Mix Requirements";
3. Water: Water shall be clean and free from deleterious concentrations of acids, alkalis, salts, or other organic or chemical substances. Water of questionable quality shall be tested per AASHTO T 26. Designate the target moisture content to be used in the recommended mix design(s) used during production;
4. Mineral Filler: Hydraulic cement, in either dry or slurry form, may be added to the reclaimed mixture as determined by the mix design. Slurry made from hydraulic cement should contain a minimum of 30 percent dry solids content. Cement used for FDR shall comply with the latest Specifications for hydraulic cement (AASHTO M 85, AASHTO M 240). The ratio of residual asphalt in the bituminous binder to dry cement should be at least 3:1. In addition, the cement shall be limited to no more than 1.5 percent by dry weight of reclaimed mixture. The Contractor at the time of the mix design submittal shall inform the Department of the process to be used for incorporating cement into the reclaiming process. If required by the mix design, provide 4 lbs. of the mineral filler and provide the recommended mineral filler content and the identity of the supplier; and
5. Corrective RAP: Corrective RAP shall be free of contamination of dirt, base, concrete or other deleterious Materials such as silt and clay.
6. FDR Mix Design:
 - 6.1 For each mix design, a minimum of 6 Marshall, per asphalt binder content, prepared specimens per AASHTO T 245, compacted to 75 blows, with a series of test specimens at a range of different asphalt contents so that the test data curves show well defined optimum values. The test specimens shall be prepared at ½ percent increments of asphalt content with at least one (1) asphalt content above optimum and at least one below optimum;
 - 6.2 AASHTO T 283 Section 7 Preparation of Field-Mixed, Laboratory-Compacted Specimens shall be followed. In lieu of Subsection 7.5 cure pucks for 72 hours in a 104°F oven. The

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Contractor shall follow Section 10, Preconditioning of Test Specimens and Section 11, Testing. The air voids requirements, loose mix curing, and freeze-thaw cycles will not be required per AASHTO T 283 test procedure. Conditioned samples shall be soaked for 24 hours;

- 6.3 Percentage of foamed asphalt binder to be added based on the total mass of the mixture;
- 6.4 Marshall Stability per AASHTO T 245 each asphalt binder/mineral filler content. Each sample shall be dried to constant mass at 104°F; and
- 6.5 At the recommended optimum asphalt cement and mineral filler content, prepare moisture-density relation (AASHTO T 180 method D) for wet density. Establish a moisture-density relation for each mix design.

The Contractor shall replace Material sampled from the existing roadway with suitable Material as approved by the Project Manager.

The Contractor shall submit mix designs meeting Table 301-A.2.1:2, "Mix Requirements". No additional Contract Time will be granted to the Contractor for failure to provide a mix design that meets mix requirements per Table 301-A.2.1:2, "Mix Requirements".

The Contractor shall not begin production of the FDR Work until required submittals have been concurred by Department. Department concurrence of a mix design will not relieve the Contractor of full responsibility for producing an Acceptable mixture.

301-A.3 CONSTRUCTION REQUIREMENTS

301-A.3.1 Production Start-Up Procedures

The Contractor shall provide seven (7) Days' notice before beginning production of FDR. The Contractor shall schedule a Pre-Construction FDR meeting as follows:

1. Pre-Construction FDR Meeting. At least two (2) weeks prior, or as directed by Project Manager, to the start of FDR operations, the Contractor shall schedule a Pre-Construction FDR meeting. The Contractor shall coordinate attendance with the Department and any applicable Subcontractors. The Contractor shall discuss and submit the following:
 - 1.1 Proposed baseline schedule of paving operations in accordance with Standard Specifications Section 108.3, "Schedule";
 - 1.2 List of all Equipment (excavation-compaction Equipment, paver, haul, etc.), and personnel used in the production and construction of the Work;
 - 1.3 Discuss Quality Control/Quality Assurance, and minimum frequency schedule for process control sampling and testing;
 - 1.4 Discuss Sections 301-A.3, "Construction Requirements";
 - 1.5 Proposed Traffic Control Plan for construction operations, and the proposed method of dealing with emergencies. Show in detail how traffic will be maintained through the Project in the event of Equipment breakdown, sudden weather changes, or other unexpected events. Include in the Plan how sufficient roadway width for safe passage of travelling public shall be maintained;
 - 1.6 Proposed Plan for maintaining the required moisture content of the FDR areas; and
 - 1.7 Safety Plan.

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301-A.3.2 Test Strip Requirements

The Contractor shall provide test strips as follows:

1. Test Strip(s). Production test strips are required on the first Day. The Contractor shall construct the test strip using construction procedures intended for the entire Project. Proposed reclaimer Equipment production rates of speed (feet/minute) are to be determined by Contractor and shall be provided to Project Manager. For each proposed production rate, a test strip is required. During production, if an alternative production rate is proposed, the Contractor shall construct a test strip. Each test strip shall be at least 150 feet in length;
2. After placement of FDR at each rate and before compaction, the Contractor shall dig three (3) test pits within each test strip to evaluate the mixing characteristics of the recycler. The Contractor shall verify per visual and physical examination at each test pit that no foamed asphalt globules, stringers or binder segregation is present within the produced mix. If any of the three (3) visual characteristics exist then the rate of speed used for the individual test strip will not be allowed for production;
3. The Contractor shall use the following procedures for the initial start-up procedures and/or when a change in construction procedures occurs or when resuming production after a termination of production due to unsatisfactory FDR Material quality;
 - 3.1 Mix Design Verification. Take one FDR sample from each test strip before compaction indicating Acceptable homogeneous mixing and evaluate according to Table 301-A.2.1:2 "Mix Requirements"; and
 - 3.2 Compaction. Take nuclear gauge density readings at a minimum of one (1) location within each test strip per Section 301-A.3, "Construction Requirements" and Table 301-A.14:1 "Contractor and NMDOT Sampling and Testing Requirements". Compact to a minimum density of 97% and correlate to the wet density according to AASHTO T180 method D. Furnish the Project Manager with the nuclear gauge readings. Take nuclear density readings behind each pass to determine the roller pattern necessary to achieve the required density. Target density for Test Strips shall be determined by moisture-density curve developed from mix design per Section 301.A.2.3, "Determination of JMF, 6. FDR Mix Design, 6.5".
4. The Contractor shall cease paving operations after construction of the test strip(s) until all test results for the FDR are evaluated and Accepted by the Department. Allow up to 3 Working Days for review and Acceptance by Department.

301-A.3.3 Equipment

The Contractor shall use Equipment for FDR as follows:

1. Reclaiming Equipment:
 - 1.1 Capable of passing through existing asphalt with a minimum eight (8) foot width at depth indicated on the Contract Documents in one (1) pass;
 - 1.2 Capable of producing a homogeneous mix free of foamed asphalt globules and stringers;
 - 1.3 Capable of mixing the RAP, reclaimed aggregate, existing aggregate base, Corrective RAP, mineral filler and additives, or any combination of the above. The combined Materials shall meet the approved JMF to form a homogeneous mass that will bond together when compacted;
 - 1.4 Equipped so that binder can be added only when the machine is moving and the additive addition is proportional to the working speed;
 - 1.5 Equipped with an exterior test nozzle to verify proper foaming action and to provide a representative sample of the foamed asphalt;
 - 1.6 Equipped with a heating system capable of maintaining the foamed asphalt spray bar system at a minimum temperature of 250°F;

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- 1.7 Equipped with sufficient number of injection nozzles to promote atomization and formation of the initial foam expansion system and the ability to verify the nozzles are open and properly functioning;
- 1.8 Equipped with an internal electric heat cleaning system for self-cleaning foaming nozzles. No diesel shall be allowed for cleaning foaming nozzles;
- 1.9 Capable of turning off individual foamed asphalt nozzles;
- 1.10 Equipped with individual microprocessor controlled systems controlling each independent pump system regulating the application of foamed asphalt stabilizing agent and water in accordance with each approved mix design. The independent application of foamed asphalt and water shall be proportionally regulated by the recycler per the forward speed and mass of Material being recycled;
- 1.11 Equipped with a compressor capable of providing a minimum of 45 psi of pressure; and
- 1.12 Use a metered spreader to uniformly apply mineral filler (cement) on the roadway Material surface. Use canvas (or similar) skirts around the spreader box to minimize dust. Cement shall be applied full width of reclaimer. Once applied to surface, minimal handling of cement shall be permitted.
2. Mobile Slurry Mixing Unit. If slurry method is chosen for delivery of mineral filler to the recycled Materials, the Contractor shall use a recycler that is fed by a separate mobile slurry mixing unit pushed ahead of the recycler. The mixing unit shall have the following minimum features:
 - 2.1 The capability of supplying the cement slurry at the required rate to comply with the specified cement application rate during continuous operation;
 - 2.2 Capable of regulating the application rate of cement slurry in accordance with the speed of advance of the recycler and volume of Material during continuous operation;
 - 2.3 Provide uniform application of cement slurry to the recycled Material to produce a homogeneous mixture;
 - 2.4 A microprocessor controlled method for monitoring cement usage during operation that can be validated by simple physical measurement for control purposes;
 - 2.5 Equipped with a screen with openings not exceeding five (5) mm and shall be capable of producing slurry of uniform consistency and constant water at the rate required for stabilization; and
 - 2.6 Capable of mechanically attaching to reclaiming Equipment.
3. Rollers. The Contractor shall use the number, weight and types of rollers as necessary to obtain the required compaction, however, at a minimum, furnish at least three (3) rollers conforming to the following:
 - 3.1 Self-propelled and in good mechanical condition;
 - 3.2 Capable of initial compaction using an 18-ton single drum vibratory compression-type (padfoot) roller;
 - 3.3 A minimum 25-ton single drum vibratory steel roller; and
 - 3.4 A minimum 12-ton pneumatic tire roller. The pneumatic roller shall be fitted with a water spray system and apply light mist to tires while rolling;
 - 3.4.1 All rollers shall be capable of reversing direction without shoving or tearing the mixture.
4. Grader. The Contractor shall furnish a grader with the capability to spread the pulverized Material to a uniform grade and cross section, where necessary.
5. Water Truck. The Contractor shall furnish at least one (1) water truck.

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6. Corrective RAP Application. The Contractor shall place Corrective RAP with a mechanical spreader, a conventional paver or by end dump trucks and spread to a uniform thickness with a motor grader. The Contractor shall spread to a uniform thickness as indicated in the Contract, in areas determined through survey data and as directed by Project Manager.

301-A.3.4 Surface Preparation

The Contractor shall ensure that no vegetation and debris is within 12 inches of the FDR.

301-A.3.5 Weather Limitations

The Contractor shall apply FDR when the surface is dry, and the ambient air temperature is above 50°F and the surface temperature is above 45°F. The Contractor shall not begin FDR operations when fog, showers, rain, frost or temperatures below 40°F are anticipated within 24 hours.

Dry mineral filler application shall be temporarily halted when wind is in excess of 25 mph until such time that wind speed decrease below this threshold.

301-A.3.6 Construction Requirements for FDR

The Contractor shall construct the FDR section as follows:

1. Prior to beginning the FDR Work each week, prepare a production Plan detailing proposals for the forthcoming week's Work. At the discretion of the Project Manager, additional meetings may be required. Provide the following in the production Plan to the Department:
 - 1.1 Diagram showing the overall layout of the length and width of roadway intended for FDR during the Day, broken into the number of parallel passes required to achieve the stated width, and six (6) inch overlap dimensions at each joint between passes;
 - 1.2 The sequence and length of each pass to be stabilized before starting on the adjacent or following pass. Provide nozzle pattern setup indicating which nozzles will be on to ensure proper asphalt binder and overlap coverage for each recycler pass;
 - 1.3 An estimate of the time required for milling, mixing, and compacting the pass. Show on the diagram the expected completion time of each pass;
 - 1.4 The location where samples for determining in-situ moisture contents, and the results of the tests;
 - 1.5 The proposed water addition for each pass;
 - 1.6 If applicable, the quantity and location from where the aggregate base is imported;
 - 1.7 The amount and type of mineral filler to be applied to each pass;
 - 1.8 The Contractor Sampling and Testing Requirements control testing program conforming to Table 301-A.14:1 "Contractor and NMDOT Sampling and Testing Requirements";
 - 1.9 Verified locations for using Corrective RAP and quantities to be used; and
 - 1.10 Any other information that is relevant for the intended Work;
2. Corrective RAP. When specified, the Contractor shall spread Corrective RAP uniformly on the roadbed at the locations indicated in the Contract using Equipment as specified in Section 301-A.3.3, "Equipment". Corrective RAP shall be placed prior to pulverization and prior to addition of the stabilizing agent. No traffic, other than the reclaiming Equipment, shall be allowed to pass over Corrective RAP until the reclaiming operation is complete;

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3. FDR Operations. FDR stabilizing and mixing operations shall be completed in continuous segments. A continuous segment is one (1) full lane width. If one (1) recycler is used, the segment shall include full lane width to centerline by the end of the Day's production. Segments shall be limited to 2000 lane feet when two (2) passes are required to complete one (1) full lane width. All compaction and grading shall be completed prior to advancing to the next segment and pass. Segments lengths may be increased if it is determined proper moisture is being maintained on each pass until final compaction and grading has been completed, and the surface has been sealed as specified in Section 301-A.3.9, "Curing and Maintenance". Verify the rate or speed of the recycler daily as Accepted and determined from the test strip. Maintain this rate unless otherwise directed by the Project Manager. Properly delineate and open to traffic overnight and on all weekends and holidays. Lightly water and broom excess Material at the end of each Day's production;
4. FDR Stabilizing. Stabilize the existing pavement, base and/or subgrade Material to the depths indicated in the Plans. Blend the foamed asphalt binder, base, and/or subgrade Material into a homogenous mass for the full specified depth. During foamed asphalt stabilization, insure that no foamed asphalt globules or stringers are present within the produced mix. Verify by digging test pits within the newly produced mix. Verify by visually and physically observing the distribution of the foamed asphalt.

For slurry method application, the mineral filler shall be fluidized as slurry by premixing with water and pumped to the recycler for injection through a spray-bar into the mixing process.

For mixtures with a dry mineral filler spread a uniform layer on the prepared roadway surface prior to stabilizing. A metered mechanical spreader shall be used. Spreading of dry mineral filler on the roadway ahead of the reclamation/recycling machine will not be allowed when windy conditions adversely affect the operation or create a hazard for the public or Workers and slurry method may be specified at the discretion of the Project Manager. Verify rate by using a square yard (S.Y.) tarp to weigh and calculate amount of cement used or alternative method approved by Project Manager;

5. Mixing. Maintain the percentage of water established for specified asphalt foaming while providing uniform moisture content in the blended mix that is within 1 % of the limits established in the design at the time of addition of the asphalt binder. Aerating of the mixture or the addition of water may be required;
Apply asphalt binder in one application to the depth as specified in the Plans and at the rate established in the JMF. Based on mix design, apply the foamed asphalt binder with water added by volume to achieve expansion of the asphalt binder. The half-life will determine the temperature that maximizes the foamed asphalt. The application temperature of the foamed asphalt will not be below 320° F or the temperature as determined in Laboratory analysis of the asphalt binder. Measure asphalt binder temperature with a calibrated temperature measuring device in a safe manner. Do not use tanker thermometer unless calibration has been completed and documented.
6. Grading and Compaction. Shape, grade and compact the mixture to the lines, grades and depths indicated in the Plans, cross sections and Specifications. Maintain the existing or new crown of the pavement. Monitor in-place density during the compaction process with nuclear density gauge per AASHTO T 310. Compact to a minimum density of 97% and correlate to the wet density according to AASHTO T 180 method D and Table 301-A.14:1 "Contractor and NMDOT Sampling and Testing Requirements". Obtain the in place density by measuring at the top of foamed stabilized section. Monitor the compaction process by determining the density of foamed stabilized base with a portable nuclear density gauge in accordance with AASHTO T 310. Furnish the nuclear gauge readings.

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Once lines, grades and depths are met, excess Material shall be hauled back to the stockpile so as to allow for the net placement of new pavement Material as specified on the Plans or as directed by Project Manager.

7. Unstable Areas. Following the grading and compaction operations, remix and aerate any FDR areas that have excess moisture content due to FDR construction and compaction activities.

As determined by the Project Manager, where areas of FDR are unable to meet compaction due to unstable subgrade (defined as soft, gummy, pumping and/or further displacement) below the FDR Material, Unstable Subgrade Stabilization shall be utilized to correct any deficiencies prior to starting the next Day's production. Unstable Subgrade Stabilization shall be used as directed by the Project Manager. Removal and replacement of FDR Material to perform unstable subgrade stabilization shall be Incidental to the Bid Item for Unstable Subgrade Stabilization.

8. Longitudinal Joints. Plan longitudinal joints to coincide with changes in cross-slope, regardless of the overlap width. Provide a minimum longitudinal overlap of six (6) inches. No payment will be paid for overlap. Do not apply foamed asphalt on previously placed FDR when overlap occurs. Insure the overlap is compacted to achieve minimum density per the Contract. Care shall be taken to ensure longitudinal joints are not located within wheel-path.
9. Rubberized crack filler, pavement markers, loop wires, thermoplastic markers, paving fabric and other similar Materials shall be removed as observed from the roadway during the reclaiming process as approved by the Project Manager. Residual Materials that cannot be completely removed from the reclaimed mixture may be incorporated into the FDR if the Contractor can demonstrate that those added Materials shall not adversely affect density. Any such Materials retained in the mix shall be appropriately sized and blended so as to not adversely affect the appearance and strength of the FDR.

When, at the determination of the Project Manager, weather-related elements adversely affect the mineral filler Materials and placement, the Project Manager, at their discretion, has the right to delay further placement.

301-A.3.7 Profile and Cross Slope Requirements

After the final rolling, the Contractor shall measure the profile and cross slope of the FDR. The Contractor shall use a 10-foot metal straightedge to measure at right angles and parallel to the centerline. As directed by the Project Manager, the Contractor shall correct surface deviations greater than ½ inch within 10 feet.

301-A.3.8 Acceptance

The minimum sampling and testing requirements are established in Table 301-A.14:1 "Contractor and NMDOT Sampling and Testing". The Contractor shall meet the following requirements:

1. Density. For the purpose of Acceptance for density, the following process shall be followed:
 - 1.1 Test Strip(s): The density measurement based on the testing frequency indicated in Table 301-A.14:1, "Contractor and NMDOT Sampling and Testing" will be compared to the maximum density from the approved mix design(s) to determine Acceptability. Once the density of the lot has been determined, the Contractor will not be permitted to provide additional compaction to raise the average; and

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- 1.2 Production: The target density will be based on the prior Day's moisture-density relationship, per Table 301-A.14:1, "Contractor and NMDOT Sampling and Testing". Once the density of the lot has been determined, the Contractor will not be permitted to provide additional compaction to raise the average.
2. Payment. Payment will be made in accordance with the requirements of Table 301-A.3.8:1 "Payment Schedule for Lot Densities". For the purpose of Acceptance, each Day's production and full lane width shall be considered a lot unless the paving length is less than 2,000 feet. When the production is less than 2,000 linear feet, the production results shall be combined with the previous Day's production.

**Table 301-A.3.8:1
 Payment Schedule for Lot Densities**

| % of Average Density from Prior Day's Moisture-Density Relationship | % of Payment as Applied to FDR-Foamed Asphalt SY Item |
|---|---|
| >97.0 | 100 |
| ≤96.0 to <97.0 | 95 |
| ≤95.0 to <96.0 | 90 |
| <95 | 75 |

301-A.3.9 Curing and Maintenance

The Contractor shall maintain the FDR layer until the asphalt concrete overlay has been placed. The Contractor shall repair any deficiencies to the completed FDR as directed by the Project Manager. The Contractor shall repair the FDR section at no cost to the Department. The Contractor shall prepare the surface for the asphalt concrete overlay in accordance with Standard Specifications Section 423.3.5, "Placement Operations".

The Contractor shall maintain the FDR section as follows:

1. Smoothness. After final compaction, treat the stabilized surface with a light application or flushing of water and roll with pneumatic-tired roller to create a close and uniform surface. The pneumatic roller should be fitted with a water spray system and apply light mist to tires while rolling;
2. Sealant. Provide a diluted (50/50) SS-1h emulsion "fog seal", in accordance with Standard Specifications Section 402.2.2, "Emulsified Asphalt". The application rate of the fog seal shall be 0.05 to 0.15 gal/sq.yd. The fog seal shall be allowed to setup properly (breaking of the emulsion). Traffic may use the stabilized surface immediately after this treatment unless otherwise indicated or instructed by Project Manager. The fog seal shall be allowed to setup properly (breaking of the emulsion). The Contractor may be required to reapply fog seal as directed by the Project Manager;
3. Prior to overlay, conduct proof roll as per Section 203-A. Upon successful completion of the proof roll, overlay of the FDR shall be permitted.
4. Overlay. Construct a HMA/WMA overlay over the FDR section within 14 Days after placement, unless otherwise specified by the Project Manager at the FDR construction meeting. If the stabilized layer loses stability, density or finish before placement of overlay, reprocess and recompact as necessary to restore the strength of the damaged Material. Any damage to the FDR section shall be corrected at the Contractor's expense.

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301-A.4 METHOD OF MEASUREMENT

Full Depth Reclamation - Foamed Asphalt Stabilized Base shall be measured by the square yard. This excludes longitudinal or transverse overlaps.

Asphalt Binder shall be measured by the ton.

Mineral Filler shall be measured by the ton.

Corrective RAP shall be measured by the cubic yard.

The Contractor shall provide the Project Manager with volume quantities and calculations to adjust the proposed profile grade utilizing a construction survey and personnel in accordance with Standard Specifications Section 801, "Construction Staking by the Contractor" at the FDR construction meeting in accordance with Section 301-A.3.1, "Production Start-Up Procedures".

301-A.5 BASIS OF PAYMENT

| Pay Item | | Pay Unit |
|---|-----|-----------------------------|
| Full Depth Reclamation - Foamed Asphalt Stabilized Base | | Square Yard Asphalt Asphalt |
| Binder | Ton | |
| Mineral Filler | | Ton |
| Corrective RAP | | Cubic Yard |

301-A.5.1 Work Included in Payment

The Department will consider as included in FDR – Foamed Asphalt Stabilized Base and associated pay items and will not measure or pay separately for the following Work:

1. Developing and testing the mix design, including Corrective RAP testing when required;
2. Overlaps and excess Material removal and delivery;
3. Removal of Materials not used in the mix design;
4. Removal and disposal of all vegetation and debris within 12 inches of the FDR;
5. Removal of rubberized crack filler, pavement markers, loop wires, thermoplastic markers, paving fabric and other similar Materials;
6. Fog Seal;
7. Proof roll prior to overlay; and
8. Replacement Material at sample locations.

The Department will consider as included in the Corrective RAP pay item and will not measure or pay separately for the following Work:

1. Transporting and hauling RAP from the existing stockpile;
2. Placement;
3. Survey required to adjust the profile grade; and
4. Survey of existing stockpile(s), and any stockpiles generated by the Work, prior to start and completion of the Work.
5. Survey to determine the quantity of Corrective RAP used for payment purposes.

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301-A.14 Sampling and Testing Requirements

**Table 301-A.14:1
Contractor and NMDOT Sampling and Testing Requirements**

| Material or Product | Acceptance Type | Characteristic | Test Method Specifications | Sampling Frequency by Contractor and NMDOT (unless specified) | Point of Sampling | Reporting Time |
|---|-----------------------------------|---------------------------|--|--|------------------------------------|-----------------------|
| Asphalt Binder (Mix Design) | Measured & Tested For Conformance | Quality | AASHTO M 320 Table 1 | _ (NMDOT not required to Test) | Refinery | Before Producing |
| | | Foaming Half-Life | Table 301-A.2:2 | | | |
| | | Expansion Ratio | Table 301-A.2:2 | | | |
| Full Depth Reclamation – Foamed Asphalt (Mix Design) | Measured & Tested for Conformance | Gradation | AASHTO T 11, AASHTO T 27 & Table 301-A.2:1 | _ (NMDOT not required to test) | - | Before Producing |
| | | Plasticity Index | AASHTO T 89 & AASHTO T 90 | | | |
| | | Moisture-Density | AASHTO T180 Method D (TTCP Modified) | | | |
| | | Indirect Tensile Strength | AASHTO T 283 and Table 301-A-2 | | | |
| | | Marshall Stability | AASHTO T 245 & Table 301-A.2:2 | | | |
| Asphalt Binder (Test Strip) | Measured & Tested for Conformance | Binder Temperature | - | 1 every tank load | Temperature Gauge | Upon Completing Test |
| Full Depth Reclamation – Foamed Asphalt (Test Strips) | Measured & Tested for Conformance | Gradation | AASHTO T 11 & T27 | 1 per test strip | Behind Reclaimer Before Compaction | Upon Completing Test |
| | | Depth Check | Probing, Shovel, Other Means | 1 Locations per test strip | Behind Reclaimer Before | Upon Completion |

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| Material or Product | Acceptance Type | Characteristic | Test Method Specifications | Sampling Frequency by Contractor and NMDOT (unless specified) | Point of Sampling | Reporting Time |
|-----------------------------|-------------------------|---------------------------------|---------------------------------------|---|------------------------------------|-------------------------|
| | | | | | Compaction | of Measurement |
| | | Moisture | AASHTO T 255 | 1 per test strip | Behind Reclaimer Before Compaction | Upon Completing Test |
| | | Moisture-Density | AASHTO T 180 Method D (TTCP Modified) | 1 per test strip | Behind Reclaimer Before Compaction | Upon Completing Test |
| | | Density | AASHTO T 310 | 1 per test strip | In -place After Compaction | Upon Completing Test |
| | | Asphalt Binder Content | - | Daily | Strap | End Of Day |
| | | Marshall Stability | AASHTO T 245 | 1 Per Mix Design Per Day (Contractor) | Behind Reclaimer Before Compaction | 80 hours |
| | | Indirect Tensile Strength | AASHTO T 283 and Table 301-A.2:2 | 1 Per Day of Production (Contractor) | Behind Reclaimer Before Compaction | Upon Completion of Test |
| | Visual Inspection | Homogeneous Mixing ¹ | | 1 per test strip | Behind Reclaimer Before Compaction | Upon Completing Test |
| Asphalt Binder (Production) | Measured and Tested for | Binder Temperature | | 1 Every Load | Temperature Gauge | Upon Completing Test |

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| Material or Product | Acceptance Type | Characteristic | Test Method Specifications | Sampling Frequency by Contractor and NMDOT (unless specified) | Point of Sampling | Reporting Time |
|--|-------------------------------------|------------------------|---------------------------------------|---|------------------------------------|--------------------------------|
| | Conformance | | | | | |
| Full Depth Reclamation – Foamed Asphalt (Production) | Measured and Tested for Conformance | Gradation | AASHTO T 11, T 27 & Table 301-A-1 | 2 per lane mile (Contractor) 1 per lane mile (NMDOT) | Behind Reclaimer Before Compaction | Upon Completing Test |
| | | Depth Check | Probing, Shovel, Other Means | 5 Locations per day | Behind Reclaimer Before Compaction | Upon Completion of Measurement |
| | | Moisture | AASHTO T 255 | 2 per lane mile (Contractor) 1 per lane mile (NMDOT) | Behind Reclaimer Before Compaction | Upon Completing Test |
| | | Asphalt Binder Content | --- | Daily (Contractor) | Strap | End of Each Production Day |
| | | Marshall Stability | AASHTO T 245 | 1 Per Mix Design Per Day (Contractor) | Behind Reclaimer Before Compaction | 80 hours |
| | | Moisture-Density | AASHTO T 180 Method D (TTCP Modified) | 1 Per Day of Production (Contractor) | Behind Reclaimer Before Compaction | Upon Completion of Test |
| | | Density | AASHTO T 310 | 1 per 500 feet per lane (NMDOT/Contractor) | In-place After Compaction | Upon Completing Test |

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| Material or Product | Acceptance Type | Characteristic | Test Method Specifications | Sampling Frequency by Contractor and NMDOT (unless specified) | Point of Sampling | Reporting Time |
|---------------------|-----------------|---------------------------|----------------------------------|---|------------------------------------|-------------------------|
| | | Indirect Tensile Strength | AASHTO T 283 and Table 301-A.2:2 | 1 Per Day of Production (Contractor) | Behind Reclaimer Before Compaction | Upon Completion of Test |

¹When sampling for test strip mix design verification testing, visually determine if asphalt globules, stringers, and binder segregation are present. The test strip is considered Acceptable for further mix verification testing if adequate homogeneous mixing is observed.

**SPECIAL PROVISIONS
FOR**

**SECTION 301-B: COLD CENTRAL PLANT RECYCLING (CCPR) -
FOAMED ASPHALT STABILIZED BASE**

The 2019 Edition of the New Mexico Department of Transportation Standard Specifications for Highway and Bridge Construction shall apply in addition to the following:

301-B.1 DESCRIPTION

This Work consists of constructing a stabilized base composed of reclaimed asphalt pavement (RAP), reclaimed aggregate Material, new aggregates, mineral filler, or any combination of the above, stabilized with foamed asphalt binder. The requirements contained within this specification are for CCPR-Foamed Asphalt Stabilized Base.

301-B.2 COMPOSITION OF MIX (JOB MIX FORMULA)

The Contractor shall furnish a mixture composed of RAP, reclaimed aggregate Material, new aggregates, mineral filler, or any combination of the above as indicated in the Plans, stabilized with a foamed asphalt binder to meet the mix and design requirements of Table 301-B.2:1 "CCPR-Foamed Asphalt Stabilized Base Gradation Requirements" and Table 301-B.2:2 "CCPR-Foamed Asphalt Stabilized Base Pavement Mix Requirements".

**Table 301-B.2:1
CCPR-Foamed Asphalt Stabilized Base Gradation Requirements**

| Sieve Size | Percent Passing |
|------------|-----------------|
| 1.5 in | 100 |
| 1.0 in | 85 – 100 |
| ¾ in | 70 – 100 |
| No. 4 | 40 – 68 |
| No. 10 | 25 – 55 |

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| | |
|---------|----------|
| No. 200 | 4.0 – 20 |
|---------|----------|

**Table 301-B.2:2
CCPR-Foamed Asphalt Stabilized Base Pavement Mix Requirements**

| Design Parameters | Value |
|--|-------|
| Marshall Compacted Specimen, AASHTO T245 Compaction, number of blows each end of test specimen | 75 |
| Marshall Stability, AASHTO T 245, min, lbs. ^(1.) | 1625 |
| Indirect Tensile Strength, AASHTO T 283 | |
| (1) Tensile Strength DRY , min. psi ^(2.) | 45 |
| (2) Tensile Strength Ratio (TSR), min. % | 70 |
| Foamed Asphalt Binder Expansion Characteristics @ 320, 338 and 356°F ^(3.) | |
| (1) Half-Life of foamed expansion, min, second. ^(4.) | 8 |
| (2) Expansion Ratio, min | 10 |

1. Cure sample to constant mass at 104°F before testing;
2. AASHTO T 283 Section 7 Preparation of Field-Mixed, Laboratory-Compacted Specimens shall be followed. Compact the mixture to the design air voids. In lieu of Subsection 7.5 cure pucks for 72 hours in a 104°F (40°C) oven. The Contractor shall follow Section 10, Preconditioning of Test Specimens and Section 11, Testing. The air voids requirements, loose mix curing, and freeze-thaw cycles will not be required per AASHTO T 283 test procedure. Conditioned samples shall be soaked for 24 hours;
3. Graph half-life to expansion ratio for the three temperatures and percentages of water (1-5%) to determine the minimum foamed asphalt characteristics; and
4. Total time for foamed asphalt to settle to half of the maximum foamed volume.

The Contractor shall submit written Job Mix Formula (JMF) for approval at least 28 Days before production. No Work will be allowed until JMF's are approved. The Contractor shall develop enough mix designs to account for variations in pavement section and Material thickness along the Project length. The Contractor shall take samples of existing Materials along the Project length, at appropriate intervals sufficient enough to develop mix designs that represent the pavement section variability to the depth of recycling as indicated on the Plan sheets. The mix design shall be performed by an AMRL certified Laboratory with the proper Equipment for determining a foamed asphalt mix design and the requirements of Table 301-B.2:2 "CCPR- Foamed Asphalt Stabilized Base Pavement Mix Requirements". For each location sampled for mix design(s), the Contractor shall use asphalt cold patch Materials to the width and depth of the Materials sampled.

The asphalt and miller filler percent additives provided in the Contract documents shall be used for bidding purposes prior to the completed mix design(s). The actual percentages will be adjusted based on the quantity necessary to meet the design requirements of 301-B.2:2 "CCPR- Foamed Asphalt Stabilized Base Pavement Mix Requirements".

For each JMF, the Contractor shall sample and perform the following tests to determine the JMF's:

1. **Aggregate.** Provide samples representing the RAP, reclaimed aggregate Material, existing aggregate base, and/or new aggregates, 250 lbs total per each Material.
 - 1.1 Gradation of processed Material (AASHTO T27 & T11)

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- 1.2 Plasticity Index (AASHTO T89 & T90)
2. **Foamed Asphalt.** Provide a minimum of five (5) one (1)-gallon samples of the asphalt binder and the identity of the source of binder.
 1. Measure the expansion ratio and foam half-life of the asphalt binder at the three (3) temperatures per Table 301-B.2:2 "CCP-Foamed Asphalt Stabilized Base Pavement Mix Requirements".
3. **Water.** Water shall be clean and free from deleterious concentrations of acids, alkalis, salts, or other organic or chemical substances. Water of questionable quality shall be tested per AASHTO T 26. Designate the target moisture content to be used in the recommended mix design(s) used during production.
4. **Mineral Filler.** If required by the mix design, provide four (4) pounds of the mineral filler which meets AASHTO M-17 requirements. Provide the recommended mineral filler content and the identity of the supplier.
5. **Mix Design of CCPR-Foamed Asphalt Stabilized Base.**
 - 5.1 For each mix design, a minimum of six (6) Marshall, per asphalt binder content, prepared specimens per AASHTO T 245, compacted to 75 blows, with a series of test specimens at a range of different asphalt contents so that the test data curves show well defined optimum values. The test specimens shall be prepared at ½ percent increments of asphalt content with at least one asphalt content above optimum and at least one below optimum.
 - 5.2 AASHTO T 283 Section 7, "Preparation of Field-Mixed, Laboratory-Compacted Specimens" shall be followed. Compact the mixture to the design air voids. In lieu of Subsection 7.5, cure pucks for 72 hours in a 104°F oven. Follow Section 10, "Preconditioning of Test Specimens" and Section 11, "Testing". The air voids requirements, loose mix curing, and freeze-thaw cycles will not be required per AASHTO T 283 test procedure.
 - 5.3 Percentage of foamed asphalt binder to be added based on the total mass of the mixture.
 - 5.4 Marshall Stability per AASHTO T 245 each asphalt binder/mineral filler content. Each sample shall be dried to constant mass at 104°F.
 - 5.5 At the recommended optimum asphalt cement and mineral filler content, prepare moisture-density relation in accordance with Appendix A, "AASHTO T-180-15 (Method D-Modified) for dry density. Establish a moisture-density relation for each JMF.

Replace Material sampled from the existing roadway with suitable Material as approved by the Project Manager.

The State Pavement Engineer and State Materials Engineer will evaluate the suitability of the Material and proposed JMF's. If not approved, a written reason detailing the basis for rejection will be provided.

If the JMF's are not approved, submit new JMF's as described above.

301-B.3 EQUIPMENT

The Contractor shall provide a Cold Central Plan with the following:

1. **Cold Central Plant Requirements.**
 - 1.1 Capable of producing a homogeneous mix free from foamed asphalt globules and stringers;
 - 1.2 Capable of mixing the RAP, reclaimed aggregate Material, existing aggregate base, new aggregates, mineral filler, or any combination of the above, and additives meeting the approved JMF and specified gradation to form a homogeneous mass that will bond together when compacted;
 - 1.3 Equipped with a heating system capable of maintaining the asphalt binder in accordance with the binder supplier's recommended temperature;

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- 1.4 Equipped with sufficient number of injection nozzles not more than six (6) inches apart to promote atomization and formation of the initial foam expansion system and the ability to verify the nozzles are open and working from within the operator cabin.
 - 1.5 Equipped with an internal electric heat cleaning system for self-cleaning foaming nozzles. No diesel will be allowed for cleaning foaming nozzles;
 - 1.6 Equipped with two (2) microprocessor controlled systems controlling two (2) independent pump systems regulating the application of foamed asphalt stabilizing agent and water in accordance with each approved mix design. The independent application of foamed asphalt and water must be proportionally regulated by the mixing plant per the weight of Material being mixed;
 - 1.7 Equipped with a compressor capable of providing a minimum of 45 psi of pressure;- and
 - 1.8 Equipped with a mineral filler feed auger so that mineral filler will be accurately metered into the Material.
2. **Rollers.** Furnish at least three (3) rollers conforming to the following:
 - 2.1 Self-propelled and in good mechanical condition;
 - 2.2 Capable of initial compaction using an 18-ton single drum vibratory compression-type roller;
 - 2.3 A minimum 14-ton single drum vibratory steel roller; and
 - 2.4 A minimum 18-ton pneumatic tire roller.Along curbs, headers, walls and places not accessible to the roller, compact the Material with approved tampers and compactors.
 3. **Water Truck.** Furnish a minimum of one (1) water truck with a minimum of 2,000 gallon capacity.
 4. **Paver.** Use a self-contained, self-propelled paver with activated screeds or strike-off assemblies and capable of spreading and finishing the CCPR-Foamed Asphalt Stabilized Base.

301-B.4 SURFACE PREPARATION

The Contractor shall clear, grub and dispose of all vegetation and debris within 12 inches of the pavement to be recycled.

301-B.5 WEATHER LIMITATIONS

The Contractor shall apply foamed asphalt stabilized base when the surface is dry, and the ambient air temperature is above 50°F and the surface temperature is above 45°F.

The Contractor shall not begin foamed recycling operations when fog, showers, rain, frost or temperatures below 36°F are anticipated within 24 hours.

The Project Manager has the authority to delay further placement when wind and other weather-related elements adversely affect the Materials and placement.

301-B.6 PRODUCTION START-UP PROCEDURES

The Contractor shall provide seven (7) Days' notice before beginning production of foamed asphalt stabilized base.

At least two (2) weeks prior to the start of CCPR-Foamed Asphalt Stabilized Base stabilizing operations, the Contractor shall arrange for a pre-stabilized base construction conference. The Contractor shall coordinate attendance with the Department and any personnel involved in the CCPR-Foamed Asphalt Stabilized Base operation. The Contractor shall discuss and submit the following:

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1. Proposed baseline schedule of paving operations;
2. List of all Equipment (excavation-compaction Equipment, paver, haul, etc.), and personnel used in the production and construction of the Work;
3. Discuss Quality Control/Quality Assurance, and minimum frequency schedule for process control sampling and testing;
4. Discuss Subsections 301-B.6 "Production Start-Up Procedures", 301-B.7 "Construction", 301-B.8 "Sampling and Testing Requirements" and 301-B.9 "Profile and Cross Slope Requirements";
5. Proposed traffic control Plan for construction operations, and the proposed method of dealing with emergencies. Show in detail how traffic will be maintained through the Project in the event of Equipment breakdown, sudden weather changes, or other unexpected events. Include in the Plan how sufficient roadway width for safe passage of travelling public will be maintained; and
6. Proposed plan for maintaining the required moisture content of the foamed recycling areas.

The Contractor shall not begin production until required submittals have been approved by the Project Manager.

301-B.6.1 Test Strips

Prior to production of CCPR-Foamed Asphalt Stabilized Base, the Contractor shall construct production test strips. The Contractor shall construct the test strip using construction procedures intended for the entire Project. The Contractor shall place foamed asphalt stabilized base for one (1) 1,500-foot long test strip, one-lane wide, at the designated Plan thickness and designed optimum foamed asphalt and mineral filler content (if required). The Contractor shall construct the test strip on the Project at a location approved by the Project Manager. For multiple lift CCPR-Foamed Asphalt Stabilized Base construction, test strip shall be the bottom lift.

The Contractor shall repeat the test strip process until an Acceptable test strip is produced. Unacceptable test strips will not be paid for, and may be removed at the sole discretion of the Project Manager. Accepted test strips will remain in place and will be Accepted and measured as a part of the completed CCPR-Foamed Asphalt Stabilized Base Material. Tests used for the test strip will not be included in the evaluation for payment. When a test strip is Accepted, full production may begin.

The Contractor shall use the following for the initial start-up procedures and/or when a change in construction procedures occurs or when resuming production after a termination of production due to unsatisfactory CCPR-Foamed Asphalt Stabilized Base Material quality.

1. **Mix Design Verification.** Take at least three (3) test strip stabilized base samples from the test strip before compaction indicating Acceptable homogeneous mixing and evaluate according to job mix specifications requirements from Table 301-B.2:2 "CCPR- Foamed Asphalt Stabilized Base Pavement Mix Requirements"; and
2. **Compaction.** Take nuclear gauge density readings at a minimum of three (3) locations within the test strip in accordance with Sections 301-B.7 "Construction" and 301-B.8 "Sampling and Testing Requirements" and AASHTO T 310. Compact to a minimum density of 97% and correlate to the dry density in accordance with Appendix A, "AASHTO T-180-15 (Method D-Modified). Furnish the Project Manager with the nuclear gauge readings. Take nuclear density readings behind each pass to determine the roller pattern necessary to achieve the required density.

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The Contractor shall cease paving operations after construction of the test strip(s) until all test results for the CCPR-Foamed Asphalt Stabilized Base and the test strip are evaluated and Accepted by the Project Manager. The Contractor shall allow up to three (3) Working Days for review and Acceptance by the Project Manager.

301-B.7 CONSTRUCTION

The Contractor shall construct CCPR-Foamed Asphalt Stabilized Base as follows:

1. Prior to beginning the laydown Work each Day, prepare a Work plan detailing proposals for the forthcoming Day's Work. Provide the following in the Work plan to the NMDOT:
 - 1.1 Diagram showing the overall layout of the length and width of roadway intended for paving during the Day;
 - 1.2 The sequence and length of each pass to be paved before starting on the adjacent or following pass;
 - 1.3 If applicable, the quantity and location from where the aggregate base is imported;
 - 1.4 The proposed control testing program conforming to Table 301-B.14:1 "Contractor and NMDOT Sampling and Testing Requirements; and
 - 1.5 Any other information that is relevant for the intended Work.
2. **Mixing and Placing.** Provide uniform moisture content in the blended mix that is within $\pm 1.0\%$ of the target moisture content provided in the mix design at the time of addition of the asphalt binder.

Apply asphalt binder at the $\pm 0.5\%$ of the rate established in the JMF. Apply the foamed asphalt binder with water added by volume to achieve expansion of the asphalt binder. The application temperature of the foamed asphalt will not be below the mix design requirement as determined in the Laboratory analysis of the asphalt binder.

The maximum time period between mixing and compacting shall be 24 hours. Maintain the moisture content to not more than 2.0% below the optimum moisture content.

3. **Grading and Compaction.** In a single lift, place the total required compacted thickness of not less than 2.5 inches. Equal multiple lifts are allowed so long as the combined thickness is met as described in the Contract. For multiple lift option, sampling, testing and Acceptance criteria shall be performed on each equal lift. For multiple lifts, tack coat shall be applied between each lift.

Compact the mixture to the lines, grades, and depths show on the Plans. Do not pave across the centerline to maintain the existing or new crown of the pavement. Compaction shall be monitored using nuclear density testing in accordance with AASHTO T 310, throughout the time compaction is being completed to continuously verify the compaction is within $\pm 5\%$ of the target density established in Section 301-B.6 - "Test Strip, 2, Compaction". The selected rolling pattern shall be followed unless changes in the recycled mix or placement conditions occur and a new rolling pattern is established at that time. Any type of rolling that causes cracking, major displacement, and/or any other type of pavement distress shall be discontinued until such time as the problem can be resolved. Discontinuation and commencement of rolling operations shall be at the discretion of the Project Manager

The recycled mat shall be continuously observed during compaction efforts. If moisture cracking occurs under vibratory compaction mode, the vibrators shall be turned off and static rolling only applied. If moisture cracking of the mat continues under static steel rolling, steel drum compaction shall cease, the mat shall be allowed to cure for a time in order for moisture to escape, and pneumatic rolling commenced,

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followed by steel rolling to correct irregularities from the pneumatic-tired roller(s). This procedure shall be followed until there is no longer any displacement of the mat observed from roller action on the recycled surface. Furnish the Project Manager with the nuclear gauge readings.

301-B.8 SAMPLING AND TESTING REQUIREMENTS

The Contractor shall meet the test requirements of Table 301-B.14:1 "Contractor and NMDOT Sampling and Testing Requirements" for Acceptance.

301-B.9 PROFILE AND CROSS SLOPE REQUIREMENTS

After the final rolling, the Contractor shall measure the profile and cross slope of the CCPR-Foamed Asphalt Stabilized Base. The Contractor shall use a ten (10)-foot metal straightedge to measure at right angles and parallel to the centerline. The Contractor shall correct surface deviations greater than ½ in within ten (10) feet as directed by the Project Manager.

301-B.10 CURING AND MAINTENANCE

The Contractor shall maintain the CCPR-Foamed Asphalt Stabilized Base layer until the asphalt overlay has been placed. The Contractor shall repair any deficiencies to the completed foamed asphalt base to the satisfaction of the Project Manager. Said repair(s) shall be considered Incidental.

The Contractor shall perform the following:

1. After final compaction, treat the stabilized surface with a light application or flushing of water and roll with pneumatic-tired roller to create a close and uniform surface. The pneumatic roller shall be fitted with a water spray system and a light mist to tires while rolling shall be applied;
2. The fog seal, tack coat and HMA/WMA overlay shall not be placed until the moisture content of the CCPR-Foamed Asphalt Stabilized Base is less than three percent (3.0%).
3. Provide a diluted (50/50) SS-1H emulsion fog seal, to each lift. The application rate of the fog seal shall be as indicated in the Plans. The fog seal shall be allowed to setup properly (breaking of the emulsion). Traffic may use the stabilized surface immediately after this treatment unless otherwise indicated by Project Manager.
4. Prepare the surface for the HMA/WMA overlay in accordance with Standard Specifications Section 423.5, "Placement Operations".
5. Construct a HMA/WMA overlay over the CCPR-Foamed Asphalt Stabilized Base within 14 Days after placement, unless otherwise indicated by the Project Manager at the pre-foam construction conference. If the stabilized layer loses stability, density, or finish before placement of overlay, reprocess and recompact as necessary to restore the strength of the damaged Material. Any damage to the foam asphalt stabilized base shall be corrected at no expense to the Department.

301-B.11 METHOD OF MEASUREMENT

CCPR-Foamed Asphalt Stabilized Base will be measured by the square yard.

Asphalt binder and mineral filler will be measured by the ton.

Longitudinal or transverse overlaps will not be measured for payment.

If Contractor chooses to place in equal multiple lifts, measurement will be based on final combined thickness as indicated in the Plans.

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301-B.12 ACCEPTANCE

The Contractor shall meet the minimum sampling and testing requirements as indicated on Table 301-B.14:1 "Contractor and NMDOT Sampling and Testing Requirements".

301-B.12.1 Density

For the purpose of Acceptance for density, the average of the density measurements based on the testing frequency indicated in Table 301-B.14:1 "Contractor and NMDOT Sampling and Testing Requirements" will be compared to the maximum density from the field in accordance with Appendix A, "AASHTO T-180-15 (Method D-Modified) and/or the field density established in Section 301-B.7, "Construction, 3. Grading and Compaction" to determine Acceptability. Once the average density of the lot has been determined, the Contractor will not be permitted to provide additional compaction to raise the average.

Payment will be made in accordance with the requirements of Table 301-B.12:1 "Payment Schedule for Lot Densities".

**Table 301-B.12:1
 Payment Schedule for Lot Densities**

| % of Density from Approved Mix Design | % of Payment as Applied to CCPR Foamed Asphalt Base SY Item |
|---------------------------------------|---|
| >102 | 90 |
| >97.0 to <102 | 100 |
| ≤96.0 to <97.0 | 95 |
| ≤95.0 to <96.0 | 90 |
| <95 | 75 |

Any results over 102% density shall require the preparation of a new rolling pattern in accordance with Section 301-B.7, "Construction, 3. Grading and Compaction", to prevent damage to the completed lift.

For the purpose of Acceptance, each Day's production and full lane width shall be considered a lot unless the paving length is less than 2,000 linear feet. When the production is less than 2,000 linear feet, the production results shall be combined with the previous Day's production.

301-B.13 BASIS OF PAYMENT

| Pay Item | Pay Unit |
|---|-----------------|
| Cold Central Plant Recycle-Foamed Asphalt Stabilized Base | Square Yard |
| Asphalt Binder | Ton |
| Mineral Filler | Ton |

The Department will adjust payment for CCPR-Foamed Asphalt Stabilized Base in accordance with Section 301-B.12.1, "Density".

301-B.13.1 Work Included in Payment

The Department will consider as included in the payment for CCPR-Foamed Asphalt Stabilized Base and will not measure or pay separately for the following Work:

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1. Job-mix formula materials, testing existing roadway section and replacement Material for existing roadway sample sections;
2. Production test strips;
3. Fog Seal;
4. Corrective Work deficiencies; and
5. Sampling and testing requirements in accordance with Section 301-B.14, "Sampling and Testing Requirements".

301-B.14 Sampling and Testing Requirements

**Table 301-B.14:1
Contractor and NMDOT Sampling and Testing Requirements**

| Material or Product | Acceptance Type | Characteristic | Test Method Specifications | Sampling Frequency by Contractor and NMDOT (unless specified) | Point of Sampling | Reporting Time |
|--|-------------------------------------|---|---|---|--|----------------------|
| Asphalt Binder (Mix Design) | Measured and Tested For Conformance | Quality | AASHTO M 320 Table 1 | _ (NMDOT not required to Test) | Refinery | Before Producing |
| | | Foaming Half-Life | Table 301-B.2:2 | | | |
| | | Expansion Ratio | Table 301-B.2:2 | | | |
| Foamed Asphalt Stabilized Base (Mix Design) | Measured and Tested for Conformance | Gradation | AASHTO T 11, AASHTO T27 and Table 301-B.2:1 | _ (NMDOT not required to test) | - | Before Producing |
| | | Plasticity Index | AASHTO T 89 and AASHTO T90 | | | |
| | | Moisture-Density | AASHTO T180 Method D (TTCP Modified) | | | |
| | | Indirect Tensile Strength | AASHTO T 283 | | | |
| | | Marshall Stability | AASHTO T 245 and Table 301-B.2:2 | | | |
| Foamed Asphalt Stabilized Base (Test Strips) | Measured and Tested for Conformance | Gradation | AASHTO T 11 and T27 | 1 per test strip | Plant Feed Belt | Upon Completing Test |
| | | Moisture | AASHTO T 255 | 3 per test strip | Behind Laydown Machine before Compaction | Upon Completing Test |
| | | Moisture Density Relation (Dry Density) | AASHTO T 180 Method D, Modified | 3 per test strip | Behind Laydown Machine before Compaction | 24 hours |
| | | Density | AASHTO T310 | 3 per test strip | In -place after compaction | Upon Completing Test |
| | | Marshall Stability | AASHTO T 245 and Table 301-B.2:2 | 1 per test strip (NMDOT not required to test) | Behind Laydown Machine before Compaction | Upon Completing Test |

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| Material or Product | Acceptance Type | Characteristic | Test Method Specifications | Sampling Frequency by Contractor and NMDOT (unless specified) | Point of Sampling | Reporting Time |
|---|-------------------------------------|---|---|---|--|----------------------------|
| | | Asphalt Binder Content | - | Daily | Strap | End Of Day |
| | | Indirect Tensile Strength | AASHTO T283 and Table 301-B.2:2 | 1 per test strip (NMDOT not required) | Behind Laydown Machine before Compaction | Upon Completing Test |
| | Visual Inspection | Homogeneous Mixing ¹ | | 3 per test strip | Behind Laydown machine before compaction | Upon Completing Test |
| Asphalt Binder (Production) | Measured and Tested for Conformance | Binder Temperature | | 1 Every Load | Temperature Gauge at Mixing Plant | Upon Completing Test |
| Foamed Asphalt Stabilized Base (Production) | Measured and Tested for Conformance | Gradation | AASHTO T11, T27 and Table 301-B.2:1 and 301-B.2:2 | 2 per lane mile (Contractor) 1 per lane mile (NMDOT) | Plant Feed Belt | 24 hours |
| | | Moisture | AASHTO T 255 | 2 per lane mile (Contractor) 1 per lane mile (NMDOT) | Behind Laydown Machine Before Compaction | 24 hours |
| | | Asphalt Binder Content | --- | Daily (Contractor) | Strap | End of Each Production Day |
| | | Moisture Density Relation (Dry Density) | AASHTO T 180 Method D Modified | 1 Per Mix Design Per Day (required), and as needed (NMDOT) | Behind Laydown Machine before Compaction | 24 hours |
| | | Density | AASHTO T 310 | 1 per 1000 feet per lane (required), and as needed (NMDOT) | In-place after compaction | Upon Completing Test |
| | | Marshall Stability | AASHTO T 245 and Table 301-B.2:2 | 1 per Day (NMDOT not required to test) | Behind Laydown Machine before Compaction | Upon Completing Test |
| | | Dry Indirect Tensile Strength And TSR | AASHTO T283 and Table 301-B.2:2 | 1 per Day (NMDOT not required to test) | Behind Laydown Machine before Compaction | Upon Completing Test |

¹ When sampling for test strip mix design verification testing, visually determine if asphalt globules, stringers, and binder segregation are present. The test strip is considered Acceptable for further mix verification testing if adequate homogeneous mixing is observed.

Appendix A

Moisture-Density Relations of Soils using a Attachment B

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**4.54-kg (10-lb.) Rammer and a 457-mm (18-in.) Drop
AASHTO T-180-15
(Method D-Modified)
For Use with CCPR Only**

The compaction test for soils and aggregate materials determines the dry weight per cubic foot under a given compactive effort and varying water contents over a sufficient range to indicate the maximum dry weight per cubic foot and the optimum moisture content.

- Modification:*
1. *T-180, Method D, modified shall be used for Cold Central Plant Recycling ONLY.*
 2. *A minimum of three (3) points shall be run.*
 3. *A minimum moisture sample size shall be 1000 grams.*
 4. *Only a mechanical hammer will be used.*
 5. *Only a sector face rammer shall be used.*
 6. *Weigh to the nearest 0.1 of a gram or 0.01 of a pound.*

Key Elements:

1. **Obtain Sample.** Obtain sample by AASHTO T-2 from behind the laydown machine. The sample must be large enough that when the oversized (retained on the 19.0-mm (3/4-in.) sieve) particles are removed, 11 lbs. or more of the sample remains **(8.1)**.
2. **Prepare Sample.** The field moisture must be maintained in the sample by storing and transporting the sample in a moisture proof container. The aggregations are to be broken up in such a manner as to avoid reducing the natural size of individual particles **(8.1)**. Various methods of pulverizing may be used as long as it does not cause degradation to the material. Sieve soil over the 19.0-mm (3/4-in.) sieve.

When the sample has oversized particles, use **Annex A1, Correction of Maximum Dry Density and Optimum Moisture Content for Oversized Particles.** *(Correction may of practical significance for materials with only a small percentage of oversized particles. minimum percentage is not specified, correction shall be applied to samples with more percent by weight of oversized particles (A1.1.2).)*

T-180

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3. **Inspect and Prepare Apparatus.** The apparatus shall consist of the following: cylindrical mold with detachable collar and base plate **(3.1)**. A metal rammer with a mass of 4.536 ± 009 kg (10.00 ± 0.02 lb.), and having a sector face with an area equal to 50.80 ± 0.25 mm (2.000 ± 0.01 in) **(3.2)**. A hardened steel straightedge at least 250 mm (10 in.) in length and having one beveled edge **(3.6)**. Balance **(3.4)**, drying oven **(3.5)**, sieves **(3.7)**, graduated cylinder and miscellaneous mixing tools such as mixing pans, spoon, spatula **(3.8)**, sample extruder **(3.3)**, containers **(3.9)**. Only a mechanical compaction hammer will be used, and must be calibrated against a hand hammer of correct weight and drop **(3.2.2 & Note 3)**.
4. **Determine Empty Weight of Cylindrical Mold.** Weigh mold and base plate without detachable collar and record to the nearest 0.1 g or 0.01 of a pound.
5. **Do not add any Moisture to Sample.** The sample of Cold Central Plant Recycling material shall be protected at all times from field moisture loss. The water in the material added during the central plant

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processing will be the only water added to the sample. Three separate and approximately equal representative samples shall be weighed and placed in a plastic bag used for mixing purposes.

6. **Compact Specimen.** Form a specimen by compacting the prepared soil in a 152.40 mm (6 in.) mold, with collar attached, in five approximately equal layers to give a compacted depth of about 125 mm (5 in.). Prior to compaction, place the loose soil into the mold and spread into a layer of uniform thickness. Lightly tamp the soil prior to compaction until it is not in a loose or fluffy state, using either the manual compaction rammer or similar device having a face diameter of approximately 50 mm (2 in.) (9.2). Each layer shall be compacted by 56 uniformly distributed blows over the surface of the layer (11.1) from the rammer dropping free from a height of 457 ± 2 mm (18.00 ± 0.06 in.) above the elevation of the soil (3.2.1). During compaction, the sector face hammer shall overlap the hammer surface area for each blow. During compaction the mold shall rest firmly on a dense, uniform, rigid and stable foundation or base. This base shall remain stationary during the compaction process (9.2).
7. **Trim Top of Compacted Soil.** With the extension collar removed, carefully trim the compacted soil even with the top of the mold, using the steel straightedge. Holes developed in the surface by removal of coarse material shall be patched with smaller sized material (9.2.1).
8. **Weigh Mold and Base Plate with Compacted Soil.** Clean excess material from the outside of the mold and base. Weigh the mold with soil to the nearest 0.1 g or 0.01 of a pound and record (9.2.1).
9. **Obtain Moisture Sample and Weigh.** Remove the material from the mold; it may be necessary to use a sample extruder to remove the compacted specimen. Slice the specimen vertically through the center. Take a representative sample from one of the cut faces; sample the entire length of the specimen (9.3). Place this moisture sample in a suitable container and weigh to the nearest 0.1 g and record. The moisture sample shall weigh not less than 1000 grams.
10. **Place in oven at $110 \pm 5^\circ\text{C}$ ($230 \pm 9^\circ\text{F}$) and dry to constant mass.** Dry sample in accordance with AASHTO T-265. Constant mass is defined as after initial drying the weight of the material decreases by less than 0.1% after a minimum of 10 minutes additional drying.

$$\frac{W1 - W2}{W2} \times 100, \frac{W2 - W3}{W3} \times 100, \text{ etc.}$$

11. **Repeat Steps 5 through 11.** Repeat steps 5 through 11. Prepare 3 specimens total.
12. **Calculate the Wet Weight of Compacted Soil.** Multiply the weight of the compacted specimen, minus the weight of the mold, by 13.33 for masses recorded in pounds (11.1). This result is recorded as the wet weight in pounds per cubic foot (lb/ft^3) of the compacted soil.
13. **Perform Calculations.** Calculate the moisture content and the dry weight of the soils as compacted for each specimen (12.1).

$$\% \text{ Moisture in specimen} = \frac{\mathbf{A} - \mathbf{B}}{\mathbf{B} - \mathbf{C}} \times 100$$

\mathbf{A} = Weight of container and wet soil.
 \mathbf{B} = Weight of container and dry soil.
 \mathbf{C} = Weight of container.

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$$\text{Dry Weight} = \frac{W1}{\% \text{ Moisture} + 100} \times 100 \quad W1 = \text{Wet weight, in lbs/ft}^3 \text{ of compacted soil.}$$

Calibration of Mechanical Compactor to Manual Compactor

Using the soil prepared in accordance with this T-180, Method D, determine the optimum moisture content and maximum dry density. Prepare one five-point curve using the mechanical compactor and another five-point curve using the manual compactor (calibrated hand hammer). Record the values of both maximum dry density and compare each value. If the difference between the two values is equal to or less than 2.0 pounds per cubic foot apart, the mechanical compactor is satisfactory for immediate use.

If the difference between the two values is greater than 2.0 pounds per cubic foot apart, then obtain two additional sets of data. Using the same soil sample, determine the average percentage difference of the maximum dry density of the three values. If the difference between the averages of the three sets is less than 2.0 pounds per cubic foot, the mechanical compactor is satisfactory for immediate use.

If the difference is still greater than 2.0 pounds per cubic foot, then adjust the rammer mass of the mechanical compactor and perform three new maximum dry density curves. If the new average absolute value of the three maximum dry density curves is still not less than 2.0 pounds per cubic foot, continue to make adjustments and repeat this procedure until it is.

For more information on rammer adjustments, refer to ASTM D2168, 5.5 – 5.7.

**NEW MEXICO DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION MODIFYING**

SECTION 416: MINOR PAVING

All provisions of SECTION 416 – MINOR PAVING of the New Mexico State Department of Transportation Standard Specifications for Highway and Bridge Construction, 2019 Edition, shall apply as modified herein:

416.1 DESCRIPTION

This Work consists of constructing one (1) or more pavement courses of Hot Mix Asphalt (HMA) or Warm Mix Asphalt (WMA) on a prepared subgrade, aggregate base course or milled surface.

416.2 MATERIALS

The Contractor shall use Materials for minor paving in accordance with Section 423.2 or Section 424.2, “Materials.”

Delete **Section 423.2.7: Reclaimed Asphalt Pavement (RAP)** in its entirety and replace with the following:

Unless otherwise specified in the Contract, the Contractor may use RAP removed under the Contract consisting of salvaged, milled, pulverized, broken, or crushed asphalt pavement. The Contractor may use RAP produced from outside sources provided the following is met: after the Contractor obtains sufficient quantities of RAP aggregate samples in accordance with AASHTO T 308; the Department will Accept RAP for which the coarse aggregate has a percent wear of 40.0 or less, at 500 revolutions, when tested in accordance with

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AASHTO T 96. The Contractor shall provide plus No. 4 RAP Material with a minimum of 75% Fractured Faces content (one (1) face). The Department will make no additional payment for the asphalt binder in the RAP or asphalt binder due to asphalt binder grade adjustment.

In the event the Contractor elects to use up to 15% RAP (by weight) or is specified as a maximum of 15% RAP by the Contract (by weight) in the production of HMA mixtures, the Contractor shall use the PG grade asphalt binder specified in the Contract.

For quantities greater than 15% and up to 25% RAP, the Contractor shall:

1. Either lower the asphalt binder's high and low temperature grades by one (1) grade (e.g. lower a PG 76-22 to a PG 70-28); or
2. Extract, recover, and combine the RAP's asphalt binder with a virgin asphalt binder per AASHTO M 323, Appendix A, ensuring the resultant binder meets the entire AASHTO M 320 (excluding direct tension) required Project PG asphalt binder properties indicated on the approved mix design.

For quantities greater than 25% and up to 35% RAP, the Contractor shall:

1. Extract, recover, and combine the RAP's asphalt binder with a virgin asphalt binder per AASHTO M 323, Appendix A; and
2. Ensure the resultant binder meets the entire AASHTO M 320 (excluding direct tension) required Project PG asphalt binder properties indicated on the approved mix design.

The Department will not allow the Contractor to use more than 35% RAP in the production of HMA mixtures.

For Projects of entirely new construction, the Contractor shall:

1. Limit the RAP to 15% in the top mat or extract, recover and combine the RAP's asphalt binder with a virgin asphalt binder per AASHTO M323, Appendix A; and
2. Ensure the resultant binder meets the entire AASHTO M320 (excluding direct tension) required Project PG asphalt binder properties indicated on the approved mix design.

If Plus Grades of PG asphalt binder is specified on the project, for quantities greater than 15% RAP, the Contractor shall extract, recover, and combine the RAP's asphalt binder with a virgin asphalt binder per AASHTO M 323, Appendix A. The Contractor shall ensure the resultant binder meets the entire AASHTO M 320 required Project PG asphalt binder properties indicated on the approved mix design including the additional Plus Grade requirements for Elastic Recovery and Solubility.

The Contractor shall:

1. Process RAP so that 100% passes a 1-1/2-inch sieve;
2. Maintain adequate stockpile management (i.e. sufficient quantities and shaping of the stockpiles);
3. Address in the Quality Control Plan how RAP will be controlled, such as which screen will be used to split into two (2) stockpiles, or by what method the RAP will be controlled to keep the resultant mix within Acceptable limits;
4. Account for the weight of the binder in the RAP when batching aggregates;
5. Provide RAP that is free of Deleterious Materials; and
6. Perform process control testing in accordance with Section 902, "Quality Control" requirements as RAP is produced and prepared for inclusion in the HMA.

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If problems with HMA consistency or compliance with Project Specifications occur, additional efforts taken to achieve Acceptable levels of consistency and compliance with Contract Specifications, at the Contractor's discretion (at no additional cost to the Department), include, but are not limited to:

1. Reduce the top size of the RAP from 1-1/2 inch to one (1) inch;
2. Fractionate the aggregates on a second screen, such as the 3/8 inch or 1/4 inch Screen so that the RAP is maintained in three (3) stockpiles, one being RAP larger than 1-1/2 inch to two (2) inches, Coarse RAP and the third being Fine RAP;
3. Ensure that the RAP used in the HMA mix design is representative of the RAP available on the Project;
4. Cover the RAP pile(s) so that ambient moisture is not absorbed; and
5. Process and maintain the stockpiles so that the RAP Material is equally and uniformly distributed throughout the entire stockpile(s) and is withdrawn such that uniform, non-segregated RAP is delivered to the hoppers.

Minor Paving shall be classified as one of the following:

1. Minor Pavement Type I – consists of minor paving that can be placed within the Roadway Prism that is of sufficient size or area to reasonably allow the material to be placed with equipment as described in Section 423.3.4.3 “Pavers” and Section 423.3.4.4 “Compaction Equipment”.

Examples of Minor Pavement Type I include the following:

1. mainline paving
 2. auxiliary lanes
 3. holding lanes
 4. shoulders
2. Minor Pavement Type II – consists of minor paving placed outside the Roadway Prism or in areas within the Roadway Prism that would not allow for the material to be placed with equipment as described in Section 423.3.4.3 “Pavers” and Section 423.3.4.4 “Compaction Equipment”.

Examples of Minor Pavement Type II include the following:

1. driveways
2. turnouts
3. official use crossings
4. widenings less than 10 feet in width
5. utility crossings
6. ADA Improvements
7. all other items not listed in Type I

416.3 CONSTRUCTION REQUIREMENTS

The Contractor shall perform minor paving in accordance with the following 423 Sections or the correlating 424 Sections:

1. Section 423.3.1, “Construction Requirements, General;”
2. Section 423.3.2, “Mix Temperature Requirements;”
3. Section 423.3.3, “Addition of Mineral Admixtures;”

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- 4. Section 423.3.4, "Equipment;" and
- 5. Section 423.3.5, "Placement Operations" excluding 423.3.5.7, "Test Strip & Shakedown Period."

No referee testing will be required for Minor Paving, but may be used if both parties agree in writing at the Pre-Pave Conference. If used, referee testing will be done in accordance with Sections 423.3.7, "Dispute Resolution" and 424.3.7, "Dispute Resolution."

416.3.1 Sampling and Testing

416.3.1.1 Contractor Quality Control

The Contractor shall provide quality control measures in accordance with Section 902, "Quality Control."

The Contractor shall identify the proposed Lot size in the Quality Control Plan for approval by the Project Manager

416.3.1.2 Department Quality Assurance

The Department will provide quality assurance measures in accordance with Section 905 "Quality Assurance."

416.3.1.2.1 Acceptance

The Department will Accept Materials in accordance with Section 905.1.3, "Acceptance."

416.3.1.3 Independent Assurance Testing

The Department will perform Independent Assurance sampling and testing in accordance with Section 906, "Minimum Testing Requirements."

416.4 METHOD OF MEASUREMENT

If the Department measures by the square yard, the Department will measure minor pavement using the dimensions shown in the Contract or approved field measurements.

416.5 BASIS OF PAYMENT

The Department will adjust payment for minor pavement in accordance with Section 905.1.3.2, "Acceptance Lots and Pay Factor Determination."

| Pay Item | Pay Unit |
|-------------------------------|-----------------|
| <i>Minor Pavement Type I</i> | Ton |
| <i>Minor Pavement Type II</i> | Ton |

416.5.1 Price Adjustments

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The Department will pay for Accepted quantities of Minor Pavement at the Bid Item Unit Price, adjusted in accordance with Section 905.1.4 "Pay Factor Determination".

416.5.2 Work Included in Payment

The Department will consider as included in the payment for the pay item(s) listed in this section and will not measure or pay separately for the following Work:

1. Asphalt binder, anti-strip, aggregate, blending sand, mineral filler, mineral admixture, and WMA additive or process as appropriate;
2. Mixing, hauling, placement, and compaction of HMA or WMA;
3. Providing Mix Design in accordance with Section 423.2.8' "Mix Design;"
4. Quality Control in accordance with Section 902, "Quality Control;"
5. Providing and transporting all cores; and
6. Providing storage container for samples and cores if referee testing is used.

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**NEW MEXICO DEPARTMENT OF TRANSPORTATION
SPECIAL PROVISION MODIFYING**

SECTION 905: QUALITY ASSURANCE FOR MINOR PAVING

All provisions of SECTION 905 – QUALITY ASSURANCE FOR MINOR PAVING of the New Mexico State Department of Transportation Standard Specifications for Highway and Bridge Construction, 2019 Edition, shall apply as modified herein:

905.1 DESCRIPTION

The Department will sample and test Materials for Acceptance unless otherwise specified in the Contract. Department testing is not for Quality Control.

905.1.1 Department Sampling and Testing for Acceptance

Acceptance sampling and testing will be performed by Department representatives, certified by the Department through TTCP in the applicable test procedures. The testing procedures utilized will be in accordance with test methods and modifications as found in the current TTCP Manual(s), AASHTO or Department methods.

The Department will sample and test in accordance with Section 906, “Minimum Testing Requirements” or at a lesser subplot size for Assurance purposes as determined by the Project Manager before production of Material begins. If Material appears defective, or if the Project Manager determines that a change in the process or product has occurred, additional sampling and testing may occur.

If the Department performs additional informational sampling and testing, the results will be used only to determine if corrective action is need to be taken by the Contractor and will not be used for Pay Factor Determination.

The Department will provide test results to the Contractor within two (2) Working Days after sampling. Any additional testing by the Department will be provided to the Contractor upon written request.

905.1.2 Independent Assurance Testing

TTCP certified independent personnel will perform Independent Assurance testing on split samples from Quality Control and Assurance programs to ensure that the Contractor and Department field personnel are using correct and accurate procedures and the proper Equipment. These personnel will not have direct responsibility for Quality Control or Assurance testing. Independent Assurance Test results will not be used for Acceptance.

905.1.3 Acceptance

The Department will Accept the constructed product based on inspection and Laboratory testing.

The Department will test samples of Minor Paving Type I HMA/WMA before compaction and on cut pavement samples (cores).

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The Department will Accept Minor Paving Type I, the constructed product based on the following criteria:

Type I Minor Pavement:

1. Laboratory air voids as determined in accordance with AASHTO T312, AASHTO T166 and AASHTO T209;
2. Asphalt content as determined by the tank strap method or plant asphalt metering system defined in the Contractor's Quality Control Plan (binder ignition oven calibration samples will not be required);
3. Final thickness of the compacted Material as measured from cores in accordance with ASTM D3549; and
4. Density of the compacted HMA/WMA as determined in accordance with AASHTO T355 Standard Method of Test for In-Place Density of Asphalt Mixtures by Nuclear Methods. Percent compaction will be calculated using the current average Gmm representing that day.

The Department will test samples of Minor Paving Type II HMA/WMA before compaction and on cut pavement samples (cores).

The Department will Accept Minor Paving Type II, the constructed product based on the following criteria:

Type II Minor Pavement:

1. Final thickness of the compacted Material as measured from cores in accordance with ASTM D3549, or other method as approved by the Project Manager.
2. Density of the compacted HMA/WMA as determined in accordance with AASHTO T355 Standard Method of Test for In-Place Density of Asphalt Mixtures by Nuclear Methods. Percent compaction will be calculated using the current average Gmm for the lot.

For both Type I and Type II Minor Pavement, in order to establish a Densometer correlation factor, the Contractor shall provide cores from three (3) locations designated by the Project Manager. A new correlation factor can be requested if a change in Materials, conditions, or densometer has occurred or if the accuracy of the established correlation factor is in question.

For both Type I and Type II Minor Pavement, the Project Manager may reject Material that appears to be defective based on visual inspection.

905.1.4 Pay Factor Determination

The Department will determine component pay factors in accordance with:

1. Table 905.1.4.1:1, "Single Test Pay Factor for Correlated In-Place Density",
2. Table 905.1.4.1:2, "Single Test Pay Factor for Laboratory Air Voids",
3. Table 905.1.4.1:3, "Single Test Pay Factor for Asphalt Content", and
4. Table 905.1.4.1:4 "Single Test Pay Factor for Thickness".

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Table 905.1.4.1:1
Single Test Pay Factor for Correlated In-place Density ^a

| Percent Compaction | Pay factor (%) |
|---------------------------|-----------------------|
| > 97.99 | Reject |
| 97.0 – 97.99 | 90 |
| 96.01 – 96.99 | 95 |
| 92.00 – 96.00 | 105 |
| 91.50 – 91.99 | 95 |
| 90.50 – 91.49 | 90 |
| 90.00 – 90.49 | 80 |
| < 90.00 | Reject |

^a Minimum of ten (10) density tests per Lot is required

For Projects consisting of single lift overlays or mill and inlay with a single lift of two and a half inches or less, the Project Manager may grant an exception to the mean density target requirement of at least 94.5% of the theoretical maximum density if the Contractor can demonstrate that a minimum of 92.0% cannot be reasonably obtained because of the existing conditions of the Pavement Structure or Subgrade Materials. The Contractor demonstrates this by providing non-destructive density results obtained during paving operations witnessed by a State Inspector at the location in question. If the Project Manager grants this exemption, the Contractor shall construct a Roadway test strip and develop an HMA/WMA compaction process to get the highest possible density based on an approved roller's density gain per pass, in accordance with Section 423.3.4.4, "Compaction Equipment." The Project Manager will approve the process, establish a new target value for density and establish a new Acceptance lot only for the portion of the Project addressed herein before paving begins or continues. Regardless of lift, a minimum density of 91.0% shall be achieved on all NHS Routes, as provided on the NMDOT external website.

Table 905.1.4.1:2
Single Test Pay Factor for Laboratory Air Voids ^{a, b}

| Deviation from TV shown on approved JMF | Pay factor (%) |
|--|-----------------------|
| < ±1.4 | 105 |
| ±1.5 to ±1.6 | 95 |
| ±1.7 to ±1.8 | 85 |
| ±1.9 to ±2.0 | 75 |
| ≥ ±2.0 | Reject |

^a Minimum of three (3) laboratory air void tests per Lot is required

^b Laboratory air voids obtained on Type II Minor Pavement shall not be used for pay determination

Table 905.1.4.1:3
Single Test Pay Factor for Asphalt Content ^a

| Deviation from TV shown on approved JMF | Pay factor (%) |
|--|-----------------------|
| < ±0.35 | 100 |

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Table 905.1.4.1:3
Single Test Pay Factor for Asphalt Content ^a

| Deviation from TV shown on approved JMF | Pay factor (%) |
|--|-----------------------|
| ±0.36 to ±0.55 | 90 |
| ≥±0.56 | Reject |

^a Minimum of three (3) asphalt contents per Lot is required

Table 905.1.4.1:4
Single Test Pay Factor for Thickness

| Negative Deviation from Minimum Plan Thickness | Pay factor (%) |
|---|--------------------------------|
| Plan Minimum Thickness or Thicker | 100 |
| ≤1/4 inch | 100 |
| > 1/4 inch to 1/2 inch | 90 |
| > 1/2 inch to 3/4 inch | 75 |
| > 3/4 inch to 1.0 inch | 50 |
| > 1.0 inch | Corrective Action ¹ |

¹ Corrective action includes removal and replacement, overlay, or other corrective actions approved by the Project Manager. Thin or feathered edge surface patching is not acceptable. If the Contractor elects to overlay the deficient area(s) the overlay lift thicknesses must meet the requirement of Table 905.1.4.1:5, "HMA/WMA Lift Thickness Requirements".

Table 905.1.4.1:5
HMA/WMA Lift Thickness Requirements

| HMA/WMA Type | Lift Thickness (Inches) | |
|---------------------|--------------------------------|----------------|
| | Minimum | Maximum |
| SP-III | 2.5 | 3.5 |
| SP-IV | 1.5 | 3.0 |
| SP-V | 0.75 | 1.5 |

The Contractor shall remove and replace rejected Material identified as per Table 905.1.4.1:1, "Single Test Pay Factor for Correlated In-Place Density", Table 905.1.4.1:2, "Single Test Pay Factor for Laboratory Air Voids", and Table 905.1.4.1:3, "Single Test Pay Factor for Asphalt Content".

In lieu of removing and replacing rejected Material, if in the best interest of the Department, the Project Manager may allow the Material to remain in place at 50% of the Bid Item Unit Price.

905.1.6 Price Adjustments

The Department will pay for Accepted quantities of Minor Pavement by multiplying the Bid Item Unit Price by the composite pay factor determined on a lot by lot basis by:

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Determining each component single test pay factor average as determined by:

1. Table 905.1.4.1:1, "Single Test Pay Factor for Correlated In-Place Density",
2. Table 905.1.4.1:2, "Single Test Pay Factor for Laboratory Air Voids",
3. Table 905.1.4.1:3, "Single Test Pay Factor for Asphalt Content", and
4. Table 905.1.4.1:4 "Single Test Pay Factor for Thickness".

The composite pay factor for each lot will be determined by multiplying the average of each component single test property pay factor and the weighting factors in Table 905.1.6:1 for Type I Minor Pavement, or Table 905.1.6:2 for Type II Minor Pavement.

The maximum pay factor per lot is one (1.0), if the composite pay factor for a lot is greater than one (1.0), the pay factor will be set at one (1.0).

Table 905.1.6:1
Weighting Factors
Type I Minor Pavement

| Characteristic | "f" Factor (%) |
|-----------------------------|-----------------------|
| Correlated In-place Density | 35 |
| Laboratory Air Voids | 35 |
| Asphalt Content | 20 |
| Thickness | 10 |

Table 905.1.6:2
Weighting Factors
Type II Minor Pavement

| Characteristic | "f" Factor (%) |
|-----------------------------|-----------------------|
| Correlated In-place Density | 50 |
| Thickness | 50 |

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Items:

The prices quoted herein represent the total compensation to be paid by the State of New Mexico for goods and/or services provided for **NMDOT District 6 only**. It is understood that the vendor providing said goods and/or services to the State of New Mexico is responsible for payment of all costs of labor, equipment, tools, materials, federal taxes, permits, licenses, fees, and any other items necessary to complete the work provided. The prices quoted in this price agreement include an amount sufficient to cover such costs. When bidding, enter the amounts for the respective bid item unit prices to a maximum of three (3) decimal places.

| Items | Approx. Qty. | Unit | Article and Description | (AA) Price | (AB) Price | (AC) Price |
|-------|--------------|------|--|------------|------------|------------|
| 001 | 1 | SY | Cold Central Plant Recycle 0 - 2000 S.Y. 3" to 6" Depth | \$21.00 | \$23.00 | \$29.00 |
| 002 | 1 | SY | Cold Central Plant Recycle 0 - 2000 S.Y. 6.1" to 9" Depth | \$23.00 | \$30.00 | \$46.00 |
| 003 | 1 | SY | Cold Central Plant Recycle 0 - 2000 S.Y. 9.1" to 12" Depth | \$25.00 | \$39.00 | \$63.00 |
| 004 | 1 | SY | Cold Central Plant Recycle 2001 - 4000 S.Y. 3" to 6" Depth | \$13.50 | \$20.00 | \$19.00 |
| 005 | 1 | SY | Cold Central Plant Recycle 2001 - 4000 S.Y. 6.1" to 9" Depth | \$15.70 | \$27.00 | \$28.00 |
| 006 | 1 | SY | Cold Central Plant Recycle 2001 - 4000 S.Y. 9.1" to 12" Depth | \$20.00 | \$35.00 | \$37.00 |
| 007 | 1 | SY | Cold Central Plant Recycle Above 4000 S.Y. 3" to 6" Depth | \$7.77 | \$20.00 | \$13.00 |
| 008 | 1 | SY | Cold Central Plant Recycle Above 4000 S.Y. 6.1" to 9" Depth | \$12.20 | \$24.00 | \$17.00 |
| 009 | 1 | SY | Cold Central Plant Recycle Above 4000 S.Y. 9.1" to 12" Depth | \$17.00 | \$28.00 | \$22.00 |
| 010 | 1 | SY | Full Depth Reclamation 0 - 2000 S.Y. 3" to 6" Depth | \$19.25 | \$19.00 | \$25.00 |

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| Items | Approx. Qty. | Unit | Article and Description | (AA) Price | (AB) Price | (AC) Price |
|-------|--------------|-----------|---|------------|------------|------------|
| 011 | 1 | SY | Full Depth Reclamation 0 - 2000 S.Y. 6.1" to 9" Depth | \$22.00 | \$20.00 | \$32.00 |
| 012 | 1 | SY | Full Depth Reclamation 0 - 2000 S.Y. 9.1" to 12" Depth | \$25.00 | \$23.00 | \$40.00 |
| 013 | 1 | SY | Full Depth Reclamation 2001 - 4000 S.Y. 3" to 6" Depth | \$14.00 | \$17.00 | \$16.00 |
| 014 | 1 | SY | Full Depth Reclamation 2001 - 4000 S.Y. 6.1" to 9" Depth | \$15.00 | \$18.00 | \$23.00 |
| 015 | 1 | SY | Full Depth Reclamation 2001 - 4000 S.Y. 9.1" to 12" Depth | \$18.00 | \$21.00 | \$31.00 |
| 016 | 1 | SY | Full Depth Reclamation Above 4000 S.Y. 3" to 6" Depth | \$5.67 | \$7.00 | \$5.75 |
| 017 | 1 | SY | Full Depth Reclamation Above 4000 S.Y. 6.1" to 9" Depth | \$7.76 | \$7.75 | \$6.00 |
| 018 | 1 | SY | Full Depth Reclamation Above 4000 S.Y. 9.1" to 12" Depth | \$11.99 | \$9.25 | \$8.00 |
| 019 | 1 | Ton | Asphalt Binder | \$695.00 | \$650.00 | \$660.00 |
| 020 | 1 | Ton | Mineral Filler | \$215.00 | \$230.00 | \$230.00 |
| 021 | 1 | SY- IN | Cold Milling (Asphalt) 0" - 6" | \$0.67 | \$0.55 | \$0.52 |
| 022 | 1 | SY- IN | Cold Milling (Asphalt) 6.1" - 9" | \$0.67 | \$0.50 | \$0.52 |
| 023 | 1 | SY | Unstable Subgrade Stabilization | \$10.00 | \$25.00 | \$25.00 |
| 024 | 1 | Ton | Placement of Contractor provided Minor Pavement Type I - SPIII w/PG 70-22, 0 - 1,500 Ton | \$101.00 | \$103.00 | \$105.00 |

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| Items | Approx. Qty. | Unit | Article and Description | (AA) Price | (AB) Price | (AC) Price |
|-------|--------------|------|--|------------|------------|------------|
| 025 | 1 | Ton | Placement of Contractor provided Minor Pavement Type I - SPIII w/PG 70-22, 1,501 - 3,000 Ton | \$95.00 | \$95.00 | \$95.00 |
| 026 | 1 | Ton | Placement of Contractor provided Minor Pavement Type I - SPIII w/PG 70-22, Above 3,000 Ton | \$90.45 | \$82.50 | \$84.00 |
| 027 | 1 | Ton | Placement of Contractor provided Minor Pavement Type I - SP IV w/PG 70-22, 0 - 1,500 Ton | \$104.00 | \$105.00 | \$110.00 |
| 028 | 1 | Ton | Placement of Contractor provided Minor Pavement Type I - SP IV w/PG 70-22, 1,501 - 3,000 Ton | \$97.00 | \$97.00 | \$101.00 |
| 029 | 1 | Ton | Placement of Contractor provided Minor Pavement Type I- SP IV w/PG 70-22, Above 3,000 Ton | \$93.00 | \$84.00 | \$84.50 |
| 030 | 1 | Ton | Placement of State provided Minor Pavement Type I - SPIII w/PG 70-22, 0 - 1,500 Ton | \$28.52 | \$30.00 | \$36.00 |
| 031 | 1 | Ton | Placement of State provided Minor Pavement Type I - SP III w/PG 70-22, 1,501 - 3,000 Ton | \$22.57 | \$28.00 | \$24.00 |
| 032 | 1 | Ton | Placement of State provided Minor Pavement Type I - SPIII w/PG 70-22, Above 3,000 Ton | \$18.26 | \$25.00 | \$21.00 |
| 033 | 1 | Ton | Placement of State provided Minor Pavement Type I - SPIV w/PG 70-22, 0-1,500 Ton | \$28.52 | \$30.00 | \$37.00 |

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| Items | Approx. Qty. | Unit | Article and Description | (AA) Price | (AB) Price | (AC) Price |
|-------|--------------|------|---|------------|------------|------------|
| 034 | 1 | Ton | Placement of State provided Minor Pavement Type I - SPIV w/PG 70-22, 1,501-3,000 Ton | \$22.57 | \$28.00 | \$30.00 |
| 035 | 1 | Ton | Placement of State provided Minor Pavement Type I - SPIV w/PG 70-22, Above 3,000 Ton | \$19.26 | \$25.00 | \$28.00 |
| 036 | 1 | Ton | Placement of Contractor provided Minor Pavement Type II - SPIII w/PG 70-22, 0 - 1,500 Ton | \$138.00 | \$110.00 | \$110.00 |
| 037 | 1 | Ton | Placement of Contractor provided Minor Pavement Type II - SPIII w/PG 70-22, 1,501 - 3,000 Ton | \$128.00 | \$105.00 | \$100.00 |
| 038 | 1 | Ton | Placement of Contractor provided Minor Pavement Type II - SPIII w/PG 70-22, Above 3,000 Ton | \$125.00 | \$95.00 | \$89.00 |
| 039 | 1 | Ton | Placement of Contractor provided Minor Pavement Type II - SP IV w/PG 70-22, 0 - 1,500 Ton | \$141.00 | \$115.00 | \$115.00 |
| 040 | 1 | Ton | Placement of Contractor provided Minor Pavement Type II - SP IV w/PG 70-22, 1,501 - 3,000 Ton | \$130.00 | \$110.00 | \$106.00 |
| 041 | 1 | Ton | Placement of Contractor provided Minor Pavement Type II - SP IV w/PG 70-22, Above 3,000 Ton | \$127.00 | \$100.00 | \$90.00 |
| 042 | 1 | Ton | Placement of State provided Minor Pavement Type II - SPIII w/PG 70-22, 0 - 1,500 Ton | \$65.53 | \$40.00 | \$41.00 |

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| Items | Approx. Qty. | Unit | Article and Description | (AA) Price | (AB) Price | (AC) Price |
|-------|--------------|------|---|------------|------------|------------|
| 043 | 1 | Ton | Placement of State provided Minor Pavement Type II - SP III w/PG 70-22, 1,501-3,000 Ton | \$55.96 | \$35.00 | \$29.00 |
| 044 | 1 | Ton | Placement of State provided Minor Pavement Type II - SPIII w/PG 70-22, Above 3,000 Ton | \$53.30 | \$32.50 | \$26.00 |
| 045 | 1 | Ton | Placement of State provided Minor Pavement Type II - SPIV w/PG 70-22, 0-1,500 Ton | \$66.53 | \$40.00 | \$42.00 |
| 046 | 1 | Ton | Placement of State provided Minor Pavement Type II - SPIV w/PG 70-22, 1,501-3,000 Ton | \$55.96 | \$35.00 | \$35.00 |
| 047 | 1 | Ton | Placement of State provided Minor Pavement Type II - SPIV w/PG 70-22, Above 3,000 Ton | \$53.30 | \$32.50 | \$33.00 |
| 048 | 1 | Ton | Placement of Contractor provided Tack Coat Material | \$590.00 | \$625.00 | \$625.00 |
| 049 | 1 | Ton | Placement of Contractor provided Prime Coat Material | \$604.00 | \$650.00 | \$575.00 |
| 050 | 1 | Hour | Traffic Control to include traffic control plan URBAN | \$445.00 | \$400.00 | \$325.00 |
| 051 | 1 | Hour | Traffic Control to include traffic control plan RURAL | \$430.00 | \$310.00 | \$325.00 |
| 052 | 1 | LF | Temporary Pavement Markings | \$0.48 | \$0.045 | \$0.20 |
| 053 | 1 | LF | Permanent Pavement Markings | \$0.29 | \$0.20 | \$0.20 |
| 054 | 1 | Mile | Mobilization- Cold Central Plant Recycle | \$110.00 | \$700.00 | \$650.00 |
| 055 | 1 | Mile | Mobilization- Full Depth Reclamation | \$150.00 | \$450.00 | \$350.00 |

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| Items | Approx. Qty. | Unit | Article and Description | (AA) Price | (AB) Price | (AC) Price |
|-------|--------------|----------|---|------------|------------|------------|
| 056 | 1 | Hour | Hauling of Material | \$96.00 | \$100.00 | \$95.00 |
| 057 | 1 | Ton Mile | Hauling of Material: 0-25 miles from Central Plant/Supplier | \$0.34 | \$0.33 | \$0.31 |
| 058 | 1 | Ton Mile | Hauling of Material: 26-50 miles from Central Plant/Supplier | \$0.30 | \$0.31 | \$0.26 |
| 059 | 1 | Ton Mile | Hauling of Material: 51-75 miles from Central Plant/Supplier | \$0.28 | \$0.29 | \$0.24 |
| 060 | 1 | Ton Mile | Hauling of Material: 76-100 miles from Central Plant/Supplier | \$0.27 | \$0.27 | \$0.23 |
| 061 | 1 | Ton Mile | Hauling of Material: 101-125 miles from Central Plant/Supplier | \$0.26 | \$0.25 | \$0.23 |
| 062 | 1 | Ton Mile | Hauling of Material: 126-150 miles from Central Plant/Supplier | \$0.25 | \$0.23 | \$0.23 |
| 063 | 1 | Ton Mile | Hauling of Material: over 150 mile from Central Plant/Supplier | \$0.24 | \$0.23 | \$0.23 |

*** 63 Items Total ***