

MDOT Use Only  
Checked \_\_\_\_\_  
Loaded \_\_\_\_\_  
Keyed \_\_\_\_\_

23 -



SM No. CMP7567030061

# PROPOSAL AND CONTRACT DOCUMENTS

FOR THE CONSTRUCTION OF  
(STATE DELEGATED)

23

Overlay approximately 16 miles of SR 567 from SR 24 to the end of State Maintenance, known as State Project No. MP-7567-03(006) / 304706301 in Amite County.

Project Completion: June 27, 2014

**SECTION 900**  
**OF THE CURRENT**  
**2004 STANDARD SPECIFICATIONS**  
**FOR ROAD AND BRIDGE CONSTRUCTION**  
**MISSISSIPPI DEPARTMENT OF TRANSPORTATION**  
**JACKSON, MISSISSIPPI**

**BIDDER CHECK LIST  
(FOR INFORMATION ONLY)**

- | \_\_\_\_\_ All unit prices have been entered **into Expedite Bid** in accordance with Subsection 102.06 of the Mississippi Standard Specifications for Road and Bridge Construction.
- | \_\_\_\_\_ **Expedite bid** sheets have been stapled and inserted into the proposal package.
- \_\_\_\_\_ First sheet of SECTION 905--PROPOSAL has been completed.
- \_\_\_\_\_ Second sheet of SECTION 905--PROPOSAL has been completed and signed.
- \_\_\_\_\_ Addenda, if any, have been acknowledged. Second sheet of Section 905 listing the addendum number has been substituted for the original second sheet of Section 905. Substituted second sheet of Section 905 has been properly completed, signed, and added to the proposal.
- \_\_\_\_\_ DBE/WBE percentage, when required by contract, has been entered on last sheet of the bid sheets of SECTION 905 - PROPOSAL.
- \_\_\_\_\_ Form OCR-485, when required by contract, has been completed and signed.
- | \_\_\_\_\_ The last sheet of the **Expedite** bid sheets of SECTION 905--PROPOSAL has been signed.
- \_\_\_\_\_ Combination Bid Proposal of SECTION 905--PROPOSAL has been completed for each project which is to be considered in combination (See Subsection 102.11).
- \_\_\_\_\_ Equal Opportunity Clause Certification, when included in contract, has been completed and signed.
- \_\_\_\_\_ The Certification regarding Non-Collusion, Debarment and Suspension, etc. has been executed in duplicate.
- \_\_\_\_\_ A certified check, cashier's check or bid bond payable to the State of Mississippi in the principal amount of 5% of the bid has been included with project number identified on same. A bid bond has been signed by the bidder and has also been signed or countersigned by a Mississippi Agent or Qualified Nonresident Agent for the Surety with Power of Attorney attached.
- \_\_\_\_\_ ON FEDERAL FUNDED PROJECTS, the Notice To Bidders regarding DUNS Requirements has been completed and included in the contract documents.
- \_\_\_\_\_ Non-resident Bidders: ON STATE FUNDED PROJECTS ONLY, a copy of the current laws regarding any preference for local Contractors from State wherein domiciled has been included. See Subsection 103.01, Mississippi Standard Specifications for Road and Bridge Construction, and Section 31-7-47, MCA, 1972 regarding this matter.
- | Return the **MDOT flash drive with completed EBS file**, proposal and contract documents in its entirety in a sealed envelope. DO NOT remove any part of the contract documents; exception - an addendum requires substitution of second sheet of Section 905. A stripped proposal is considered as an irregular bid and will be rejected.

Failure to complete any or all of the applicable requirements will be cause for the proposal to be considered irregular.

# MISSISSIPPI DEPARTMENT OF TRANSPORTATION

## TABLE OF CONTENTS

### PROJECT: MP-7567-03(006) / 304706301 – Amite County

901--Advertisement

904--Notice to Bidders:     Governing Specs. - # 1  
                                  Final Cleanup - # 3  
                                  Errata & Modifications to 2004 Standard Specifications - # 1405  
                                  Federal Bridge Formula - # 1928  
                                  Reduced Speed Limit Signs - # 2937  
                                  Alternate Asphalt Mixture Bid Items - # 3039  
                                  Temporary Traffic Paint - # 3131  
                                  Type III Barricade Rails - # 3655  
                                  Petroleum Products Base Price - # 3893  
                                  Questions Regarding Bidding - # 3980  
                                  Safety Apparel - # 4214  
                                  Terminal End Sections - # 4308  
                                  Contract Time - # 4466  
                                  Tack Coat - # 4490  
                                  Warm Mix Asphalt (WMA) - # 4524  
                                  Electronic Addendum Process - # 4526  
                                  Plan Quantity - # 4543  
                                  Manual on Uniform Traffic Control Devices (MUTCD) - # 4565  
                                  Adjustments for Bituminous Materials - # 4612  
                                  Payroll Requirements - # 4661

907-101-4:     Definitions  
907-102-10:    Bidding Requirements and Conditions  
907-103-8:     Award and Execution of Contract  
907-104-5:     Scope of Work  
907-105-7:     Control of Work  
907-107-13:    Legal Relations & Responsibility to Public  
907-108-30:    Prosecution and Progress  
907-109-6:     Measurement and Payment, W/ Supplement  
907-304-13:    Granular Courses  
907-401-2:     Hot Mix Asphalt (HMA), W/ Supplement  
907-401-6:     Warm Mix Asphalt (WMA)  
907-403-4:     Hot Mix Asphalt (HMA), W/ Supplement  
907-403-12:    Warm Mix Asphalt (WMA)  
907-405-8:     Polymer Modified Asphalt Rejuvenating Scrub Seal  
907-407-1:     Tack Coat  
907-411-4:     Ultra-Thin Asphalt Pavement (UTAP)  
907-412-2:     Pre-Grinding Existing Pavement  
907-618-9:     Placement of Temporary Traffic Stripe  
907-626-5:     Inverted Profile Thermoplastic Traffic Stripe  
907-702-3:     Polyphosphoric Acid (PPA) Modification of Petroleum Asphalt Cement  
907-703-11:    Aggregates  
907-710-1:     Fast Drying Solvent Traffic Paint

**PAGE 2 - PROJECT: MP-7567-03(006) / 304706301 – Amite County**

SECTION 905 - PROPOSAL,  
PROPOSAL BID ITEMS,  
COMBINATION BID PROPOSAL,  
STATE BOARD OF CONTRACTORS REQUIREMENTS,  
CERTIFICATION REGARDING NON-COLLUSION, DEBARMENT AND SUSPENSION,  
SECTION 902 - CONTRACT FORM, AND SECTION 903 - CONTRACT BOND FORM,

(REVISIONS TO THE ABOVE WILL BE INDICATED ON THE SECOND SHEET  
OF SECTION 905 AS ADDENDA)

# MISSISSIPPI DEPARTMENT OF TRANSPORTATION

## SECTION 901 - ADVERTISEMENT

Sealed bids will be received by the Mississippi Transportation Commission in the Office of the Contract Administration Engineer, Room 1013, Mississippi Department of Transportation Administration Building, 401 North West Street, Jackson, Mississippi, until 10:00 o'clock A.M., Tuesday, March 25, 2014, and shortly thereafter publicly opened on the Sixth Floor for:

Overlay approximately 16 miles of SR 567 from SR 24 to the end of State Maintenance, known as State Project No. MP-7567-03(006) / 304706301 in Amite County.

The attention of bidders is directed to the predetermined minimum wage rate set by the U. S. Department of Labor under the Fair Labor Standards Act.

The Mississippi Department of Transportation hereby notifies all bidders that it will affirmatively insure that in any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, sex, age, disability, religion or national origin in consideration for an award.

Plans and specifications are on file in the offices of the Mississippi Department of Transportation.

Bid proposals must be purchased online at <https://shopmdot.ms.gov>. Specimen proposals may be viewed and downloaded online at no cost at <http://mdot.ms.gov> or purchased online. Proposals are available at a cost of Ten Dollars (\$10.00) per proposal plus a small convenience fee. Cash or checks will not be accepted as payment.

Plans must be purchased online at <https://shopmdot.ms.gov>. Costs of plans will be on a per sheet basis plus a small convenience fee. If you have any questions, you can contact the MDOT Plans Print Shop at (601) 359-7460, or e-mail at [plans@mdot.state.ms.us](mailto:plans@mdot.state.ms.us). Plans will be shipped upon receipt of payment. Cash or checks will not be accepted as payment.

Bid bond, signed or countersigned by a Mississippi Agent or Qualified Nonresident Agent, with Power of Attorney attached, a Cashier's check or Certified Check for five (5%) percent of bid, payable to STATE OF MISSISSIPPI, must accompany each proposal.

The attention of bidders is directed to the provisions of Subsection 102.07 pertaining to irregular proposals and rejection of bids.

MELINDA L. MCGRATH  
EXECUTIVE DIRECTOR

# MISSISSIPPI DEPARTMENT OF TRANSPORTATION

**SECTION 904 - NOTICE TO BIDDERS NO. 1**

**CODE: (IS)**

**DATE: 05/03/2004**

**SUBJECT: Governing Specifications**

The current (2004) Edition of the Standard Specifications for Road and Bridge Construction adopted by the Mississippi Transportation Commission is made a part hereof fully and completely as if it were attached hereto, except where superseded by special provisions, or amended by revisions of the Specifications contained herein. Copies of the specification book may be purchased from the MDOT Construction Division.

A reference in any contract document to controlling requirements in another portion of the contract documents shall be understood to apply equally to any revision or amendment thereof included in the contract.

In the event the plans or proposal contain references to the 1990 Edition of the Standard Specifications for Road and Bridge Construction, it is to be understood that such references shall mean the comparable provisions of the 2004 Edition of the Standard Specifications.

## MISSISSIPPI DEPARTMENT OF TRANSPORTATION

**SECTION 904 - NOTICE TO BIDDERS NO. 3**

**CODE: (SP)**

**DATE: 05/03/2004**

**SUBJECT: Final Clean-Up**

Immediately prior to final inspection for release of maintenance, the Contractor shall pick up, load, transport and properly dispose of all litter from the entire highway right-of-way that is within the termini of the project.

Litter shall include, but not be limited to, solid wastes such as glass, paper products, tires, wood products, metal, synthetic materials and other miscellaneous debris.

Litter removal is considered incidental to other items of work and will not be measured for separate payment.

# MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 1405

CODE: (IS)

DATE: 03/15/2007

SUBJECT: ERRATA AND MODIFICATIONS TO THE 2004 STANDARD SPECIFICATIONS

<u>Page</u>	<u>Subsection</u>	<u>Change</u>
101	201.01	In the second sentence of the first paragraph, change “salvable” to “salvageable”.
107	202.04	In the fourth sentence of the fourth paragraph, change “yard” to “feet”.
107	202.05	In the list of units measurements for 202-B, add “square foot”.
132	211.03.4	In the second sentence of the second paragraph, change “planted” to “plated”.
192	306.02.4	In the first line of the first paragraph, delete the word “be”.
200	307.03.7	In the fourth sentence of the second paragraph, change “lime-fly ash” to “treated”.
236	401.01	Change the header from “Section 403” to “Section 401”.
242	401.02.3.2	In the first sentence of the third full paragraph, add “1/8” in the blank before the inch mark.
250	401.02.6.3	In the second sentence of the first paragraph on page 250, change “rutting over ” to “rutting over 1/8” ”.
253	401.02.6.4.2	In the paragraph preceding the table, change “91.0” to “89.0”.
259	401.03.1.4	In the first paragraph, change “92.0 percent” to “the specified percentage (92.0 or 93.0)”.
269	403.03.2	In the table at the top of page 269, change the PI requirement from “=” to “≤”.



- 278 404.04 In the second sentence, change the subsection from “401.04” to “403.04”.
- 283 409.02.2 Change “PG 64-22” to “PG 67-22”.
- 294 413.02 In the first sentence of the second paragraph, change “707.02.1.3” to “Subsection 707.02.1.3”.
- 340 511.04 In the second sentence of the second paragraph, change “412” to “512”.
- 349 601.03.3 In the first sentence, change “804.03.2” to “804.03.5”.
- 355 603.02 Change the subsection reference for Joint mortar from “707.03” to “714.11”.
- 369 604.04 In the first sentence, change “601.04” to “Subsection 601.04”.
- 427 619.04 Delete the second paragraph.
- 442 625.04 In the third paragraph, change “626.04” to “Subsection 626.04”.
- 444 626.03.1.2 Delete the third sentence of the first paragraph.
- 464 631.02 Change the subsection reference for Water from “714.01.0” to “714.01.1”.
- 570 682.03 Change the subsection number from “682-03” to “682.03”.
- 575 683.10.4 Change the subsection number from “683.10.4” to “683.04”.
- 575 683.10.5 Change the subsection number from “683.10.5” to “683.05”.
- 596 701.02 In the table under the column titled “Cementations material required”, change “Class F, FA” to “Class F FA,”.
- 603 702.11 In the first sentence, change “702.12” to “Subsection 702.12”.
- 612 703.04.2 In the fifth paragraph, delete “Subsection 703.11 and”.
- 616 703.07.2 In the Percentage By Weight Passing Square Mesh Sieves table, change the No. 10 requirement for Class 7 material from “30 - 10” to “30 - 100”.

- 618 703.13.1 In the first sentence of the first paragraph, change “703.09” to “703.06”.
- 618 703.13.2 In the first sentence, change “703.09” to “703.06”.
- 671 712.06.2.2 In the first sentence, change “712.05.1” to “Subsection 712.05.1”.
- 689 714.11.2 In the first sentence, change “412” to “512”.
- 709 715.09.5 In the first sentence of the first paragraph, change “guage” to “gauge”.
- 717 717.02.3.4 In the top line of the tension table, change “1 1/2” to “1 1/8” and change “1 1/8” to “1 1/2”.
- 741 720.05.2.2 In the last sentence of this subsection, change “720.05.2.1” to “Subsection 720.05.2.1”.
- 827 803.03.2.3.7.5.2 In the first sentence of the second paragraph, change “803.03.5.4” to “803.03.2.3.4”.
- 833 803.03.2.6 In the first sentence, change “803.03.7” to “803.03.2.5”.
- 854 804.02.11 In the last sentence of the first paragraph, change “automatically” to “automatic”.
- 859 804.02.13.1.3 In the last sentence, change Subsection “804.02.12.1” to “804.02.12”.
- 879 804.03.19.3.2 In the first sentence of the third paragraph, change “listed on of Approved” to “listed on the Approved”.
- 879 804.03.19.3.2 In the last sentence of the last paragraph, change “804.03.19.3.1” to “Subsection 804.03.19.3.1”.
- 962 814.02.3 In the first sentence, change “710.03” to “Subsection 710.03”.
- 976 820.03.2.1 In the first sentence, change “803.02.6” to “803.03.1.7”.
- 976 820.03.2.2 In the first sentence, change “803.03.9.6” to “803.03.1.9.2”.
- 985 Index Change the subsection reference for Petroleum Asphalt Cement from “702.5” to “702.05”.

985	Index	Change the subsection reference for the Definition of Asphaltic Cement or Petroleum Asphalt from “700.2” to “700.02”.
985	Index	Change the subsection reference for Automatic Batchers from “501.03.2.4” to “804.02.10.4”.
986	Index	Delete “501.03.2” as a subsection reference for Batching Plant & Equipment.
988	Index	Change the subsection reference for the Central Mixed Concrete from “501.03.3.2” to “804.02.11”.
988	Index	Change the subsection reference for the Concrete Batching Plant & Equipment from “501.03.2” to “804.02.11”.
999	Index	Delete “501.03.3.3” as a subsection reference for Truck Mixers.
1001	Index	Change the subsection reference for Edge Drain Pipes from “605.3.5” to “605.03.5”.
1002	Index	Change the subsection reference for Metal Posts from “713.05.2” to “712.05.2”.
1007	Index	Change the subsection reference for Coarse Aggregate of Cement Concrete Table from “703.3” to “703.03”.
1007	Index	Change the subsection reference for Composite Gradation for Mechanically Stabilized Courses Table from “703.8” to “703.08”.
1009	Index	Delete “501.03.3.3” as a subsection reference for Truck Mixers and Truck Agitators.
1010	Index	Delete reference to “Working Day, Definition of”.

## MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SECTION 904 - NOTICE TO BIDDERS NO. 1928

CODE: (IS)

| DATE: 04/14/2008

SUBJECT: Federal Bridge Formula

Bidders are hereby advised that Federal Highway Administration Publication No. FHWA-MC-94-007, **BRIDGE FORMULA WEIGHTS**, dated January 1994, is made a part of this contract when applicable.

Prior to the preconstruction conference, the Contractor shall advise the Engineer, in writing, what materials, if any, will be delivered to the jobsite via Interstate route(s).

Copies of the **BRIDGE FORMULA WEIGHTS** publication may be obtained by contacting:

Federal Highway Administration  
400 7<sup>th</sup> Street, SW  
Washington, DC 20590  
(202) 366-2212

or

| [http://ops.fhwa.dot.gov/freight/sw/brdgcalc/calc\\_page.htm](http://ops.fhwa.dot.gov/freight/sw/brdgcalc/calc_page.htm)

**MISSISSIPPI DEPARTMENT OF TRANSPORTATION**

**SECTION 904 - NOTICE TO BIDDERS NO. 2937**

**CODE: (SP)**

**DATE: 01/11/2010**

**SUBJECT: Reduced Speed Limit Signs**

Bidders are advised that all black and white speed limits signs that are used to reduce the speed limit through construction zones shall be covered or removed during times when the Contractor is not performing work. If the Contractor has a routine daytime operation and is not working at night, the signs shall be covered or removed during the nighttime when there is no work activity.

**MISSISSIPPI DEPARTMENT OF TRANSPORTATION**

**SECTION 904 - NOTICE TO BIDDERS NO. 3039**

**CODE: (SP)**

**DATE: 03/23/2010**

**SUBJECT: Alternate Asphalt Mixture Bid Items**

Bidders are advised that the asphalt mixture used on this project will be bid as an alternate pay item: Hot Mix Asphalt (HMA) or Warm Mix Asphalt (WMA). Bidders must select one of the alternates at the time of bid. **The Contractor must use the selected asphalt mixture, HMA or WMA, throughout the entire project.**

**MISSISSIPPI DEPARTMENT OF TRANSPORTATION**

**SECTION 904 - NOTICE TO BIDDERS NO. 3131**

**CODE: (SP)**

**DATE: 06/24/2010**

**SUBJECT: Temporary Traffic Paint**

Bidders are hereby advised that the temporary traffic paint for this project can be waterborne paint as specified in the 2004 Mississippi Standard Specifications For Road and Bridge Construction or fast dry solvent traffic paint meeting the requirements set out in 907-710-1 (Fast Dry Solvent Traffic Paint).

Payment for all temporary traffic paint shall be paid under the appropriate 619 pay items.

When using fast dry solvent traffic stripe, no paint can be sprayed or placed on the ground during set-up or clean-up.

## MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 3655

CODE: (SP)

DATE: 10/04/2011

SUBJECT: Type III Barricade Rails

Bidders are advised that the use of 2-inch nominal thickness timber for rails on Type III barricades has not been approved by NCHRP as a crashworthy device. Therefore, the use of 2-inch nominal thickness timbers will not be allowed for rails on Type III Barricades. Timber rails for Type III Barricades shall be as follows.

- For barricades up to four feet (4') wide, the maximum thickness of timber rails shall be one inch (1") and the material shall be pine timber or ¾-inch ACX plywood.
- For barricades more than four feet (4') wide, timber rails shall be constructed of ¾-inch ACX plywood.

A list of crashworthy Type III Barricades can be found at the below FHWA website.

[http://safety.fhwa.dot.gov/roadway\\_dept/policy\\_guide/road\\_hardware/wzd/](http://safety.fhwa.dot.gov/roadway_dept/policy_guide/road_hardware/wzd/)



## MISSISSIPPI DEPARTMENT OF TRANSPORTATION

**SECTION 904 - NOTICE TO BIDDERS NO. 3893**

**CODE: (SP)**

**DATE: 04/10/2012**

**SUBJECT: Petroleum Products Base Prices**

Bidders are advised that monthly petroleum products base prices will be available at the web site listed below. Current monthly prices will be posted to this web site on or before the 15<sup>th</sup> of each month. Bidders are advised to use the petroleum base prices on this web site when preparing their bids. The current monthly petroleum products base prices will be acknowledged by the Bidder and become part of the contract during the execution process.

Monthly Petroleum Products Base Prices can be viewed at:

<http://sp.gomdot.com/Contract%20Administration/BidSystems/Pages/letting%20calendar.aspx>

## MISSISSIPPI DEPARTMENT OF TRANSPORTATION

**SECTION 904 - NOTICE TO BIDDERS NO. 3980**

**CODE: (SP)**

**DATE: 07/25/2012**

**SUBJECT: Questions Regarding Bidding**

Bidders are advised that all questions that arise regarding the contract documents (proposal) or plans on this project shall be directed to the [www.gomdot.com](http://www.gomdot.com) current letting webpage. Click on the call number for this project to open an email form to submit your question. Questions must be submitted by 8:00 a.m. on Monday prior to the letting on Tuesday. Answers to questions will be posted by 6:00 p.m. on Monday prior to the letting on Tuesday. Answers can be viewed by clicking on Q&A link under the Proposal Addenda column.

It shall be the Bidders responsibility to familiarize themselves with the questions and answers that have been submitted on this project.

## MISSISSIPPI DEPARTMENT OF TRANSPORTATION

**SECTION 904 - NOTICE TO BIDDERS NO. 4214**

**CODE: (IS)**

**DATE: 11/29/2012**

**SUBJECT: Safety Apparel**

Bidders are advised that the Code of Federal Regulations CFR 23 Part 634 final rule was adopted November 24, 2006 with an effective date of November 24, 2008. This rule requires that "All workers within the right-of-way of a Federal-Aid Highway who are exposed either to traffic (vehicles using the highway for the purposes of travel) or to construction equipment within the work area shall wear high-visibility safety apparel". High-visibility safety apparel is defined in the CFR as "personnel protective safety clothing that is intended to provide conspicuity during both daytime and nighttime usage, and that meets the Performance Class 2 or 3 requirements of the ANSI/ISEA 107-2004 publication entitled American National Standard for High-Visibility Safety Apparel and Headwear". All workers on Mississippi State Highway right-of-way shall comply with this Federal Regulation. Workers are defined by the CFR as "people on foot whose duties place them within the right-of way of a Federal-Aid Highway, such as highway construction and maintenance forces, survey crews, utility crews, responders to incidents within the highway right-of-way, and law enforcement personnel when directing traffic, investigating crashes, and handling lane closures, obstructed roadways, and disasters within the right-of-way of a Federal-Aid Highway".

More information regarding high visibility safety apparel can be found at the following sites.

<http://www.gpo.gov/fdsys/pkg/CFR-2008-title23-vol1/pdf/CFR-2008-title23-vol1-sec634-1.pdf>

<http://ops.fhwa.dot.gov/wz/resources/policy.htm#hv>

## MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SECTION 904 - NOTICE TO BIDDERS NO. 4308

CODE: (SP)

DATE: 02/07/2013

SUBJECT: Terminal End Sections

Guard rail terminal end sections shall be construction in accordance with the plans, specifications, and the following.

### **Flared.**

Flared terminal end sections shall be FLEAT-350, REGENT, SRT-350, ROSS-350 or approved flared equal and installed in accordance with the manufacturer's recommendation. The Contractor shall provide two copies of the manufacturer's installation details to the Project Engineer. The Project Engineer will keep one copy in the project file and provide one copy to the District Maintenance Engineer. The installation details shall be engineering drawings, a minimum of 11" X 17" in size. Reflective adhesive sheeting with alternating black and yellow stripes (sloping downward at an angle of 45 degrees in the direction traffic is to pass) shall be required on the end of the terminal section. The type of terminal section installed shall be written on the device with a Permanent Marking Stick or some other means of permanent identification.

### **Non-Flared.**

Non-Flared terminal end sections shall be ET-2000, SKT-350, or approved non-flared equal and installed in accordance with the manufacturer's recommendation. The Contractor shall provide two copies of the manufacturer's installation details to the Project Engineer. The Project Engineer will keep one copy in the project file and provide one copy to the District Maintenance Engineer. The installation details shall be engineering drawings, a minimum of 11" X 17" in size. Reflective adhesive sheeting with alternating black and yellow stripes (sloping downward at an angle of 45 degrees in the direction traffic is to pass) shall be required on the end of the terminal section. The type of terminal section installed shall be written on the device with a Permanent Marking Stick or some other means of permanent identification.

Likewise, impact attenuators shall be construction in accordance with the plans, specifications, and the following.

Approved impact attenuator systems shall meet standardized testing defined in Manual for Assessing Safety Hardware (MASH) or NCHRP Report 350. In addition, these devices shall have an acceptance letter from FHWA that documents the device meets the appropriate crash test criteria and can be used on the National Highway System (NHS). The Contractor shall provide two copies of the manufacturer's installation details to the Project Engineer. The Project Engineer shall keep one copy in project file and provide one copy to District Maintenance Engineer. The installation details shall be engineering drawings, a minimum of 11"x17" in size. Reflective adhesive sheeting with alternating black and yellow stripes (sloping downward at an angle of 45 degrees in the direction traffic is to pass) shall be required on the end of the attenuator section. The type of system installed shall be written on the device with a Permanent Marking Stick or some other means of permanent identification.

**MISSISSIPPI DEPARTMENT OF TRANSPORTATION**

**SECTION 904 - NOTICE TO BIDDERS NO. 4466**

**CODE: (SP)**

**DATE: 02/18/2014**

**SUBJECT: Contract Time**

**PROJECT: MP-7567-03(006) / 304706301 – Amite County**

The calendar date for completion of work to be performed by the Contractor for this project shall be **June 27, 2014** which date or extended date as provided in Subsection 907-108.06 shall be the end of contract time. It is anticipated that the Notice of Award will be issued no later than **April 8, 2014** and the effective date of the Notice to Proceed / Beginning of Contract Time will be **April 21, 2014**.

Should the Contractor request a Notice to Proceed earlier than **April 21, 2014** and it is agreeable with the Department for an early Notice to Proceed, the requested date will become the new Notice to Proceed / Beginning of Contract Time date.

The available productive days for this project are **42**.

**MISSISSIPPI DEPARTMENT OF TRANSPORTATION**

**SECTION 904- NOTICE TO BIDDERS NO. 4490**

**CODE: (SP)**

**DATE: 04/30/2013**

**SUBJECT: Tack Coat**

**PROJECT: MP-7567-03(006) / 304706301 – Amite County**

The Contractor is hereby advised that a separate pay item does not exist for 907-407-A (Asphalt for Tack Coat). In lieu of Asphalt for Tack Coat, Bituminous Tack Coat (907-411-B) will be used for tack coat on all asphalt applications for this project.

**MISSISSIPPI DEPARTMENT OF TRANSPORTATION**

**SECTION 904 - NOTICE TO BIDDERS NO. 4524**

**CODE: (SP)**

**DATE: 05/13/2013**

**SUBJECT: Warm Mix Asphalt**

Bidders are advised that MDOT approved products and processes for the production of Warm Mix Asphalt are available at the following MDOT website.

<http://sp.mdot.ms.gov/Materials/Pages/MPL.aspx>

**MISSISSIPPI DEPARTMENT OF TRANSPORTATION**

**SECTION 904 - NOTICE TO BIDDERS NO. 4526**

**CODE: (SP)**

**DATE: 06/11/2013**

**SUBJECT: Electronic Addendum Process**

Bidders are advised that hard copies of any addenda for this project will no longer be mailed to prospective bidders. All addenda for this project will be posted to the [mdot.ms.gov](http://mdot.ms.gov) webpage under the Proposal Addenda column for the current letting and appropriate call number. Bidders will have to download addenda from the webpage and process the addenda in the same manner as previous lettings. Addenda will be posted by 10:00 a.m. on Friday prior to the letting. It will be the Bidder's responsibility to check and see if any addenda have been posted for this project. Any questions regarding the downloading process of the addenda shall be directed to the Contract Administration Division at 601-359-7700. Any questions regarding the content of the addenda shall be submitted as a question in accordance with the Notice To Bidders entitled "Questions Regarding Bidding".



**MISSISSIPPI DEPARTMENT OF TRANSPORTATION**

**SECTION 904- NOTICE TO BIDDERS NO. 4543**

**CODE: (SP)**

**DATE: 05/24/2013**

**SUBJECT: Plan Quantity**

**PROJECT: MP-7567-03(006) / 304706301----Amite County**

The Contractor is hereby advised that the pay item for 907-412-A (Pre-grinding), was omitted from the plan summary of quantities; however, the quantity has been added to the proposal bid items.

**MISSISSIPPI DEPARTMENT OF TRANSPORTATION**

**SECTION 904 - NOTICE TO BIDDERS NO. 4565**

**CODE: (SP)**

**DATE: 06/27/2013**

**SUBJECT: Manual on Uniform Traffic Control Devices**

Any reference in the Standard Specifications or contract documents to a particular Section of the Manual on Uniform Traffic Control Devices (MUTCD) it shall mean that Section of the latest version of the Manual on Uniform Traffic Control Devices.

**MISSISSIPPI DEPARTMENT OF TRANSPORTATION**

**SECTION 904 - NOTICE TO BIDDERS NO. 4612**

**CODE: (SP)**

**DATE: 08/13/2013**

**SUBJECT: Adjustments for Bituminous Materials**

Bidders are advised that Subsection 907-402.03.1.2, Tack Coat, in Special Provision 907-402, allows the Contractor several options for OGFC tack coat. Regardless of the tack coat used, the monthly material adjustment, as referenced in Section 109 of the Standard Specifications, will be made using the base and current prices of tack coat Grade PG 76-22.

Bidders are also advised that the specifications allow the use of RC-70, RC-250, RC- 800, RS-1, RS-2, MC-30, MC-250, MS-2h, and CMS-2h in various other construction operations. If the Contractor uses one of these bituminous materials, the monthly material adjustment will be made using the base and current prices of the materials shown below.

<b>Materials Used</b>	<b>Material Adjustment Made Based on Prices For</b>
RC-70, 250, 800	MC-70
RS-1, 2	CRS-2
MC-30, 250	MC-70
MS-2h	SS-1
CMS-2h	SS-1

## MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SECTION 904 - NOTICE TO BIDDERS NO. 4661

CODE: (IS)

| DATE: 10/16/2013

**SUBJECT: Payroll Requirements**

Bidders are hereby advised that the Contractor and Subcontractor(s) are required to submit payroll information to the Project Engineers on a weekly basis.

On Federal-Aid Projects, CAD-880, CAD-881 and certified payroll submissions are required each week the Contractor or a Subcontractor performs work on the project. This is addressed in Section IV of Form FHWA-1273.

On State-Funded Projects, CAD-880 is required each week the Contractor or a Subcontractor performs work on the project.

| When no work is performed on either Federal-Aid or State-Funded Projects, the Contractor should only submit CAD-880 showing no work activities.

The Contractor shall make all efforts necessary to submit this information to the Project Engineer in a timely manner. The Engineer will have the authority to suspend the work wholly or in part and to withhold payments because of the Contractor's failure to submit the required information. Submission of forms and payrolls shall be current through the first full week of the month for the estimate period in order for the Project Engineer to process an estimate.

Bidders are advised to review the requirements regarding payroll submissions in Section 110 of the Standard Specifications.

## MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-101-4

CODE: (IS)

DATE: 11/05/2008

SUBJECT: Definitions

Section 101, Definitions and Terms, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

**907-101.02--Definitions.** Replace the following definitions in Subsection 101.02 on pages 3 through 13.

**Contract** - The written agreement between the Mississippi Transportation Commission and the Contractor setting forth the obligations of the parties thereunder, including but not limited to, the performance of the work, the furnishing of labor and materials, and the basis of payment.

The contract includes the invitation for bids, proposal, contract form and contract bonds, specifications, supplemental specifications, interim specifications, general and detailed plans, special provisions, notices to bidders, notice to proceed, and also any agreements that are required to complete the construction of the work in an acceptable manner, including authorized extensions thereof, all of which constitute one instrument.

**Contract Bonds** - The approved form of security, executed by the Contractor and the Contractor's Surety(ies), guaranteeing complete execution of the contract and all supplemental agreements pertaining thereto and the payment of all legal debts pertaining to the construction of the project. This term includes Performance and Payment Bond(s).

**Surety** - A corporate body, qualified under the laws of Mississippi, which is bound with and for the successful bidder by "contract bond(s)" to guarantee acceptable performance of the contract and payment of all legal taxes and debts pertaining to the construction of the project, including payment of State Sales Tax as prescribed by law, and any overpayment made to the Contractor.

Add the following to the list of definitions in Subsection 101.02 on pages 3 through 13.

**Performance Bond** - The approved form of security, executed by the Contractor and issued by the Contractor's Surety(ies), guaranteeing satisfactory completion of the contract and all supplemental agreements pertaining thereto.

**Payment Bond** - The approved form of security, executed by the Contractor and issued by the Contractor's Surety(ies), guaranteeing the payment of all legal debts pertaining to the construction of the project including, but not limited to, the labor and materials of subcontractors and suppliers to the prime contractor.

## MISSISSIPPI DEPARTMENT OF TRANSPORTATION

**SPECIAL PROVISION NO. 907-102-10**

**CODE: (IS)**

**DATE: 05/01/2013**

**SUBJECT: Bidding Requirements and Conditions**

Section 102, Bidding Requirements and Conditions, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

**907-102.06--Preparation of Proposal.** Delete the first paragraph of Subsection 102.06 on page 17, and substitute the following.

The bidder's complete original proposal shall be submitted upon the forms (Certification of Performance, Certification Regarding Non-Collusion, etc.) furnished by the Department and shall include Expedite Bid printed bid sheets along with the bid data on the MDOT-supplied USB Flash Drive. Expedite Bid System (EBS) files shall be downloaded from the Department's website <http://mdot.ms.gov>. In case of discrepancy between a unit price and the extension, the unit price will govern and the extension along with the total amount of the proposal will be corrected.

Delete the fifth, sixth, and seventh paragraphs of Subsection 102.06 on page 18, and substitute the following.

Bid sheets generated by the Department's Electronic Bid System (Transport Expedite Bid) along with a completed proposal package (with all forms completed and signed) will constitute the official bid and shall be signed on the last sheet of the Expedite Bid generated bid sheets and delivered to the Department in accordance with the provisions of Subsection 102.09. Bids submitted using any other form, format or means will result in an irregular bid. The bidder's bid data shall be saved on the MDOT-supplied USB Flash Drive and submitted with the bid. Failure to return the USB Flash Drive with bid data will result in an irregular bid. If a Bidder is submitting bids on multiple proposals, the bid data for all proposals can be included on one flash drive and submitted with any of the bid envelopes.

Bidders are cautioned that using other versions of the Expedite Bid may result in improperly printed bid sheets. The correct version of Expedite Bid can be obtained at no cost from the MDOT Contract Administration Division or at the MDOT website, <http://mdot.ms.gov>. The current version of Expedite Bid is also included on the MDOT-supplied USB Flash Drive.

The Expedite Bid generated bid sheets should be stapled together in order beginning with page 1, signed and included in the bid proposal package in the sealed envelope. Only the Expedite Bid generated sheets will be recognized as the official bid. The MDOT-provided USB Flash Drive containing the information printed on the Expedite Bid generated bid sheets should be placed in the padded envelope included with the bid proposal package and enclosed in the sealed envelope. Bid sheets printed from Expedite Bid should be a representation of the data returned on the flash

drive. To have a true representation of the bid sheets, the Bidder must copy the EBS and EBS amendment files used to prepare the bid sheets to the flash drive. Otherwise, the unit prices bid will not be recorded to the flash drive. Bidders are cautioned that failure to follow proper flash drive handling procedures could result in the Department being unable to process the flash drive. Any modification or manipulation of the data contained on the flash drive, other than entering unit bid prices and completing all required Expedite Bid sections, will not be allowed and will cause the Contractor's bid to be considered irregular.

**907-102.08--Proposal Guaranty.** Delete the first and second paragraphs in Subsection 102.08 on page 20 and substitute the following.

No proposal will be considered unless accompanied by certified check, cashier's check or bid bond, made payable to the State of Mississippi, in an amount of not less than five percent (5%) of the total amount of the proposal offered. The guaranty shall be evidence of good faith that, if awarded the contract, the bidder will execute the contract and give performance and payment contract bond(s) as stipulated in Subsection 907-103.05.1, 907-103.05.2, and as required by law.

If a bid bond is offered as guaranty, the bond must be on a form approved by the Executive Director, made by a Surety acceptable to the Executive Director and signed or countersigned by a Mississippi Agent or Qualified Nonresident Agent and the Bidder. Such bid bond shall also conform to the requirements and conditions stipulated in Subsection 907-103.05.2 as applicable.

## MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-103-8

CODE: (SP)

DATE: 12/15/2009

SUBJECT: Award and Execution of Contract

Section 103, Award and Execution of Contract, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

**907-103.04--Return of Proposal Guaranty.** Delete the second paragraph of Subsection 103.04 on page 23 and substitute the following:

Certified checks or cashier's checks submitted as proposal guaranties, except those of the two lowest bidders, will be returned within 10 days of contract award. The retained proposal guaranty of the unsuccessful of the two lowest bidders will be returned within ten days following the execution of a contract with the successful low bidder. The retained proposal guaranty of the successful bidder will be returned after satisfactory performance and payment bonds have been furnished and the contract has been executed.

In the event all bids are rejected by the Commission, certified checks or cashier's checks submitted as proposal guaranty by all bidders will be returned within 10 days of rejection.

Delete Subsection 103.05 on page 23 and substitute the following:

**907-103.05--Contract Bonds.**

**907-103.05.1--Requirement of Contract Bonds.** Prior to the execution of the contract, the successful bidder shall execute and deliver to the Executive Director a performance and payment bond(s), in a sum equal to the full amount of the contract as a guaranty for complete and full performance of the contract and the protection of the claimants and the Department for materials and equipment and full payment of wages in accordance with Section 65-1-85 Miss. Code Ann. (1972 as amended). In the event of award of a joint bid, each individual, partnership, firm or corporation shall assume jointly the full obligations under the contract and the contract bond(s).

**907-103.05.2--Form of Bonds.** The form of bond(s) shall be that provided by or acceptable to the Department. These bonds shall be executed by a Mississippi agent or qualified nonresident agent and shall be accompanied by a certification as to authorization of the attorney-in-fact to commit the Surety company. A power of attorney exhibiting the Surety's original seal supporting the Mississippi agent or the qualified nonresident agent's signature shall be furnished with each bond. The Surety company shall be currently authorized and licensed in good standing to conduct business in the State of Mississippi with a minimum rating by A.M. Best of (A-) in the latest printing "Best's Key Rating Guide" to write individual bonds up to ten percent of the policy holders' surplus or listed on the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as



published by the United States Department of the Treasury, Financial Management Service, Circular 570 (latest revision as published and supplemented on the Financial Management Service Web site and in the Federal Register) within the underwriting limits listed for that Surety. All required signatures on the bond(s) and certifications shall be original signatures, in ink, and not mechanical reproductions or facsimiles. The [Mississippi agent](#) or [qualified nonresident agent](#) shall be in good standing and currently licensed by the Insurance Commissioner of the State of Mississippi to represent the Surety company(ies) executing the bonds.

Surety bonds shall continue to be acceptable to the Commission throughout the life of the Contract and shall not be canceled by the Surety without the consent of the Department. In the event the Surety fails or becomes financially insolvent, the Contractor shall file a new Bond in the amount designated by the Executive Director within thirty (30) days of such failure, insolvency, or bankruptcy. Subsequent to award of Contract, the Commission or the Department may [require additional security for any supplemental agreements executed under the contract or replacement security in the event of the surety\(ies\) loss of the ratings required above](#). Suits concerning bonds shall be filed in the State of Mississippi and adjudicated under its laws without reference to conflict of laws principles.

**907-103.08--Failure to Execute Contract.** In the first sentence of Subsection 103.08 on page 24, change “bond” to “performance and payment bonds”.

**MISSISSIPPI DEPARTMENT OF TRANSPORTATION**

**SPECIAL PROVISION NO. 907-104-5**

**CODE: (IS)**

**DATE: 05/01/2013**

**SUBJECT: Scope of Work**

Section 104, Scope of Work, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

**907-104.05--Removal and Disposal of All Materials From the Project.** Delete the second sentence of the first full paragraph of Subsection 104.05 on page 30 and substitute the following:

The Contractor shall also furnish the Engineer a certified letter stating that the area of disposal is not in a wetland or in Waters of the U.S.

## MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SPECIAL PROVISION NO. 907-105-7

CODE: (IS)

| DATE: 05/01/2013

SUBJECT: Control of Work

Section 105, Control of Work, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is modified as follows.

**907-105.05--Cooperation by Contractor.** In the third sentence of the second paragraph of Subsection 105.05 on page 35, change “Notice to Proceed” to “Notice of Award”.

Delete the fourth paragraph of Subsection 105.05 on page 35, and substitute the following.

On projects that include erosion control pay items, the Contractor shall also designate a responsible person whose primary duty shall be to monitor and maintain the effectiveness of the erosion control plan, including NPDES permit requirements. This responsible person must be a Certified Erosion Control Person certified by an organization approved by the Department. Prior to or at the pre-construction conference, the Contractor shall designate in writing the Certified Erosion Control Person to the Project Engineer. The designated Certified Erosion Control Person shall be assigned to only one (1) project. When special conditions exist, such as two (2) adjoining projects or two (2) projects in close proximity, the Contractor may request in writing that the State Construction Engineer approve the use of one (1) Certified Erosion Control Person for both projects. The Contractor may request in writing that the Engineer authorize a substitute Certified Erosion Control Person to act in the absence of the Certified Erosion Control Person. The substitute Certified Erosion Control Person must also be certified by an organization approved by the Department. A copy of the Certified Erosion Control Person's certification must be included in the Contractor's Protection Plan as outlined in Subsection 907-107.22.1. This in no way modifies the requirements regarding the assignment and availability of the superintendent.

| **907-105.14--Maintenance During Construction.** Before the first sentence Subsection 105.14 on page 39, add the following.

The Contractor will be responsible for the maintenance of existing roadways within the limits of this project starting on the date of the Notice To Proceed / Beginning of Contract Time. Anytime work is performed in a travel lane, the Contractor shall install portable lane closure signs meeting the requirement of the MDOT Standard Drawing or MUTCD.

# MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SPECIAL PROVISION NO. 907-107-13

CODE: (IS)

| DATE: 05/01/2013

**SUBJECT: Legal Relations and Responsibility to Public**

Section 107, Legal Relations and Responsibility to Public, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

**907-107.02--Permits, Licenses and Taxes.** Delete in toto Subsection 107.02 on page 49 and substitute the following.

The Contractor or any Subcontractor shall have the duty to determine any and all permits and licenses required and to procure all permits and licenses, pay all charges, fees and taxes and issue all notices necessary and incidental to the due and lawful prosecution of the work. At any time during the life of this contract, the Department may audit the Contractor's or Subcontractor's compliance with the requirements of this section.

The Contractor or any Subcontractor is advised that the "Mississippi Special Fuel Tax Law", Section 27-55-501, et seq. and the Mississippi Use Tax Law, Section 27-67-1, et seq., and their requirements and penalties, apply to any contract or subcontract for construction, reconstruction, maintenance or repairs, for contracts or subcontracts entered into with the State of Mississippi, any political subdivision of the State of Mississippi, or any Department, Agency, Institute of the State of Mississippi or any political subdivision thereof.

The Contractor or any Subcontractor will be subject to one or more audits by the Department during the life of this contract to make certain that all applicable fuel taxes, as outlined in Section 27-55-501, et seq., and any sales and/or use taxes, as outlined in Section 27-67-1, et seq. are being paid in compliance with the law. The Department will notify the Mississippi State Tax Commission of the names and addresses of any Contractors or Subcontractors.

**907-107.14--Damage Claims and Insurance.**

| **907-107.14.2--Liability Insurance.** Delete Subsection 107.14.2 beginning on page 60 and substitute [the following](#).

**907-107.14.2.1--General.** The Contractor shall carry Contractor's liability, including subcontractors and contractual, with limits not less than: \$500,000 each occurrence; \$1,000,000 aggregate; automobile liability - \$500,000 combined single limit - each accident; Workers' Compensation and Employers' Liability - Statutory & \$100,000 each accident; \$100,000 each employee; \$500,000 policy limit. Each policy shall be signed or countersigned by a Mississippi Agent or Qualified Nonresident Agent of the Insurance Company.

The Contractor shall have certificates furnished to the Department from the insurance companies providing the required coverage. The certificates shall be on the form furnished by the Department and will show the types and limits of coverage.

**907-107.14.2.2--Railroad Protective.** The following provisions are applicable to all work performed under a contract on, over or under the rights-of-way of each railroad shown on the plans.

The Contractor shall assume all liability for any and all damages to work, employees, servants, equipment and materials caused by railroad traffic.

Prior to starting any work on railroad property, the Contractor shall furnish satisfactory evidence to the Department that insurance of the forms and amounts set out herein in paragraphs (a) and (b) has been obtained. Also, the Contractor shall furnish similar evidence to the Railroad Company that insurance has been obtained in accordance with the Standard Provisions for General Liability Policies and the Railroad Protective Liability Form as published in the Code of Federal Regulations, 23 CFR 646, Subpart A. Evidence to the Railroad Company shall be in the form of a Certificate of Insurance for coverages required in paragraph (b), and the original policy of the Railroad Protective Liability Insurance for coverage required in paragraph (a).

All insurance herein specified shall be carried until the contract is satisfactorily complete as evidenced by a release of maintenance from the Department.

The Railroad Company shall be given at least 30 days notice prior to cancellation of the Railroad Protective Liability Insurance policy.

For work within the limits set out in Subsection 107.18 and this subsection, the Contractor shall provide insurance for bodily injury liability, property damage liability and physical damage to property with coverages and limits no less than shown in paragraphs (a) and (b). Bodily injury shall mean bodily injury, sickness, or disease, including death at anytime resulting therefrom. Property damage shall mean damages because of physical injury to or destruction of property, including loss of use of any property due to such injury or destruction. Physical damage shall mean direct and accidental loss of or damage to rolling stock and their contents, mechanical construction equipment or motive power equipment.

(a) **Railroad Protective Liability Insurance** shall be purchased on behalf of the Railroad Company with limits of \$2,000,000 each occurrence; \$6,000,000 aggregate applying separately to each annual period for lines without passenger trains. If the line carries passenger train(s), railroad protective liability insurance shall be purchased on behalf of the Railroad Company with limits of \$5,000,000 each occurrence; \$10,000,000 aggregate applying separately to each annual period.

Coverage shall be limited to damage suffered by the railroad on account of occurrences arising out of the work of the Contractor on or about the railroad right-of-way, independent of the railroad's general supervision or control, except as noted in paragraph 4 below.

Coverage shall include:

- (1) death of or bodily injury to passengers of the railroad and employees of the railroad not covered by State workmen's compensation laws,
- (2) personal property owned by or in the care, custody or control of the railroads,
- (3) the Contractor, or any of the Contractor's agents or employees who suffer bodily injury or death as a result of acts of the railroad or its agents, regardless of the negligence of the railroads, and
- (4) negligence of only the following classes of railroad employees:
  - (i) any supervisory employee of the railroad at the job site
  - (ii) any employee of the railroad while operating, attached to, or engaged on, work trains or other railroad equipment at the job site which are assigned exclusively to the Contractor, or
  - (iii) any employee of the railroad not within (i) or (ii) above who is specifically loaned or assigned to the work of the Contractor for prevention of accidents or protection of property, the cost of whose services is borne specifically by the Contractor or Governmental authority.

(b) **Contractor's Liability - Railroad**, including subcontractors, XCU and railroad contractual with limits of \$1,000,000 each occurrence; \$2,000,000 aggregate. **Automobile** with limits of \$1,000,000 combined single limit any one accident; **Workers' Compensation and Employer's Liability** - statutory and \$100,000 each accident; \$100,000 each employee; \$500,000 policy limit. **Excess/Umbrella Liability** \$5,000,000 each occurrence; \$5,000,000 aggregate. All coverage to be issued in the name of the Contractor shall be so written as to furnish protection to the Contractor respecting the Contractor's operations in performing work covered by the contract. Coverage shall include protection from damages arising out of bodily injury or death and damage or destruction of property which may be suffered by persons other than the Contractor's own employees.

In addition, the Contractor shall provide for and on behalf of each subcontractor by means of a separate and individual liability and property damage policy to cover like liability imposed upon the subcontractor as a result of the subcontractor's operations in the same amounts as contained above; or, in the alternative each subcontractor shall provide same.

**907-107.15--Third Party Beneficiary Clause.** In the first sentence of the first paragraph of Subsection 107.15 on page 61, change "create the public" to "create in the public".

**907-107.17--Contractor's Responsibility for Work.** Delete the fifth sentence of the fifth paragraph of Subsection 107.17 on page 63 and substitute the following.

The eligible permanent items shall be limited to traffic signal systems, changeable message signs, roadway signs and sign supports, lighting items, guard rail items, delineators, impact

attenuators, median barriers, bridge railing or pavement markings. The eligible temporary items shall be limited to changeable message signs, guard rail items, or median barriers.

**907-107.18--Contractor's Responsibility for Utility Property and Services.** After the first sentence of Subsection 107.18 on page 63, add the following:

Prior to any excavation on the project, the Contractor shall contact MS 811 and advise them to mark all known utilities in the area of the excavation.

## MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SPECIAL PROVISION NO. 907-108-30

CODE: (IS)

| DATE: 05/22/2013

**SUBJECT: Prosecution and Progress**

Section 108, Prosecution and Progress, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

### **907-108.01--Subletting of Contract.**

**907-108.01.1--General.** At the end of the last paragraph of Subsection 108.01.1 on page 73, add the following.

The Engineer will have the authority to suspend the work wholly or in part and to withhold payments because of the Contractor's failure to make prompt payment within 15 calendar days as required above, or failure to submit the required OCR-484 Form, Certification of Payments to Subcontractors, which is also designed to comply with prompt payment requirements.

**907-108.02--Notice To Proceed.** Delete the second paragraph of Subsection 108.02 on page 75 and substitute the following.

The anticipated date of the Notice to Proceed (NTP) / Beginning of Contract Time (BCT) will be specified in the proposal.

Delete the fourth paragraph of Subsection 108.02 on page 75 and substitute the following.

Upon written request from the Contractor and if circumstances permit, the Notice to Proceed may be issued at an earlier date subject to the conditions stated therein. The Contractor shall not be entitled to any monetary damages or extension of contract time for any delay claim or claim of inefficiency occurring between the early issuance Notice To Proceed date and the Notice to Proceed date stated in the contract.

**907-108.03--Prosecution and Progress.** Delete Subsection 108.03.1 on pages 75 & 76, and substitute the following.

**907-108.03.1--Progress Schedule.** Prior to or at the Pre-Construction Conference, the Contractor shall furnish a progress schedule and be prepared to discuss both its proposed methodologies for fulfilling the scheduling requirements and its sequence of operations. The Engineer will review the schedule and approve the schedule as it relates to compliance with the specifications and logic. The progress schedule must be approved by the Engineer prior to commencing work. The schedule shall be a bar-chart type schedule submitted on 11"x17" paper meeting the below minimum requirements. These activities shall be significantly detailed enough to communicate the Contractor's understanding of the construction sequencing and phasing of the project.



When preparing the progress schedule, the Contractor shall include the following:

- Show a time scale to graphically show the completion of the work within contract time.
- Define and relate activities to the contract pay items.
- Show all activities in the order the work is to be performed including submittals, submittal reviews, fabrication and delivery.
- Show all activities that are controlling factors in the completion of the work.
- Show the time needed to perform each activity and its relationship in time to other activities.

Should the schedule not include the above requirements or becomes unrealistic during construction, the Contractor should immediately submit a revised, more realistic schedule for approval.

**907-108.03.2--Preconstruction Conference.** Delete the first paragraph of Subsection 108.03.2 on page 76 and substitute the following.

Prior to commencement of the work, a preconstruction conference shall be held for the purpose of discussing with the Contractor essential matters pertaining to the prosecution and satisfactory completion of the work. The Contractor will be responsible for scheduling the preconstruction conference. The Contractor will advise the Project Engineer in writing 14 days prior to the requested date that a conference is requested. When the contract requires the Contractor to have a certified erosion control person, the Contractor's certified erosion control person shall be at the preconstruction conference. The Department will arrange for utility representatives and other affected parties to be present.

Delete the third paragraph of Subsection 108.03.2 on page 76.

**907-108.06--Determination and Extension of Contract Time.** Delete Subsections 108.06.1 and 108.06.2 on pages 79 thru 85 and substitute the following.

**907-108.06.1--Blank.**

**907-108.06.2--Based on Calendar Date Completion.**

**907-108.06.2.1--General.** Contract Time will be established on the basis of a Completion Date, as indicated in the contract. The span of time allowed for the completion of the work included in the contract will be indicated in the contract documents and will be known as "Contract Time".

The span of time allowed in the contract as awarded is based on the quantities used for comparison of bids. If satisfactory fulfillment of the contract requires performance of work in greater quantities than those set forth in the proposal, the time allowed for completion shall be increased in Calendar Days in the same ratio that the cost of such added work, exclusive of the cost of work altered by Supplemental Agreement for which a time adjustment is made for such altered work in the Supplemental Agreement, bears to the total value of the original contract unless it can be established that the extra work was of such character that it required more time

than is indicated by the money value.

The Contractor shall provide sufficient materials, equipment and labor to guarantee the completion of the work in the contract in accordance with the plans and specifications within the Contract Time.

**907-108.06.2.2--Contract Time.** The following TABLE OF ANTICIPATED PRODUCTIVE DAYS indicates an average/anticipated number of productive days per month.

**TABLE OF ANTICIPATED PRODUCTIVE DAYS**

Month	Available Productive Days
January	6
February	7
March	11
April	15
May	19
June	20
July	21
August	21
September	20
October	16
November	11
December	5
Calendar Year	172

Allocation of anticipated productive days for a fractional part of the month will be computed as a proportion of the listed anticipated productive days for the applicable month.

Available productive days will start being assessed at the original Notice to Proceed/Beginning of Contract Time date shown in the contract documents, regardless of whether or not the Contractor has been issued an early Notice to Proceed.

Available productive days will be based on soil and weather conditions and other specific conditions cited in the contract. The Engineer will determine on each applicable day the extent to which work in progress could have been productive, regardless of whether the Contractor actually worked.

An available productive day will be assessed as follows:

- (a) any day of the week, Monday through Friday, exclusive of legal holidays recognized by the Department in Subsection 108.04.1, in which the Contractor works or could have worked for more than six (6) consecutive hours on the controlling item(s) of work, as determined by the

Engineer from the Contractor's approved progress schedule. When the Contractor works or could work more than four but less than six consecutive hours, one-half (0.5) of an available work day will be charged for that day. When the Contractor works or could work six or more consecutive hours during the day, one (1.0) available work day will be charged for that day, or

(b) any Saturday, exclusive of legal holidays recognized by the Department in Subsection 108.04.1, in which the Contractor works for more than six (6) consecutive hours on the controlling item(s) of work, as determined by the Engineer from the Contractor's approved progress schedule. When the Contractor works less than four consecutive hours during the day, no time will be charged for that day. When the Contractor works more than four but less than six consecutive hours, one-half (0.5) of an available work day will be charged for that day. When the Contractor works six or more consecutive hours during the day, one (1.0) available work day will be charged for that day.

Should the weather or other conditions be such that four (4) consecutive satisfactory hours are not available prior to noon (for daytime operations) or midnight (for nighttime operations), no time will be assessed for that day regardless of the above conditions. However, if the Contractor elects to work, time will be assessed in accordance with the previous paragraph.

Weather delays will not be considered for Saturdays, Sundays or legal holidays recognized by the Department in Subsection 108.04.1.

Each month the Engineer will complete, and furnish to the Contractor, an "Assessment Report for Available Productive Days" (CSD-765). This report shows the number of available productive days during the estimate period and the cumulative available productive days to date. The Contractor should review the Engineer's report as to the accuracy of the assessment and confer with the Resident or Project Engineer to rectify any differences. Each should make a record of the differences, if any, and conclusions reached. In the event mutual agreement cannot be reached, the Contractor will be allowed a maximum of 15 calendar days following the ending date of the monthly report in question to file a protest Notice of Claim in accordance with the provisions of Subsection 105.17. Otherwise, the Engineer's assessment shall be final unless mathematical errors of assessment are subsequently found to exist, and any claim of the Contractor as to such matter shall be waived.

The Contractor's progress will be determined monthly at the time of each progress estimate and will be based on the percentage of money earned by the Contractor compared to the percentage of elapsed time.

The percentage of money earned will be determined by comparing the total money earned to-date by the Contractor, minus any payment for advancement of materials, to the total dollar amount of the contract. The percentage of time elapsed will be determined by comparing the available productive days assessed to-date on Form CSD-765 to the total available productive days for the contract.

When the "percent complete" lags more than 20 percent behind the "percentage of elapsed time", the Contractor shall immediately submit a written statement and revised progress schedule

indicating any additional equipment, labor, materials, etc. to be assigned to the work to ensure completion within the specified contract time. When the "percent complete" lags more than 40 percent behind the "percentage of elapsed time", the contract may be terminated.

**907-108.06.2.3--Extension of Time.** The Contractor may, prior to the expiration of the Contract Time, make a written request to the Engineer for an extension of time with a valid justification for the request. The Contractor's plea that insufficient time was specified is not a valid reason for extension of time.

No extension of the specified completion date will be granted except as provided herein. An extension of contract time may be granted for unusually severe weather, abnormal delays caused solely by the State or other governmental authorities, or unforeseeable disastrous phenomena of nature of the magnitude of earthquakes, hurricanes, tornadoes, or flooded essential work areas which are deemed to unavoidably prevent prosecuting the work.

Unusually severe weather is defined as when the actual available productive days for the contract time are less than the number of available productive days shown in the Table of Anticipated Productive Days. Any extension of contract time will be based on a calendar days basis, excluding Saturdays, Sundays or legal holidays recognized by the Department in Subsection 108.04.1. Any extension of contract time will be made on or after the specified completion date. No extension of contract time will be made on a monthly basis.

If the **specified completion date** of the project is extended into a season of the year in which completion of certain items of work would be prohibited or delayed because of seasonal or temperature limitations, the Engineer may waive the limitations provided the completion of the work will not result in a reduction in quality. When determined that the completion of the out-of-season items will cause a reduction in the quality of the work, the completion of the project will be further extended so the items may be completed under favorable weather conditions. In either case, the Engineer will notify the Contractor in writing.

Liquidated damages as set forth in Subsection 108.07 under the heading "Daily Charge Per Calendar Day" in the Table titled "Schedule of Deductions for Each Day of Overrun in Contract Time", shall be applicable to each calendar day after the specified completion date, or authorized extension thereof, and until all work under the contract is completed.

**907-108.06.2.4--Cessation of Contract Time.** When the Engineer by written notice schedules a final inspection, time will be suspended until the final inspection is conducted and for an additional 14 calendar days thereafter. If after the end of the 14-day suspension all necessary items of work have not been completed, time charges will resume. If the specified completion date had not been reached at the time the Contractor called for a final inspection, the calendar day difference between the specified completion date and the date the Contractor called for a final inspection will be added after the 14-day period before starting liquidation damages. If a project is on liquidated damages at the time a final inspection is scheduled, liquidated damages will be suspended until the final inspection is conducted and for seven (7) calendar days thereafter. If after the end of the 7-day suspension all necessary items of work have not been completed, liquidated damages will resume. When final inspection has been made by the

Engineer as prescribed in Subsection 105.16 and all items of work have been completed, the daily time charge will cease.

**907-108.07--Failure to Complete the Work on Time.** Delete the Schedule of Deductions table in Subsection 108.07 on page 85, and substitute the following.

**Schedule of Deductions for Each Day of Overrun in Contract Time**

<b>Original Contract Amount</b>		<b>Daily Charge Per Calendar Day</b>
<b>From More Than</b>	<b>To and Including</b>	
\$ 0	100,000	\$ 150
100,000	500,000	360
500,000	1,000,000	540
1,000,000	5,000,000	830
5,000,000	10,000,000	1,200
10,000,000	20,000,000	1,800
20,000,000	-----	3,500

**907-108.10--Termination of Contractor's Responsibility.** In the last sentence of Subsection 108.10 on page 88, change “bond” to “performance and payment bond(s)”.

# MISSISSIPPI DEPARTMENT OF TRANSPORTATION

## SUPPLEMENT TO SPECIAL PROVISION NO. 907-109-6

**DATE:** 12/17/2013

**SUBJECT:** Measurement and Payment

Before the first sentence of Subsection 907-109.04 on page 1, add the following.

Delete the first paragraph under Subsection 109.04 on page 91, and substitute the following.

When extra work results for any reason and is not handled as prescribed elsewhere herein, the Engineer and the Contractor will attempt to agree on equitable prices. When such prices are agreed upon, a Supplemental Agreement will be issued by the Engineer.

When the Supplemental Agreement process is initiated, the Contractor will be required to submit to the Engineer a detailed breakdown for Material, Labor, Equipment, Profit and Overhead. The total allowable markup (which includes Prime Contractor and Subcontractor work, if applicable) for Supplemental Agreement work shall not exceed 20%.

The requirement for detailed cost breakdowns may be waived when a Department's Bid Item History exists for the proposed item(s), and the Contractor's requested price is within 20% of the Department's Bid History cost for that item(s). In any case, the Department reserves the right to request detailed cost breakdowns from the Contractor on any Supplemental Agreement request.

When equitable prices cannot be agreed upon mutually by the Engineer and the Contractor, the Engineer will issue a written order that work will be completed on a force account basis to be compensated in the following manner:

After the last paragraph of Subsection 907-109.07 on page 2, add the following.

Delete the last paragraph of Subsection 109.07 on pages 97 & 98, and substitute the following.

Adjustments herein provided shall not apply to fuels consumed or materials incorporated into the work during any monthly estimate period falling wholly after the expiration of contract time as defined in Subsection 101.02 of the applicable Mississippi Standard Specifications for Road and Bridge Construction, and as determined by checked final quantities..

# MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-109-6

CODE: (IS)

DATE: 05/01/2013

SUBJECT: Measurement and Payment

Section 109, Measurement and Payment, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

**907-109.01--Measurement of Quantities.** Delete the third full paragraph of Subsection 109.01 on page 90 and substitute the following.

When requested by the Contractor, material specified to be measured by the cubic yard or ton may be converted to the other measure as appropriate. Factors for this conversion will be determined by the District Materials Engineer and agreed to by the Contractor. The conversion of the materials along with the conversion factor will be incorporated into the contract by supplemental agreement. The supplemental agreement must be executed before such method of measurement is used.

After the second sentence of the fourth full paragraph of Subsection 109.01 on page 90, add the following.

Where loose vehicle measurement (LVM) is used, the capacity will be computed to the nearest one-tenth cubic yard and paid to the whole cubic yard. Measurements greater than or equal to nine-tenths of a cubic yard will be rounded to the next highest number. Measurements less than nine-tenths of a cubic yard will not be rounded to the next highest number. Example: A vehicle measurement of 9.9 cubic yards will be classified as a 10-cubic yard vehicle. A vehicle measurement of 9.8 cubic yards will be classified as a 9-cubic yard vehicle.

**907-109.04--Extra and Force Account Work.** In the last sentence of subparagraph (b) in Subsection 109.04 on page 91, change “bond” to “bond(s)”.

Delete the first sentence of the second paragraph of subparagraph (d) in Subsection 109.04 on page 92 and substitute the following.

In the event an agreement cannot be reached for a particular piece of equipment, the book entitled "Rental Rate Blue Book For Construction Equipment" as published by EquipmentWatch® and is current at the time the force account work is authorized will be used to determine equipment ownership and operating expense rates.

**907-109.06--Partial Payment.**

**907-109.06.1--General.** Delete the fourth and fifth sentences of the third paragraph of Subsection 109.06.1 on page 94, and substitute the following.

In the event mutual agreement cannot be reached, the Contractor will be allowed a maximum of

25 calendar days following the Contractor's receipt of the monthly estimate in question to file in writing, a protest Notice of Claim in accordance with the provisions Subsection 105.17. Otherwise, the Engineer's estimated quantities shall be considered acceptable pending any changes made during the checking of final quantities.

**907-109.07--Changes in Material Costs.** Delete the third full paragraph of Subsection 109.07 on page 96 and substitute the following.

A link to the established base prices for bituminous products and fuels will be included in the contract documents under a Notice to Bidders entitled "Petroleum Products Base Prices."



**MISSISSIPPI DEPARTMENT OF TRANSPORTATION**

**SPECIAL PROVISION NO. 907-304-13**

**CODE: (SP)**

**DATE: 06/06/2012**

**SUBJECT: Granular Courses**

Section 907-304, Granular Courses, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

**907-304.02--Materials.** After the first paragraph of Subsection 304.02.1 on page 183, add the following.

Crushed concrete meeting the requirements of Subsection 907-703.04.3 may be used in lieu of granular courses or crushed stone courses specified in the contract. This applies to base courses, shoulders, or other required construction on a prepared foundation.

**907-304.03--Construction Requirements.**

**907-304.03.5--Shaping, Compacting and Finishing.** Delete the sixth paragraph of Subsection 304.03.5 on page 185.

Delete the first table in Subsection 304.03.5 on page 186 and substitute the following.

Granular Material Class	Lot Average	Individual Test
7,8,9 or 10	97.0	93.0
5 or 6	99.0	95.0
3 or 4	100.0	96.0
1 or 2	102.0	98.0
Crushed Courses*	99.0	95.0

\* When placed on filter fabric on untreated subgrade, the individual tests and the average of the five (5) tests shall equal or exceed the following values.

<u>Lot Average</u>	<u>Individual Test</u>
96.0	92.0

**907-304.05--Basis of Payment.** Add the “907” prefix to the pay items listed on page 187.

# MISSISSIPPI DEPARTMENT OF TRANSPORTATION

## SUPPLEMENT TO SPECIAL PROVISION NO. 907-401-2

**DATE:** 12/17/2013

**SUBJECT:** Hot Mix Asphalt (HMA)

Before the first sentence on page 1, add the following.

**907-401.02.3.1–General.** Delete the second paragraph of Subsection 401.02.3.1 on page 239, and substitute the following.

The total amount of crushed limestone aggregate for mixtures, excluding shoulders, when used in the top lift, shall not exceed 50 percent of the total combined aggregate by weight.

Delete the table in Subsection 401.02.3.1 on page 240 and substitute the following.

Asphalt Mixture	Maximum Percentage of RAP by total weight of mix
4.75 mm	0
9.5 mm	20*
12.5 mm Surface Lift	20*
12.5 mm Underlying Lift	30
19 mm	30
25 mm	30

\* At a minimum, RAP shall be processed and/or screened such that the RAP material size does not exceed the nominal maximum sieve size for the mixture specified.

**907-401.02.4--Substitution of Mixture.** Delete the table in Subsection 401.02.4 on page 242, and substitute the following.

Mixture	Single Lift Laying Thickness Inches	
	Minimum	Maximum
25 mm	3	4
19 mm	2¼	3½
12.5 mm	1½	2½
9.5 mm	1	1½
4.75 mm	½	¾

After Subsection 907-401-02.6.2 on page 2, add the following.

**907-401.02.6.4.1--Roadway Density.** Delete subparagraphs 1., 2., & 3. on page 251 and substitute the following.

1. For all leveling lifts, when full lane width and with a thickness as specified in the table in Subsection 401.02.4, the required lot density shall be 92.0 percent of maximum density.
2. For all single lift overlays, with or without leveling and/or milling, the required lot density shall be 92.0 percent of maximum density.
3. For all multiple lift overlays of two (2) or more lifts excluding leveling lifts, the required lot density of the bottom lift shall be 92.0 percent of maximum density. The required lot density for all subsequent lifts shall be 93.0 percent of maximum density.
4. For all pavements on new construction, the required lot density for all lifts shall be 93.0 percent of maximum density.

Delete Subsections 401.02.6.5 and 401.02.6.6 on pages 253 thru 257 and substitute the following.

**907-401.02.6.5--Blank.**

**907-401.02.6.6--Blank.**

**907-401.02.6.7--Surface Correction.** Delete the paragraph in Subsection 401.02.6.7 on page 257, and substitute the following.

Corrective work to sections exceeding short continuous interval thresholds reported by ProVal, as described in Subsection 907-403.03.2.1, shall consist of diamond grinding in accordance with these specifications or methods approved by the Engineer. All surface areas corrected by grinding shall be sealed with a sealant approved by the Engineer.

**907-401.02.6.8--Acceptance Procedure for Pavement Smoothness Using Mean Roughness Index (MRI).** When compaction is completed, the lift shall have a uniform surface and be in reasonably close conformity with the line, grade and cross section shown on the plans.

The smoothness of the surface lift will be determined by using an Inertial Profiling System (IPS) to measure and record roughness data in each designated location. Roughness data for each longitudinal profile will be reported as a Mean Roughness Index (MRI). MRI is calculated by averaging the International Roughness Index (IRI) values from the two individual wheelpath profiles. The surface shall be tested and corrected to a smoothness index as described herein with the exception of those locations or specific projects that are excluded from smoothness testing with an IPS.

The smoothness of the surface lift will be determined for traffic lanes, auxiliary lanes, climbing lane and two-way turn lanes. Areas excluded from a smoothness test with the IPS are acceleration and deceleration lanes, tapered sections, transition sections for width, shoulders, crossovers, ramps, side street returns, etc. The roadway pavement on bridge replacement projects having 1,000 feet or less of pavement on each side of the structure will be excluded from a smoothness test. Pavement on horizontal curves having a radius of less than 1,000 feet at the centerline and pavement within the super elevation transition of such curves are excluded from smoothness testing. Smoothness testing shall terminate 264 feet from each transverse joint that

separates the pavement from a bridge deck, bridge approach slab or existing pavement not constructed under the contract. This shall apply to any other exceptions including, but not limited to, railroad crossings and manholes. Segments containing a considerable amount of encroachments such as intersections, manholes, curb and gutter sections, etc. may be excluded at the Project Engineer's discretion.

Initial smoothness measurements shall take place no more than 72 hours following placement of surface and must be performed at the posted speed limit or 50 miles per hour ( $\pm 5$  mile per hour), whichever is lower. This speed requirement will be waived for all lightweight profilers. Measurements will be made in both wheel paths of exterior and interior lanes. The wheel paths shall be designated as being located three feet (3') and nine feet (9') from centerline or longitudinal joint, respectively. Beginning and ending latitude and longitude coordinates shall be required on each smoothness surface test. Testing will also be required on sections that have been surface corrected. No smoothness testing shall be performed when there is moisture of any kind on the pavement surface. Any additional testing shall meet the requirements of Subsection 907-403.03.2.

The surface lift will be accepted on a continuous interval basis for pavement smoothness. Continuous reporting is based upon all MRI values for a specified running interval. These values are averaged and presented at the midpoint of the specified running interval. The last 15 feet of a day's lift may not be obtainable until the lift is continued and for this reason may be included in the subsequent section.

Areas of localized roughness exceeding the continuous 25-foot interval threshold described in Subsection 907-403.03.2.1 shall be corrected regardless of the 528-foot interval MRI value of the section. Surface correction by grinding shall be performed in accordance with Subsection 401.02.6.7. The Contractor shall also make other necessary surface corrections to ensure that the final mean roughness index of the section meets the requirements of Subsection 907-403.03.2.

Continuous sections exceeding the accepted long interval MRI value shall be corrected as specified in Subsection 403.03.4. All such corrections shall be performed at no additional costs to the State. Scheduling and traffic control will be the responsibility of the Contractor with approval of the Engineer. All tests and corrections shall be in accordance with AASHTO R 54-10, Accepting Pavement Ride Quality When Measured Using Inertial Profiling Systems.

#### **907-401.02.6.9--High Speed Inertial Profiling System.**

**907-401.02.6.9.1--General.** The IPS, furnished and operated by the Contractor under the supervision of the Engineer or the Engineer's representative, shall be a dual laser high speed or lightweight vehicle meeting the requirements of AASHTO M 328-10, Standard Specification for Inertial Profiler.

**907-401.02.6.9.2--Mechanical Requirements.** The IPS should function independent of vehicle suspension and speed with an operational range of 15-70 mph (for high speed profilers only) and must collect data at a sample interval of no more than three inches (3"). All IPSs, operators, and combinations thereof shall be verified in accordance with AASHTO R 56-10, Standard Practice for Certification of Inertial Profiler Systems and AASHTO R 57-10, Operating Inertial Profiler Systems.

**907-401.02.6.9.3--Computer Requirements.** The computer measurement program must be menu driven, Windows compatible, and able to produce unfiltered profiler runs in any one of the following file formats: University of Michigan's Transportation Research Institute's (UMTRI) Engineering Research Division (\*.erd) file, ProVAL's Pavement Profile (\*.ppf) file, or Ames Engineering's (\*.adf) file format. The computer shall have the ability to display and print data on site for verification and shall have the ability to save and transfer data via Universal Serial Bus (USB) flash drive, which shall be provided by the Contractor.

All profiler runs must be named in the following format for acceptance by the Project Engineer:

- County\_Route\_Direction\_Lane\_BeginStation\_EndStation

In addition to manufacturers software; the latest version of FHWA's ProVAL software shall be installed on the IPS computer. ProVAL software is available for free download at <http://www.roadprofile.com>.

**907-401.03.1.2--Tack Coat.** Delete the three sentences of Subsection 401.03.1.2 on page 259, and substitute the following.

Tack coat shall be applied to previously placed HMA and between lifts, unless otherwise directed by the Engineer. Tack coat shall be applied with a distributor spray bar. A hand wand will only be allowed for applying tack coat on ramp pads, irregular shoulder areas, median crossovers, turnouts, or other irregular areas. Bituminous materials and application rates for tack coat shall be as specified in Table 410-A on page 293. Construction requirements shall be in accordance with Subsection 407.03 of the Standard Specifications.

**907-401.03.1.4--Density.** Delete the first sentence of the first paragraph of Subsection 401.03.1.4 on page 259 and substitute the following.

The lot density for all dense graded pavement lifts, except as provided below for preleveling, wedging [less than fifty percent (50%) of width greater than minimum lift thickness], ramp pads, irregular shoulder areas, median crossovers, turnouts, or other areas where the established rolling pattern cannot be performed, shall not be less than the specified percent (92.0% or 93.0%) of the maximum density based on AASHTO Designation: T 209 for the day's production. For all leveling lifts, when full lane width and with a thickness as specified in the table in Subsection 401.02.4, the required lot density shall be 92.0 percent of maximum density.

**907-401.03.9--Material Transfer Equipment.** Delete the paragraph in Subsection 401.03.9 on page 264 and substitute the following.

Excluding the areas mentioned below, the material transferred from the hauling unit when placing the top lift, or the top two (2) lifts of a multi-lift HMA pavement with density requirements, shall be remixed prior to being placed in the paver hopper or insert by using an approved Materials Transfer Device. Information on approved devices can be obtained from the State Construction Engineer. Areas excluded from this requirement include: leveling courses, temporary work of short duration, detours, bridge replacement projects having less than 1,000 feet of pavement on each side of the structure, acceleration and deceleration lanes less than 1,000 feet in length, tapered sections, transition sections for width, shoulders less than 10 feet in width, crossovers, ramps, side street returns and other areas designated by the Engineer.

After Subsection 401.03.13 on page 266, add the following.

**907-401.03.14--Shoulder Wedge.** The Contractor shall attach a device to the screed of the paver that confines the material at the end gate and extrudes the asphalt material in such a way that results in a compacted wedge shape pavement edge of approximately 30 degrees, but not steeper than 35 degrees. The device shall maintain contact between itself and the road shoulder surface and allow for automatic transition to cross roads, driveways, and obstructions. The device shall be used to constrain the asphalt head reducing the area by 10% to 15% increasing the density of the extruded profile. Conventional single plate strike off shall not be used.

The device shall be TransTech Shoulder Wedge Maker, the Advant-Edge, or a similar approved equal device that produces the same wedge consolidation results. Contact information for these wedge shape compaction devices is the following:

1. TransTech Systems, Inc.  
1594 State Street  
Schenectady, NY 12304  
800-724-6306  
[www.transtechsys.com](http://www.transtechsys.com)
  
2. Advant-Edge Paving Equipment, LLC  
P.O. Box 9163  
Niskayuna, NY 12309-0163  
518-280-6090  
Contact; Gary D. Antonelli  
Cell: 518-368-5699  
email: [garya@nycap.rr.com](mailto:garya@nycap.rr.com)  
Website: [www.advantedgepaving.com](http://www.advantedgepaving.com)

Before using a similar device, the Contractor shall provide proof that the device has been used on previous projects with acceptable results, or construct a test section prior to the beginning of work and demonstrate wedge compaction to the satisfaction of the Engineer. Short sections of handwork will be allowed when necessary for transitions and turnouts, or otherwise authorized by the Engineer.

## MISSISSIPPI DEPARTMENT OF TRANSPORTATION

**SPECIAL PROVISION NO. 907-401-2**

**CODE: (IS)**

**DATE: 11/04/2005**

**SUBJECT: Hot Mix Asphalt (HMA)**

Section 401, Hot Mix Asphalt (HMA) - General, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

Delete in toto Subsection 401.02.6.2 on pages 248 and 249, and substitute:

**907-401.02.6.2--Assurance Program for Mixture Quality.** The Engineer will conduct a quality assurance program. The quality assurance program will be accomplished as follows:

- 1) Conducting verification tests.
- 2) Validate Contractor test results.
- 3) Periodically observing Contractor quality control sampling and testing.
- 4) Monitoring required quality control charts and test results.
- 5) Sampling and testing materials at any time and at any point in the production or laydown process.

The rounding of all test results will be in accordance with Subsection 700.04.

The Engineer will conduct verification tests on samples taken by the Contractor under the direct supervision of the Engineer at a time specified by the Engineer. The frequency will be equal to or greater than ten percent (10%) of the tests required for Contractor quality control and the data will be provided to the Contractor within two asphalt mixture production days after the sample has been obtained by the Engineer. At least one sample shall be tested from the first two days of production. All testing and data analysis shall be performed by a Certified Asphalt Technician-I (CAT-I) or by an assistant under the direct supervision of the CAT-I. Certification shall be in accordance with the *MDOT HMA Technician Certification Program* chapter in the Materials Division Inspection, Testing, and Certification Manual. The Department shall post a chart giving the names and telephone numbers for the personnel responsible for the assurance program.

The Engineer shall be allowed to inspect Contractor testing equipment and equipment calibration records to confirm both calibration and condition. The Contractor shall calibrate and correlate all testing equipment in accordance with the latest versions of the Department's Test Methods and AASHTO Designation: R 18.

Random differences between the Engineer's verification tests and the current running average of four quality control tests at the time of obtaining the verification sample will be considered acceptable if within the following limits:

Item	Allowable Differences
Sieve - % Passing	
3/8-inch and above	6.0
No. 4	5.0
No. 8	4.0
No. 16, for 4.75 mm mixtures ONLY	3.5
No. 30	3.5
No. 200	2.0
AC Content	0.4
Specimen Bulk SG, Gmb @ N <sub>Design</sub>	0.030
Maximum SG, Gmm	0.020

If four quality control tests have not been tested prior to the time of the first verification test, the verification test results will be compared to the average of the preceding quality control tests. If the verification test is the first material tested on the project or if a significant process adjustment was made just prior to the verification test, the verification test results will be compared to the average of four subsequent quality control test results. For all other cases after a significant process adjustment, the verification test results will be compared to the average of the preceding quality control tests (taken after the adjustment) as in the case of a new project start-up when four quality control tests are not available.

In the event that; 1) the comparison of the Contractor’s running average quality control data and Engineer’s quality assurance verification test results are outside the allowable differences in the above table, or 2) if a bias exists between the results, such that one of the results is predominately higher or lower than the other, and the Engineer’s results fail to meet the JMF control limits, the Engineer will investigate the reason immediately. As soon as the need for an investigation becomes known, the Engineer will increase the quality assurance sampling rate to the same frequency required for Contractor testing. The additional samples obtained by the Engineer may be used as part of the investigation process or for routine quality assurance verification tests. The Engineer's investigation may include testing of the remaining quality control split samples, review and observation of the Contractor's testing procedures and equipment, and a comparison of split sample test results by the Contractor quality control laboratory, Department quality assurance laboratory and the Materials Division laboratory. The procedures outlined in the latest edition of MDOT’s Field Manual for HMA may be used as a guide for the investigation. In the event that the Contractor’s results are determined to be incorrect, the Engineer's results will be used for the quality control data and the appropriate payment for the mixture will be based on the procedures specified in Subsection 401.02.5.8(j).

The Engineer will periodically witness the sampling and testing being performed by the Contractor. The Engineer, both verbally and in writing, will promptly notify the Contractor of any observed deficiencies. When differences exist between the Contractor and the Engineer which cannot be resolved, a decision will be made by the State Materials Engineer, acting as the referee. The Contractor will be promptly notified in writing of the decision. If the deficiencies are not corrected, the Engineer will stop production until corrective action is taken.



## MISSISSIPPI DEPARTMENT OF TRANSPORTATION

**SPECIAL PROVISION NO. 907-401-6**

**CODE: (SP)**

**DATE: 08/21/2012**

**SUBJECT: Warm Mix Asphalt (WMA)**

Section 401, Hot Mix Asphalt (HMA) - General, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction as amended by this special provision is applicable to Warm Mix Asphalt Only.

### **907-401.01--Description.**

These specifications include general requirements that are applicable to Warm Mix Asphalt (WMA).

This work consists of the construction of one or more lifts of WMA in accordance with Section 401 for Hot Mix Asphalt, with the exceptions set forth in this special provision. The WMA shall meet the specific requirements for the mixture to be produced and placed in reasonably close conformity with the lines, grades, thicknesses and typical sections shown on the plans or established by the Engineer.

### **907-401.02--Materials.**

**907-401.02.2--WMA Products and Processes.** The Department will maintain a list of qualified WMA products and processes. No product or process shall be used unless it appears on this list.

The Contractor may propose other products or processes for approval by the Product Evaluation Committee. Documentation shall be provided to demonstrate laboratory performance, field performance, and construction experience.

### **907-401.03--Construction Requirements.**

**907-401.03.1.1--Weather Limitations.** The air and pavement temperature at the time of placement shall equal or exceed 40°F, regardless of compacted lift thickness.

**907-401.03.8--Preparation of Mixture.** Warm mix asphalt is defined as a plant produced asphalt mixture that can be produced and constructed at lower temperatures than typical hot mix asphalt. Typical temperature ranges of non-polymer modified, WMA produced by foaming the asphalt binder at the plant are typically 270°F to 295°F at the point of discharge of the plant. Typical temperature ranges of polymer modified, WMA produced by foaming the asphalt binder at the plant are typically 280°F to 305°F at the point of discharge of the plant. WMA produced by addition of a terminal blended additive may allow the producer to reduce the temperatures below 270°F as long as all mixture quality and field density requirements are met. Production temperatures at the plant may need to be increased or decreased due to factors such as material

characteristics, environmental conditions, and haul time to achieve mixture temperatures at the time of compaction in which uniform mat density can be achieved.

**MISSISSIPPI DEPARTMENT OF TRANSPORTATION**

**SUPPLEMENT TO SPECIAL PROVISION NO. 907-403-4**

**DATE:**        **12/17/2013**

**SUBJECT:**   **Hot Mix Asphalt (HMA)**

Before Subsection 907-403.05.2 on page 1, add the following:

**907-403.03--Construction Requirements.**

**907-403.03.2--Smoothness Tolerances.** Delete the table, footnotes, and first six paragraphs of Subsection 403.03.2 on page 266 & 267, and substitute the following.

	Lower* & Leveling Lifts	Lower* Intermediate Lift	Top Intermediate Lift	Surface Lift
Maximum deviation from grade and cross section at any point .....	1/2"	3/8"	1/4"	1/4"
Maximum deviation from A 10 foot straight edge.....	3/8"	1/4"	1/8"	1/8"

Note: Where more than four (4) lifts of HMA are required, all lifts, excluding the top three (3) lifts, shall meet the requirements of the lower lift.

\* When tested longitudinally from a stringline located equidistant above points 50 feet apart, the distance from the stringline to the surface at any two points located 12 1/2 feet apart shall not vary one from the other more than the maximum deviation allowed above from a 10-foot straight edge.

Delete the last paragraph of Subsection 403.03.2 at the bottom of page 268, the table at the top of page 269, and the first, second and third full paragraphs on page 269, and substitute the following.

Sections(s) or portions thereof representing areas excluded from a smoothness test with the High Speed Inertial Profiling System (IPS) shall also be excluded from consideration for a contract price adjustment for rideability.

Any contract price adjustment for rideability will be applied on a continuous basis to the pay tonnage, determined in accordance with Subsections 907-401.02.6.8 and 403.04, for the section(s) or portions thereof for which an adjustment is warranted.

Contract price adjustments for rideability shall only be applicable to the surface lift and furthermore to only the long continuous section(s) or portions of the long continuous section(s) of the surface lift that require smoothness be determined by using a profiling device.

**907-403.03.2.1--Smoothness Tolerances for Mean Roughness Index (MRI).** Smoothness tolerances shall be applied to asphalt pavements based on the following pavement categories.

**Category A** applies to the following pavement constructions:

- New construction
- Construction with three (3) or more lifts
- Mill and two (2) or more lifts

**Category B** applies to the following pavement constructions:

- Mill and one (1) lift
- Two (2) lift overlays without milling

**Category C** applies to the following pavement constructions:

- Single lift overlay without milling

**NOTE:** Spot Leveling does not count as a lift. Full width / continuous leveling courses will be considered a lift. Leveling lifts that do not have a minimum thickness of 3/4" across the entire lane width will not be considered a lift.

For all projects, the surface lift smoothness data shall be reported by two MRI methods:

1. A continuous 528-foot long interval MRI report
2. A continuous 25-foot short interval MRI report

Areas of the surface lift with localized roughness greater than 160 inches per mile as determined by the continuous short interval report will be identified for correction by the Project Engineer.

**Category A** projects shall have a long interval surface MRI of not more than 60 inches per mile.

**Category B** projects shall have a long interval surface MRI of not more than 70 inches per mile.

**Category C** projects shall have the existing surface profiled at no additional cost to the State. The finished surface lift shall meet the following requirements:

- A 50% improvement in MRI from the existing surface
- or
- 80 inches per mile long interval surface MRI value whichever value is higher.

In the case that 50% of the existing surface MRI is greater than 80 inches per mile, the short continuous threshold shall be increased from 160 inches per mile by the difference between 50% of the existing surface MRI and 80 inches per mile.

When a project has multiple lifts, the lift underlying the surface lift shall have a MRI of no more than 10 inches/mile more than the surface lift threshold for both long and short continuous intervals. Category B projects containing multiple lifts must meet the Category C percent improvement requirement for the underlying lift. Corrective action must be taken on those segments that do not meet this requirement. No unit price adjustment will be applied on any underlying lift.

For Category A and B projects, a unit price increase will be added when the MRI for the final surface lift is less than or equal to fifty inches per mile (50.0 inches / mile) on the long interval report. These Projects will be considered for incentive pay based on the following guidelines for the long interval surface lift MRI.

Mean Roughness Index inches / mile	Contract Price Adjustment percent of Asphalt unit bid price
Less than 35.0	108
35.1 to 40.0	106
40.1 to 45.0	104
45.1 to 50.0	102
50.1 to Required Surface MRI	100

For Category C projects, a unit price increase will be added when the MRI for the final surface lift is less than or equal to fifty inches per mile (50.0 inches / mile) on the long interval report. These Projects will be considered for incentive pay based on the following guidelines for the long interval surface lift MRI.

Mean Roughness Index inches / mile	Contract Price Adjustment percent of HMA unit bid price
Less than or equal to 50.0	103
50.1 to Required Surface MRI	100

No incentive will be allowed if the MRI value from the newly paved surface is greater than the existing surface.

In addition to the above pay incentive factors, a project may be subject to a disincentive when the Long Continuous Interval MRI for the surface exceeds the allowable tolerance. This applies to all project categories and will correlate to the maximum allowed Long Continuous Interval MRI.

Mean Roughness Index inches / mile	Contract Price Adjustment percent of HMA unit bid price
Above 20.0 Over	Remove And Replace
15.1 to 20.0 Over	80
10.1 to 15.0 Over	85
5.1 to 10.0 Over	90
0.1 to 5.0 Over	95
Required Surface MRI	100

Segment(s) or portions thereof representing areas excluded from a smoothness test shall also be excluded from consideration for a contract price adjustment for rideability. Corrective action must be taken on those sections that exceed the 'Remove and Replace' threshold on the Long Continuous Interval as directed by the Project Engineer. Sections that fall into this requirement may also need corrective action on both the preceding and following 264-foot sections as to conform to a complete 528-foot Long Continuous Interval. The minimum remove and replace length will be 528 feet (0.1 mile). Additional smoothness testing shall be required on sections following replacement and will be required to meet *at least* the maximum surface MRI short of 'Remove and Replace'.

The above pay factors will be applied in conjunction with the Long Continuous Histogram Chart from ProVAL's Smoothness Assurance Module. The price adjustments for rideability will be tabulated in MDOT's Pay Incentive spreadsheet on the basis of a theoretical tonnage of 110 lbs/yd<sup>2</sup>\*inch thickness (pounds per square yard \* inch thickness) and 12-foot travel lanes, determined in accordance with Subsections 401.02.6.5 and 403.04, for the segment(s) or portions thereof for which an adjustment is warranted.

Delete Subsection 403.03.5.5 on page 273 and substitute the following.

**907-403.03.5.5--Preliminary Leveling.** All irregularities of the existing pavement, such as ruts, cross-slope deficiencies, etc., shall be corrected by spot leveling, skin patching, feather edging or a wedge lift in advance of placing the first overall lift.

**907-403.04--Method of Measurement.** After the first paragraph of Subsection 403.04 on page 274, add the following.

The pay quantities for each individual job mix formula (JMF) will be calculated using the approved JMF maximum specific gravity (Gmm) and the following formulas.

When the composite mixture has a maximum specific gravity of 2.540 or less,

$$T_p = T_w$$

When the composite mixture has a maximum specific gravity greater than 2.540,

$$T_p = T_w((100-(((Gmm*A*B)-C)/(Gmm*A*B))*100))/100$$

Where:

- Tp = Total tonnage for payment
- Tw = Total tonnage weighed, used and accepted
- Gmm = Maximum Specific Gravity of the approved composite asphalt mixture
- A = 46.725 lbs/yd<sup>2</sup>/in
- B = 0.93 = 93% density
- C = 110.374 lbs/yd<sup>2</sup>/in = Theoretical density at 2.540 Gmm

**MISSISSIPPI DEPARTMENT OF TRANSPORTATION**

**SPECIAL PROVISION NO. 907-403-4**

**CODE: (IS)**

**DATE: 11/04/2005**

**SUBJECT: Hot Mix Asphalt (HMA)**

Section 403, Hot Bituminous Pavement, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

**907-403.05.2--Pay Items.** Add the "907" prefix to the pay items listed on page 275 & 276.



## MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-403-12

CODE: (SP)

DATE: 08/21/2012

SUBJECT: Warm Mix Asphalt (WMA)

Section 403, Hot Bituminous Pavement, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction as amended by this special provision is applicable to Warm Mix Asphalt Only.

**907-403.01--Description.** This work consists of constructing one or more lifts of Warm Mix Asphalt (WMA) pavement in accordance with the requirements of Section 403 for Hot Mix Asphalt, with the exceptions set forth in this special provision. The WMA shall meet the requirements of this section and placed in reasonably close conformity with the lines, grade, thicknesses, and typical cross sections shown on the plans or established by the Engineer.

**907-403.04--Method of Measurement.** Warm mix asphalt will be measured by the ton. The weight of the composite mixture shall be determined in accordance with the provisions of Subsection 401.03.2.1.11.

**907-403.05--Basis of Payment.** Subject to the adjustments set out in Subsections 401.02.6.3, 401.02.6.4, 401.02.6.5, 401.02.6.6 & 403.03.2, warm mix asphalt, measured as prescribed above, will be paid for at the contract unit price per ton for each lift of pavement specified in the bid schedule and shall be full compensation for completing the work.

**907-403.05.2--Pay Items.** After the last pay item listed on page 276, add the following:

907-403-M: Warm Mix Asphalt,     (1)    ,     (2)     - per ton  
Type Mixture

907-403-N: Warm Mix Asphalt,     (1)    ,     (3)    , Leveling - per ton  
Type Mixture

907-403-O: Warm Mix Asphalt,     (1)    ,     (4)    , Trench Widening - per ton  
Type Mixture

907-403-P: Warm Mix Asphalt, HT,     (3)    , Polymer Modified - per ton  
Mixture

907-403-Q: Warm Mix Asphalt, HT,     (3)    , Polymer Modified, Leveling - per ton  
Mixture

MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-405-8

CODE: (SP)

DATE: 05/14/2013

SUBJECT: Polymer Modified Asphalt Rejuvenating Scrub Seal

Section 907-405, Scrub Seal, is hereby added to and made a part of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction as follows.

**SECTION 907-405 -- POLYMER MODIFIED ASPHALT REJUVENATING  
SCRUB SEAL**

**907-405.01--Description.** This work shall consist of, but not be limited to, furnishing all labor, materials, equipment and transportation for the application of a polymer modified asphalt rejuvenating scrub seal. All ingredients shall be properly proportioned, mixed, and spread on the paved surface in accordance with this Specification and as directed by the Engineer.

**907-405.02--Materials.**

**907-405.02.1--Aggregate.** Unless otherwise noted, the aggregate material shall be one of the seal aggregate cover materials listed in and meeting the requirements of Subsection 703.14 of the Standard Specifications.

**907-405.02.2--Asphalt Emulsion for Scrub Seal.** The asphalt emulsion for scrub seal shall meet the requirements of the following table and shall be composed of a polymer modifier, a petroleum based rejuvenating agent, and asphalt.

Test on Emulsion	Method	Specification	
		(min)	(max)
Viscosity @77 (SFS)	AASHTO T 59	50	350
Residue, w% <sup>(1)</sup>	AASHTO T 59	60	-
Storage Stability, 24 h, %	AASHTO T 59	-	1.0
Sieve, w%	AASHTO T 59		0.1
Oil distillate, w%	AASHTO T 59		0.5
<b>Test on Residue<sup>(1)</sup></b>			
Viscosity @ 140°F, P	AASHTO T 202	-	3000
Penetration @ 4°C (39.2°F), 200 g, 60 sec	AASHTO T 59	30	-
<b>Test on Polymer Modifier</b>			
Swelling in rejuvenating agent, %; 48 hours exposure @ 104°F	ASTM D 471 <sup>(2)</sup> Modified	-	40% intact film
<b>Test on Rejuvenating Agent</b>			
Flash point, COC , °F	AASHTO T 48	380	-
Viscosity @ 140°F, CST	AASHTO T 201	50	175
Saturate, % by weight	ASTM D 2007	-	30
Asphaltenes	ASTM D 2007	-	1.0
<b>Test on Residue</b>			
Weight Change, %			6.5
Viscosity Ratio			3

(1) Exception to AASHTO T59: Bring the temperature on the lower thermometer slowly to 350°F plus or minus 10°F. Maintain at this temperature for 20 minutes. Complete total distillation in 60 plus or minus 5 minutes from first application of heat.

(2) **Polymer Modifier** Testing: Suitable substrate for film formation shall be polyethylene boards, silicone rubber sheeting, glass, or any substrate which produces a cured film of uniform cross-section. Polymer film shall be prepared from latex as follows:

Resistance to Swelling: Polymer films shall be formed by using a 50 mil drawdown bar and drawing down 50 mils of the latex on polyethylene boards. Films shall be cured for 14 days at 75°F and 50% humidity. Samples for resistance to swelling in rejuvenating agent shall be 1" by 2" rectangles cut from the cured film. Cut at least 3 specimens for each sample to be tested for swelling. Fill 3- 8 oz ointment tins with at least a ½" deep of rejuvenating agent. Swelling samples shall be weighed and then placed in the ointment tins on top of the rejuvenating agent. Then, add at least another ½" deep of rejuvenating agent over each of the latex samples. The ointment tins shall be covered and placed in an oven at 104°F for the specified 48 hours +/- 15 minutes. The ointment tins are allowed to cool to 75°F and then the latex films are removed from the tins. Unabsorbed rejuvenating agent is removed from the intact latex film by scraping with a rubber policeman and blotting with paper towels. If the latex film does not remain intact during removal from the tins or while removing the unabsorbed rejuvenating agent the sample shall be rejected. After the rejuvenating agent is removed from the samples they are then weighed. Percent swelling is reported as weight increase of the polymer film; report mass increase as a percent by weight of the original latex film mass upon exposure of films to the **rejuvenating** agent.

**907-405.02.2.1--Certification and Acceptance.** The Emulsion supplier shall submit a certification that the polymer modified rejuvenating emulsion meets the requirements of the specification. The certification shall be submitted to the Engineer prior to starting the work. The Engineer will sample the polymer modified rejuvenating emulsion according to Department procedures. **Final acceptance of the emulsion for scrub seal will be based on the Manufacturer's Certification and testing conducted by the Department.**

**907-405.03--Construction Requirements.** The attached sign drawings shall be used during scrub seal operations. Prior to any sealing operation, the rectangular "Loose Rock" signs shall be installed and remain in place until all sealing operations are complete. Prior to any daily sealing operation, the portable "Loose Rock" signs shall be installed in accordance with the attached drawings. Portable signs shall be installed and remain in place on a daily basis in the active sealing area. Payment for signs shown on the sign detail drawings shall be made under pay item no. 618-A, Maintenance of Traffic.

**907-405.03.1--Preparation.** The work shall be done in the following order: Prepare the pavement surface; apply the **asphalt emulsion for scrub seal** and scrub the applied emulsion with a scrub broom as specified herein; apply the aggregate, roll the aggregate, broom the aggregate with a secondary broom when specified; and sweep up and dispose of excess aggregate. Excess aggregate shall be removed from the project unless otherwise approved by the Engineer.

Prior to the scrub seal operation, the Contractor shall remove any and all vegetation within the limits of the scrub seal installation. The use of herbicides will be allowed at the discretion of the Engineer.

If used, the herbicide shall be applied at least 10 days prior to the scrub seal operation, or as directed by the manufacturer of the approved herbicide. The application of the herbicide shall be performed in accordance with all applicable regulations. Any and all fines or clean-up costs for unlawful misuse or discarding of herbicides shall be the sole responsibility of the Contractor. Mixtures and spread rates for the herbicides shall be determined by the manufacturer's specifications. Wash down of equipment or discarding of herbicides shall not enter catch basins or positive drainage facilities.

Prior to the scrub seal operation, the Contractor shall remove all existing thermoplastic striping, thermoplastic legends and raised pavement markers within the scrub seal limits. Removal shall be performed to the satisfaction of the Engineer.

Prior to the scrub seal operation, all drain inlet covers, monument covers, and all other utility covers shall be protected from the Contractor's scrub seal operations by applying a sheet of plastic over the exposed facilities, or other methods approved by the Engineer. All traces of plastic, residual emulsion and aggregate shall be removed from covered objects after the application of the scrub seal and/or prior to final inspection of the project.

Immediately prior to the scrub sealing operations, the Contractor shall sweep the entire pavement surface.

**907-405.03.2--Application.** The scrub seal shall be applied from edge of pavement to edge of pavement. The edges of the scrub seal application shall be maintained in a neat and uniform line. Scrub seal shall not be applied on concrete gutters or pads unless directed by the Engineer.

The application of the asphalt emulsion for scrub seal shall be applied only when the ambient and pavement temperatures are above 70°F.

The asphalt emulsion for scrub seal shall be applied with a distributor truck at the following target rates. The actual emulsion application rate shall be determined from the surface demands and aggregate used. Any adjustments of the application rate shall be approved by the Engineer, and manufacturer’s representative if necessary.

The optimum application rate of bituminous material is dependent on the chosen seal aggregate gradation as well as the condition of the pavement in which the bituminous surface treatment is to be applied. The application rate of the bituminous material may be adjusted by the Engineer based on field conditions at the time of construction. Following are target application rates for bituminous material.

Seal Aggregate Gradation	Bituminous Material	Target Application Rate (gal/yd <sup>2</sup> )	Tolerance
Size No. 7	Emulsified Asphalt	0.33	±0.03
Size No. 8 or 89	Emulsified Asphalt	0.30	±0.03

Note: Emulsified Asphalt shall not be diluted. A sample of emulsified asphalt should be obtained from the Contractor’s distributor on the first day of production and thereafter at a frequency not to exceed 1 sample per 50,000 gallons. Because the time between sampling of the emulsified asphalt and the testing of the material can affect the test results, samples should be sent to the MDOT Central Lab for testing as soon as possible.

The asphalt emulsion for scrub seal temperature when applied shall be a minimum of 140° to 180°F. For smaller areas, the emulsion may be applied with a wand. The emulsion shall be immediately broomed to fill cracks and voids. The emulsion scrub broom shall be as described below.

Immediately following the application of the emulsion to the road surface, the material shall be scrubbed with a scrub broom for the purpose of forcing the emulsion into the existing surface and distributing the emulsion evenly over variable road surface contours.

The application of the asphalt emulsion for scrub seal and scrub broom operation shall cease 40 feet prior to the end of the application. The remaining asphalt emulsion for scrub seal shall be dragged out by the scrub broom, and the remaining emulsified material required to complete the pass shall be applied only by the distributor truck, at the specified rate.

Immediately following the scrubbing of emulsion, aggregate shall be applied at the following application rates.

Size 7 Slag, Stone, Gravel or Expanded Clay	= 0.30 ±0.02 ft <sup>3</sup> / yd <sup>2</sup>
Size 8 Expanded Clay	= 0.25 ±0.02 ft <sup>3</sup> / yd <sup>2</sup>
Size 89 Slag, Stone, or Gravel	= 0.25 ±0.02 ft <sup>3</sup> / yd <sup>2</sup>

The actual aggregate application rate shall be as required by the surface demands and the emulsion used. The rate shall be adjusted, within the specified limit, up or down so that no “bleed through” occurs during rolling.

During the first day of production and at least once a week thereafter, the application rate of the aggregate shall be verified by the Department to assure that the appropriate application rate of the aggregate is applied. The rate can be verified by placing a tarp of at least 1.0 yd<sup>2</sup> area on the roadway surface. After allowing the aggregate spreader to pass over the tarp, the aggregate on the tarp should be collected and weighed to determine the weight of aggregate. The measured weight should then be compared to the target weight calculated using the following formula.

$$W = 0.85(G_{sb})(U_w)(R)(A)(e)$$

Where:

- W = target weight of aggregate in lbs.
- G<sub>sb</sub> = bulk specific gravity of aggregate
- U<sub>w</sub> = Unit weight of water at 70°F = 62.3 lbs./ft<sup>3</sup>
- R = target application rate in ft<sup>3</sup>/yd<sup>2</sup>
- A = area of tarp in yd<sup>2</sup>
- e = air voids in loose aggregate = 0.4

- G<sub>sb</sub> for gravel = 2.650
- G<sub>sb</sub> for limestone = 2.700

Note: Bulk specific gravities of expanded clay and steel slag should be obtained from the seal aggregate supplier.

Upon determining the target weight, it should be compared to the actual measured weight. If the difference in the target weight and the actual measured weight is over 2.5 pounds, the aggregate distributor should be adjusted such that the spread rate is within the above tolerance. The above procedure shall be repeated until the spread rate is within the allowable tolerance.

If at any point during production, excessive aggregate is noted, the aggregate application rate should be verified and the spread rate adjusted. The intent is to minimize the amount of excess aggregate. Excess aggregate removed from the roadway surface after brooming shall be removed from the job site and should not be reused in the aggregate operation.

The dry aggregate shall be spread uniformly to cover the bituminous material with the quantity of mineral aggregate specified by the Engineer. All deficient areas shall be covered by additional material. All excess cover material shall be removed from the surface and stockpiled or used as directed.

A minimum of two self-propelled pneumatic-tired rollers shall be used for the required rolling of the aggregate. The pneumatic-tired rollers shall be in good working condition and actively rolling at all times during the scrub seal operation. The pneumatic-tired rollers shall be minimum 5-ton rollers. The pneumatic-tired rollers shall be operated in such a manner to prevent the dislodging of newly applied aggregate.

**907-405.03.3--Stockpile Sites.** Sites for stockpiles of materials shall be grubbed and cleaned prior to storing the aggregates, and the ground shall be firm, smooth, and well drained.

**907-405.03.4--Equipment.** The following equipment shall be used for the scrub-seal operations.

- A. **Asphalt Distributor.** The asphalt distributor for application of the emulsion shall have a full circulation spray bar that is adjustable to at least sixteen feet (16') wide in two (2) feet increments and capable of heating and circulating the emulsion simultaneously. It must have computerized rate control for adjusting and controlling the application from the cab within 0.01 gallons per square yard increments. The distributor shall also be equipped with a volume measuring device and a thermometer for measuring the emulsion temperature in the tank.
- B. **Scrub Broom.** A scrub broom as described herein shall be used to scrub the emulsion after application. The scrub broom frame shall be constructed of metal. The scrub broom shall be attached to and pulled by the distributor truck. The scrub broom must be equipped with a means of raising and lowering the scrub broom at desired points. It shall be towable in the elevated position to the next area of construction. The weight of the broom assembly shall be such that it does not squeegee the emulsion off the roadway surface.

The main body of the scrub broom shall have a frame size as shown in the drawing at the end of this special provision. The nearest and furthest members, paralleling the back of the distributor truck, and diagonal members shall be equipped with street brooms. The leading member and the trailing member shall have broom heads angled at 10 to 15 degrees off the centerline of the supporting member. The diagonal members shall have broom heads attached in line with the centerline of the supporting member. Each individual street broom attached to the scrub broom assembly shall be 3.5 inches wide x 6.5 inches high x 16 inches long and have stiff nylon bristles. Bristle height is to be maintained at a minimum of five inches (5"). The scrub broom shall be equipped with hinged wing assemblies attached to the main body not to exceed 4.5 feet per side, with diagonals and equipped with street brooms. The purpose of the maximum rigid frame width and the hinged wing extensions is not only for maximum width of 16 feet but to maintain the scrubbing process evenly as contours and cross-sections change across the existing road surface.

- C. **Aggregate Spreader.** A self-propelled aggregate spreader with front discharge that can evenly distribute aggregate.
- D. **Roller.** A minimum of two (2) pneumatic rollers weighing at least five (5) tons each.
- E. **Power Broom.** Two (2) mechanically powered kick-brooms or vacuum type brooms.

**907-405.03.5--Opening to Traffic.** Unless otherwise advised, the Contractor's operations shall be schedule such that all lanes of traffic are open to the traveling public at the end of each day. Considering time needed for curing and preparation prior to opening traffic, the Contractor should not apply bituminous material two (2) hours before dusk, or longer, to allow sufficient time for bonding of the aggregates.

After the scrub seal has been rolled and the bituminous material has cured a minimum of one (1) hour, or longer if necessary to sufficiently hold the aggregate in place, the Contractor shall perform an initial brooming operation consisting of lightly sweeping excess aggregate material from the surface. After the initial brooming has been completed, public traffic will be allowed on the roadway.

Immediately the next morning, a final brooming shall be performed to remove any remaining excess aggregate material from the previous day's seal operation.

**907-405.04--Method of Measurement.** Scrub seal shall be measured by the square yard.

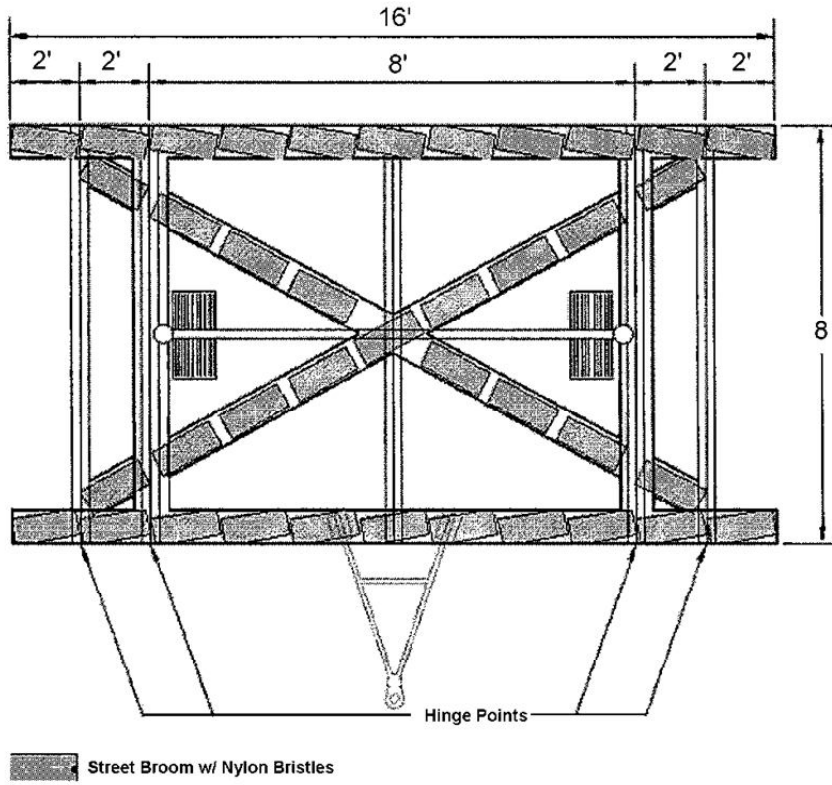
**907-405.05--Basis of Payment.** Scrub seal, measured as prescribed above, will be paid for at the contract bid price per square yard, which shall be full compensation for furnishing all labor, materials, equipment, temporary markers, vegetation removal, cleaning of the surface, pre-sweeping, post-sweeping, doing all the work involved in mixing, applying and protecting the polymer modified asphaltic rejuvenating scrub seal, and all incidentals necessary to complete the work.

Payment will be made under:

907-405-D: Scrub Seal

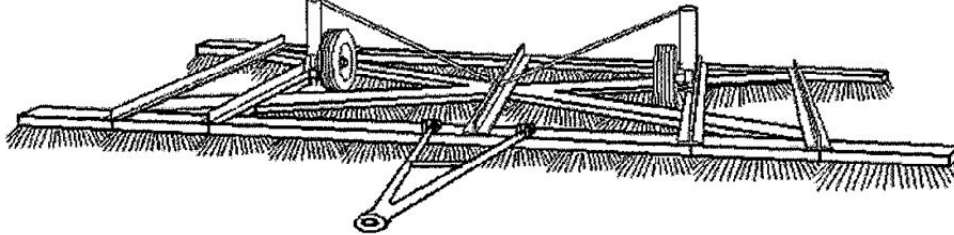
- per square yard



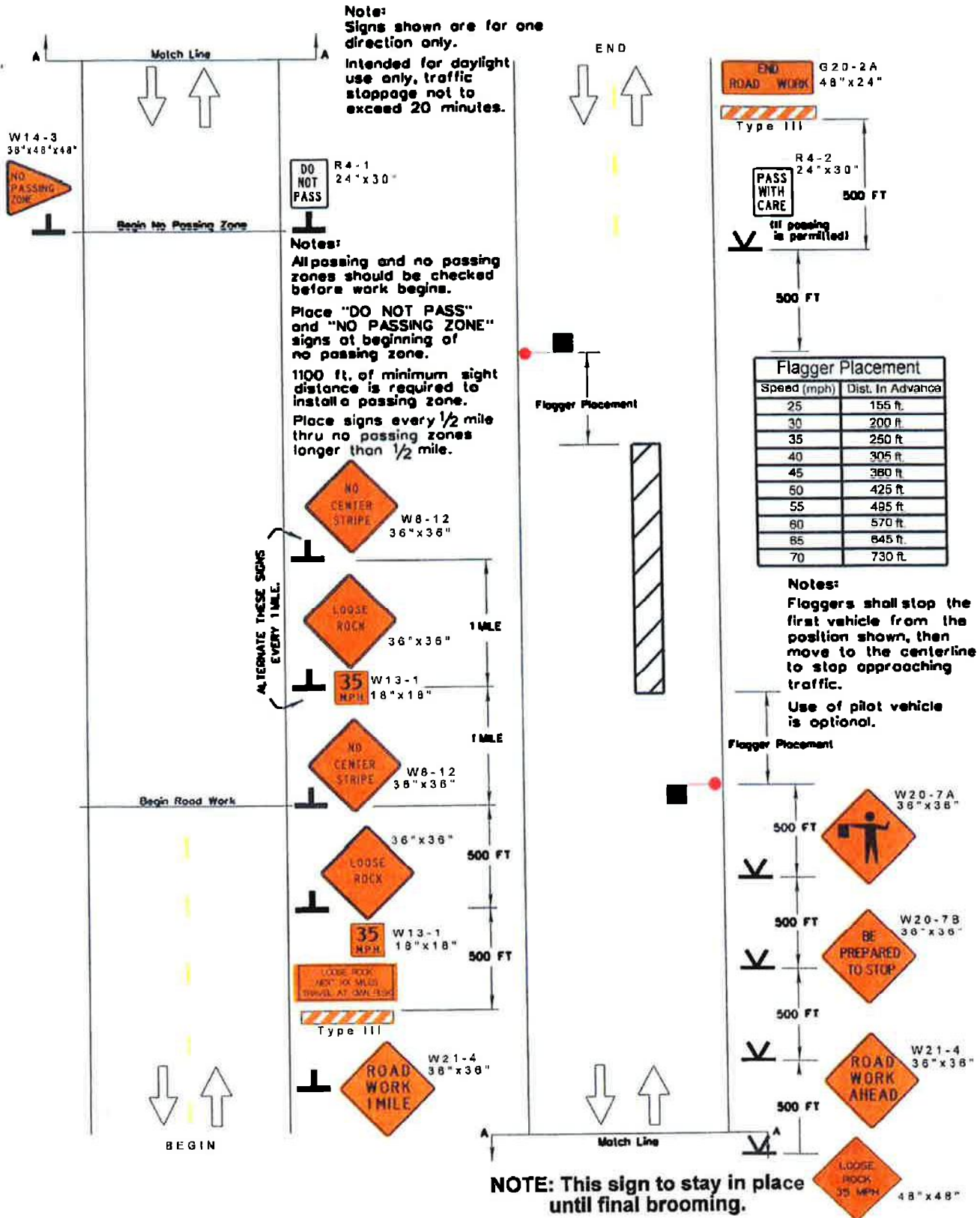


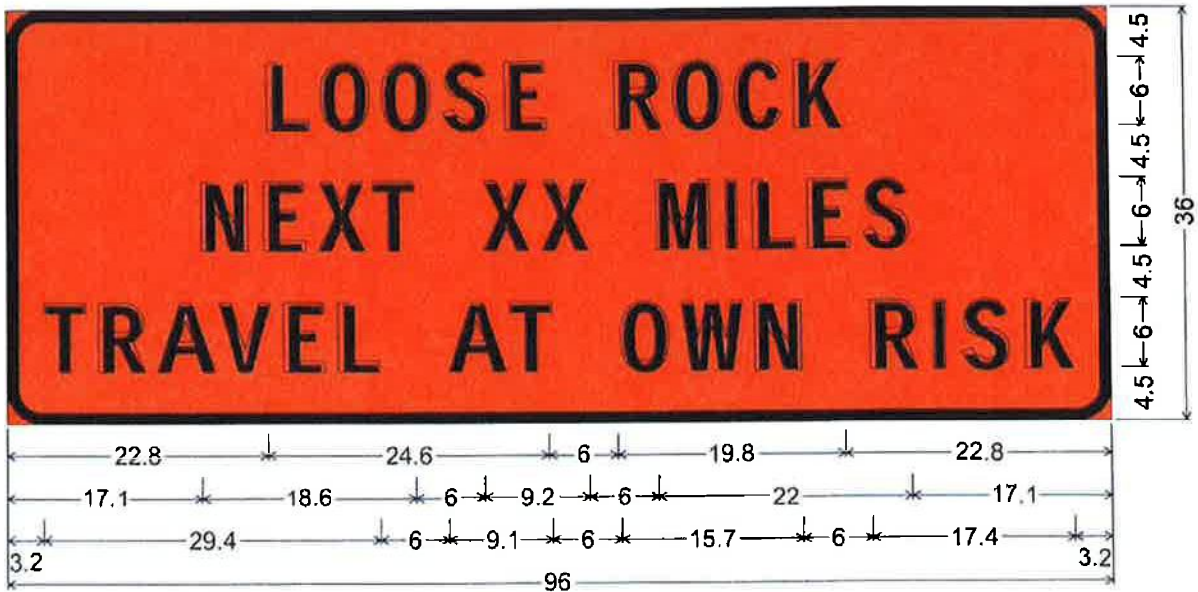
Lift For Wheels (Typical)

Note: Wheels are up and the broom is in the scrub position.



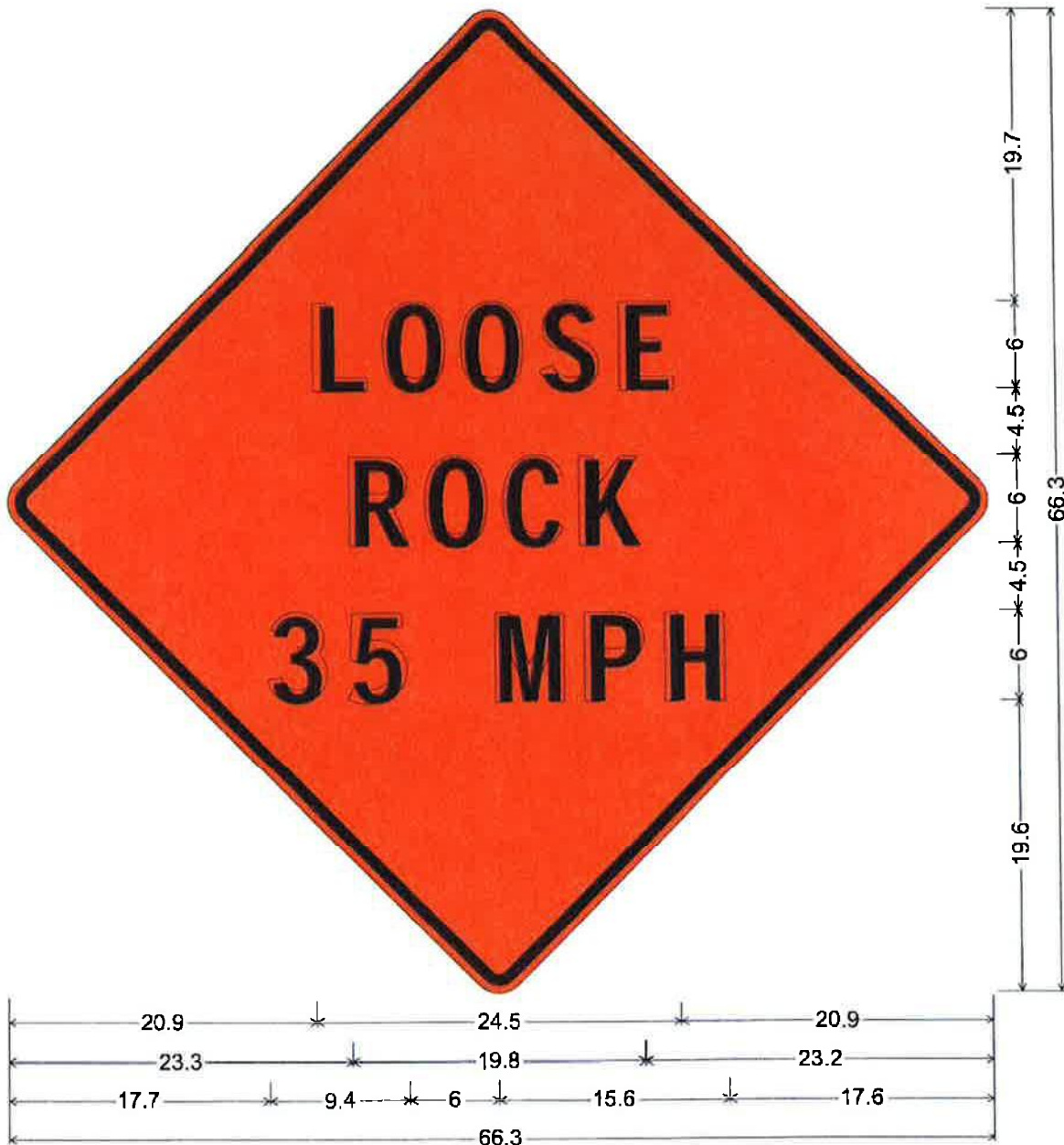
### Scrub Broom





3.0" Radius, 1.0" Border, Black on Orange;  
 "LOOSE ROCK" D; "NEXT XX MILES" D; "TRAVEL AT OWN RISK" D;  
 Table of letter and object lefts.

L	O	O	S	E	R	O	C	K						
22.8	27.6	33.0	38.3	43.7	53.4	58.5	63.9	69.0						
N	E	X	T	X	X	M	I	L	E	S				
17.1	22.5	27.3	32.1	41.7	46.9	56.9	63.0	65.3	70.1	74.9				
T	R	A	V	E	L	A	T	O	W	N	R	I	S	K
3.2	8.0	13.2	18.6	24.2	29.0	38.6	44.0	53.7	59.0	65.4	75.4	80.9	83.2	88.6



48.0" across sides 1.9" Radius, 0.8" Border, 0.5" Indent, Black on Orange;

"LOOSE" D; "ROCK" D; "35 MPH" D;

Table of letter and object lefts.

<b>L</b>	<b>O</b>	<b>O</b>	<b>S</b>	<b>E</b>
20.9	25.7	31.0	36.4	41.8
<b>R</b>	<b>O</b>	<b>C</b>	<b>K</b>	
23.3	28.4	33.8	38.9	
<b>3</b>	<b>5</b>	<b>M</b>	<b>P</b>	<b>H</b>
17.7	23.1	33.1	39.2	44.6

**MISSISSIPPI DEPARTMENT OF TRANSPORTATION**

**SPECIAL PROVISION NO. 907-407-1**

**CODE: (SP)**

**DATE: 02/26/2008**

**SUBJECT: Tack Coat**

Section 407, Tack Coat, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

**907-407.02.1--Bituminous Material.** Delete the second sentence of the first paragraph of Subsection 407.02.1 on page 281, and substitute the following:

When not specified, the materials shall be as specified in Table 410-A on page 293.

**907-407.03.3--Application of Bituminous Material.** Delete the first paragraph of Subsection 407.03.3 on page 281, and substitute the following.

Tack coat shall be applied with a distributor spray bar. A hand wand will only be allowed for applying tack coat on ramp pads, irregular shoulder areas, median crossovers, turnouts, or other irregular areas. Bituminous materials and application rates for tack coat shall be as specified in Table 410-A on page 293. Tack coat shall not be applied during wet or cold weather, after sunset, or to a wet surface. Emulsions shall be allowed to "break" prior to superimposed construction.

**907-407.05--Basis of Payment.** Delete the pay item at the end of Subsection 407.05 on page 282, and substitute the following:

907-407-A: Asphalt for Tack Coat \*

- per gallon

\* Grade may be specified

# MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SPECIAL PROVISION NO. 907-411-4

CODE: (SP)

| DATE: 07/25/2013

SUBJECT: Ultra-Thin Asphalt Pavement (UTAP)

Section 907-411, Ultra-Thin Asphalt Pavement, is hereby added to and made part of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction as follows:

## **SECTION 907-411 - ULTRA-THIN ASPHALT PAVEMENT**

**907-411.01--Description.** These specifications include general requirements that are applicable to Ultra-Thin Hot Mix Asphalt (UHMA) and Ultra-Thin Warm Mix Asphalt (UWMA).

This work consists of the construction of one lift of UTAP in accordance with these specifications and the specific requirements for the mixture to be produced and placed in reasonable close conformity with the lines, grades, thicknesses and typical sections shown on the plans or established by the Engineer.

The asphalt mixture (UHMA or UWMA) used on this project will be bid as an alternate pay item. **The Contractor must use the selected asphalt mixture, UHMA or UWMA, throughout the entire project.**

### **907-411.01.1--Definitions.**

**Maximum Sieve Size** - Maximum sieve size is the smallest sieve size at which 100 percent of the aggregate passes.

**Nominal Maximum Sieve Size** - The nominal maximum sieve size is one sieve size larger than the first sieve to retain more than 10 percent of the aggregate.

**Maximum Density Line** - The maximum density line is a straight line plot on the FHWA 0.45 power gradation chart which extends from the zero origin point of the chart through the plotted point of the combined aggregate gradation curve on the nominal maximum sieve size.

**Mechanically Fractured Face** - An angular, rough, or broken surface of an aggregate particle created by crushing as determined by ASTM Designation: D 5821.

### **907-411.02--Materials.**

#### **907-411.02.1--Component Materials.**

**907-411.02.1.1--Aggregates.** The source of aggregates shall meet the applicable requirements of Section 703.



The total amount of crushed limestone shall not exceed fifty percent (50%) of the total aggregate by weight.

**907-411.02.1.1.1--Coarse Aggregate Blend.** Mechanically fractured faces by weight of the combined mineral aggregate coarser than the No. 4 sieve shall be 90 percent, two faces.

**907-411.02.1.1.2--Fine Aggregate Blend.** Uncrushed natural sand shall pass the 3/8" sieve and can be used, excluding the content in RAP, as no greater than 30 percent of the total mineral aggregate by weight.

**907-411.02.1.1.3--Combined Aggregate Blend.** The gradation requirements for Ultra-thin asphalt pavements are provided in the following table:

Sieve Size	Percent Passing
1/2 inch	100
3/8 inch	95-100
No. 4	75 min
No. 8	22-70
No.16	--
No. 200	4-12

The ultra-thin mixtures shall have a minimum fine aggregate angularity of 40.0 when tested on combined aggregate in accordance with ASTM Designation: C1252 Method A.

The minus No. 40 fraction of the combined aggregate shall be non-plastic when tested according to AASHTO T 90. The clay content shall not exceed 0.5 percent by weight of the total mineral aggregate when tested according to AASHTO T 88.

**907-411.02.1.2--Reclaimed Asphalt Pavement.** Reclaimed asphalt pavement may be used in ultra-thin asphalt pavement and shall be no greater than 25 percent of the total mix weight.

Reclaimed asphalt pavement shall be separated into coarse and fine aggregate stockpiles using a 1/2" sieve as the break point.

**907-411.02.1.3--Bituminous Materials.** Bituminous materials shall meet the applicable requirements of Section 702 for the grade specified.

**907-411.02.1.4--Hydrated Lime.** Hydrated lime shall meet the requirements of Subsection 714.03.2 for lime used in soil stabilization.

**907-411.02.1.5--Mineral Filler.** Mineral filler shall meet the requirements of Subsection 703.16.

**907-411.02.2--Composition of Mixtures.**

**907-411.02.2.1--General.** Unless otherwise specified or permitted, the UTAP shall consist of a uniform mixture of asphalt, aggregate, mineral filler, hydrated lime and, when required or necessary to obtain desired properties, antistripping agent and/or other materials.

Hydrated lime shall be used in all UTAP at the rate of one percent (1%) by weight of the total dry aggregate. The aggregate, prior to the addition of the hydrated lime, shall contain sufficient surface moisture.

The Contractor shall obtain a shipping ticket for each shipment of hydrated lime. The Contractor shall provide the District Materials Engineer with a copy of each shipping ticket from the supplier, including the date, time and weight of hydrated lime shipped.

Mixtures will require the addition of an antistripping agent when the Tensile Strength Ratio (MT-63) and/or the Boiling Water Test (MT-59) fail to meet the following criteria.

**Tensile Strength Ratio (TSR - MT-63)**

Wet Strength / Dry Strength	85 percent minimum
Interior Face Coating	95 percent minimum

**Boiling Water Test (MT-59)**

Particle Coating	95 percent minimum
------------------	--------------------

**907-411.02.2.2--Mixture Properties.** Ultra-thin asphalt pavement shall be designed at  $N_{design}$  of 50 revolutions of the gyratory compactor.

Mixtures shall be designed such that the percent of maximum specific gravity ( $G_{mm}$ ) shall be between 94.0 and 96.0.

There will not be voids in mineral aggregate (VMA) requirement for ultra-thin hot mix asphalt. However, the specified volume of effective binder (the difference between total air voids and VMA) shall be a minimum of 12 percent.

Dust/Binder Ratio (Percent Passing No. 200 / Effective Binder Content) for ultra-thin asphalt pavement shall be between 1.0 and 2.0.

**907-411.02.2.3--Job Mix Formula.** At least 10 working days prior to the proposed use of each mixture, the Contractor shall submit in writing to the Engineer a proposed job-mix formula or request the transfer of a verified job-mix formula as set forth in the latest edition of MDOT's Field Manual for HMA. The job-mix formula shall be signed by a Certified Mixture Design Technician (CMDT).

The Department will perform the tests necessary for review of a proposed job-mix formula for each required mixture free of charge one time only. A charge will be made for additional job-mix formulas submitted by the Contractor for review.



The mixture shall conform thereto within the range of tolerances specified for the particular mixture. No change in properties or proportion of any component of the job-mix formula shall be made without permission of the Engineer. The job-mix formula for each mixture shall be in effect until revised in writing by the Engineer.

A job-mix formula may be transferred to other contracts in accordance with conditions set forth in the Department's Field Manual for HMA.

The Contractor shall not place any UTAP prior to receiving "tentative" approval and a MDOT design number from the Central Laboratory.

When a change in source of materials, unsatisfactory mixture production results such as segregation, bleeding, shoving, rutting over 1/8 inch, raveling & cracking, or changed conditions make it necessary, a new job-mix formula will be required. The conditions set out herein for the original job-mix formula are applicable to the new job-mix formula.

**907-411.02.2.4--Single Lift Laying Thickness.** The minimum lift thickness for ultra-thin asphalt pavement shall be 1/2 inch and the maximum lift thickness shall not exceed one inch (1").

**907-411.02.2.5--UWMA Products and Processes.** The Department will maintain a list of qualified UWMA products and processes. No product or process shall be used unless it appears on this list.

The Contractor may propose other products or processes for approval by the Product Evaluation Committee. Documentation shall be provided to demonstrate laboratory performance, field performance, and construction experience.

**907-411.02.3--Contractor's Quality Management Program.**

**907-411.02.3.1--General.** The Contractor shall have full responsibility for quality management and maintain a quality control system that will furnish reasonable assurance that the mixtures and all component materials incorporated in the work conform to contract requirements. The Contractor shall have responsibility for the initial determination and all subsequent adjustments in proportioning materials used to produce the specified mixture. Adjustments to plant operation and spreading and compaction procedures shall be made immediately when results indicate that they are necessary. Mixture produced by the Contractor without the required testing or personnel on the project shall be subject to removal and replacement by the Contractor at no additional cost to the State.

**907-411.02.3.2--Personnel Requirements.** The Contractor shall provide at least one Certified Asphalt Technician-I (CAT-I) full-time during UTAP production at each plant site used to furnish material to the project. Sampling shall be conducted by a certified technician or by plant personnel under the direct observation of a certified technician. All testing, data analysis and data posting will be performed by the CAT-I or by an assistant under the direct supervision of the CAT-I. The Contractor shall have a Certified Asphalt Technician-II (CAT-II) available to make any necessary

process adjustments. An organizational chart, including names, telephone numbers and current certification, of all those responsible for the quality control program shall be posted in the contractor's laboratory while the UTAP paving work is in progress

**907-411.02.3.3--Testing Requirements.** As a minimum, the Contractor's quality management program shall include the following:

- (a) Bituminous Material. Provide Engineer with samples in a sealed one-quart metal container at the frequency given in MDOT SOP TMD-20-04-00-000.
- (b) Mechanically Fractured Face. Determine mechanically fractured face content of aggregates retained on the No. 4 sieve, at a minimum of one test per day of production.
- (c) Mixture Gradation. Conduct extraction tests for gradation determination on the mixture. Sample according to the frequency in paragraph (i) and test according to Mississippi Test Method MT-31.
- (d) Total Voids and  $V_{be}$ . Determine total voids and volume of effective binder ( $V_{be}$ ), at  $N_{Design}$ , from the results of bulk specific gravity tests on laboratory compacted specimens. Sample according to the sampling frequency in paragraph (h) and test according to the latest edition of MDOT's Field Manual for HMA.
- (e) Asphalt Content. Sample according to the sampling frequency in paragraph (i), and determine the asphalt content using one of the following procedures.
  - (1) Nuclear gauge. (Mississippi Test Method MT-6)
  - (2) Incinerator oven. (AASHTO T 308, Method A)
- (f) Stripping Tests. Conduct a minimum of one stripping test at the beginning of each job-mix production and thereafter, at least once per each two weeks of production according to Mississippi Test Method: MT-63 and one stripping test per day of production according to Mississippi Test Method: MT-59. Should either the TSR (MT-63) or the boiling water (MT-59) stripping tests fail, a new antistripping additive or rate shall be established or other changes made immediately that will result in a mixture which conforms to the specifications; otherwise, production shall be suspended until corrections are made.
- (g) Quality Control Charts. Plot the individual test data, the average of the last four tests and the control limits for the following items as a minimum:

Mixture Gradation (Percent Passing) Sieves:  
1/2-in, 3/8-in, No. 4, No. 8, No. 30, and No. 200.  
Asphalt Content, Percent  
Maximum Specific Gravity  
Total Voids @  $N_{Design}$ , Percent  
 $V_{be}$  @  $N_{Design}$ , Percent

Keep charts up-to-date and posted in a readily observable location. Charts may be kept on a computer; however, the charts shall be printed out a minimum of once each production day and displayed in the laboratory. Note any process changes or adjustments on the Air Voids chart.

- (h) Sampling Frequency. Conduct those tests as required above at the following frequency for each mixture produced based on the estimated plant tonnage at the beginning of the day.

<u>Total Estimated Production, tons</u>	<u>Number of Tests</u>
0-500	1
501-1000	2
1001-1500	3
1501-2000	4
2001+	5

- (j) Sample Requirements. Obtain the asphalt mixture samples from trucks at the plant. Obtain aggregate samples from cold feed bins or aggregate stockpile. Save a split portion of all mixture samples at the laboratory site in a dry and protected location for 14 calendar days. At the completion of the project, the remaining samples may be disposed of with the approval of the Engineer.

The above testing frequencies are for the estimated plant production for the day. If production is discontinued or interrupted, the tests will be conducted at the previously established sample tonnage points for the materials that are actually produced. If the production exceeds the estimated tonnage, sampling and testing will continue at the testing increments previously established for the day. A testing increment is defined as the estimated daily tonnage divided by the required number of tests from the table in Subsection 907-411.02.3.3 paragraph (h).

In addition to the above program, aggregate stockpile gradation tests (AASHTO T-11 and T-27) shall be conducted every other production day. Fine aggregate angularity tests (ASTM C 1252, Method A) shall be conducted on the first day of production and once for every eight production samples thereafter, with a minimum of one test per production week.

**907-411.02.3.4--Documentation.** The Contractor shall document all observations, records of inspection, adjustments to the mixture, and test results on a daily basis. All tests conducted by the Contractor in accordance with Subsection 907-411.02.3.3 (g) shall be included in the running average calculations. If single tests are performed as a check on individual UTAP properties, between regular samples, without performing all tests required in Subsection 907-411.02.3.3 (g), the results of those individual tests shall not be included in the running average calculations for that particular property. The Contractor shall record the results of observations and records of inspection as they occur in a permanent field record. The Contractor shall record all process adjustments and job mix formula (JMF) changes on the air void charts. The Contractor shall provide copies of all test data sheets and the daily summary reports on the appropriate Mississippi DOT forms to the Engineer on a daily basis. The Contractor shall provide a written

description of any process change, including blend proportions, to the Engineer as they occur. Information provided to the Engineer must be received in the Engineer's office by no later than 9:00 AM the day after the UTAP is produced. Fourteen days after the completion of the placement of the UTAP, the Contractor shall provide the Engineer with the original testing records and control charts in a neat and orderly manner

**907-411.02.3.5--Control Limits.** The following control limits for the job mix formula (JMF) and warning limits are based on a running average of the last four data points.

<u>Sieve - % Passing</u>	<u>JMF Limits</u>	<u>Warning Limits</u>
1/2-in	± 5.5	± 4.0
3/8-in	± 5.5	± 4.0
No. 4	± 4.0	± 3.0
No. 8	± 4.0	± 3.0
No. 30	± 4.0	± 3.0
No. 200	± 2.0	± 1.5
Asphalt Content, %	-0.3 to +0.5	-0.2 to +0.4
Design Total Voids @ N <sub>Design</sub> , %	± 1.3	± 1.0
V <sub>be</sub> @ N <sub>Design</sub> , %	- 1.5	- 1.0

**907-411.02.3.6--Warning Bands.** Warning bands are defined as the area between the JMF limits and the warning limits.

**907-411.02.3.7--Job Mix Formula Adjustments.** A request for a JMF adjustment signed by a CAT-II may be made to the Engineer by the Contractor. Submit sufficient testing data with the request to justify the change. The requested change will be reviewed by the State Materials Engineer for the Department. If current production values meet the mixture design requirements, a revised JMF will be issued. Adjustments to the JMF shall conform to the latest edition of MDOT's Field Manual for HMA. Adjustments to the JMF to conform to actual production shall not exceed the tolerances specified for the JMF limits. Regardless of such tolerances, any adjusted JMF gradation shall be within the range given in Subsection 907-411.02.1.1.3 for the mixture specified. **The JMF asphalt content may only be reduced if the production V<sub>be</sub> meets or exceeds the minimum design V<sub>be</sub> requirements for the mixture being produced.**

**907-411.02.3.8--Actions and Adjustments.** Actions and adjustments shall be in accordance with Subsection 401.02.5.8.

**907-411.02.4--Standards of Acceptance.**

**907-411.02.4.1--General.** Acceptance for mixture quality (V<sub>be</sub> and total voids @ N<sub>Design</sub>, gradation, and asphalt content) will be based on random samples tested in accordance with the latest edition of MDOT's Field Manual for HMA. Smoothness will be accepted by lots as set out in Subsection 907-411.02.4.3.

**907-411.02.4.2--Assurance Program for Mixture Quality.** The Engineer will conduct a quality assurance program in accordance with Subsection 401.02.6.2.

**907-411.02.4.3--Acceptance Procedure for Mixture Quality.** All obviously defective material or mixture will be subject to rejection by the Engineer. Such defective material or mixture shall not be incorporated into the finished work. If the defective material has already been placed in the work, the material shall be removed and replaced at no additional cost to the State.

The Engineer will base final acceptance of the asphalt mixture production on the results of the Contractor's testing for total voids and  $V_{be}$  @  $N_{Design}$ , gradation, and asphalt content as verified by the Engineer in the manner hereinbefore described and the uniformity and condition of the completed pavement. Areas of pavement that exhibit nonuniformity or failures (materials or construction related) such as but not limited to segregation, bleeding, shoving, rutting over 1/8 inch, raveling, slippage, or cracking will not be accepted. Such areas will be removed and replaced at no additional cost to the State.

Bituminous mixture placed prior to correction for deficiencies in  $V_{be}$  and total voids @  $N_{Design}$ , gradation, or asphalt content, as required in Subsection 907-411.02.3.8 and determined by the Engineer satisfactory to remain in place will be paid for in accordance with the following pay factors times the contract unit price per ton.

**Pay Factor for Mixture Quality \***

Item	Produced in Warning Bands	Produced Outside JMF Limits (Allowed to Remain in Place)
Gradation	0.90	0.75
Asphalt Content	0.85	0.75
Total Voids @ $N_{Design}$	0.70	0.50
$V_{be}$ @ $N_{Design}$	0.90	0.75

\* The minimum single payment will apply.

**907-411.02.4.4--Acceptance Procedure for Density.** The density requirement for UTAP shall be roll to refusal. Refusal is defined as the number of roller passes to maximize the in-place unit weight of the mixture. On the first day of production and every three production days thereafter, a 500-foot test strip shall be evaluated to determine the required number of roller passes. Three random sites within the test strip shall be selected and monitored with the nuclear density gauge to determine refusal.

**907-411.02.4.5--Acceptance Procedure for Pavement Smoothness.** Prior to placement of UTAP, the Contractor shall determine the existing surface **Mean Roughness Index** at no additional cost to the State. The finished UTAP lift shall have a **mean roughness index** no greater than that of the existing surface.

**907-411.02.5--High Speed Inertial Profiling System.** The high speed inertial profiling system shall meet the applicable requirements of Subsection 907-401.02.6.9.

**907-411.02.6--Surface Correction.** In the event surface correction is needed it shall be accomplished by removal and replacement in accordance with Subsection 403.03.4. All such corrections shall be at no additional cost to the State.

The finished pavement surface will be measured for riding quality.

**907-411.02.7--Nuclear Gauges.** Nuclear gauges shall meet the requirements of Subsection 401.02.7.

**907-411.03--Construction Requirements.** Mississippi DOT has adopted the “Hot-Mix Asphalt Paving Handbook” as the guideline for acceptable UTAP construction practices.

**907-411.03.1--Weather Limitations.** The mixture shall not be placed when weather conditions prevent the proper handling and finishing or the surface on which it is to be placed is wet or frozen. At the time of placement, the air and pavement surface temperature limitations shall be equal to or exceed 55°F for UHMA and 40°F for UWMA, regardless of the compacted lift thickness.

When paving operations are discontinued because of rain, the mixture in transit shall be protected until the rain ceases. The surface on which the mixture is to be placed shall be swept to remove as much moisture as possible and the mixture may then be placed subject to removal and replacement at no additional cost to the State if contract requirements are not met.

**907-411.03.2--Tack Coat.** Tack coat shall meet the requirements of Subsection 401.03.1.2.

**907-411.03.3--Bituminous Mixing Plants.** Bituminous mixing plants shall meet the applicable requirements of Subsection 410.03.2.

**907-411.03.4--Hauling Equipment.** Hauling equipment shall meet the requirements of Subsection 401.03.3.

**907-411.03.5--Bituminous Pavers.** Bituminous pavers shall meet the requirements of Subsection 401.03.4.

**907-411.03.6--Rollers.** All rollers shall meet the requirements of Subsection 401.03.5.

**907-411.03.7--Preparation of Grade.** The foundation upon which UTAP pavement is to be placed shall be prepared in accordance with Subsection 401.03.6.

**907-411.03.8--Preparation of Mixture.** The temperature of the mixture, when discharged from the mixer, shall not exceed 340°F for UHMA and 280°F for UWMA.

**907-411.03.9--Spreading and Finishing.** Spreading and finishing of UTAP shall be in accordance with Subsection 401.03.10.

**907-411.03.10--Joints.** Joints shall be constructed in accordance with Subsection 401.03.12.

**907-411.04--Method of Measurement.** Ultra-thin asphalt pavement, of the type specified, will be measured by the ton.

Bituminous Tack Coat for the ultra-thin asphalt pavement shall be measured by the gallon as in accordance with the provisions of Subsections 109.01 and 410.04.

**907-411-05--Basis of Payment.** Ultra-thin asphalt pavement, measured as prescribed above, will be paid for at the contract unit price per ton, which price shall be full compensation for completing the work.

Bituminous Tack Coat, measured as prescribed above, will be paid for at the contract unit price per gallon, which price shall be full compensation for completing the work.

Payment will be made under the following items:

907-411-A: Ultra Thin Asphalt Pavement, Type -per ton

907-411-B: Bituminous Tack Coat - per gallon

# MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-412-2

CODE: (SP)

DATE: 05/22/2013

SUBJECT: Pre-Grinding Existing Pavement

Section 907-412, Pre-Grinding, is hereby added to and made a part of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction as follows.

## SECTION 907-412 -- PRE-GRINDING

**907-412.01--Description.** This work shall consist of grinding existing pavement surfaces to substantially eliminate bumps/knots in the existing pavement which results will improve riding characteristics of the finished pavement surface. The work shall be accomplished in accordance with these specifications and in reasonably close conformity to any details on the plans or in the contact documents.

Pre-grinding will be allowed, and paid for, on certain projects in which a pay item for pre-grinding is included in the bid items. Pre-grinding will be allowed at the Contractor's option on all other projects, but at no cost to the State. The Contractor may elect to pre-grind bumps in the existing pavement surface to improve riding characteristics prior to placement of the new asphalt pavement. It is the intent of this specification to remove bumps which can not be eliminated during the paving operation but not to pre-grind areas that can be corrected with the asphalt overlay.

### **907-412.02--Blank.**

**907-412.03--Construction Requirements.** Prior to any paving operations, the Contractor shall run a profilograph of the existing pavement as required in Subsection 907-403.03.2.1. This profile shall be used to determine if and where any areas are located with a short interval MRI value of 150 inches per mile or more. With approval of the Engineer, these areas may be ground prior to placement of the asphalt overlay.

Equipment for pre-grinding shall meet the requirements set forth in Section 406 of the Standard Specifications, or other equipment approved by the Engineer.

The Contractor shall establish positive means for removal of grinding residue. Solid residue shall be removed from pavement surfaces before it is blown by traffic action or wind. Residue shall not be permitted to flow across lanes used by public traffic or into gutters or drainage facilities, but may be allowed to flow into adjacent ditches.

**907-412.04--Method of Measurement.** When a pay item is included in the contract, Pre-Grinding of existing pavement will be measured by the square foot of area approved by the Engineer.



**907-412.05--Basis of Payment.** Pre-Grinding, measured as prescribed above, will be paid for at the contract fixed price per square foot, which price shall be full compensation for all labor, tools, equipment, profiling, cleanup, and all incidentals necessary to complete the work.

Payment will be made under:

907-412-A: Pre-grinding - per square foot

**MISSISSIPPI DEPARTMENT OF TRANSPORTATION**

**SPECIAL PROVISION NO. 907-618-9**

**CODE: (IS)**

**DATE: 11/08/2012**

**SUBJECT: Placement of Temporary Traffic Stripe**

Section 618, Maintenance of Traffic and Traffic Control Plan, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows.

**907-618.03.3--Safe Movement of Traffic.** Delete subparagraphs (2) and (3) of Subsection 618.03.3 on page 416, and substitute the following.

- (2) Temporary edge lines on projects requiring shoulders constructed of granular material may be delayed for a period not to exceed three (3) days.

Temporary edge lines placed on the final pavement course of projects requiring paved shoulders with surface treatment may be placed on the adjacent shoulder in as near the permanent location as possible until the surface treatment is placed. When the edge lines are obliterated by the placement of the surface treatment, the edge lines shall be placed in the permanent stripe location. The replacement of edge lines may be delayed for a period not to exceed three (3) days for a two or three-lane roads.

Delete the first sentence of next to last paragraph of Subsection 618.03.3 on page 416 and substitute the following.

Permanent pavement markings are to be applied no sooner than 10 days nor later than 45 days after placement of the final lift of pavement.

## MISSISSIPPI DEPARTMENT OF TRANSPORTATION

| SPECIAL PROVISION NO. 907-626-5

CODE: (SP)

| DATE: 09/15/2004

**SUBJECT: Inverted Profile Thermoplastic Traffic Stripe**

Section 626, Thermoplastic Traffic Markings, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction as amended by this special provision is applicable for inverted profile thermoplastic traffic stripe only:

**907-626.01--Description.** Inverted profile thermoplastic pavement markings consists of furnishing materials and placing inverted profile thermoplastic pavement markings in reasonably close conformity with these specifications and the details shown on the plans or established.

Inverted profile thermoplastic pavement markings, high contract, shall consist of furnishing materials and placing inverted profile thermoplastic pavement markings over a black thermoplastic pavement marking in order to enhance the marking's visibility.

**907-626.02--Materials.**

| **907-626.02.1--General.** The inverted profile thermoplastic marking material shall consist of an alkyd/maleic or hydrocarbon based formulation. The material shall be so manufactured as to be applied to the pavement in a molten form, with internal and surface application of glass spheres, and upon cooling to normal pavement temperature, shall produce an adherent, reflectorized pavement marking of specified thickness and width, capable of resisting deformation.

Materials shall be obtained from approved sources as listed on the Department's "List of Approved Sources" for Inverted Profile Thermoplastic Pavement Marking Materials. The material shall not scorch, break down, discolor, or deteriorate when held at the application temperature for four hours or when reheated four times to the application temperature. Temperature-vs-viscosity characteristics of the plastic material shall remain constant when reheated four times, and shall be the same from batch to batch.

The thermoplastic material shall be a product especially compounded for pavement markings. The pavement markings shall maintain their original dimension and shall not smear or spread under normal traffic at temperatures below 140°F. The markings shall have a uniform cross section. Pigment shall be evenly dispersed throughout its thickness. The exposed surface shall be free from tack and shall not be slippery when wet. The material shall not lift from pavement in freezing weather. Cold ductility of the material shall be such as to permit normal movement with the pavement surface without chipping or cracking.

| Black thermoplastic compound for the placement of inverted profile thermoplastic pavement markings, high contract, shall consist of a hydrocarbon or alkyd/maleic based formulation.

The manufacturers of the thermoplastic compound, glass beads and epoxy primer sealer shall furnish to the Engineer three copies of certified test reports showing results of all tests specified herein and shall further certify that the materials meet all requirements. The Contractor shall provide the warranty as specified herein to the Engineer.

**907-626.02.2--Inverted Profile Thermoplastic Material.** The thermoplastic material shall consist of homogeneously mixed pigments, fillers, resins and glass beads, and shall be available in both white and yellow. The material shall be free from all skins, dirt, and foreign objects. Materials shall conform to AASHTO Designation: M 249 with the following modifications:

**907-626.02.2.1--Intermixed Glass Beads.** The thermoplastic material shall contain a minimum of 40 percent Class H glass beads by weight. Class H glass beads shall meet the requirements of ASTM Designation: D 1155, and shall be coated with an adhesion promoting coating which shall also provide moisture resistance as tested by AASHTO Designation: M 247, Section 4.4.2. Class H beads shall have a minimum of 70 percent true spheres and the +20 sieve shall be tested visually.

The gradation of the Class H beads shall meet the following:

<b><u>U. S. Standard Sieve</u></b>	<b><u>% Passing</u></b>
12	100
14	95 - 100
16	80 - 100
18	30 - 100
20	15 - 100
30	10 - 100
50	0 - 50
100	0 - 5

**907-626.02.2.2--Binder Content.** The binder content of the thermoplastic material shall be 19 percent minimum.

**907-626.02.2.3--Titanium Dioxide.** The titanium dioxide shall meet ASTM Designation: D 476, Type II, Rutile grade - 10 percent minimum titanium content.

**907-626.02.2.4--Yellow Pigment.** The yellow pigment for the yellow thermoplastic material shall be five (5) percent minimum.

**907-626.02.2.5--Specific Gravity.** The specific gravity of the thermoplastic pavement marking material shall not exceed 2.35.

**907-626.02.2.6--Flow Characteristics.**

**907-626.02.2.6.1--Flowability.** After heating the thermoplastic material for four (4) hours ±5 minutes at 425 ±3°F and testing flowability, the white thermoplastic shall have a maximum

percent residue of 22 percent and the yellow thermoplastic shall have a maximum residue of 24 percent.

**907-626.02.2.6.2--Flow Resistance.** The material shall exhibit a maximum flow of 10%. The material’s ability to form ribs on the markings shall be evaluated by casting a disc of material approximately 3.5 inches wide by 1.0 inch long by and 0.60 inch deep. After the material is cooled to ambient temperature, measure the exact height. The material shall then be stored at 190°F for four (4) hours. After the material is cooled to ambient temperature, re-measure the exact height and express the flow resistance as a flow percentage.

**907-626.02.2.7--Reflectivity.** The initial reflectance for the in-place marking shall have a minimum reflectance value of 450 mcd/fc/sq. ft. for white and 350 mcd/fc/sq. ft. for yellow, when measured with a Mirolux 30 retroreflectometer, or approved equal.

**907-626.02.2.8--Wet Reflectivity.** The initial reflectance for the in-place marking when wet shall have a minimum reflectance value of 200 mcd/fc/sq. ft. for white and 175 mcd/fc/sq. ft. for yellow, when measured with an approved retroreflectometer. The stripe shall be wetted utilizing a pump type sprayer for five (5) seconds. After 30 seconds, place the retroreflectometer on the stripe and measure the reflectance.

**907-626.02.2.9--Inverted Profile.** The thermoplastic pavement marking material shall be applied to have individual profiles having a minimum height of 0.140 inches with the recessed inverted profiles having a thickness of 0.025 to 0.050 inches. The profiles shall be well defined, spaced approximately one (1) inch apart, and not excessively run back together.

**907-626.02.3--Black Pavement Marking Material for High Contrast Inverted Profile Pavement Markings.**

**907-626.02.3.1--General.** In the molten state, the material shall not give off fumes that are toxic or otherwise injurious to persons or property. The manufacturer shall provide material safety data sheets for the product.

The temperature versus viscosity characteristic of the plastic material shall remain constant and the material shall not deteriorate in any manner during three reheating processes. There shall be no obvious change in color of the material as a result of up to three reheatings, or in maintaining the material at application temperature up to an aggregate time of four (4) hours, or from batch to batch. The maximum elapsed time after application at which normal traffic will leave no impression or imprint on the new stripe shall be 30 seconds when the air and road surface temperature is approximately 68 ±5°F. The applied stripe shall remain free from tack and shall not lift from the pavement under normal traffic conditions within a road temperature range of -20°F to 150°F. The stripe shall maintain its original dimensions and placement. Cold ductility of the material shall be such as to permit normal dimensional distortion as a result of tire impact within the temperature range specified.

The material shall provide a stripe that has a uniform thickness throughout its cross section.

**907-626.02.3.2--Binder.** The binder shall be hydrocarbon or alkyd/maleic based. The binder shall consist of a homogeneous mixture of pigment, fillers, resins, waxes and plasticizers. The total binder content shall be well distributed throughout the compound. The binder shall be free from all foreign objects or ingredients that would cause bleeding, staining or discoloration. The binder shall be 19 percent minimum by weight of the thermoplastic compound.

**907-626.02.3.3--Pigment.** The pigment used for black pavement marking compound shall be as required and shall be uniformly distributed throughout the marking compound.

**907-626.02.3.4--Filler.** The filler to be incorporated with the resins shall be a white calcium carbonate, silica or any approved substitute.

**907-626.02.3.5--Specific Gravity.** The specific gravity of the marking compound shall not exceed 2.0.

**907-626.02.3.6--Softening Point.** After heating the marking compound for 4 hours  $\pm 5$  minutes at  $375 \pm 3^\circ\text{F}$  and testing in accordance with ASTM Designation: E 28, the material shall have a minimum softening point of  $180^\circ\text{F}$  as measured by the ring and ball method.

**907-626.02.3.7--Tensile Bond Strength.** After heating the marking compound for 4 hours  $\pm 5$  minutes at  $375 \pm 3^\circ\text{F}$ , the tensile bond strength shall exceed 180 psi when tested in accordance with ASTM Designation: D 4806. The material shall be applied to unprimed, sandblasted Portland cement concrete block at a thickness of 0.0625-inch and at a temperature of  $375 \pm 3^\circ\text{F}$ . The test shall be conducted at room temperature.

**907-626.02.3.8--Impact Resistance.** After heating the marking compound for 4 hours  $\pm 5$  minutes at  $375 \pm 3^\circ\text{F}$ , the impact resistance shall be a minimum of 50 inch-pounds minimum when tested in accordance with ASTM Designation: D 2794. No cracks or bond loss shall occur when a 0.0625-inch thick film drawdown is made at  $375 \pm 3^\circ\text{F}$  on an unprimed sandblasted Portland cement concrete block. The sample is tested with a male indenter  $5/8$ -inch and no female Die at room temperature.

**907-626.02.3.9--Identification.** Each package of material shall be stenciled with the manufacturer's name, the type of material and specification number, the month and year the material was packaged and lot number. The letters and numbers used in the stencils shall be a minimum of  $1/2$  inch in height.

**907-626.02.3.10--Packaging.** The material shall be packaged in suitable containers that will not adhere to the product during shipment and storage. The container of pavement marking material shall weigh approximately 50 lbs. Each container shall designate the color, type of resin, type of application and user information. The label shall warn the user that the material shall be heated in the range of  $350^\circ$  to  $425^\circ\text{F}$ .

**907-626.02.3.11--Storage Life.** The material shall meet the requirements of this specification for a period of one year. The material must also meet uniformly with no evidence of skins or

unmelted particles for this one-year period. The manufacturer shall replace any material not meeting the above requirements.

**907-626.02.3.12--Certifications.** The material manufacturer shall furnish a certified copy of material test reports to the Engineer.

**907-626.02.4--Drop-On Glass Beads.** Drop-on glass beads shall be separated into two (2) classes, as follows:

**907-626.02.4.1--Class G Glass Beads.** Class G glass beads shall be coated with an adhesion promoting coating which shall also provide moisture resistance as tested by AASHTO Designation: M 247, Section 4.4.2 and shall exhibit the following characteristics:

- **Color and Clarity:** The glass beads shall be colorless and clear, and shall be free of carbon residues.
- **Index of Refraction:** minimum 1.50
- **Roundness:** The glass beads shall have a minimum of 80% true spheres per screen for the two highest sieve quantities, determined visually, and a maximum of 3% angular particles per sieve, determined visually. The remaining sieves shall have a minimum of 75% true spheres, determined visually per aspect ratio using microfiche reader.
- **Air Inclusions:** 10% maximum
- **Specific Gravity:** The specific gravity of the glass beads shall be a minimum of 2.50.
- **Gradation:** The gradation of Class G glass beads shall be as follows:

<u>U. S. Standard Sieve</u>	<u>% Passing</u>
12	100
14	100 - 95
16	100 - 80
18	100 - 20
20	90 - 20
30	100 - 50
Pan	100 - 90

All Class G glass beads shall be coated with an adhesion promoting coating.

**907-626.02.4.2--Class H Glass Beads.** Class H glass beads shall meet the requirements of ASTM Designation: D 1155, and shall be coated with an adhesion promoting coating which shall also provide moisture resistance as tested by AASHTO Designation: M 247, Section 4.4.2. Class H beads shall have a minimum of 70 percent true spheres and the +20 sieve shall be tested visually.

The gradation of the Class H beads shall meet the following:

<u>U. S. Standard Sieve</u>	<u>% Passing</u>
16	99 - 100
20	75 - 100
30	55 - 95
50	10 - 35
100	0 - 5

**907-626.03--Construction Requirements.**

**907-626.03.1--Equipment.** The application equipment shall be specifically designed for placing thermoplastic material in a hot molten state on the pavement surface utilizing a pressure type application method. The thermoplastic stripe shall be formed by a die that is allowed to drag along in proximity with the pavement surface. The die is pulled forward by a special linkage that will allow it to automatically level itself as to float and remain parallel with the pavement surface. The traffic stripe shall be formed by reason that the hot thermoplastic material is forced under pressure through four sides to the die onto the pavement surface. The top of the die shall be enclosed and provide entry means for the hot molten thermoplastic material to enter the die cavity. The bottom of the die shall contain a movable door that is remote controlled so as to start or stop the flow of thermoplastic material onto the pavement surface. When the movable door is open, thermoplastic material can flow through the die and will apply a thermoplastic stripe that will be formed rearward of the advancing die. The pavement surface shall be at the bottom of the die enclosure. Thermoplastic material shall be fed to the die under pressure through flexible oil-jacketed stainless steel hoses. The thermoplastic material must be either pumped or fed from a pressure vessel to the die under pressure in order to obtain the proper adhesion with the pavement surface.

The system shall consist of a low pressure drop-on type glass bead gun, (bead coat #1). The thermoplastic die shall be oil-jacketed on four (4) sides and is formed from a single solid block of steel. The glass bead gun shall dispense glass beads onto the hot thermoplastic stripe from a height of approximately one (1) inch above the pavement surface. The point at which the glass beads strike the surface of the stripe shall be approximately three inches (3”) behind the strike point of the thermoplastic material itself. This reflective bead coat #1 shall utilize Class G glass beads as specified herein, and shall provide a surface coating of 50 percent of the thermoplastic stripe surface. Of this 50 percent stripe coverage, at least 50 percent of the beads shall be embedded to a depth of 60 percent of their diameter.

A second curtain coater, low pressure drop-on type glass bead gun capable of applying a continuous sheet or ribbon of glass beads, shall follow at an interval of approximately 10 inches behind the first bead gun. This second glass bead gun shall apply bead coat #2 which will form a continuous drop-on coat of Class H glass beads immediately in front of the profiling device. This second curtain of glass beads shall have a low impact speed so that they are not forced into the stripe under pressure.



A special rotatable wheel profiling device shall be located approximately eight (8) inches behind bead gun #2. This rotatable wheel device shall be approximately seven (7) inches in diameter and shall have a plurality of spaced projections located around its circumference. The profiling device shall be wider than the stripe being applied in order that the stripe shall be adequately covered. The projections on the rotatable profiling device shall have an angular profiling surface set at an angle to the pavement surface. The rotatable profile device shall be mounted with an automatic leveling device to the same carriage assembly as the thermoplastic gun. This is required so that a traffic stripe of accurate and uniform definition can be obtained. The inverted profile grooves shall be pressed into the hot molten thermoplastic stripe within one (1) second of the thermoplastic material application in order to insure proper bead adhesion to the stripe. Using rollers to place grooves in the traffic stripe utilizing a separate vehicle or grooves that are not pressed within one (1) second of the thermoplastic material application will not be allowed. To insure that no thermoplastic material adheres to the wheel as it rotates and profiles the stripe, a small air atomizer water jet shall apply a thin mist coat of water to the rotatable profile wheel. It is the intent of this specification that a minimum amount of water be used and that no water puddles greater than ¼ inch in diameter be allowed to accumulate on the pavement surface in proximity to the freshly placed stripe. Excess water on the pavement surface can cause bond failure of the thermoplastic material.

All parts of the thermoplastic holding tank including manifolds, hoses, pipes, dies, etc., shall be oil-jacketed to insure accurate temperature control. The thermoplastic material shall be preheated in kettles designed specifically for that purpose. Each kettle of preheated thermoplastic material shall be properly mixed and heated to the correct application temperature. The preheated material shall then be fed to the thermoplastic gun for application.

The striping machine shall contain enough glass beads and water to apply one full kettle of thermoplastic material.

**907-626.03.2--Cleaning of Pavement Surface.** Immediately before application, the areas to receive markings shall be cleaned thoroughly using equipment capable of cleaning without damaging the pavement surface. This will include, but not be limited to, all vegetation, loose soil, oils, and other debris. On areas of pavement cured with compound, the membrane shall be removed completely by "shot" blasting, sand blasting or other approved method. Striping shall follow as closely as practical after the pavement surface has been cleaned.

**907-626.03.3--Application Over Existing Striping.** Where shown on the plans or directed by the Engineer, the existing traffic stripe shall be removed by grinding or sandblasting. When placing inverted profile thermoplastic pavement markings on existing pavement that has more than one light coat (pavement not showing through stripe) of striping material, the existing stripe shall be removed to the point that 80 percent of the pavement surface is visible.

Removal of existing stripe will be paid for as a separate item of work.

Where unsatisfactory striping performed by the Contractor must be removed and replaced in accordance with these specifications, the Contractor shall use the removal method described

above. No payment will be made for removal or replacement of the Contractor’s unsatisfactory striping.

**907-626.03.4--Surface Conditions.** When placing inverted profile thermoplastic pavement markings, no striping shall be permitted when the pavement surface temperature is less than 60°F. A non-contact infrared pyrometer shall be furnished by the Contractor for use by the Engineer for verification of the temperature. Striping shall not be performed when there is moisture on the pavement surface or when winds exceed 12 mph. When unseen moisture is suspected to be present, a moisture test shall be performed. The test shall be as follows:

- 1) Place a piece of roofing felt on the pavement surface.
- 2) Pour 0.5 gallon of thermoplastic material at application temperature onto the paper.
- 3) After two (2) minutes, lift the paper and inspect to see if moisture has been drawn from the pavement.
- 4) If moisture is present, striping is not to begin until the surface is moist free.

Documentation of weather and pavement conditions shall be recorded as part of completing the MDOT Inverted Profile Thermoplastic Pavement Marking Inspectors Report.

**907-626.03.5--Application.** Prior to the placement of pavement markings, the Contractor shall furnish the Engineer three copies of the manufacturer's warranty stating that the manufacturer will guarantee the pavement marking to meet the requirements of this specification.

The thermoplastic material shall be preheated and thoroughly mixed. The application temperature of the thermoplastic material shall be between 400°F and 430°F. A digital thermometer complete with a 24-inch probe shall be furnished by the Contractor for use by the Engineer for verification of the temperature.

When measured at the highest point of the profile, the cold thickness of the in-place thermoplastic stripe shall be a minimum of 0.140 inch for Inverted Profile Thermoplastic Pavement Markings. The thickness of the thermoplastic material in the bottom of the profiles shall range from 0.025 to 0.050 inch. The individual profiles shall be located transversely across the stripe at intervals of approximately one (1) inch. The bottoms of these intervals shall be between 3/32 inch and 5/16 inch wide. In order to drain water and to reflect light, it is normal for the top surface of the inverted profiles to be irregular. The application rate of thermoplastic material for Inverted Profile Thermoplastic Pavement Markings shall be a minimum of 2700± pounds per mile for a continuous 6-inch stripe.

The application rate for Class G glass beads (bead coat #1) shall be 300± pounds per mile for 6-inch continuous stripe.

The application rate for Class H glass beads (bead coat #2) shall be 300± pounds per mile for 6-inch continuous stripe.

The thickness of the striping materials shall be verified periodically (at least every 1320 feet) and any thickness more than five (5) percent under the designated thickness shall be reworked. A

consistent, uncorrected under-run will not be allowed and the Contractor will be required to install the specified minimum thickness of 0.140 inch. A wet thickness gauge and cold thickness gauge shall be furnished by the Contractor for use by the Engineer for the verification of film thickness.

When striping over existing painted stripe (one light coat), on old oxidized asphalt, on all concrete surfaces or on asphalt surfaces when ambient temperatures are below 70°F, a two component epoxy primer sealer shall be used and installed as recommended in writing by the thermoplastic material manufacturer. The epoxy primer sealer shall be EX255/EX256 as manufactured by Crown Paint Company of Oklahoma City, Oklahoma, or approved equal. The Contractor shall furnish certification of compatibility of the epoxy primer sealer to be used with the thermoplastic material supplied. If an alternate epoxy primer sealer to the EX255/EX256 is used, the Contractor shall furnish a mill analysis and proof of adequate performance of the alternate epoxy primer sealer when used with thermoplastic pavement markings.

**907-626.03.6--Inverted Profile Thermoplastic Traffic Stripe, High Contrast.** Before applying the black pavement marking material, the Contractor shall remove any dirt, glaze, grease or any other material that would reduce the adhesion of the thermoplastic to the pavement.

The pavement marking material shall be installed in a molten state by the spray method at a minimum temperature of 350°F and a maximum temperature of 425°F. Scorching or discoloration of material shall be cause for rejection by the Engineer. The machinery shall be constructed so that all mixing and conveying parts, up to and including the thermoplastic gun, maintain the material in the molten state.

The pavement marking materials shall not be applied when air and pavement surface temperatures are below 60°F or when the surface of the pavement contains any evidence of moisture.

The pavement marking material shall be applied at a thickness of not less than 0.040-inch.

The equipment used to install hot applied pavement marking material shall provide continuous mixing and agitation of the material while maintaining a minimum temperature exceeding 400°F. A strainer shall be in place between the main material reservoir and the gun to prevent accumulation and clogging. The equipment shall be constructed for easy accessibility to parts requiring cleaning and maintenance.

After the black thermoplastic pavement markings are applied, inverted profile thermoplastic markings shall be placed over the black thermoplastic pavement markings in accordance with the specifications and to the dimensions and details shown on the plans or established.

**907-626.03.7--Warranty.** The manufacturer shall warrant that the inverted profile thermoplastic markings will meet the minimum performance level of 150 mcd/fc/sq. ft. dry and 75 mcd/fc/sq. ft. wet for a period of 48 months from the date of final inspection when exposed to normal roadway conditions regardless of the average daily traffic. Failure to meet this requirement will result in the total replacement of the portion of the stripe shown to be below these minimums.

All costs of labor, material and other incidentals necessary for the replacement of unacceptable pavement markings shall be at no additional costs to the State.

Compliance will be determined by an average brightness reading over a minimum zone marking length of 300 linear feet, using an approved reflectometer. The zone of measurement referred to includes centerline stripe, edge lines and skip lines.

<b>Performance Requirements:</b>	<b>White</b>		<b>Yellow</b>	
	<u><b>Dry</b></u>	<u><b>Wet</b></u>	<u><b>Dry</b></u>	<u><b>Wet</b></u>
Initial Reflectivity, mcd/ft/sq. ft.	450	200	350	175
48-Month Retained Reflectivity	150	75	150	75

The measurement procedure for this warranty will entail a visual night inspection by a manufacturer representative and a MDOT representative to identify areas of the installation, which appear to be below the specified minimum, warranted reflectance value. All reflectance measurements for dry conditions shall be made on a clean dry surface at a minimum temperature of 40°F. All reflectance measurements for wet conditions shall be made using the setting conditions of Subsection 907-626.02.2.8 at a minimum temperature of 40°F.

Measurement intervals for installations with areas less than, or equal to, three (3) miles shall be at a minimum of three (3) check points for each zone. These check points should include the start point, approximate mid-point and the end point.

Measurement intervals for installations with areas greater than three (3) miles shall be at a minimum of three (3) check points, one at the start point, one at the end point and additional measurements spaced at 3-mile intervals between the start and end points of the area in question.

The number of measurements at each check point for each zone will be as follows:

- (A) Skip Lines: Eighteen (18) measurements, distributed over six (6) skip lines, shall be made at each check point.
- (B) Center Lines and/or Edge Lines: Eighteen (18) measurements shall be made over 300 linear feet of continuous stripe.

When taking reflectivity measurements, the value of the measurement shall be determined by averaging three measurements; one at the left edge of the stripe, one at the center of the stripe and one at the right edge of the stripe.

In addition, the reflectance values measured at each check point shall be averaged by zone to determine conformance to the minimum warranted reflective values.

**907-626.04--Method of Measurement.** Inverted profile thermoplastic traffic stripe of the type specified will be measured by the mile or by the linear foot, as indicated, from end-to-end of individual stripes. In the case of skip lines the measurement will include skips. The length used to measure centerline and edge stripes will be the horizontal length computed along the stationed

control line. Inverted profile thermoplastic detail traffic stripe will be measured by the linear foot from end-to-end of individual stripes. Measurements will be made along the surface of each stripe and will exclude skip intervals where skips are specified. Stripes more than six (6) inches in width will be converted to equivalent lengths of six-inch widths.

**907-626.05--Basis of Payment.** Inverted profile thermoplastic traffic stripe, measured as prescribed above, will be paid for at the contract unit price per mile or linear foot, as applicable, which shall be full compensation for completing the work.

Payment will be made under:

- 907-626-I: 6" Inverted Profile Thermoplastic Traffic Stripe, Skip White - per linear foot or mile
- 907-626-J: 6" Inverted Profile Thermoplastic Traffic Stripe, Continuous White - per linear foot or mile
- 907-626-K: 6" Inverted Profile Thermoplastic Traffic Stripe, Skip Yellow - per linear foot or mile
- 907-626-L: 6" Inverted Profile Thermoplastic Traffic Stripe, Continuous Yellow - per linear foot or mile
- 907-626-M: Inverted Profile Thermoplastic Detail Traffic Stripe, Color - per linear foot
- 907-626-II: 6" Inverted Profile Thermoplastic Traffic Stripe, High Contrast, Skip White - per linear foot or mile
- 907-626-JJ: 6" Inverted Profile Thermoplastic Traffic Stripe, High Contrast, Continuous White - per linear foot or mile
- 907-626-KK: 6" Inverted Profile Thermoplastic Traffic Stripe, High Contrast Skip Yellow - per linear foot or mile
- 907-626-LL: 6" Inverted Profile Thermoplastic Traffic Stripe, High Contrast, Continuous Yellow - per linear foot or mile
- 907-626-MM: Inverted Profile Thermoplastic Detail Traffic Stripe, High Contrast, Color - per linear foot

**MISSISSIPPI DEPARTMENT OF TRANSPORTATION**

**SPECIAL PROVISION NO. 907-702-3**

**CODE: (SP)**

**DATE: 05/08/2012**

**SUBJECT: Polyphosphoric Acid (PPA) Modification of Petroleum Asphalt Cement**

Section 702.05, Petroleum Asphalt Cement, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

**907-702.05--Petroleum Asphalt Cement.** Delete the third paragraph of Subsection 702.05 on page 598, and substitute the following.

The bituminous material used in all types of asphalt mixtures shall conform to AASHTO Designation: M 320, Performance Grade PG 67-22, as modified in the table below, except that Polyphosphoric Acid (PPA) may be used at low dosage rates as a modifier to enhance the physical properties of a base binder to meet the requirements for Performance Grade PG 67-22. In addition, PPA may be used as a catalyst or mixing agent at low dosage rates in the production of Polymer Modified, Performance Grade PG 76-22.

When PPA is used as a modifier, in no case shall the PPA modifier be used to adjust the physical properties of the binder a full binder grade. For example: the base binder (unmodified) is graded as a PG 64-22 and should only be modified by the addition of PPA to a modified binder grade of PG 67-22.

When petroleum asphalt cement is modified by PPA, the following dosage limits shall be applied.

<u>Grade</u>	<u>Dosage Limit</u>
PG 67-22	0.75% by weight of binder
PG 76-22	0.50% by weight of binder

# MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-703-11

CODE: (IS)

DATE: 05/22/2013

SUBJECT: Aggregates

Section 703, Aggregates, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is hereby amended as follows:

**907-703.03.2.4--Gradation.** Delete the last sentence of the last paragraph of Subsection 703.03.2.4 on page 611.

**907-703.04--Aggregate for Crushed Stone Courses.**

**907-703.04.1--Coarse Aggregate.** Delete the first paragraph of Subsection 703.04.1 on page 611, and substitute the following.

Coarse aggregate, defined as material retained on No. 8 sieve, shall be either crushed limestone, steel slag, granite, concrete, or combination thereof. Crushed concrete is defined as recycled concrete pavement, structural concrete, or other concrete sources that can be crushed to meet the gradation requirements for Size No. 825B as modified below. In no case shall waste from concrete production (wash-out) be used as a crushed stone base.

**907-703.04.2--Fine Aggregate.** Delete the first sentence of the first paragraph of Subsection 703.04.2 on page 612, and substitute the following.

Fine aggregate, defined as material passing the No. 8 sieve, shall be material resulting from the crushing of limestone, steel slag, granite, concrete, or combination thereof.

Delete the third paragraph of Subsection 703.04.2 on page 612.

**907-703.04.3--Gradation.** In the table of Subsection 703.04.3 on page 613, change the requirement for the 1-inch sieve under Size No. 825 B from “75 - 98” to “75 - 100”.

After the table in Subsection 703.04.3 on page 613, add the following.

If crushed concrete is used, the crushed material shall meet the gradation requirements of Size No. 825 B with the exception that the percent passing by weight of the No. 200 sieve shall be 2 – 18.

**907-703.06--Aggregates for Hot Mix Asphalt.**

**907-703.06.1--Coarse Aggregates.** Delete the third paragraph of Subsection 703.06.1 on page 613, and substitute the following.

When tested in accordance with AASHTO Designation: T 19, the dry rodded unit weight of all aggregates except expanded clay and shale shall not be less than 70 pounds per cubic foot.

**907-703.06.1.2--Fine Aggregates.** Delete the last sentence of Subsection 703.06.1.2 on page 614.

**907-703.14--Aggregates for Bituminous Surface Treatments.**

**907-703.14.2--Detail Requirements.**

**907-703.14.2.1--Gradation.** In the table entitled “Gradation Requirements For Cover Aggregate” in Subsection 703.14.2.1 on page 622, delete the requirement for the No. 16 sieve for Size No. 7 under the column “Slag or Expanded Clay”.

**907-703.20.3--Gradation.** Delete the table and notes in Subsection 703.20.3 at the top of page 626, and substitute the following.

**PERCENT PASSING BY WEIGHT**

Square Mesh Sieves	Shell	Coarse			Medium	Fine
		Size I	Size II Note (1)	Size III Note (3)		
3 inch	90-100			100		
2 1/2 inch				90-100		
2 inch		100				
1 1/2 inch		90-100	100	25-60		
1 inch		80-100	97-100			
3/4 inch		55-100	55-100	0-10		
1/2 inch		35-85	35-85	0-5	100	
3/8 inch	12-65	12-65		97-100		
No. 4, Note (2)	0-30	0-30		92-100		
No. 10	0-8	0-8		80-100	100	
No. 40				10-40	80-100	
No. 60				0-20	30-100	
No. 100					15-80	
No. 200	0-5	0-4	0-4	0-5	0-30	
PI Material Passing No. 40				6 or less	0	

Note (1): Size II is intended for use in bases in which portland cement is used.

Note (2): Ground shell shall contain at least 97% passing the No. 4 sieve.

Note (3): Size III is intended for use in stabilized construction entrances.



## MISSISSIPPI DEPARTMENT OF TRANSPORTATION

SPECIAL PROVISION NO. 907-710-1

CODE: (SP)

DATE: 06/24/10

SUBJECT: Fast Dry Solvent Traffic Paint

Section 710, Paint, of the 2004 Edition of the Mississippi Standard Specifications for Road and Bridge Construction is amended as follows:

After Subsection 710.05 on Page 661, add the following:

**907-710.06--Fast Dry Solvent Traffic Paint.** Fast dry solvent traffic paints intended for use under this specification shall include products that are single packaged and ready mixed. Upon curing, these materials shall produce an adherent, reflective pavement marking capable of resisting deformation by traffic. The manufacturer shall have the option of formulating the material according to their own specifications. However, the requirements delineated in this specification, Section 619 and Section 710 shall apply regardless of the formulation used. The material shall be free from all skins, dirt and foreign objects.

**907-710.06.1--Composition.**

**907-710.06.1.1--Percent Pigment.** The percent pigment by weight shall be not less than 51% nor more than 58% when tested in accordance with ASTM D 3723.

**907-710.06.1.2--Viscosity.** The consistency of the paint shall be not less than 75 nor more than 95 Krebs Units (KU) when tested in accordance with ASTM D 562.

**907-710.06.1.3--Weight per Gallon.** The paint shall weigh a minimum 11.8 pounds per gallon and the weight of the production batches shall not vary more than +/- 0.5 pounds per gallon from the weight of the qualification samples when tested in accordance with ASTM D 1475.

**907-710.06.1.4--Total Solids.** The percent of total solids shall not be less than 70% by weight when tested in accordance with ASTM D 2369.

**907-710.06.1.5--Dry Time (No pick-up).** The paint shall dry to a no tracking condition in a maximum of 10 minutes.

**907-710.06.1.6--Volatile Organic Content.** The volatile organic content (VOC) shall contain a maximum of 1.25 pounds of volatile organic matter per gallon of total non-volatile paint material when tested in accordance with ASTM D 3960.

**907-710.06.1.7--Bleeding.** The paint shall have a minimum bleeding ratio of 0.95 when tested in accordance with Federal Specification TT-P-115D.

**907-710.06.1.8--Color.** The initial daytime chromaticity for yellow materials shall fall within the box created by the following coordinates:

**Initial Daytime Chromaticity Coordinates (Corner Points)**

	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>x</b>	<b>0.53</b>	<b>0.51</b>	<b>0.455</b>	<b>0.472</b>
<b>y</b>	<b>0.456</b>	<b>0.485</b>	<b>0.444</b>	<b>0.4</b>

The initial daytime chromaticity of white materials shall fall within the box created by the following coordinates:

**Initial Daytime Chromaticity Coordinates (Corner Points)**

	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>x</b>	<b>0.355</b>	<b>0.305</b>	<b>0.285</b>	<b>0.355</b>
<b>y</b>	<b>0.355</b>	<b>0.305</b>	<b>0.325</b>	<b>0.375</b>

**907-710.06.2--Environmental Requirements.** All yellow materials using lead chromate pigments shall meet the criteria of non-hazardous waste as defined by 40 CFR 261.24 when tested in accordance with EPA Test Method 1311, Toxicity Characteristics Leaching Procedures (TCLP). The striping and marking material , upon preparation and installation, shall not exude fumes which are toxic, or detrimental to persons or property. All material using lead free pigments shall NOT contain either lead or other Resource Conservation and Recovery Act (RCCA) materials in excess of the standard defined by EPA Method 3050 and 6010.

**907-710.06.3--Acceptance Procedures.** Acceptance of all fast dry solvent based traffics paint will be based on the Manufacturer’s Certification and Certified Test Results. The Contractor shall furnish the Engineer with three copies of the manufacturer’s certification stating that each lot of material in a shipment complies with the requirements of this contract. In addition, the Contractor shall provide Certified Test Reports for all tests required by this specification. The test results shall be representative of the material contained with the shipment.

# SECTION 905 - PROPOSAL

Date \_\_\_\_\_

Mississippi Transportation Commission  
Jackson, Mississippi

Sirs: The following proposal is made on behalf of \_\_\_\_\_  
\_\_\_\_\_ of \_\_\_\_\_  
\_\_\_\_\_

for constructing the following designated project(s) within the time(s) hereinafter specified.

The plans are composed of drawings and blue prints on file in the offices of the Mississippi Department of Transportation, Jackson, Mississippi.

The Specifications are the current Standard Specifications of the Mississippi Department of Transportation approved by the Federal Highway Administration, except where superseded or amended by the plans, Special Provisions and Notice(s) to Bidders attached hereto and made a part thereof.

I (We) certify that I (we) possess a copy of said Standard and any Supplemental Specifications.

Evidence of my (our) authority to submit the Proposal is hereby furnished. The proposal is made without collusion on the part of any person, firm or corporation. I (We) certify that I (we) have carefully examined the Plans, the Specifications, including the Special Provisions and Notice(s) to Bidders, herein, and have personally examined the site of the work. On the basis of the Specifications, Special Provisions, Notice(s) to Bidders, and Plans, I (we) propose to furnish all necessary machinery, tools, apparatus and other means of construction and do all the work and furnish all the materials in the manner specified. I (We) understand that the quantities mentioned herein are approximate only and are subject to either increase or decrease, and hereby propose to perform any increased or decreased quantities of work at the unit prices bid, in accordance with the above.

Attached hereto is a certified check, cashier's check or Proposal Guaranty Bond in the amount as required in the Advertisement (or, by law).

**INSTRUCTION TO BIDDERS:** Alternate and Optional Items on Bid Schedule.

1. Two or more items entered opposite a single unit quantity WITHOUT DEFINITE DESIGNATION AS "ALTERNATE ITEMS" are considered as "OPTIONAL ITEMS". Bidders may or may not indicate on bids the Optional Item proposed to be furnished or performed WITHOUT PREJUDICE IN REGARD TO IRREGULARITY OF BIDS.
2. Items classified on the bid schedule as "ALTERNATE ITEMS" and/or "ALTERNATE TYPES OF CONSTRUCTION" must be preselected and indicated on bids. However, "Alternate Types of Construction" may include Optional Items to be treated as set out in Paragraph 1, above.
3. Optional items not preselected and indicated on the bid schedule MUST be designated in accordance with Subsection 102.06 prior to or at the time of execution of the contract.
4. Optional and Alternate items designated must be used throughout the project.

I (We) further propose to perform all "force account or extra work" that may be required of me (us) on the basis provided in the Specifications and to give such work my (our) personal attention in order to see that it is economically performed.

**SECTION 905 -- PROPOSAL (CONTINUED)**

I (We) further propose to execute the attached contract agreement (Section 902) as soon as the work is awarded to me (us), and to begin and complete the work within the time limit(s) provided for in the Specifications and Advertisement. I (We) also propose to execute the attached contract bond (Section 903) in an amount not less than one hundred (100) percent of the total of my (our) part, but also to guarantee the excellence of both workmanship and materials until the work is finally accepted.

I (We) enclose a certified check, cashier's check or bid bond for **five percent (5%) of total bid** and hereby agree that in case of my (our) failure to execute the contract and furnish bond within Ten (10) days after notice of award, the amount of this check (bid bond) will be forfeited to the State of Mississippi as liquidated damages arising out of my (our) failure to execute the contract as proposed. It is understood that in case I am (we are) not awarded the work, the check will be returned as provided in the Specifications.

Respectfully Submitted,

DATE \_\_\_\_\_

\_\_\_\_\_  
Contractor

BY \_\_\_\_\_  
Signature

TITLE \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY, STATE, ZIP \_\_\_\_\_

PHONE \_\_\_\_\_

FAX \_\_\_\_\_

E-MAIL \_\_\_\_\_

(To be filled in if a corporation)

Our corporation is chartered under the Laws of the State of \_\_\_\_\_ and the names, titles and business addresses of the executives are as follows:

\_\_\_\_\_  
President Address

\_\_\_\_\_  
Secretary Address

\_\_\_\_\_  
Treasurer Address

The following is my (our) itemized proposal.

Overlay approximately 16 miles of SR 567 from SR 24 to the end of State Maintenance, known as State Project No. MP-7567-03(006) / 304706301 in Amite County.

Line No.	Item Code	Adj Code	Quantity	Units	Description [Fixed Unit Price]
<b>Roadway Items</b>					
0010	202-B053		170	Linear Feet	Removal of Guard Rail Including Post, Blockouts & Hardware
0020	202-B076		1,116	Linear Feet	Removal of Traffic Stripe
0030	203-G003	(E)	54	Cubic Yard	Excess Excavation, FM, AH
0040	406-A001		1,600	Square Yard	Cold Milling of Bituminous Pavement, All Depths
0050	606-E002		4	Each	Guard Rail, Terminal End Section, Flared
0060	606-F001		1	Each	Special Sections, Bridge Connector
0070	618-A001		1	Lump Sum	Maintenance of Traffic
0080	618-B001		1	Square Feet	Additional Construction Signs [\$10.00]
0090	619-A1002		29	Mile	Temporary Traffic Stripe, Continuous White
0100	619-A2002		52	Mile	Temporary Traffic Stripe, Continuous Yellow
0110	619-A4006		17	Mile	Temporary Traffic Stripe, Skip Yellow
0120	619-A5001		6,600	Linear Feet	Temporary Traffic Stripe, Detail
0130	619-A6001		2,884	Linear Feet	Temporary Traffic Stripe, Legend
0140	625-B002		8	Mile	Traffic Stripe, Skip Yellow
0150	625-C002		29	Mile	Traffic Stripe, Continuous White
0160	625-D002		24	Mile	Traffic Stripe, Continuous Yellow
0170	625-E001		6,600	Linear Feet	Detail Traffic Stripe
0180	625-F002		2,884	Linear Feet	Legend
0190	627-J001		668	Each	Two-Way Clear Reflective High Performance Raised Markers
0200	627-L001		1,726	Each	Two-Way Yellow Reflective High Performance Raised Markers
0210	630-F001		22	Each	Delineators, Guard Rail, White
0220	907-304-A003	(GY)	1,524	Cubic Yard	Granular Material, LVM, Class 6, Group D
0230	907-405-D001		219,400	Square Yard	Scrub Seal
0240	907-411-B001	(A2)	20,492	Gallon	Bituminous Tack Coat
0250	907-412-A002		1	Square Feet	Pre-Grinding [\$3.25]
0260	907-606-PP001		88	Each	Remove and Replace Guard Rail Blockouts
<b>ALTERNATE GROUP AA NUMBER 1</b>					
0270	907-403-A012	(BA1)	50	Ton	Hot Mix Asphalt, ST, 19-mm mixture
<b>ALTERNATE GROUP AA NUMBER 2</b>					
0280	907-403-M004	(BA1)	50	Ton	Warm Mix Asphalt, ST, 19-mm mixture
<b>ALTERNATE GROUP BB NUMBER 1</b>					
0290	907-403-B009	(BA1)	1,500	Ton	Hot Mix Asphalt, ST, 9.5-mm mixture, Leveling
<b>ALTERNATE GROUP BB NUMBER 2</b>					

Line No.	Item Code	Adj Code	Quantity	Units	Description [Fixed Unit Price]
0300	907-403-N001	(BA1 )	1,500	Ton	Warm Mix Asphalt, ST, 9.5-mm mixture, Leveling
					<b>ALTERNATE GROUP CC NUMBER 1</b>
0310	907-411-A001	(BA1 )	9,477	Ton	Ultra Thin Asphalt Pavement, UHMA
					<b>ALTERNATE GROUP CC NUMBER 2</b>
0320	907-411-A002	(BA1 )	9,477	Ton	Ultra Thin Asphalt Pavement, UWMA
					<b>ALTERNATE GROUP DD NUMBER 1</b>
0330	907-626-J003		560	Linear Feet	6" Inverted Profile Thermoplastic Traffic Stripe, Continuous White
0340	907-626-L001		560	Linear Feet	6" Inverted Profile Thermoplastic Traffic Stripe, Continuous Yellow
					<b>ALTERNATE GROUP DD NUMBER 2</b>
0350	628-J002		560	Linear Feet	6" High Performance Cold Plastic Traffic Stripe, Continuous White
0360	628-M002		560	Linear Feet	6" High Performance Cold Plastic Traffic Stripe, Continuous Yellow

**CONDITIONS FOR COMBINATION BID**

If a bidder elects to submit a combined bid for two or more of the contracts listed for this month's letting, the bidder must complete and execute these sheets of the proposal in each of the individual proposals to constitute a combination bid. In addition to this requirement, each individual contract shall be completed, executed and submitted in the usual specified manner.

Failure to execute this Combination Bid Proposal in each of the contracts combined will be just cause for each proposal to be received and evaluated as a separate bid.

\*\*\*\*\*

**COMBINATION BID PROPOSAL**

I. This proposal is tendered as one part of a Combination Bid Proposal utilizing option \_\_\_\* of Subsection 102.11 on the following contracts:

\* Option to be shown as either (a), (b), or (c).

<u>Project No.</u>	<u>County</u>	<u>Project No.</u>	<u>County</u>
1. _____	_____	6. _____	_____
2. _____	_____	7. _____	_____
3. _____	_____	8. _____	_____
4. _____	_____	9. _____	_____
5. _____	_____	10. _____	_____

A. If option (a) has been selected, then go to II, and sign Combination Bid Proposal.

B. If option (b) has been selected, then complete the following, go to II, and sign Combination Bid Proposal.

SECTION 905 - COMBINATION BID PROPOSAL (Continued)

Project Number	Pay Item Number	Unit	Unit Price Reduction	Total Item Reduction	Total Contract Reduction
1. _____	_____ _____	_____ _____	_____ _____	_____ _____	
2. _____	_____ _____	_____ _____	_____ _____	_____ _____	
3. _____	_____ _____	_____ _____	_____ _____	_____ _____	
4. _____	_____ _____	_____ _____	_____ _____	_____ _____	
5. _____	_____ _____	_____ _____	_____ _____	_____ _____	
6. _____	_____ _____	_____ _____	_____ _____	_____ _____	
7. _____	_____ _____	_____ _____	_____ _____	_____ _____	
8. _____	_____ _____	_____ _____	_____ _____	_____ _____	



SECTION 905 - COMBINATION BID PROPOSAL (Continued)

Project Number	Pay Item Number	Unit	Unit Price Reduction	Total Item Reduction	Total Contract Reduction
9. _____	_____ _____	_____ _____	_____ _____	_____ _____	
10. _____	_____ _____	_____ _____	_____ _____	_____ _____	

C. If option (c) has been selected, then initial and complete one of the following, go to II. and sign Combination Bid Proposal.

\_\_\_\_\_ I (We) desire to be awarded work not to exceed a total monetary value of \$ \_\_\_\_\_.

\_\_\_\_\_ I (We) desire to be awarded work not to exceed \_\_\_\_\_ number of contracts.

II. It is understood that the Mississippi Transportation Commission not only reserves the right to reject any and all proposals, but also the right to award contracts upon the basis of lowest separate bids or combination bids most advantageous to the State.

It is further understood and agreed that the Combination Bid Proposal is for comparison of bids only and that each contract shall operate in every respect as a separate contract in accordance with its proposal and contract documents.

I (We), the undersigned, agree to complete each contract on or before its specified completion date.

SIGNED \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

TO: EXECUTIVE DIRECTOR, MISSISSIPPI DEPARTMENT OF TRANSPORTATION  
JACKSON, MISSISSIPPI

**CERTIFICATE**

If awarded this contract, I (we) contemplate that portions of the contract will be sublet. I (we) certify that those subcontracts which are equal to or in excess of fifty thousand dollars (\$50,000.00) will be in accordance with regulations promulgated and adopted by the Mississippi State Board of Contractors on January 13, 1999.

I (we) agree that this notification of intent DOES NOT constitute APPROVAL of the subcontracts.

NOTE: Insert name and address of subcontractors. (Subcontracts equal to or in excess of fifty thousand dollars (\$50,000.00) ONLY.)

_____	_____
(Individual or Firm)	(Address)
_____	_____
(Individual or Firm)	(Address)
_____	_____
(Individual or Firm)	(Address)
_____	_____
(Individual or Firm)	(Address)

NOTE: Failure to complete the above DOES NOT preclude subsequent subcontracts. Subsequent subcontracts, if any, equal to or in excess of fifty thousand dollars (\$50,000.00) will be in accordance with regulations promulgated and adopted by the Mississippi State Board of Contractors on January 13, 1999.

Contractor \_\_\_\_\_

By \_\_\_\_\_

Title \_\_\_\_\_

**CERTIFICATE MUST BE EXECUTED**

**MISSISSIPPI DEPARTMENT OF TRANSPORTATION**

CERTIFICATION  
(Execute in duplicate)

I, \_\_\_\_\_,  
(Name of person signing certification)

individually, and in my capacity as \_\_\_\_\_ of  
(Title)

\_\_\_\_\_ do hereby certify under  
(Name of Firm, Partnership, or Corporation)

penalty of perjury under the laws of the United States and the State of Mississippi that  
\_\_\_\_\_, Bidder  
(Name of Firm, Partnership, or Corporation)

on Project No. **MP-7567-03(006) / 304706301** \_\_\_\_\_,

in Amite County(ies), Mississippi, has not either directly or indirectly entered into any agreement, participated in any collusion; or otherwise taken any action in restraint of free competitive bidding in connection with this contract; nor have any of its corporate officers or principal owners.

Except as noted hereafter, it is further certified that said legal entity and its corporate officers, principal owners, managers, auditors and others in a position of administering federal funds are not currently under suspension, debarment, voluntary exclusion or determination of ineligibility; nor have a debarment pending; nor been suspended, debarred, voluntarily excluded or determined ineligible within the past three years by the Mississippi Transportation Commission, the State of Mississippi, any other State or a federal agency; nor been indicted, convicted or had a civil judgment rendered by a court of competent jurisdiction in any matter involving fraud or official misconduct within the past three years.

Initial here " \_\_\_\_\_ " if exceptions are attached and made a part thereof. Any exceptions shall address to whom it applies, initiating agency and dates of such action.

Note: Exceptions will not necessarily result in denial of award but will be considered in determining bidder responsibility. Providing false information may result in criminal prosecution or administrative sanctions.

All of the foregoing and attachments (when indicated) is true and correct.

Executed on \_\_\_\_\_ Signature

(5/29/2008S)

**MISSISSIPPI DEPARTMENT OF TRANSPORTATION**

CERTIFICATION  
(Execute in duplicate)

I, \_\_\_\_\_,  
(Name of person signing certification)

individually, and in my capacity as \_\_\_\_\_ of  
(Title)

\_\_\_\_\_ do hereby certify under  
(Name of Firm, Partnership, or Corporation)

penalty of perjury under the laws of the United States and the State of Mississippi that  
\_\_\_\_\_, Bidder  
(Name of Firm, Partnership, or Corporation)

on Project No. **MP-7567-03(006) / 304706301** \_\_\_\_\_,

in Amite County(ies), Mississippi, has not either directly or indirectly entered into any agreement, participated in any collusion; or otherwise taken any action in restraint of free competitive bidding in connection with this contract; nor have any of its corporate officers or principal owners.

Except as noted hereafter, it is further certified that said legal entity and its corporate officers, principal owners, managers, auditors and others in a position of administering federal funds are not currently under suspension, debarment, voluntary exclusion or determination of ineligibility; nor have a debarment pending; nor been suspended, debarred, voluntarily excluded or determined ineligible within the past three years by the Mississippi Transportation Commission, the State of Mississippi, any other State or a federal agency; nor been indicted, convicted or had a civil judgment rendered by a court of competent jurisdiction in any matter involving fraud or official misconduct within the past three years.

Initial here " \_\_\_\_\_ " if exceptions are attached and made a part thereof. Any exceptions shall address to whom it applies, initiating agency and dates of such action.

Note: Exceptions will not necessarily result in denial of award but will be considered in determining bidder responsibility. Providing false information may result in criminal prosecution or administrative sanctions.

All of the foregoing and attachments (when indicated) is true and correct.

Executed on \_\_\_\_\_ Signature

(5/29/2008S)

**S E C T I O N   9 0 2**

CONTRACT FOR MP-7567-03(006) / 304706301

LOCATED IN THE COUNTY(IES) OF Amite

STATE OF MISSISSIPPI,  
COUNTY OF HINDS

This contract entered into by and between the Mississippi Transportation Commission on one hand, and the undersigned contractor, on the other witnesseth;

That, in consideration of the payment by the Mississippi Transportation Commission of the prices set out in the proposal hereto attached, to the undersigned contractor, such payment to be made in the manner and at the time of times specified in the specifications and the special provisions, if any, the undersigned contractor hereby agrees to accept the prices stated in the proposal in full compensation for the furnishing of all materials and equipment and the executing of all the work contemplated in this contract.

It is understood and agreed that the advertising according to law, the Advertisement, the instructions to bidders, the proposal for the contract, the specifications, the revisions of the specifications, the special provisions, and also the plans for the work herein contemplated, said plans showing more particularly the details of the work to be done, shall be held to be, and are hereby made a part of this contract by specific reference thereto and with like effect as if each and all of said instruments had been set out fully herein in words and figures.

It is further agreed that for the same consideration the undersigned contractor shall be responsible for all loss or damage arising out of the nature of the work aforesaid; or from the action of the elements and unforeseen obstructions or difficulties which may be encountered in the prosecution of the same and for all risks of every description connected with the work, exceptions being those specifically set out in the contract; and for faithfully completing the whole work in good and workmanlike manner according to the approved Plans, Specifications, Special Provisions, Notice(s) to Bidders and requirements of the Mississippi Department of Transportation.

It is further agreed that the work shall be done under the direct supervision and to the complete satisfaction of the Executive Director of the Mississippi Department of Transportation, or his authorized representatives, and when Federal Funds are involved subject to inspection at all times and approval by the Federal Highway Administration, or its agents as the case may be, or the agents of any other Agency whose funds are involved in accordance with those Acts of the Legislature of the State of Mississippi approved by the Governor and such rules and regulations issued pursuant thereto by the Mississippi Transportation Commission and the authorized Federal Agencies.

The Contractor agrees that all labor as outlined in the Special Provisions may be secured from list furnished by

It is agreed and understood that each and every provision of law and clause required by law to be inserted in this contract shall be deemed to be inserted herein and this contract shall be read and enforced as though it were included herein, and, if through mere mistake or otherwise any such provision is not inserted, then upon the application of either party hereto, the contract shall forthwith be physically amended to make such insertion.

The Contractor agrees that he has read each and every clause of this Contract, and fully understands the meaning of same and that he will comply with all the terms, covenants and agreements therein set forth.

Witness our signatures this the \_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

\_\_\_\_\_  
Contractor (s)

By \_\_\_\_\_

MISSISSIPPI TRANSPORTATION COMMISSION

Title \_\_\_\_\_

By \_\_\_\_\_

Signed and sealed in the presence of:  
(names and addresses of witnesses)

Executive Director

\_\_\_\_\_  
Secretary to the Commission

Award authorized by the Mississippi Transportation Commission in session on the \_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_, Minute Book No. \_\_\_\_\_, Page No. \_\_\_\_\_.

**S E C T I O N   9 0 3**  
**PERFORMANCE AND PAYMENT BOND**

CONTRACT BOND FOR: MP-7567-03(006) / 304706301

LOCATED IN THE COUNTY(IES) OF: Amite

STATE OF MISSISSIPPI,

COUNTY OF HINDS

Know all men by these presents: that we, \_\_\_\_\_  
( Contractor )

\_\_\_\_\_ Principal, a \_\_\_\_\_

residing at \_\_\_\_\_ in the State of \_\_\_\_\_

and \_\_\_\_\_

( Surety )

residing at \_\_\_\_\_ in the State of \_\_\_\_\_,

authorized to do business in the State of Mississippi, under the laws thereof, as surety, are held and firmly bound unto the State of Mississippi in the sum of \_\_\_\_\_

(\$ \_\_\_\_\_) Dollars, lawful money of the United States of America, to be paid to it for which payment well and truly to be made, we bind ourselves, our heirs, administrators, successors, or assigns jointly and severally by these presents.

Signed and sealed this the \_\_\_\_\_ day of \_\_\_\_\_ A.D. \_\_\_\_\_.

The conditions of this bond are such, that whereas the said \_\_\_\_\_

principal, has (have) entered into a contract with the Mississippi Transportation Commission, bearing the date of \_\_\_\_\_ day of \_\_\_\_\_ A.D. \_\_\_\_\_ hereto annexed, for the construction of certain projects(s) in the State of Mississippi as mentioned in said contract in accordance with the Contract Documents therefor, on file in the offices of the Mississippi Department of Transportation, Jackson, Mississippi.

Now therefore, if the above bounden \_\_\_\_\_

\_\_\_\_\_ in all things shall stand to and abide by and well and truly observe, do keep and perform all and singular the terms, covenants, conditions, guarantees and agreements in said contract, contained on his (their) part to be observed, done, kept and performed and each of them, at the time and in the manner and form and furnish all of the material and equipment specified in said contract in strict accordance with the terms of said contract which said plans, specifications and special provisions are included in and form a part of said contract and shall maintain the said work contemplated until its final completion and acceptance as specified in Subsection 109.11 of the approved specifications, and save harmless said Mississippi Transportation Commission from any loss or damage arising out of or occasioned by the negligence, wrongful or criminal act, overcharge, fraud, or any other loss or damage whatsoever, on the part of said principal (s), his (their) agents, servants, or employees in

**SECTION 903 - CONTINUED**

the performance of said work or in any manner connected therewith, and shall be liable and responsible in a civil action instituted by the State at the instance of the Mississippi Transportation Commission or any officer of the State authorized in such cases, for double any amount in money or property, the State may lose or be overcharged or otherwise defrauded of, by reason of wrongful or criminal act, if any, of the Contractor(s), his (their) agents or employees, and shall promptly pay the said agents, servants and employees and all persons furnishing labor, material, equipment or supplies therefor, including premiums incurred, for Surety Bonds, Liability Insurance, and Workmen's Compensation Insurance; with the additional obligation that such Contractor shall promptly make payment of all taxes, licenses, assessments, contributions, damages, any liquidated damages which may arise prior to any termination of said principal's contract, any liquidated damages which may arise after termination of the said principal's contract due to default on the part of said principal, penalties and interest thereon, when and as the same may be due this state, or any county, municipality, board, department, commission or political subdivision: in the course of the performance of said work and in accordance with Sections 31-5-51 et seq. Mississippi Code of 1972, and other State statutes applicable thereto, and shall carry out to the letter and to the satisfaction of the Executive Director of the Mississippi Department of Transportation, all, each and every one of the stipulations, obligations, conditions, covenants and agreements and terms of said contract in accordance with the terms thereof and all of the expense and cost and attorney's fee that may be incurred in the enforcement of the performance of said contract, or in the enforcement of the conditions and obligations of this bond, then this obligation shall be null and void, otherwise to be and remain in full force and virtue.

Witness our signatures and seals this the \_\_\_\_\_ day of \_\_\_\_\_ A.D. \_\_\_\_\_.

_____	_____
(Contractors) Principal	Surety
By _____	By _____
	(Signature) Attorney in Fact
	Address _____
	_____
Title _____	_____
(Contractor's Seal)	(Printed) MS Agent
	_____
	(Signature) MS Agent
	Address _____
	_____
	_____
	(Surety Seal)
	_____
	Mississippi Insurance ID Number



# BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we \_\_\_\_\_  
Contractor

\_\_\_\_\_  
Address

\_\_\_\_\_  
City, State ZIP

as Principal, hereinafter called the Principal, and \_\_\_\_\_  
Surety

a corporation duly organized under the laws of the state of \_\_\_\_\_

as Surety, hereinafter called the Surety, are held and firmly bound unto State of Mississippi, Jackson, Mississippi

As Obligee, hereinafter called Obligee, in the sum of **Five Per Cent (5%) of Amount Bid**  
Dollars (\$ \_\_\_\_\_)

for the payment of which sum will and truly to be made, the said Principal and said Surety, bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has submitted a bid for **Overlay approximately 16 miles of SR 567 from SR 24 to the end of State Maintenance, known as State Project No. MP-7567-03(006) / 304706301 in Amite County.**

NOW THEREFORE, the condition of this obligation is such that if the aforesaid Principal shall be awarded the contract, the said Principal will, within the time required, enter into a formal contract and give a good and sufficient bond to secure the performance of the terms and conditions of the contract, then this obligation to be void; otherwise the Principal and Surety will pay unto the Obligee the difference in money between the amount of the bid of the said Principal and the amount for which the Obligee legally contracts with another party to perform the work if the latter amount be in excess of the former, but in no event shall liability hereunder exceed the penal sum hereof.

Signed and sealed this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_

\_\_\_\_\_  
(Principal) (Seal)

\_\_\_\_\_  
(Witness)

By: \_\_\_\_\_  
(Name) (Title)

\_\_\_\_\_  
(Surety) (Seal)

\_\_\_\_\_  
(Witness)

By: \_\_\_\_\_  
(Attorney-in-Fact)

\_\_\_\_\_  
MS Agent

\_\_\_\_\_  
Mississippi Insurance ID Number