

# HIGHWAY WORK PROPOSAL

Wisconsin Department of Transportation  
06/2017 s.66.0901(7) Wis. Stats

Proposal Number: **031**

<u>COUNTY</u>	<u>STATE PROJECT</u>	<u>FEDERAL</u>	<u>PROJECT DESCRIPTION</u>	<u>HIGHWAY</u>
Jackson	7510-02-60	N/A	Black River Falls - City Point; Oasis Road To Cth K	STH 054
Jackson	7510-02-62	N/A	Black River Falls - City Point; Cth K To East County Line	STH 054

This proposal, submitted by the undersigned bidder to the Wisconsin Department of Transportation, is in accordance with the advertised request for proposals. The bidder is to furnish and deliver all materials, and to perform all work for the improvement of the designated project in the time specified, in accordance with the appended Proposal Requirements and Conditions.

Proposal Guaranty Required: \$100,000.00 Payable to: Wisconsin Department of Transportation	Attach Proposal Guaranty on back of this PAGE.
Bid Submittal Date: December 11, 2018 Time (Local Time): 9:00 am	Firm Name, Address, City, State, Zip Code
Contract Completion Time August 30, 2019	<b>SAMPLE</b> <b>NOT FOR BIDDING PURPOSES</b>
Assigned Disadvantaged Business Enterprise Goal 0%	This contract is exempt from federal oversight.

This certifies that the undersigned bidder, duly sworn, is an authorized representative of the firm named above; that the bidder has examined and carefully prepared the bid from the plans, Highway Work Proposal, and all addenda, and has checked the same in detail before submitting this proposal or bid; and that the bidder or agents, officer, or employees have 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 proposal bid.

Do not sign, notarize, or submit this Highway Work Proposal when submitting an electronic bid on the Internet.

Subscribed and sworn to before me this date \_\_\_\_\_

\_\_\_\_\_  
(Signature, Notary Public, State of Wisconsin)

\_\_\_\_\_  
(Bidder Signature)

\_\_\_\_\_  
(Print or Type Name, Notary Public, State Wisconsin)

\_\_\_\_\_  
(Print or Type Bidder Name)

\_\_\_\_\_  
(Date Commission Expires)

\_\_\_\_\_  
(Bidder Title)

Notary Seal

Type of Work: Excavation, Base, HMA Pavement, Beam Guard, Pavement Marking, Permanent Signing	For Department Use Only
Notice of Award Dated	Date Guaranty Returned

**PLEASE ATTACH  
PROPOSAL GUARANTY HERE**

**Effective with November 2007 Letting**

**PROPOSAL REQUIREMENTS AND CONDITIONS**

The bidder, signing and submitting this proposal, agrees and declares as a condition thereof, to be bound by the following conditions and requirements.

If the bidder has a corporate relationship with the proposal design engineering company, the bidder declares that it did not obtain any facts, data, or other information related to this proposal from the design engineering company that was not available to all bidders.

The bidder declares that they have carefully examined the site of, and the proposal, plans, specifications and contract forms for the work contemplated, and it is assumed that the bidder has investigated and is satisfied as to the conditions to be encountered, as to the character, quality, and quantities of work to be performed and materials to be furnished, and as to the requirements of the specifications, special provisions and contract. It is mutually agreed that submission of a proposal shall be considered conclusive evidence that the bidder has made such examination.

The bidder submits herewith a proposal guaranty in proper form and amount payable to the party as designated in the advertisement inviting proposals, to be retained by and become the property of the owner of the work in the event the undersigned shall fail to execute the contract and contract bond and return the same to the office of the engineer within fourteen (14) days after having been notified in writing to do so; otherwise to be returned.

The bidder declares that they understand that the estimate of quantities in the attached schedule is approximate only and that the attached quantities may be greater or less in accordance with the specifications.

The bidder agrees to perform the said work, for and in consideration of the payment of the amount becoming due on account of work performed, according to the unit prices bid in the following schedule, and to accept such amounts in full payment of said work.

The bidder declares that all of the said work will be performed at their own proper cost and expense, that they will furnish all necessary materials, labor, tools, machinery, apparatus, and other means of construction in the manner provided in the applicable specifications and the approved plans for the work together with all standard and special designs that may be designed on such plans, and the special provisions in the contract of which this proposal will become a part, if and when accepted. The bidder further agrees that the applicable specifications and all plans and working drawings are made a part hereof, as fully and completely as if attached hereto.

The bidder, if awarded the contract, agrees to begin the work not later than ten (10) days after the date of written notification from the engineer to do so, unless otherwise stipulated in the special provisions.

The bidder declares that if they are awarded the contract, they will execute the contract agreement and begin and complete the work within the time named herein, and they will file a good and sufficient surety bond for the amount of the contract for performance and also for the full amount of the contract for payment.

The bidder, if awarded the contract, shall pay all claims as required by Section 779.14, Statutes of Wisconsin, and shall be subject to and discharge all liabilities for injuries pursuant to Chapter 102 of the Statutes of Wisconsin, and all acts amendatory thereto. They shall further be responsible for any damages to property or injury to persons occurring through their own negligence or that of their employees or agents, incident to the performance of work under this contract, pursuant to the Standard Specifications for Road and Bridge Construction applicable to this contract.

In connection with the performance of work under this contract, the contractor agrees to comply with all applicable state and federal statutes relating to non-discrimination in employment. No otherwise qualified person shall be excluded from employment or otherwise be subject to discrimination in employment in any manner on the basis of age, race, religion, color, gender, national origin or ancestry, disability, arrest or conviction record (in keeping with s.111.32), sexual orientation, marital status, membership in the military reserve, honesty testing, genetic testing, and outside use of lawful products. This provision shall include, but not be limited to the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation, and selection for training, including apprenticeship. The contractor further agrees to ensure equal opportunity in employment to all applicants and employees and to take affirmative action to attain a representative workforce.

The contractor agrees to post notices and posters setting forth the provisions of the nondiscrimination clause, in a conspicuous and easily accessible place, available for employees and applicants for employment.

If a state public official (section 19.42, Stats.) or an organization in which a state public official holds at least a 10% interest is a party to this agreement, this contract is voidable by the state unless appropriate disclosure is made to the State of Wisconsin Ethics Board.

## **Effective with August 2015 Letting**

### **BID PREPARATION**

#### **Preparing the Proposal Schedule of Items**

##### **A General**

- (1) Obtain bidding proposals as specified in section 102 of the standard specifications prior to 11:45 AM of the last business day preceding the letting. Submit bidding proposals using one of the following methods:
  1. Electronic bid on the internet.
  2. Electronic bid on a printout with accompanying diskette or CD ROM.
  3. Paper bid under a waiver of the electronic submittal requirements.
- (2) Bids submitted on a printout with accompanying diskette or CD ROM or paper bids submitted under a waiver of the electronic submittal requirements govern over bids submitted on the internet.

- (3) The department will provide bidding information through the department's web site at:  
<https://wisconsindot.gov/Pages/doing-bus/contractors/hcci/bid-let.aspx>

The contractor is responsible for reviewing this web site for general notices as well as information regarding proposals in each letting. The department will also post special notices of all addenda to each proposal through this web site no later than 4:00 PM local time on the Thursday before the letting. Check the department's web site after 5:00 PM local time on the Thursday before the letting to ensure all addenda have been accounted for before preparing the bid. When bidding using methods 1 and 2 above, check the Bid Express™ on-line bidding exchange at <http://www.bidx.com/> after 5:00 PM local time on the Thursday before the letting to ensure that the latest schedule of items Expedite file (\*.ebs or \*.00x) is used to submit the final bid.

- (4) Interested parties can subscribe to the Bid Express™ on-line bidding exchange by following the instructions provided at the [www.bidx.com](http://www.bidx.com) web site or by contacting:

Info Tech Inc.  
5700 SW 34th Street, Suite 1235  
Gainesville, FL 32608-5371  
email: <mailto:customer.support@bidx.com>

- (5) The department will address equipment and process failures, if the bidder can demonstrate that those failures were beyond their control.
- (6) Contractors are responsible for checking on the issuance of addenda and for obtaining the addenda. Notice of issuance of addenda is posted on the department's web site at:  
<https://wisconsindot.gov/Pages/doing-bus/contractors/hcci/bid-let.aspx>

or by calling the department at (608) 266-1631. Addenda can ONLY be obtained from the department's web site listed above or by picking up the addenda at the Bureau of Highway Construction, 4<sup>th</sup> floor, 4822 Madison Yards Way, Madison, WI, during regular business hours.

- (7) Addenda posted after 5:00 PM on the Thursday before the letting will be emailed to the eligible bidders for that proposal. All eligible bidders shall acknowledge receipt of the addenda whether they are bidding on the proposal or not. Not acknowledging receipt may jeopardize the awarding of the project.

##### **B Submitting Electronic Bids**

###### **B.1 On the Internet**

- (1) Do the following before submitting the bid:
  1. Have a properly executed annual bid bond on file with the department.

2. Have a digital ID on file with and enabled by Info Tech Inc. Using this digital ID will constitute the bidder's signature for proper execution of the bidding proposal.
- (2) In lieu of preparing, delivering, and submitting the proposal as specified in 102.6 and 102.9 of the standard specifications, submit the proposal on the internet as follows:
  1. Download the latest schedule of items reflecting all addenda from the Bid Express™ web site.
  2. Use Expedite™ software to enter a unit price for every item in the schedule of items.
  3. Submit the bid according to the requirements of Expedite™ software and the Bid Express™ web site. Do not submit a bid on a printout with accompanying diskette or CD ROM or a paper bid. If the bidder does submit a bid on a printout with accompanying diskette or a paper bid in addition to the internet submittal, the department will disregard the internet bid.
  4. Submit the bid before the hour and date the Notice to Contractors designates.
  5. Do not sign, notarize, and return the bidding proposal described in 102.2 of the standard specifications.
- (3) The department will not consider the bid accepted until the hour and date the Notice to Contractors designates.

## **B.2 On a Printout with Accompanying Diskette or CD ROM**

- (1) Download the latest schedule of items from the Wisconsin pages of the Bid Express™ web site reflecting the latest addenda posted on the department's web site at:  
<https://wisconsindot.gov/Pages/doing-bus/contractors/hcci/bid-let.aspx>  
Use Expedite™ software to prepare and print the schedule of items. Provide a valid amount for all price fields. Follow instructions and review the help screens provided on the Bid Express™ web site to assure that the schedule of items is prepared properly.
- (2) Staple an 8 1/2 by 11 inch printout of the Expedite™ generated schedule of items to the other proposal documents submitted to the department as a part of the bidder's sealed bid. As a separate submittal, not in the sealed bid envelop but due at the same time and place as the sealed bid, also provide the Expedite™ generated schedule of items on a 3 1/2 inch computer diskette or CD ROM. Label each diskette or CD ROM with the bidder's name, the 4 character department-assigned bidder identification code from the top of the bidding proposal, and a list of the proposal numbers included on that diskette or CD ROM as indicated in the following example:

**Bidder Name**

**BN00**

**Proposals: 1, 12, 14, & 22**

- (3) If bidding on more than one proposal in the letting, the bidder may include all proposals for that letting on one diskette or CD ROM. Include only submitted proposals with no incomplete or other files on the diskette or CD ROM.
- (4) The bidder-submitted printout of the Expedite™ generated schedule of items is the governing contract document and must conform to the requirements of section 102 of the standard specifications. If a printout needs to be altered, cross out the printed information with ink or typewriter and enter the new information and initial it in ink. If there is a discrepancy between the printout and the diskette or CD ROM, the department will analyze the bid using the printout information.
- (5) In addition to the reasons specified in section 102 of the standard specifications, proposals are irregular and the department may reject them for one or more of the following:
  1. The check code printed on the bottom of the printout of the Expedite™ generated schedule of items is not the same on each page.
  2. The check code printed on the printout of the Expedite™ generated schedule of items is not the same as the check code for that proposal provided on the diskette or CD ROM.

3. The diskette or CD ROM is not submitted at the time and place the department designates.

### **C Waiver of Electronic Submittal**

- (1) The bidder may request a waiver of the electronic submittal requirements. Submit a written request for a waiver in lieu of bids submitted on the internet or on a printout with accompanying diskette or CD ROM. Use the waiver that was included with the paper bid document sent to the bidder or type up a waiver on the bidder's letterhead. The department will waive the electronic submittal requirements for a bidding entity (individual, partnership, joint venture, corporation, or limited liability company) for up to 4 individual proposals in a calendar year. The department may allow additional waivers for equipment malfunctions.
- (2) Submit a schedule of items on paper conforming to section 102 of the standard specifications. The department charges the bidder a \$75 administrative fee per proposal, payable at the time and place the department designates for receiving bids, to cover the costs of data entry. The department will accept a check or money order payable to: "Wisconsin, Dept. of Transportation."
- (3) In addition to the reasons specified in section 102 of the standard specifications, proposals are irregular and the department may reject them for one or more of the following:
  1. The bidder fails to provide the written request for waiver of the electronic submittal requirements.
  2. The bidder fails to pay the \$75 administrative fee before the time the department designates for the opening of bids unless the bidder requests on the waiver that they be billed for the \$75.
  3. The bidder exceeds 4 waivers of electronic submittal requirements within a calendar year.
- (4) In addition to the reasons specified in section 102 of the standard specifications, the department may refuse to issue bidding proposals for future contracts to a bidding entity that owes the department administrative fees for a waiver of electronic submittal requirements.

# PROPOSAL BID BOND

DT1303 1/2006

Wisconsin Department of Transportation

Proposal Number	Project Number	Letting Date
Name of Principal		
Name of Surety	State in Which Surety is Organized	

We, the above-named Principal and the above-named Surety, are held and firmly bound unto the State of Wisconsin in the sum equal to the Proposal Guaranty for the total bid submitted for the payment to be made; we jointly and severally bind ourselves, our heirs, executors, administrators, successors and assigns. The condition of this obligation is that the Principal has submitted a bid proposal to the State of Wisconsin acting through the Department of Transportation for the improvement designated by the Proposal Number and Letting Date indicated above.

If the Principal is awarded the contract and, within the time and manner required by law after the prescribed forms are presented for signature, enters into a written contract in accordance with the bid, and files the bond with the Department of Transportation to guarantee faithful performance and payment for labor and materials, as required by law, or if the Department of Transportation shall reject all bids for the work described, then this obligation shall be null and void; otherwise, it shall be and remain in full force and effect. In the event of failure of the Principal to enter into the contract or give the specified bond, the Principal shall pay to the Department of Transportation **within 10 business days of demand** a total equal to the Proposal Guaranty as liquidated damages; the liability of the Surety continues for the full amount of the obligation as stated until the obligation is paid in full.

The Surety, for value received, agrees that the obligations of it and its bond shall not be impaired or affected by any extension of time within which the Department of Transportation may accept the bid; and the Surety does waive notice of any such extension.

IN WITNESS, the Principal and Surety have agreed and have signed by their proper officers and have caused their corporate seals to be affixed this date: **(DATE MUST BE ENTERED)**

## PRINCIPAL

\_\_\_\_\_  
(Company Name) **(Affix Corporate Seal)**

\_\_\_\_\_  
(Signature and Title)

\_\_\_\_\_  
(Company Name)

\_\_\_\_\_  
(Signature and Title)

\_\_\_\_\_  
(Company Name)

\_\_\_\_\_  
(Signature and Title)

\_\_\_\_\_  
(Company Name)

\_\_\_\_\_  
(Signature and Title)

## NOTARY FOR PRINCIPAL

\_\_\_\_\_  
(Date)

State of Wisconsin )  
 ) ss.  
\_\_\_\_\_ County )

On the above date, this instrument was acknowledged before me by the named person(s).

\_\_\_\_\_  
(Signature, Notary Public, State of Wisconsin)

\_\_\_\_\_  
(Print or Type Name, Notary Public, State of Wisconsin)

\_\_\_\_\_  
(Date Commission Expires)

**Notary Seal**

\_\_\_\_\_  
(Name of Surety) **(Affix Seal)**

\_\_\_\_\_  
(Signature of Attorney-in-Fact)

## NOTARY FOR SURETY

\_\_\_\_\_  
(Date)

State of Wisconsin )  
 ) ss.  
\_\_\_\_\_ County )

On the above date, this instrument was acknowledged before me by the named person(s).

\_\_\_\_\_  
(Signature, Notary Public, State of Wisconsin)

\_\_\_\_\_  
(Print or Type Name, Notary Public, State of Wisconsin)

\_\_\_\_\_  
(Date Commission Expires)

**Notary Seal**

**IMPORTANT: A certified copy of Power of Attorney of the signatory agent must be attached to the bid bond.**





# CERTIFICATE OF ANNUAL BID BOND

DT1305 8/2003

Wisconsin Department of Transportation

Time Period Valid (From/To)	
Name of Surety	
Name of Contractor	
Certificate Holder	Wisconsin Department of Transportation

This is to certify that an annual bid bond issued by the above-named Surety is currently on file with the Wisconsin Department of Transportation.

This certificate is issued as a matter of information and conveys no rights upon the certificate holder and does not amend, extend or alter the coverage of the annual bid bond.

**Cancellation:** Should the above policy be cancelled before the expiration date, the issuing surety will give thirty (30) days written notice to the certificate holder indicated above.

\_\_\_\_\_  
(Signature of Authorized Contractor Representative)

\_\_\_\_\_  
(Date)



## March 2010

## LIST OF SUBCONTRACTORS

Section 66.0901(7), Wisconsin Statutes, provides that as a part of the proposal, the bidder also shall submit a list of the subcontractors the bidder proposes to contract with and the class of work to be performed by each. In order to qualify for inclusion in the bidder's list a subcontractor shall first submit a bid in writing, to the general contractor at least 48 hours prior to the time of the bid closing. The list may not be added to or altered without the written consent of the municipality. A proposal of a bidder is not invalid if any subcontractor and the class of work to be performed by the subcontractor has been omitted from a proposal; the omission shall be considered inadvertent or the bidder will perform the work personally.

No subcontract, whether listed herein or later proposed, may be entered into without the written consent of the Engineer as provided in Subsection 108.1 of the Standard Specifications.

[illegible]

**DECEMBER 2000**

**CERTIFICATION REGARDING DEBARMENT, SUSPENSION, AND OTHER  
RESPONSIBILITY MATTERS - PRIMARY COVERED TRANSACTIONS**

Instructions for Certification

1. By signing and submitting this proposal, the prospective contractor is providing the certification set out below.
2. The inability of a person to provide the certification required below will not necessarily result in denial of participation in this covered transaction. The prospective contractor shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective contractor to furnish a certification or an explanation shall disqualify such person from participation in this transaction.
3. The certification in this clause is a material representation of fact upon which reliance was placed when the department determined to enter into this transaction. If it is later determined that the contractor knowingly rendered an erroneous certification in addition to other remedies available to the Federal Government the department may terminate this transaction for cause or default.
4. The prospective contractor shall provide immediate written notice to the department to whom this proposal is submitted if at any time the prospective contractor learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.
5. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of the rules implementing Executive Order 12549. You may contact the department to which this proposal is being submitted for assistance in obtaining a copy of those regulations.
6. The prospective contractor agrees by submitting this proposal that, should this contract be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department entering into this transaction.
7. The prospective contractor further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," which is included as an addendum to PR-1273 - "Required Contract Provisions Federal Aid Construction Contracts," without

modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

8. The contractor may rely upon a certification of a prospective subcontractor/materials supplier that it is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A contractor may decide the method and frequency by which it determines the eligibility of its principals. Each contractor may, but is not required to, check the Disapproval List (telephone # 608/266/1631).
9. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of a contractor is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.
10. Except for transactions authorized under paragraph 6 of these instructions, if a contractor in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department may terminate this transaction for cause or default.

Certification Regarding Debarment, Suspension, and Other Responsibility Matters - Primary Covered Transactions

- (1) The prospective contractor certifies to the best of its knowledge and belief, that it and its principals:
  - (a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
  - (b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements or receiving stolen property;
  - (c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offense enumerated in paragraph (1)(b) of this certification; and
  - (d) Have not within a three-year period preceding this proposal had one or more public transactions (Federal, State or local) terminated for cause or default.
- (2) Where the prospective contractor is unable to certify to any of the statements in this certification, such prospective contractor shall attach an explanation to this proposal.

## Special Provisions

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**SPECIAL PROVISIONS**

**1. General.**

Perform the work under this construction contract for Project 7510-02-60 Black River Falls – City Point, Oasis Road to CTH K, STH 54, Jackson County, Wisconsin, Project 7510-02-62, Black River Falls – City Point, CTH K to East County Line, STH 54, Jackson County, Wisconsin as the plans show and execute the work as specified in the State of Wisconsin, Department of Transportation, Standard Specifications for Highway and Structure Construction, 2019 Edition, as published by the department, and these special provisions.

If all or a portion of the plans and special provisions are developed in the SI metric system and the schedule of prices is developed in the US standard measure system, the department will pay for the work as bid in the US standard system.

100-005 (20180628)

**2. Scope of Work.**

The work under this contract shall consist of removing asphaltic surface milling, HMA pavement, asphalt lane repairs, culvert replacement, cleaning culvert pipe, cleaning ditches, MGS guardrail, permanent signing, pavement markings, asphaltic center line rumble strips and all incidental items necessary to complete the work as shown on the plans and included in the proposal and contract.

104-005 (20090901)

**3. Prosecution and Progress.**

Begin work within ten calendar days after the engineer issues a written notice to do so.

Provide the start date to the engineer in writing within a month after executing the contract but at least 14 calendar days before the preconstruction conference. Upon approval, the engineer will issue the notice to proceed within ten calendar days before the approved start date.

To revise the start date, submit a written request to the engineer at least two weeks before the intended start date. The engineer will approve or deny that request based on the conditions cited in the request and its effect on the department's scheduled resources.

**Northern Long-eared Bat (*Myotis septentrionalis*)**

Northern Long-eared Bats (NLEB) have the potential to inhabit the project limits because they roost in trees. Roosts may not have been observed on this project, but conditions to support the species exist. The species and all active roosts are protected by the Federal Endangered Species Act. If an individual bat or active roost is encountered during construction operations, stop work and notify the engineer and the WisDOT Regional Environmental Coordinator (REC).

If additional construction activities beyond what was originally specified are required to complete the work, approval from the engineer, following coordination with WisDOT REC, is required prior to initiating these activities.

**Eastern Massasauga Rattlesnake (*Sistrurus catenatus*)**

Exclusion fencing as shown in the plans and described in the specials shall be installed prior to March 31, 2019 from Stations 285+00 to 290+00 LT and RT, and from 327+00 to 332+00 LT and RT.

**4. Traffic.**

**Project 7510-02-60**, the leveling layer of HMA pavement shall be placed on milled surface the same day of milling the asphalt pavement for the entire length of the project.

All milled surfaces shall have the lower layer of asphalt placed before 6:00 PM Friday unless the engineer directs otherwise. Avoid elevation differences between lanes and/or shoulders during all non-working hours.

STH 54 shall be reduced to a single lane under flagging operations. For work operations within the four-lane section of STH 54, traffic shall be reduced to a single lane conforming to SDD Traffic Control Single Lane Closure Non-Freeway/Expressway.



All work operations shall be limited to a maximum of one mile in length.

**Project 7510-02-62**, the leveling layer of HMA pavement shall be placed within 48 hours of milling the asphalt pavement for the entire length of the project. Asphaltic lane repair items as detailed in the plans shall be completed after milling operations and prior to the HMA leveling layer.

All milled surfaces shall have the lower layer of asphalt placed before 6:00 PM Friday unless the engineer directs otherwise. Avoid elevation differences between lanes and/or shoulders during all non-working hours.

All work operations shall be limited to a maximum of one mile in length. Multiple lane closures will be allowed provided a minimum distance of 1 miles between work zones is maintained or as approved by the engineer.

#### **Wisconsin Lane Closure System Advance Notification**

Provide the following advance notification to the engineer for incorporation into the Wisconsin Lane Closure System (LCS).

**TABLE 108-1 CLOSURE TYPE AND REQUIRED MINIMUM ADVANCE NOTIFICATION**

<b>Closure type with height, weight, or width restrictions (available width, all lanes in one direction &lt; 16')</b>	<b>MINIMUM NOTIFICATION</b>
Lane and shoulder closures	7 calendar days
Full roadway closures	7 calendar days
Ramp closures	7 calendar days
Detours	7 calendar days
<b>Closure type without height, weight, or width restrictions (available width, all lanes in one direction ≥ 16')</b>	<b>MINIMUM NOTIFICATION</b>
Lane and shoulder closures	3 business days
Ramp closures	3 business days
Modifying all closure types	3 business days

Discuss LCS completion dates and provide changes in the schedule to the engineer at weekly project meetings in order to manage closures nearing their completion date.

#### **5. Holiday Work Restrictions.**

Do not perform work on, nor haul materials of any kind along or across any portion of the highway carrying STH 54 traffic, and entirely clear the traveled way and shoulders of such portions of the highway of equipment, barricades, signs, lights, and any other material that might impede the free flow of traffic during the following holiday periods:

- From noon Friday, May 24, 2019 to 6:00 AM Tuesday, May 28, 2019 for Memorial Day;
- From noon Wednesday, July 3, 2019 to 6:00 AM Friday, July 5, 2019 for Independence Day;
- From noon Friday, August 30, 2019 to 6:00 AM Tuesday, September 3, 2019 for Labor Day.

stp-107-005 (20050502)

#### **6. Utilities.**

This contract comes under the provision of Administrative Rule Trans 220.

stp-107-065 (20080501)

Within the limits of projects 7510-02-60 and 7510-02-62 there are overhead and underground facilities. Coordinate construction activities with Diggers Hotline.

#### **Project 7510-02-60**

The following companies have utilities near or within the project limits:

**AT&T Legacy** has underground communication line crossing STH 54 at approximately Station 119+20. No conflicts are anticipated.

**Black River Falls Utilities** has watermain crossing STH 54 at Station 119+00. No conflicts are anticipated.

**Brockway Sanitary District #1** has watermain facilities along the south side of STH 54 with several highway crossings from the beginning of the project to Airport Road. No conflicts are anticipated.

**Brockway Sanitary District #1** has sanitary sewer facilities below the westbound STH 54 roadway from Station 124+95 to Station 126+80 and below the EB STH 54 roadway from Station 126+70 to 129+60 with several highway crossings from the beginning of the project to Leicht Road. Manholes exist within the pavement in these areas. No conflicts are anticipated.

**Centurylink** has underground communication (copper and fiber) lines along both sides of STH 54 from Oasis Road to CTH K with several highway crossings. No Conflicts are anticipated.

**Charter Communications** has underground facilities located on the south side of STH 54 from the beginning of the project to crossings at Vaudreuil Road. No conflicts are anticipated.

**Ho-Chunk Nation Public Utilities** has underground communication lines crossing STH 54 at Stations 173+77 and 252+77. No conflicts are anticipated.

**Ho-Chunk Nation (Sewer)** will be performing utility work within the limits of the project. Contact Steve Christopherson at (715) 284-9851 Ext. 5091 of Ho-Chunk Nation prior to preparing bids to obtain current information on the status of proposed utility work. Cooperate and coordinate construction activities with this utility.

Additional information regarding the proposed installation of utility facilities may be available on permits required by each utility company. These permits, if available, can be viewed at the Region Office during normal working hours.

Prior to preparing bids, contact WisDOT NW Region Utility Coordinator Heath Bielefeldt at (715) 836-2729.

**Ho-Chunk Nation (Water)** will be performing utility work within the limits of the project. Contact Steve Christopherson at (715) 284-9851 Ext. 5091 of Ho-Chunk Nation prior to preparing bids to obtain current information on the status of proposed utility work. Cooperate and coordinate construction activities with this utility.

Additional information regarding the proposed installation of utility facilities may be available on permits required by each utility company. These permits, if available, can be viewed at the Region Office during normal working hours.

Prior to preparing bids, contact WisDOT NW Region Utility Coordinator Heath Bielefeldt at (715) 836-2729.

**Jackson County Electric** has overhead electric lines along both sides of STH 54 with several crossings from the beginning of the project to crossing at approximately Station 292+00. No Conflicts are anticipated

**Northern Natural Gas** has a gas line crossing STH 54 at Station 155+40. No conflicts are anticipated.

**Xcel Energy** has overhead electric lines crossing STH 54 at 119+80, 134+00 and 204+00. No conflicts are anticipated.

**WE Energies** has underground gas lines along both sides of STH 54 from the beginning of the project to crossing at approximately Station 256+00. No Conflicts are anticipated.

#### **Project 7510-02-62**

**Centurylink** has underground communication and fiber lines along STH 54 from Station 3+89 to crossing at Station 230+00. No conflicts are anticipated.

**Oakdale Electric Cooperative** has several overhead electric crossings from Station 1118+50 to 129+50. No conflicts are anticipated.

**TDS Telecom** has underground communication crossing STH 54 at several locations on STH 54. TDS Telecom also has underground communication fiber along the south side of STH 54 from 1086+00 to 1136+00. No conflicts are anticipated.

## **7. Railroad Insurance and Coordination - Union Pacific Railroad Company.**

### **A Description**

Comply with standard spec 107.17 for all work affecting Union Pacific Railroad Company property and any existing tracks.

#### **A.1 Railroad Insurance Requirements**

In addition to standard spec 107.26, provide railroad protective liability insurance coverage as specified in standard spec 107.17.3. Insurance is filed in the name of Union Pacific Railroad Company.

Notify evidence of the required coverage, and duration to Danielle Allen, Contract Administrator; 1400 Dodge Street, Stop 1690, Omaha, NE 68179; Telephone (402) 544-8020; E-mail: [danielleallen@up.com](mailto:danielleallen@up.com).

Also send a copy to the following: Anna Davey, NW Region Railroad Coordinator; 1701 N 4th Street, Superior, WI 54880; Telephone (715) 392-7960; E-mail: [anna.davey@dot.wi.gov](mailto:anna.davey@dot.wi.gov).

Include the following information on the insurance document:

- Project ID: 7510-02-60
- Project Location: Black River Falls, WI
- Route Name: STH 54, Jackson County
- Crossing ID: 184 041M
- Railroad Subdivision: Altoona, WI
- Railroad Milepost: 142.18
- Work Performed: Mill and over lay, pavement marking

#### **A.2 Train Operation**

Approximately 6 through freight trains operate daily at up to 50 mph. There are no switching movements at this location.

#### **A.3 Names and Addresses of Railroad Representatives for Consultation and Coordination**

##### **Construction Contact**

John Venice, Manager Special Projects - Industry & Public Projects Engineering Department; 101 North Wacker Drive - Suite 1920, Chicago, IL 60606; Telephone (312) 777-2043; E-mail [jvenice@up.com](mailto:jvenice@up.com) for consultation on railroad requirements during construction.

Amend standard spec 108.4 to include the railroad in the distribution of the initial bar chart, and monthly schedule updates. The bar chart shall specifically show work involving coordination with the railroad.

##### **Flagging Contact**

See Construction Contact. If more than 30 days of flagging is required contact UP 30 days prior to needing a flagger on site. Reference the Wisconsin Milepost and Subdivision located in A.1.

##### **Cable Locate Contact**

In addition to contacting Diggers Hotline, contact the UP Call Before You Dig line at (800) 336-9193 at least five working days before the locate is needed. Normal business hours are 6:30 AM to 6:30 PM, Central Time, Monday through Friday, except holidays and are subject to change. Calls will be routed at all times in case of an emergency. Reference the Wisconsin Milepost and Subdivision located in A.1.

UP will only locate railroad owned cable buried in the railroad right-of-way. The railroad does not locate any other utilities.

#### **A.4 Work by Railroad**

The railroad will perform the work described in this section, except for work described in other special provisions, and will be accomplished without cost to the contractor. None

## **A.5 Temporary Grade Crossing**

If a temporary grade crossing is desired, submit a written request to the railroad representative named in A.3 at least 40 days prior to the time needed. Approval is subject to the discretion of the railroad. The department has made no arrangements for a temporary grade crossing.

stp-107-026 (20170615)

## **8. Railroad Insurance and Coordination - Wisconsin Central Ltd (CN).**

### **A Description**

Comply with standard spec 107.17 for all work affecting Wisconsin Central Ltd (CN) property and any existing tracks.

### **A.1 Railroad Insurance Requirements**

In addition to standard spec 107.26, provide railroad protective liability insurance coverage as specified in standard spec 107.17.3. Insurance is filed in the name of Wisconsin Central Ltd and Its Parents (CN).

Notify evidence of the required coverage, and duration to Jackie Macewicz, Manager Public Works; 1625 Depot Street, Stevens Point, WI 54481; Telephone (715) 345-2503; E-mail: [Jackie.macewicz@cn.ca](mailto:Jackie.macewicz@cn.ca).

Also send a copy to the following: Anna Davey, NW Region Railroad Coordinator; 1701 N 4th Street, Superior, WI 54880; Telephone (715) 392-7960; E-mail: [anna.davey@dot.wi.gov](mailto:anna.davey@dot.wi.gov).

Include the following information on the insurance document:

- Project ID: 7510-02-62
- Project Location: Pittsville, WI
- Route Name: Panter Road, Jackson County
- Crossing ID: 281 634V
- Railroad Subdivision: Whitehall Sub
- Railroad Milepost: 121.51
- Work Performed: Paving within 50' of railroad right-of-way

### **A.2 Train Operation**

Approximately 2 through freight trains operate daily at up to 35 mph. There are switching movements at lower speeds.

### **A.3 Names and Addresses of Railroad Representatives for Consultation and Coordination**

#### **Construction Contact**

Jackie Macewicz, Manager Public Works; 1625 Depot St., Stevens Point, WI 54481; Telephone (715) 345-2503; E-mail [jackie.macewicz@cn.ca](mailto:jackie.macewicz@cn.ca) for consultation on railroad requirements during construction.

Amend standard spec 108.4 to include the railroad in the distribution of the initial bar chart, and monthly schedule updates. The bar chart shall specifically show work involving coordination with the railroad.

#### **Flagging Contact**

Submit by US Mail a "Request for Flagging Services and Cable Location" form with prepayment to: Mary Ellen Carmody, CN, 24002 Vreeland Road, Flat Rock, MI 48134; Telephone (734) 783-4533. The form can be obtained at:

<https://www.cn.ca/en/delivering-responsibly/safety/erailsafe/utility-installations>

Requests for flagging and cable locates can take up to five business days after the railroad receives the paperwork. Reference the Wisconsin Milepost and Subdivision located in A.1. Advise Ms. Carmody that the flagging services are to be billed at the rate for a public highway project.

#### **Cable Locate Contact**

In addition to contacting Diggers Hotline, follow the procedure listed under Flagging Contact.

Wisconsin Central Ltd (CN) will only locate railroad owned facilities buried in the railroad right-of-way. The railroad does not locate any other utilities.

#### **A.4 Work by Railroad**

The railroad will perform the work described in this section, except for work described in other special provisions, and will be accomplished without cost to the contractor. None

#### **A.5 Temporary Grade Crossing**

If a temporary grade crossing is desired, submit a written request to the railroad representative named in A.3 at least 40 days prior to the time needed. Approval is subject to the discretion of the railroad. The department has made no arrangements for a temporary grade crossing.

stp-107-026 (20170615)

### **9. Dewatering**

Dewatering required during construction shall be properly treated before it is allowing to enter any wetlands or surface waters. Prepare a dewatering plan as part of the Erosion Control Implementation Plan (ECIP) and provide to the engineer for review and approval prior to starting dewatering operations. The plan shall include a description of the proposed dewatering operations. The plan shall include a description of the proposed dewatering methods and drawings indicating the location of the dewatering facilitates and points of discharge of the water.

Use the Wisconsin Department of Natural Resources Technical Standard on Dewatering as found on their website at <http://dnr.wi.gov/> for the appropriate best management practice and proper application and sizing of such to the maximum extent possible. As part of the Erosion Control Implementation Plan (ECIP) submittal, supply all pertinent information and calculations used to determine the best management practice for dewatering at each location it is required. Prior to construction, obtain approval from the engineer for proposed method of treatment including supporting calculations.

Work under this item shall include all work, materials, equipment, permitting and incidentals required to dewater the site during construction or to work with the water on-site in a manner that allows the project to be constructed according to the plans and specifications. This provision includes the dewatering of groundwater, surface water runoff, and trench dewatering. The contractor is responsible for all work, material and equipment required to comply with permit conditions to dewater the site.

Any polymers or other materials included in the dewatering plan for sediment coagulation are incidental to the dewatering and shall be on the Wisconsin Department of Natural Resource approved list.

Dewatering will be incidental to the contract. Dewatering will include all work necessary for constructing temporary settling basins, pumping, settling, and discharging water; for any permit fees required; and for furnishing all labor, tools, equipment, and incidentals necessary to complete the work.

### **10. Environmental Protection, Aquatic Exotic Species Control.**

Exotic invasive organisms such as VHS, zebra mussels, purple loosestrife, and Eurasian water milfoil are becoming more prolific in Wisconsin and pose adverse effects to waters of the state. Wisconsin State Statutes 30.07, "Transportation of Aquatic Plants and Animals; Placement of Objects in Navigable Waters", details the state law that requires the removal of aquatic plants and zebra mussels each time equipment is put into state waters.

At construction sites that involve navigable water or wetlands, use the follow cleaning procedures to minimize the chance of exotic invasive species infestation. Use these procedures for all equipment that comes in contact with waters of the state and/or infested water or potentially infested water in other states.

Ensure that all equipment that has been in contact with waters of the state, or with infested or potentially infested waters, has been decontaminated for aquatic plant materials and zebra mussels before being used in other waters of the state. Before using equipment on this project, thoroughly disinfect all equipment that has come into contact with potentially infested waters. Guidelines from the Wisconsin Department of Natural Resources for disinfection are available at:

<http://dnr.wi.gov/topic/invasives/disinfection.html>

Use the following inspection and removal procedures:

1. Before leaving the contaminated site, wash machinery and ensure that the machinery is free of all soil and other substances that could possibly contain exotic invasive species;
2. Drain all water from boats, trailers, bilges, live wells, coolers, bait buckets, engine compartments, and any other area where water may be trapped;

3. Inspect boat hulls, propellers, trailers and other surfaces. Scrape off any attached mussels, remove any aquatic plant materials (fragments, stems, leaves, seeds, or roots), and dispose of removed mussels and plant materials in a garbage can before leaving the area or invested waters; and
4. Disinfect your boat, equipment and gear by either:
  - 4.1. Washing with ~212 F water (steam clean), or
  - 4.2. Drying thoroughly for five days after cleaning with soap and water and/or high pressure water, or
  - 4.3. Disinfecting with either 200 ppm (0.5 oz per gallon or 1 Tablespoon per gallon) Chlorine for 10-minute contact time or 1:100 solution (38 grams per gallon) of Virkon Aquatic for 20- to 30-minute contact time. Note: Virkon is not registered to kill zebra mussel veligers nor invertebrates like spiny water flea. Therefore this disinfect should be used in conjunction with a hot water (>104° F) application.

Complete the inspection and removal procedure before equipment is brought to the project site and before the equipment leaves the project site.

stp-107-055 (20130615)

## 11. Environmental Protection, Eastern Massasauga Rattlesnake.

The Eastern Massasauga Rattlesnake (*Sistrurus catenatus*), a Wisconsin Threatened Species, is known to inhabit the project area. Prior to the start of construction, install exclusion fencing as shown in the plans and as described in:

<http://dnr.wi.gov/topic/erreview/documents/amphibianreptilefencingprotocol.pdf>

Maintain the fencing throughout the active period of the Eastern Massasauga Rattlesnake, March 15 through October 1, or until all construction activities have been completed, whichever occurs first. Inspect the fencing a minimum of two times per week on non-consecutive days and following any significant rainfall event (greater than 3/4-inch in one hour or 1 ½ inches in 24 hours).

## 12. Native American Hiring.

### Pre-Bid

Before bid submittal, contact the Ho-Chunk Nation to provide information on hiring procedures and future employment opportunities, and gather information on the tribal work force.

Ho-Chunk Nation tribal labor office contact information:

Tracy Thundercloud, Executive Director, Department of Labor  
 P. O. Box 667, Black River Falls, Wisconsin 54615  
 Office: (715) 284-5877  
 Email: [tracy.thundercloud@ho-chunk.com](mailto:tracy.thundercloud@ho-chunk.com)

Maintain documentation of all efforts made to communicate with the Ho-Chunk Nation. Pre-bid, submit documentation in conjunction with the Proposal Request Form to the Bureau of Project Development at:

[DOTDTSHighwayConstructionContractors@dot.wi.gov](mailto:DOTDTSHighwayConstructionContractors@dot.wi.gov)

The Eligible Bidders list will not be updated until this documentation is received. Include the following information in documentation:

Proposal number/route number/termini/county  
 Persons contacted  
 Method of communication (phone, email, written, in person)  
 Information exchanged (hiring procedures, available positions, referrals received, employee performance, etc)

### After Execution

At a minimum of three days before the tribal coordination meeting, contact the Ho-Chunk Nation to provide the following information regarding available employment opportunities for prime and subcontractors:

Job classification/trade  
 Job qualifications and required skills  
 Employment period  
 Wage  
 Copy of job application

After receiving employment opportunities, the Executive Director of the Ho-Chunk Department of Labor will within two business days provide employment referrals, or provide other recruitment sources to obtain qualified referrals.

Document all efforts made to communicate job opportunities and the results of hiring activities throughout the life of the contract. At any time during the life of the contract, provide the Ho-Chunk Nation communication documentation within five business days of request by the department.

### **Tribal Coordination Meeting**

Between execution of contract and the project preconstruction conference, setup and coordinate a meeting with the Tribal officials and leaders at Ho-Chunk Nation and notify and invite WisDOT Statewide Tribal Liaison, 4802 Sheboygan Ave, Room 451, P.O. Box 7965, Madison, WI 53707-7965, [kelly.jackson@dot.wi.gov](mailto:kelly.jackson@dot.wi.gov), (608) 266-3761. The prime contractor and all subcontractors shall attend this meeting. Discuss available employment opportunities and other tribal areas of interest such as scope of work, Tribal regulations, borrow sites, waste sites, and available aggregate.

### **Project Completion**

As a part of the document submittals required under standard spec 109.7, submit documentation summarizing communications regarding job opportunities throughout the life of the contract. Provide final report to the tribe and Statewide Tribal Affairs compiling the results of hiring activities for the prime contractor as well as for subcontractors at all tiers.

stp-107-200 (20140630)

## **13. Removing Apron Endwalls, Item 204.9060.S.01.**

### **A Description**

This special provision describes removing apron endwalls conforming to standard spec 204.

### **B (Vacant)**

### **C Construction**

Conform to standard spec 204.

### **D Measurement**

The department will measure Removing Apron Endwalls as each individual unit, acceptably completed.

### **E Payment**

*Add the following to standard spec 204.5:*

ITEM NUMBER	DESCRIPTION	UNIT
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204.9060.S.01	Removing Apron Endwalls	EACH
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stp-204-025 (20150630)

## **14. Prepare Foundation for Asphaltic Paving.**

This special provision describes preparation of foundation for asphaltic paving over a surface milled HMA surface according to the pertinent requirements of standard spec 211 and as hereinafter provided.

*Add the following to standard spec 211.3.5:*

After the surface mill, remove all surplus crack sealing, joint sealing, and asphalt patching materials to a minimum depth of 2 inches below the surface milled pavement. Completely remove patches of asphaltic materials used to fill localized areas of pits, potholes, depressions, badly spalled areas, or disintegrated areas of old pavement. Remove any loose material with insipient spalling within or within or contiguous to such areas. Prior to refilling, all removal areas shall be cleaned by air blasting or other engineer approved methods.

Prior to placement of the HMA pavement or any wedging or leveling layers, refill these areas of removal, as described above, to the level of the milled surface. Payment for refilling these areas is paid for under standard spec 465.0110 Asphaltic Surface Patching.

*Replace standard spec 211.5.1 (4) with the following:*

This payment will be full compensation for all work under this item including brooming, air blasting, leaning, crack fill removal, asphaltic material removal, and disintegrated pavement removal. The department will pay separately for the following work associated with refilling the removing areas under the Asphaltic Surface Patching item.

**15. Hauling Excess Shoulder Material, Item 305.0504.S.**

**A Description**

This special provision describes moving excess suitable shoulder material longitudinally along the roadway to areas of deficiency as the engineer directs.

**B (Vacant)**

**C Construction**

After the asphaltic removing or salvaging operation, move the suitable shoulder material, which is in excess after shaping the shoulders to the required cross section, to areas of deficiency as the engineer directs.

**D Measurement**

The department will measure Hauling Excess Shoulder Material in volume by the cubic yard in the vehicle.

**E Payment**

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
305.0504.S	Hauling Excess Shoulder Material	CY

Payment is full compensation for loading, hauling, placing, and for compacting the material.

stp-305-010 (20030820)

**16. HMA Pavement Percent Within Limits (PWL) QMP.**

**A Description**

This special provision describes percent within limits (PWL) pay determination, providing and maintaining a contractor Quality Control (QC) Program, department Quality Verification (QV) Program, required sampling and testing, dispute resolution, corrective action, pavement density, and payment for HMA pavements. Pay is determined by statistical analysis performed on contractor and department test results conducted according to the Quality Management Program (QMP) as specified in standard spec 460, except as modified below.

**B Materials**

Conform to the requirements of standard spec 450, 455, and 460 except where superseded by this special provision. The department will allow only one mix design for each HMA mixture type per layer required for the project, unless approved by the engineer. The use of more than one mix design for each HMA pavement layer will require the contractor to construct a new test strip in accordance with HMA Pavement Percent Within Limits (PWL) QMP Test Strip Volumetrics and HMA Pavement Percent Within Limits (PWL) QMP Test Strip Density articles at no additional cost to the department.

*Replace standard spec 460.2.8.2.1.3.1 for contracts with 5000 Tons of Mixture or Greater with the following:*

**460.2.8.2.1.3.1 Contracts under Percent within Limits**

(1) Furnish and maintain a laboratory at the plant site fully equipped for performing contractor QC testing. Have the laboratory on-site and operational before beginning mixture production.

(2) Obtain random samples and perform tests according to this document and further defined in Appendix A: *Test Methods & Sampling for HMA PWL QMP Projects*. Obtain HMA mixture samples from trucks at the plant. For the subplot in which a QV sample is collected, the QC sample shall be discarded, and the QC team shall test a split of the QV sample.



(3) Sampling from the truck box and three-part splitting of HMA samples shall be done in accordance with CMM 8-36. Sample size must be adequate to run the appropriate required tests in addition to one set of duplicate tests that may be required for dispute resolution (i.e., retained). This requires sample sizes which yield three splits for all random sampling per subplot. All QC samples shall provide the following: QC, QV, and Retained. The contractor shall take possession and test the QC portions. The department will observe the splitting and take possession of the samples intended for QV testing (i.e., QV portion from each sample) and the Retained portions. Additional sampling details are found in Appendix A. Samples shall be labeled in accordance with CMM 8-36. Additional handling instructions for retained samples are found in CMM 8-36.

(4) Use the test methods identified below to perform the following tests at a frequency greater than or equal to that indicated:

- Blended aggregate gradations in accordance with AASHTO T 30
- Asphalt content (AC) in percent according to WisDOT Modified AASHTO T 308 per CMM 8-36.6.3.6 (ignition oven), AASHTO T 164 Method A or B (chemical extraction), or WisDOT Modified ASTM D8159 per CMM 8-36.6.3.1 (automated extraction).
- Bulk specific gravity (Gmb) of the compacted mixture according to AASHTO T 166.
- Maximum specific gravity (Gmm) according to AASHTO T 209.
- Air voids (Va) by calculation according to AASHTO T 269.
- Voids in Mineral Aggregate (VMA) by calculation according to AASHTO R35.

(5) Lot size shall consist of 3750 tons with sublots of 750 tons. Test each design mixture at a frequency of 1 test per 750 tons of mixture type produced and placed on the project. Add a random sample for any fraction of 750 tons at the end of production for a specific mixture design for each project. Partial lots with less than three subplot tests will be included into the previous lot for data analysis and pay adjustment. Volumetric lots will include all tonnage of mixture type under specified bid item unless otherwise specified in the plan.

(6) Conduct field tensile strength ratio tests according to AASHTO T283, without freeze-thaw conditioning cycles, on each qualifying mixture in accordance with CMM 8-36.6.14. Test each full 50,000 ton production increment, or fraction of an increment, after the first 5,000 tons of production. Perform required increment testing in the first week of production of that increment. If field tensile strength ratio values are below the spec limit, notify the engineer. The engineer and contractor will jointly determine a corrective action.

*Delete standard spec 460.2.8.2.1.5 and 460.2.8.2.1.6.*

*Replace standard spec 460.2.8.2.1.7 Corrective Action with the following:*

#### **460.2.8.2.1.7 Corrective Action**

(1) Material must conform to the following action and acceptance limits based on individual QC and QV test results (tolerances relative to the JMF used on the PWL Test Strip):

ITEM	ACTION LIMITS	ACCEPTANCE LIMITS
Percent passing given sieve:		
37.5-mm	+/- 8.0	
25.0-mm	+/- 8.0	
19.0-mm	+/- 7.5	
12.5-mm	+/- 7.5	
9.5-mm	+/- 7.5	
2.36-mm	+/- 7.0	
75-µm	+/- 3.0	
AC in percent <sup>[1]</sup>	-0.3	-0.5
Va		- 1.5 & +2.0
VMA in percent <sup>[2]</sup>	- 0.5	-1.0

<sup>[1]</sup> The department will not adjust pay based on a QC AC in percent test results; however corrective action will be applied to nonconforming material according to 460.2.8.2.1.7(3) as modified herein.

<sup>[2]</sup> VMA limits based on minimum requirement for mix design nominal maximum aggregate size in table 460-1.

(2) QV samples will be tested for Gmm, Gmb, and AC. Air voids and VMA will then be calculated using these test results.

(3) Notify the engineer if any individual test result falls outside the action limits, investigate the cause and take corrective action to return to within action limits. If two consecutive test results fall outside the action limits, stop production. Production may not resume until approved by the engineer. Additional QV samples may be collected upon resuming production, at the discretion of the engineer.

(4) For any additional tests outside the random number testing conducted for volumetrics, the data collected will not be entered into PWL calculations. Additional QV tests must meet acceptance limits or be subject to production stop and/or remove and replace.

(5) Remove and replace unacceptable material at no additional expense to the department. Unacceptable material is defined as any individual QC or QV tests results outside the acceptance limits or a PWL value < 50. The engineer may allow such material to remain in place with a price reduction. The department will pay for the such HMA Pavement allowed to remain in place at 50 percent of the contract unit price.

*Replace standard spec 460.2.8.3.1.2 Personnel Requirements with the following:*

#### **460.2.8.3.1.2 Personnel Requirements**

(1) The department will provide at least one HTCP-certified Transportation Materials Sampling (TMS) Technician, to observe QV sampling of project mixtures.

(2) Under departmental observation, a contractor TMS technician will collect and split samples.

(3) A department HTCP-certified Hot Mix Asphalt, Technician I, Production Tester (HMA-IPT) technician will ensure that all sampling is performed correctly and conduct testing, analyze test results, and report resulting data.

(4) The department will provide an organizational chart to the contractor before mixture production begins. The organizational chart will include names, telephone numbers, and current certifications of all QV testing personnel. The department will update the chart with appropriate changes, as they become effective.

*Replace standard spec 460.2.8.3.1.4 Department Verification Testing Requirements with the following:*

#### **460.2.8.3.1.4 Department Verification Testing Requirements**

(1) HTCP-certified department personnel will obtain QV random samples by directly supervising HTCP-certified contractor personnel sampling from trucks at the plant. Sample size must be adequate to run the appropriate required tests in addition to one set of duplicate tests that may be required for dispute resolution (i.e., retained). This requires sample sizes which yield three splits for all random sampling per subplot. All QV samples shall provide the following: QC, QV, and Retained. The department will observe the splitting and take possession of the samples intended for QV testing (i.e., QV portion from each sample) and the Retained portions. The department will take possession of retained samples accumulated to date each day QV samples are collected. Retention of samples will be provided until surpassing the analysis window of up to 5 lots, as defined in 460.2.8.3.1.7(2) of this document. Additional sampling details are found in Appendix A.

(2) The department will verify product quality using the test methods specified here in 460.2.8.3.1.4(3). The department will identify test methods before construction starts and use only those methods during production of that material unless the engineer and contractor mutually agree otherwise.

(3) The department will perform all testing conforming to the following standards:

- Bulk specific gravity (Gmb) of the compacted mixture according to AASHTO T 166.
- Maximum specific gravity (Gmm) according to AASHTO T 209.
- Air voids (Va) by calculation according to AASHTO T 269.
- Voids in Mineral Aggregate (VMA) by calculation according to AASHTO R 35.
- Asphalt Content (AC) in percent by ignition oven according to WisDOT Modified AASHTO T 308 per CMM 8-36.6.3.6 (ignition oven), AASHTO T 164 Method A or B (chemical extraction), or WisDOT Modified ASTM D 8159 per CMM 8-36.6.3.1 (automated extraction).

(4) The department will randomly test each design mixture at the minimum frequency of one test for each lot.

*Delete standard spec 460.2.8.3.1.6.*

Replace standard spec 460.2.8.3.1.7 Dispute Resolution with the following:

#### **460.2.8.3.1.7 Data Analysis for Volumetrics**

(1) Analysis of test data for pay determination will be contingent upon QC and QV test results. Statistical analysis will be conducted on Gmm and Gmb test results for calculation of Va. If either Gmm or Gmb analysis results in non-comparable data as described in 460.2.8.3.1.7(2), subsequent testing will be performed for both parameters as detailed in the following paragraph.

(2) The engineer, upon completion of the first 3 lots, will compare the variances (F-test) and the means (t-test) of the QV test results with the QC test results. Additional comparisons incorporating the first 3 lots of data will be performed following completion of the 4<sup>th</sup> and 5<sup>th</sup> lots (i.e., lots 1-3, 1-4, and 1-5). A rolling window of 5 lots will be used to conduct F & t comparison for the remainder of the project (i.e., lots 2-6, then lots 3-7, etc.), reporting comparison results for each individual lot. Analysis will use a set alpha value of 0.025. If the F- and t-tests report comparable data, the QC and QV data sets are determined to be statistically similar and QC data will be used to calculate the Va used in PWL and pay adjustment calculations. If the F- and t-tests result in non-comparable data, proceed to the *dispute resolution* steps found below. Note: if both QC and QV Va PWL result in a pay adjustment of 102% or greater, dispute resolution testing will not be conducted. Dispute resolution via further investigation is as follows:

[1] The Retained portion of the split from the most recent lot in the analysis window (specifically the subplot identifying that variances or means do not compare) shall be referee tested by the bureau's AASHTO accredited laboratory and certified personnel. If the non-comparison occurs following Lot 3, 4, or 5, all previous lots are subject to referee testing. Referee test results will replace the QV data of the subplot(s).

[2] Statistical analysis will be conducted with referee test results replacing QV results.

- i. If the F- and t-tests indicate variances and means compare, no further testing is required for the lot and QC data will be used for PWL and pay factor/adjustment calculations.
- ii. If the F- and t-tests indicate non-comparable variances or means, the Retained portion of the random QC sample will be tested by the department's regional lab for the remaining 4 sublots of the lot which the F- and t- tests indicate non-comparable datasets. The department's regional lab and the referee test results will be used for PWL and pay factor/adjustment calculations. Upon the second instance of non-comparable variance or means and for every instance thereafter, the department will be credited for the additional testing of the remaining 4 sublots at \$2,000/lot under the Regional Testing administrative item.

[3] The contractor may choose to *dispute* the regional test results on a lot basis. In this event, the retained portion of each subplot will be referee tested by the department's AASHTO accredited laboratory and certified personnel. The referee Gmm and Gmb test results will supersede the regional lab results for the disputed lot.

- i. If referee testing results in an increased calculated pay factor, the department will absorb the cost of the additional referee testing.
- ii. If referee testing of a disputed lot results in an equal or lower calculated pay factor, the contractor pays for the additional referee testing at \$2,000/lot. This will be credited to the department under the Referee Testing administrative item.

(3) The department will notify the contractor of the referee test results within 3 working days after receipt of the samples by the department's AASHTO accredited laboratory. The intent is to provide referee test results within 7 calendar days from completion of the lot.

(4) The department will determine mixture conformance and acceptability by analyzing referee test results, reviewing mixture project data, and inspecting the completed pavement according to Standard Spec, this special provision, and accompanying Appendix A.

(5) Unacceptable material (i.e., resulting in a PWL value less than 50 or individual QC or QV test results not meeting the Acceptance Requirements of 460.2.8.2.1.7 as modified herein) will be referee tested by the bureau's AASHTO accredited laboratory and certified personnel. Such material may be subject to remove and replace, at the discretion of the engineer. If the engineer allows the material to remain in place, it will be paid at 50% of the HMA Pavement contract unit price. Replacement or pay adjustment will be conducted on a subplot basis. If an entire PWL subplot is removed and replaced, the test results of the newly placed material shall replace the original data for the subplot. Any remove and replace shall be performed at no additional cost to the department. Testing of replaced material must include a minimum of one QV result. [Note: If the removed and replaced material does not result in replacement of original QV data, an additional QV test will be conducted and under such circumstances will be entered into the HMA PWL Production spreadsheet for data analysis and pay determination.] The quantity of material paid at 50% the contract unit price will be deducted from PWL pay adjustments, along with accompanying data of this material.

*Delete standard spec 460.2.8.3.1.8 Corrective Action.*

## **C Construction**

*Replace standard spec 460.3.3.2 Pavement Density Determination with the following:*

### **460.3.3.2 Pavement Density Determination**

- (1) The engineer will determine the target maximum density using department procedures described in CMM 8-15. The engineer will determine density as soon as practicable after compaction and before placement of subsequent layers or before opening to traffic.
- (2) Do not re-roll compacted mixtures with deficient density test results. Do not operate continuously below the specified minimum density. Stop production, identify the source of the problem, and make corrections to produce work meeting the specification requirements.
- (3) A lot is defined as 7500 lane feet with sublots of 1500 lane feet (excluding shoulder, even if paved integrally) and placed within a single layer for each location and target maximum density category indicated in table 460-3. The contractor is required to complete three tests randomly per subplot and the department will randomly conduct one QV test per subplot. A partial quantity less than 750 lane feet will be included with the previous subplot. Partial lots with less than three sublots will be included into the previous lot for data analysis/acceptance and pay, by the engineer. If density lots/sublots are determined prior to construction of the test strip, any random locations within the test strip shall be omitted. Exclusions such as shoulders and appurtenances shall be tested and recorded in accordance with CMM 8-15. However, all acceptance testing of shoulders and appurtenances will be conducted by the department, and average lot (daily) densities must conform to standard spec Table 460-3. No density incentive or disincentive will be applied to shoulders or appurtenances. Offsets will not be applied to nuclear density gauge readings for shoulders or appurtenances. Unacceptable shoulder material will be handled according to standard spec 460.3.3.1 and CMM 8-15.11.
- (4) The three QC locations per subplot will represent the outside, middle, and inside of the paving lane. The QC density testing procedures are detailed in Appendix A.
- (5) QV nuclear testing will consist of one randomly selected location per subplot. The QV density testing procedures will be the same as the QC procedure at each testing location and are also detailed in Appendix A.
- (6) An HTCP-certified nuclear density technician (NUCDENSITYTEC-I) shall identify random locations and perform the testing for both the contractor and department. The responsible certified technician shall ensure that sample location and testing is performed correctly, analyze test results, and provide density results to the contractor weekly, or at the completion of each lot.
- (7) For any additional tests outside the random number testing conducted for density, the data collected will not be entered into PWL calculations. However, additional QV testing must meet the tolerances for material conformance as specified in the Standard Specification and this document. If additional density data identifies unacceptable material, proceed in accordance with CMM 8-15.11.

*Replace standard spec 460.3.3.3 Waiving Density Testing with Acceptance of Density Data with the following:*

### **460.3.3.3 Analysis of Density Data**

- (1) Analysis of test data for pay determination will be contingent upon test results from both the contractor (QC) and the department (QV).
- (2) As random density locations are paved, the data shall be recorded in the HMA PWL Production Spreadsheet for analysis in chronological order. The engineer, upon completion of the analysis lot, will compare the variances (F-test) and the means (t-test) of the QV test results with the QC test results. Analysis will use a set alpha value of 0.025.
  - i. If the F- and t-tests indicate variances and means compare, the QC and QV data sets are determined to be statistically similar and QC data will be used for PWL and pay adjustment calculations.
  - ii. If the F- and t-tests indicate variances or means do not compare, the QV data will be used for subsequent calculations.
- (3) The department will determine mixture density conformance and acceptability by analyzing test results, reviewing mixture project data, and inspecting the completed pavement according to Standard Spec, this document, and accompanying Appendix.
- (4) Density resulting in a PWL value less than 50 or not meeting the requirements of 460.3.3.1 (any individual density test result falling more than 3.0 percent below the minimum required target maximum density as specified in standard spec Table 460-3) is unacceptable and may be subject to remove and replace at no additional cost to the department, at the discretion of the engineer.

- i. Replacement may be conducted on a subplot basis. If an entire PWL subplot is removed and replaced, the test results of the newly placed material shall replace the original data for the subplot.
- ii. Testing of replaced material must include a minimum of one QV result. [Note: If the removed and replaced material does not result in replacement of original QV data, an additional QV test must be conducted and under such circumstances will be entered into the data analysis and pay determination.]
- iii. If the engineer allows such material to remain in place, it will be paid for at 50% of the HMA Pavement contract unit price. The extent of unacceptable material will be addressed in accordance with CMM 8-15.11. The quantity of material paid at 50% the contract unit price will be deducted from PWL pay adjustments, along with accompanying data of this material.

#### **D Measurement**

The department will measure the HMA Pavement bid items acceptably completed by the ton as specified in standard spec 450.4 and as follows in standard spec 460.5 as modified here within.

#### **E Payment**

*Replace standard spec 460.5.2 HMA Pavement with the following:*

#### **460.5.2 HMA Pavement**

##### **460.5.2.1 General**

<sup>(1)</sup> Payment for HMA Pavement Type LT, MT, and HT mixes is full compensation for providing HMA mixture designs; for preparing foundation; for furnishing, preparing, hauling, mixing, placing, and compacting mixture; for HMA PWL QMP testing and aggregate source testing; for warm mix asphalt additives or processes; for stabilizer, hydrated lime and liquid antistripping agent, if required; and for all materials including asphaltic materials.

<sup>(2)</sup> If provided for in the plan quantities, the department will pay for a leveling layer, placed to correct irregularities in an existing paved surface before overlaying, under the pertinent paving bid item. Absent a plan quantity, the department will pay for a leveling layer as extra work.

##### **460.5.2.2 Calculation of Pay Adjustment for HMA Pavement using PWL**

<sup>(1)</sup> Pay adjustments will be calculated using 65 dollars per ton of HMA pavement. The HMA PWL Production Spreadsheet, including data, will be provided to the contractor by the department as soon as practicable upon completion of each lot. The department will pay for measured quantities of mix based on this price multiplied by the following pay adjustment calculated in accordance with the HMA PWL Production Spreadsheet:

#### **PAY FACTOR FOR HMA PAVEMENT AIR VOIDS & DENSITY**

*PERCENT WITHIN LIMITS  
(PWL)*  
 $\geq 90$  to 100  
 $\geq 50$  to 90  
 $< 50$

*PAYMENT FACTOR, PF  
(percent of \$65/ton)*  
 $PF = ((PWL - 90) * 0.4) + 100$   
 $(PWL * 0.5) + 55$   
 50%<sup>[1]</sup>

where PF is calculated per air voids and density, denoted PF<sub>air voids</sub> & PF<sub>density</sub>

<sup>[1]</sup> Any material resulting in PWL value less than 50 shall be removed and replaced unless the engineer allows such material to remain in place. In the event the material remains in place, it will be paid at 50% of the contract unit price of HMA pavement.

For air voids, PWL values will be calculated using lower and upper specification limits of 2.0 and 4.3 percent, respectively. Lower specification limits for density shall be in accordance with standard spec Table 460-3. Pay adjustment will be determined on a lot basis and will be computed as shown in the following equation.

$$\text{Pay Adjustment} = (PF - 100) / 100 \times (WP) \times (\text{tonnage}) \times (\$65/\text{ton})^*$$

\*Note: If Pay Factor < 50, the contract unit price will be used in lieu of \$65/ton

The following weighted percentage (WP) values will be used for the corresponding parameter:

<u>Parameter</u>	<u>WP</u>
Air Voids	0.5
Density	0.5

Individual Pay Factors for each air voids ( $PF_{\text{air voids}}$ ) and density ( $PF_{\text{density}}$ ) will be determined.  $PF_{\text{air voids}}$  will be multiplied by the total tonnage placed (i.e., from truck tickets), and  $PF_{\text{density}}$  will be multiplied by the calculated tonnage used to pave the mainline only (i.e., travel lane excluding shoulder) as determined in accordance with Appendix A.

The department will pay incentive for air voids and density under the following bid items:

ITEM NUMBER	DESCRIPTION	UNIT
460.2005	Incentive Density PWL HMA Pavement	DOL
460.2010	Incentive Air Voids HMA Pavement	DOL

The department will administer disincentives under the Disincentive Density HMA Pavement and the Disincentive Air Voids HMA Pavement administrative items.

The department will administer a disincentive under the Disincentive HMA Binder Content administrative item for each individual QV test result indicating asphalt binder content below the Action Limit in 460.2.8.2.1.7 presented herein. The department will adjust pay per subplot of mix at 65 dollars per ton of HMA pavement multiplied by the following pay adjustment calculated in accordance with the HMA PWL Production Spreadsheet:

<u>AC Binder</u> <u>Relative to JMF</u>	<u>Pay Adjustment /</u> <u>Sublot</u>
-0.4% to -0.5%	75%
More than -0.5%	50% <sup>[1]</sup>

<sup>[1]</sup>Any material resulting in an asphalt binder content more than 0.5% below the JMF AC content shall be removed and replaced unless the engineer allows such material to remain in place. In the event the material remains in place, it will be paid at 50% of the contract unit price of HMA pavement. Such material will be referee tested by the department's AASHTO accredited laboratory and HTCP certified personnel using automated extraction according to WisDOT Modified ASTM D8159.

Note: PWL value determination is further detailed in the *Calculations* worksheet of the HMA PWL Production spreadsheet.

bts-HMA PWL QMP (20181030)

## 17. Reheating HMA Pavement Longitudinal Joints, Item 460.4110.S.

### A Description

This special provision describes reheating the abutting edge of the previously compacted layer in the adjacent lane while paving mainline asphalt pavements.

### B (Vacant)

### C Construction

#### C.1 Equipment

Provide a self-contained heating unit that heats by convection only. Do not use forced air to enhance the flame. Provide a fireproof barrier between the flame and the heater's fuel source. The heater must produce a uniform distribution of heat within the heat box. Provide automatic controls to regulate the heater output and shutoff the heater when the paver stops or the heater control system loses power.

Mount the heater on the paver inside the paver's automatic leveling device.

## C.2 Reheating Joints

Evenly reheat at least an 8 inch (200 mm) wide strip of the previously compacted layer in the adjacent lane as follows:

- Reheat the joint to within 60 degrees F (15 degrees C) of the mix temperature at the paver auger. Measure joint temperature immediately behind the heater.

The engineer may allow the required joint reheat temperatures to be cooler than specified to adjust for weather, wind, and other field conditions. Coordinate the heater output and paver speed to achieve the required joint reheat temperature without visible smoke emission.

## D Measurement

The department will measure Reheating HMA Pavement Longitudinal Joints by the linear foot, acceptably completed, as measured along each joint for each layer of asphalt placed.

## E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
460.4110.S	Reheating HMA Pavement Longitudinal Joints	LF

Payment is full compensation for all the work required under this bid item.

stp-460-015 (20140630)

## 18. Culvert Pipe Liners, 24-Inch, Item 520.9700.S.01; Cleaning Culvert Pipes for Liner Verification, Item 520.9750.S.

### A Description

This special provision describes providing, verifying, and pressure grouting culvert pipe liners for circular culverts.

### B Materials

#### B.1 General

Provide flow calculations at the preconstruction conference. Use contractor-proposed liner properties, the Manning's coefficients listed on the department's approved products list, and base calculations on existing culvert sizes and liner sizes the plans show. Ensure that pipes when lined have a capacity within  $\pm 5\%$  of the original full flow capacity of the pipe.

#### B.2 Flexible Pipe Liner

Use liners with a Manning's coefficient value published on the department's approved products list. Upon delivery provide manufacturer certificates of compliance certifying that the liners conform to the following:

Pipe Type	ASTM Designation	ASTM D3350 Resin
<b>High Density Polyethylene (HDPE)</b>		
Profile Wall Pipe	F894	345463C
Solid Wall Pipe	F714	345463C
<b>Polyvinylchloride (PVC)</b>	F949	---

#### B.3 Grout

##### B.3.1 Cement

Furnish cement meeting the requirements of standard spec 501.2.1 for Type I or II Portland Cement.

##### B.3.2 Fly Ash

Furnish Class C or F Fly Ash meeting the requirements of standard spec 501.2.6.

### B.3.3 Sand

Furnish natural sand meeting the fine aggregate requirements of standard spec 501.2.5.3. In addition to the size requirements of standard spec 501.2.5.3.4 the percent passing of the number 200 sieve shall be 0-5 percent passing by weight.

### B.3.4 Water

Furnish water meeting the requirements of standard speci 501.2.4.

### B.3.5 Mix Design

Use the basic proportions of dry materials per cubic yard of grout as follows:

Cement 100 pounds  
Fly Ash 400 pounds  
Fine Aggregate 2600 pounds

Air entraining and chemical admixtures to control fluidity of the grout are allowable. Ten days before placement, furnish to the engineer a design mix detailing all components and their proportions in the mix.

### B.8.6 Fluidity

Measure the fluidity of the grout per ASTM C939. Prior to filling the flow cone with flowable mortar, pass the mixture through a 1/4-inch screen. Use an efflux time of 10 seconds to 16 seconds. Measure in the presence of the engineer prior to placement and at least once every 4 working hours until work is complete.

### B.8.7 Cellular Grout

Alternatively, the contractor may use, or if the manufacturer recommends, an engineer-approved commercial cellular concrete grout conforming to the following:

Cement	ASTM C150	Type I or II
Density	ASTM C495 (no oven drying)	50 pcf min
Compressive Strength	ASTM C495	300 psi @ 28 day min 100 psi in 24 hours
Shrinkage	ASTM	1% by volume
Flow	ASTM C939	35 sec max

## C Construction

### C.1 General

As soon as possible after contract execution, survey existing culvert pipes to determine which culverts need cleaning in order to verify the required liner diameter and length. Notify the engineer before cleaning to confirm payment under the Cleaning Culvert Pipes for Liner Verification bid item.

Coordinate with the engineer to field verify culvert diameter and length, shape, material, and condition before ordering the liners.

Obtain easements if necessary for installing long sections of pipe.

### C.2 Excavating and Cleaning

Before inserting the liner, clean and dry the pipe. Excavate and pump as required to remove debris and other materials that would interfere with the placement or support of the inserted liner. Dispose of and replace unserviceable endwalls as the engineer directs.

### C.3 Placing Liners

Unload liners using slings and boom-type trucks or equivalents. Do not use chains or wire rope to handle liners and do not dump liners from the trucks when unloading.

Install liners such that the alignment and invert lie true to the lines, grades, and elevations in the plan. In absence of plan details, install liners horizontally to provide even annular space between the host pipe and sides of the liner. Install liners vertically with the invert as close to the host pipe invert as possible.

Obtain additional easements, if necessary, for installing long sections of liner.

Connect joints and install the liner per the manufacturer's recommendations and this part.



#### **C.4 Pressure Grouting**

Furnish a written plan for grouting the annular space between the host pipe and culvert pipe liner to the engineer for acceptance. Furnish the grouting plan prior to or at the project preconstruction conference so that it can be reviewed and discussed. At a minimum, the grouting plan shall consist of the following:

- Intended grout mix(es)
- Testing methods and frequency
- Pumping equipment and pressure regulation
- Intended grout staging
- Grout monitoring
- Bracing/floatation control

Include a description of staging in the grouting plan. Based on the length and slope of the host culvert, multiple stages may be required to minimize external loads on the culvert pipe liner. Develop the staging plan with the manufacturer based on the recommended maximum loading for the culvert pipe liner and the condition of the host culvert. Unless approved by the manufacturer, in no case shall a single lift of grout exceed 1/3rd the pipe external diameter at any point in the pour.

After the liner is in place, fill the area between the original culvert and the liner completely with grout per the accepted grouting plan. Block, grout in lifts, or otherwise secure liners to prevent floatation or deformation of the liner while grouting. Grout ports can be fabricated to allow placement of anti-floatation bracing or spacers.

Use a grout plant that is capable of accurately measuring, proportioning, mixing, and discharging by volume and at discharge pressures the liner manufacturer recommends. Do not exceed manufacturer-specified maximum pressures. Place grout in lifts to prevent exceeding maximum allowable pressures and to prevent flotation.

Use grout and witness ports to vent grouting and monitoring grouting progress. Plug ports as necessary as grout reaches them.

Do not remove any bracing inside of the liner until the grouting process is complete.

#### **C.5 Assembly, Floatation, and Deflection Mitigation**

Damage or misalignment due to assembly, floatation or deformation during grouting, or otherwise resulting from workmanship will be mitigated at the contractor's expense.

#### **C.6 Site Restoration**

Replace pipe sections damaged or collapsed during installation or grouting operations. Restore the grade to its original or improved cross section. Dispose of waste material.

#### **D Measurement**

The department will measure the Culvert Pipe Liners bid items by the linear foot measured in place for each culvert location, acceptably completed.

The department will measure Cleaning Culvert Pipes for Liner Verification as each culvert, acceptably cleaned. The department will only measure culverts the engineer approves for payment.

#### **E Payment**

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
520.9700.S.01	Culvert Pipe Liners 24-Inch	LF
520.9750.S	Cleaning Culvert Pipes for Liner Verification	EACH

Payment for the Culvert Pipe Liners bid items is full compensation for providing pipe liners; obtaining easements; for excavation and pumping; for cleaning the existing pipe before liner installation; for pressure grouting; for replacing contractor-damaged pipe and endwalls; and for restoring the grade and disposing of waste materials.

The department will pay the contractor \$150 per cubic yard for grout required in excess of 110 percent of the theoretical quantity required to fill the space between the inside diameter of the existing pipe and the outside diameter of the liner.

Payment for Cleaning Culvert Pipes for Liner Verification is full compensation for cleaning required to verify liner length and diameter; for excavation and pumping; and for disposing of waste material.

The department will pay separately for replacing unserviceable endwalls not rendered unserviceable by contractor operations under the appropriate contract endwall bid item, or absent the appropriate item as extra work.

stp-520-015 (20180628)

## **19. Salvaged Rail, Item 614.0920.**

Perform this work according to the pertinent requirements of standard spec 204 and standard spec 614 and as hereinafter provided.

Completely disassemble the existing beam guard and carefully remove all salvageable posts, blocks, guardrail and hardware (brackets, reflectors, nuts, washers, bolts and other appurtenances) in a manner that will preclude any damage (cutting or destructive measures are not allowed). Store the salvaged materials on the right-of-way, outside the limits of construction at a location approved by the engineer. Store salvaged materials as follows:

Posts – Banded and neatly stacked on pallets.

Blocks - Banded and neatly stacked on pallets.

Beams - Banded and neatly stacked on pallets.

Hardware – In 5-gallon pails or burlap sacks.

Upon completion of the removal and storage of salvageable materials, contact Chuck Wortman or Jay Borek, Jackson County Patrol Superintendents at (715) 284-5615 and (715) 284-0233. Jackson County will inspect the materials and shall have the right to reject any damaged or otherwise unacceptable materials.

Remove all other materials from the right-of-way and properly dispose of them, including items rejected by Jackson County.

This work also includes entirely removing the posts and backfilling their hole as necessary.

## **20. Removing Signs Type II, Item 638.2602.**

This work shall be according to the pertinent requirements of standard spec 638 and as provided here.

Type II signs are the department's property. All department signs removed, and not identified for reuse, shall be separated, plywood from aluminum signs, and the aluminum signs shall be palletized for shipment and handling with a forklift. Contact DTSD Sign Shop Coordinator Steve Allard at (715) 577-1259 at least three business days prior to delivery to coordinate shipment to be delivered to the DTSD Sign Shop Distribution Center at one of the following locations:

Dunn County Highway Shop, 3303 USH 12 East, Menomonie, WI 54751

LaCrosse County Highway Shop, 301 Carlson Rd, West Salem, WI 54669

Price County Highway Shop, 704 N. Lake Ave, Phillips, WI 54555

Washburn County Highway Shop, 1600 CTH H, Spooner, WI 54801

Wood County Highway Shop, 555 17<sup>th</sup> Ave North, Wisconsin Rapids, WI 54495

## **21. Temporary Portable Rumble Strips, Item 643.0310.S.**

### **A Description**

This special provision describes providing, relocating, maintaining, and removing temporary portable rumble strips.

### **B Materials**

Furnish RoadQuake2 or Roadquake2F temporary portable rumble strips, by Plastic Safety Systems. Do not use alternate products or methods without preapproval by the Bureau of Traffic Operations.

### **C Construction**

#### **C.1 Placement**

Provide rumble strips where the plans show or the engineer directs as follows:

1. Before placing rumble strips, clean the roadway of sand and other materials that may cause slippage.

2. Place one end of the rumble strips 6 inches from the roadway centerline. Extend the strips perpendicular to the direction of travel. Ensure strips lay flat on the roadway surface.
3. Only one series of rumble strips, placed before the first work zone, is required per direction of travel for multiple work zones spaced 1 mile or less apart. Work zones spaced greater than 1 mile apart require a separate series of rumble strips.

## **C.2 Maintenance**

Maintain rumble strips as follows:

1. If rumble strips slide, become out of alignment, or are no longer in the wheel path of approaching vehicles during the work period, thoroughly clean both sides of the rumble strips and reset on a clean roadway.
2. Repair or replace damaged rumble strips immediately.

## **D Measurement**

The department will measure temporary portable rumble strips as a single lump sum unit of work acceptably completed.

## **E Payment**

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
643.0310.S	Temporary Portable Rumble Strips	LS

Payment is full compensation for providing, relocating, maintaining or replacing, and removing temporary portable rumble strips.

stp-643-020 (20161130)

## **22. Locating No-Passing Zones, Item 648.0100.**

For this project, the spotting sight distance in areas with a 55 mph posted speed limit is 0.21 miles (1108 feet).

stp-648-005 (20060512)

## **23. HMA Pavement PWL Test Strip Volumetrics, Item SPV.0060.01; HMA Pavement PWL Test Strip Density Item SPV.0060.02.**

### **A Description**

This special provision describes the Hot Mix Asphalt (HMA) density and volumetric testing tolerances required for an HMA test strip. An HMA test strip is required for projects constructed under HMA Percent Within Limits (PWL) QMP. A density test strip is required for each pavement layer placed over a specific, uniform underlying material, unless specified otherwise in the plans. Each project is restricted to a single mix design per mix type per layer (e.g., upper layer and lower layer may have different mix type specified or may have the same mix type with different mix designs). Each mix design requires a separate test strip. Density and volumetrics testing will be conducted on the same test strip whenever possible.

Perform work according to standard spec 460 and as hereinafter modified.

### **B Materials**

Use materials conforming to HMA Pavement Percent Within Limits (PWL) QMP special provision.

### **C Construction**

#### **C.1 Test Strip**

Submit the test strip start time and date to the department in writing at least 5 calendar days in advance of construction of the test strip. If the contractor fails to begin paving within 2 hours of the submitted start time, the test strip is delayed and the department will be credited \$2,000 according to Section E of this document. Alterations to the start time and date must be submitted to the department in writing a minimum of 24 hours prior to the start time. The contractor will not be liable for changes in start time related to adverse weather days as defined by standard spec 101.3 or equipment breakdown verified by the department.

On the first day of production for a test strip, produce approximately 750 tons of HMA. (Note: tonnage shall be adjusted to accommodate natural break points in the project.) Test strips shall be located in a section of the roadway to allow a representative rolling pattern (i.e. not a ramp or shoulder, etc.).

### **C.1.1 Sampling and Testing Intervals**

#### **C.1.1.1 Volumetrics**

Laboratory testing will be conducted from a split sample yielding three components, with portions designated for QC (quality control), QV (quality verification), and retained.

During production for the test strip, sufficient HMA mixture for three-part split samples shall be obtained from trucks prior to departure from the plant. Three split samples shall be collected during the production of test strip material. Sampling from the truck box and three-part splitting of HMA samples shall be done in accordance with CMM 8-36. These three samples will be randomly selected by the engineer from each *third* of the test strip tonnage (T), excluding the first 50 tons:

<u>Sample Number</u>	<u>Production Interval (tons)</u>
<u>1</u>	50 to $\frac{T}{3}$
<u>2</u>	$\frac{T}{3}$ to $\frac{2T}{3}$
<u>3</u>	$\frac{2T}{3}$ to T

#### **C.1.1.2 Density**

Required field tests include contractor QC and department QV nuclear density gauge tests and pavement coring at ten individual locations (five in each half of the test strip length) in accordance with Appendix A: *Test Methods and Sampling for HMA PWL QMP Projects*. Both QV and QC teams shall have two nuclear density gauges present for correlation at the time the test strip is constructed. QC and QV teams may wish to scan with additional gauges at the locations detailed in Appendix A, as only gauges used during the test strip correlation phase will be allowed on the remainder of the project.

### **C.1.2 Field Tests**

#### **C.1.2.1 Density**

A gauge comparison according to CMM 8-15.7 shall be completed prior to the day of test strip construction. Daily standardization of gauges on reference blocks and a project reference site shall be performed in accordance with CMM 8-15.8. A standard count shall be performed for each gauge on the material placed for the test strip, prior to any additional data collection. Nuclear gauge readings and pavement cores shall be used to determine nuclear gauge correlation in accordance with Appendix A. The two to three readings for the five locations across the mat for each of two zones shall be provided to the engineer. The engineer will analyze the readings of each gauge relative to the densities of the cores taken at each location. The engineer will determine the average difference between the nuclear gauge density readings and the measured core densities to be used as a constant offset value. This offset will be used to adjust raw density readings of the specific gauge for the remainder of the project and shall appear on the density data sheet along with gauge and project identification. An offset is specific to the mix and layer, therefore a separate value shall be determined for each layer of each mix placed over a differing underlying material for the project. This constitutes correlation of that individual gauge for the given layer. Two gauges per team are not required to be onsite daily after completion of the test strip. Any data collected without a correlated gauge will not be accepted.

The contractor is responsible for coring the pavement from the footprint of the density tests and filling core holes according to Appendix A. Coring and filling of pavement core holes must be approved by the engineer. The QV team is responsible for the labeling and safe transport of the cores from the field to the QC laboratory. Testing of cores shall be conducted by the contractor and witnessed by department personnel. The contractor is responsible for drying the cores following testing. The department will take possession of cores following laboratory testing and will be responsible for any verification testing at the discretion of the engineer.

The target maximum density to be used in determining core density is the average of the three volumetric/mix Gmm values from the test strip multiplied by 62.24 lb/ft<sup>3</sup>. In the event mix and density portions of the test strip procedure are separated, or if an additional density test strip is required, the mix portion must be conducted prior to density determination. The target maximum density to determine core densities shall then be the Gmm four-test running average (or three-test average from a PWL volumetric-only test strip) from the end of the previous day's production multiplied by 62.24 lb/ft<sup>3</sup>. If no PWL production volumetric test is to be taken in a density-only test strip, a non-random three-part split mix sample will be taken and tested for Gmm by the department representative. The department Gmm test results from this non-random test will be entered in the HMA PWL Test Strip Spreadsheet and must conform to the Acceptance Limits presented in C.2.1.

Exclusions such as shoulders and appurtenances shall be tested and reported in accordance with CMM 8-15. However, all acceptance testing of shoulders and appurtenances will be conducted by the department, and average lot (daily) densities must conform to standard spec Table 460-3. No density incentive or disincentive will be applied to shoulders or appurtenances. However, unacceptable shoulder material will be handled according to standard spec 460.3.3.1 and CMM 8-15.11.

### **C.1.3 Laboratory Tests**

#### **C.1.3.1 Volumetrics**

Obtain random samples according to C.1.1.1 and Appendix A. Perform tests the same day as taking the sample.

Theoretical maximum specific gravities of each mixture sample will be obtained according to AASHTO T 209. Bulk specific gravities of both gyratory compacted samples and field cores shall be determined in accordance with AASHTO T 166. The bulk specific gravity values determined from field cores shall be used to calculate a correction factor (i.e., offset) for each QC and QV nuclear density gauge. The correction factor will be used throughout the remainder of the layer.

### **C.2 Acceptance**

#### **C.2.1 Volumetrics**

Produce mix conforming to the following limits based on individual QC and QV test results (tolerances based on most recent JMF):

ITEM	ACCEPTANCE LIMITS
Percent passing given sieve:	
37.5-mm	+/- 8.0
25.0-mm	+/- 8.0
19.0-mm	+/- 7.5
12.5-mm	+/- 7.5
9.5-mm	+/- 7.5
2.36-mm	+/- 7.0
75-µm	+/- 3.0
Asphaltic content in percent <sup>[1]</sup>	- 0.5
Air Voids	-1.5 & +2.0
VMA in percent <sup>[2]</sup>	- 1.0
Maximum specific gravity	+/- 0.024

<sup>[1]</sup> Asphalt content more than -0.5% below the JMF will be referee tested by the department's AASHTO accredited laboratory and HTCP certified personnel using automated extraction according to WisDOT Modified ASTM D8159.

<sup>[2]</sup> VMA limits based on minimum requirement for mix design nominal maximum aggregate size in table 460-1.

QV samples will be tested for Gmm, Gmb, and AC. Air voids and VMA will then be calculated using these test results.

Calculation of air voids shall use either the QC, QV, or retained split sample test results, as identified by conducting the paired t-test with the WisDOT PWL Test Strip Spreadsheet.

If QC and QV test results do not correlate as determined by the split sample comparison, the retained split sample will be tested by the department's AASHTO accredited laboratory and HTCP certified personnel as a referee test. Additional investigation shall be conducted to identify the source of the difference between QC and QV data. Referee data will be used to determine material conformance and pay.

### C.2.2 Density

Compact all layers of test strip HMA mixture to the applicable density shown in the following table:

TABLE 460-3 MINIMUM REQUIRED DENSITY<sup>[1]</sup>

LAYER	MIXTURE TYPE	
	LT & MT	HT
LOWER	93.0 <sup>[2]</sup>	93.0 <sup>[3]</sup>
UPPER	93.0	93.0

<sup>[1]</sup> If any individual core density test result falls more than 3.0 percent below the minimum required target maximum density, the engineer will investigate the acceptability of that material per CMM 8-15.11.

<sup>[2]</sup> Minimum reduced by 2.0 percent for a lower layer constructed directly on crushed aggregate or recycled base courses.

<sup>[3]</sup> Minimum reduced by 1.0 percent for lower layer constructed directly on crushed aggregate or recycled base courses.

Nuclear density gauges are acceptable for use on the project only if correlation is completed for that gauge during the time of the test strip and the department issues documentation of acceptance stating the correlation offset value specific to the gauge and mix design. The offset is not to be entered into any nuclear density gauge as it will be applied by the department-provided Field Density Worksheet.

### C.2.3 Test Strip Approval and Material Conformance

All applicable laboratory and field testing associated with a test strip shall be completed prior to any additional mainline placement of the mix. All test reports shall be submitted to the department upon completion, and approved before paving resumes. The department will notify the contractor within 24 hours from start of test strip regarding approval to proceed with paving, unless an alternate time frame is agreed upon in writing with the department. The 24-hour approval time includes only working days as defined in standard spec 101.3.

The department will evaluate material conformance and make pay adjustments based on the PWL value of air voids and density for the test strip. The QC core densities and QC and QV mix results will be used to determine the PWL values as calculated in accordance with Appendix A.

The PWL values for air voids and density shall be calculated after determining core densities. An approved test strip is defined as the individual PWL values for air voids and density both being equal to or greater than 75, mixture volumetric properties conforming to the limits specified in C.2.1, and an acceptable gauge-to-core correlation. Further clarification on PWL test strip approval and appropriate post-test strip actions are shown in the following table:

**PWL Test Strip Approval and Material Conformance Criteria**

PWL Value for Air Voids and Density	Test Strip Approval	Material Conformance	Post-Test Strip Action
Both PWL $\geq 75$	Approved <sup>1</sup>	Material paid for according to Section E.	Proceed with Production
$50 \leq$ Either PWL $< 75$	Not Approved	Material paid for according to Section E.	Consult BTS to determine need for additional test strip.
Either PWL $< 50$	Not Approved	Unacceptable material removed and replaced or paid for at 50% of the contract unit price according to Section E.	Construct additional Volumetrics or Density test strip as necessary.

<sup>1</sup> In addition to these PWL criteria, mixture volumetric properties must conform to the limits specified in C.2.1, split sample comparison must have a passing result and an acceptable gauge-to-core correlation must be completed.

A maximum of two test strips will be allowed to remain in place per pavement layer per project. If material is removed, a new test strip shall replace the previous one at no additional cost to the department. If the contractor changes the mix design for a given mix type during a project, no additional compensation will be paid by the department for the required additional test strip and the department will be credited \$2,000 for the additional test strip according to Section E of this document. For simultaneously conducted density and volumetric test strip components, the following must be achieved:

- i. Passing/Resolution of Split Sample Comparison
- ii. Volumetrics/mix PWL value  $\geq 75$
- iii. Density PWL value  $\geq 75$
- iv. Acceptable correlation

If not conducted simultaneously, the mix portion of a test strip must accomplish (i) & (ii), while density must accomplish (iii) & (iv). If any applicable criteria are not achieved for a given test strip, the engineer, with authorization from the Department's Bureau of Technical Services, will direct an additional test strip (or alternate plan approved by the department) be conducted to prove the criteria can be met prior to additional paving of that mix. For a density-only test strip, determination of mix conformance will be according to main production, i.e., HMA Pavement Percent Within Limits (PWL) QMP special provision.

#### **D Measurement**

The department will measure HMA Percent Within Limits (PWL) Test Strip as each unit of work, acceptably completed as passing the required air void, VMA, asphalt content, gradation, and density correlation for a Test Strip. Material quantities shall be determined in accordance with standard spec 450.4 and detailed here within.

#### **E Payment**

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.01	HMA Percent Within Limits (PWL) Test Strip Volumetrics	EACH
SPV.0060.02	HMA Percent Within Limits (PWL) Test Strip Density	EACH

These items are intended to compensate the contractor for the construction of the test strip for projects paved under the HMA Pavement Percent Within Limits QMP article.

Payment for HMA Percent Within Limits (PWL) Test Strip Volumetrics is full compensation for volumetric sampling, splitting, and testing; for proper labeling, handling, and retention of split samples.

Payment for HMA Percent Within Limits (PWL) Test Strip Density is full compensation for collecting and measuring of pavement cores, acceptably filling core holes, providing of nuclear gauges and operator(s), and all other work associated with completion of a core-to-gauge correlation, as directed by the engineer.

Acceptable HMA mixture placed on the project as part of a volumetric or density test strip will be compensated by the appropriate HMA Pavement bid item with any applicable pay adjustments. If a test strip is delayed as defined in C.1 of this document, the department will also be credited \$2,000 for each instance, under the Delayed Test Strip administrative item. If an additional test strip is required because the initial test strip is not approved by the department or the mix design is changed by the contractor, the department will be credited \$2,000 for each additional test strip (i.e. \$2,000 for each individual volumetrics or density test strip) under the Additional Test Strip administrative item.

Pay adjustment will be calculated using 65 dollars per ton of HMA pavement. The department will pay for measured quantities of mix based on \$65/ton multiplied by the following pay adjustment:

#### PAY ADJUSTMENT FOR HMA PAVEMENT AIR VOIDS & DENSITY

<i>PERCENT WITHIN LIMITS (PWL)</i>	<i>PAYMENT FACTOR, PF (percent of \$65/ton)</i>
≥ 90 to 100	$PF = ((PWL - 90) * 0.4) + 100$
≥ 50 to 90	$(PWL * 0.5) + 55$
<50	50% <sup>[1]</sup>

where, PF is calculated per air voids and density, denoted PF<sub>air voids</sub> & PF<sub>density</sub>

<sup>[1]</sup> Material resulting in PWL value less than 50 shall be removed and replaced, unless the engineer allows for such material to remain in place. In the event the material remains in place, it will be paid at 50% of the contract unit price of HMA pavement.

For air voids, PWL values will be calculated using lower and upper specification limits of 2.0 and 4.3 percent, respectively. Lower specification limits for density will be in accordance with Table 460-3 as modified herein. Pay adjustment will be determined for an acceptably completed test strip and will be computed as shown in the following equation:

$$\text{Pay Adjustment} = (PF - 100) / 100 \times (WP) \times (\text{tonnage}) \times (\$65/\text{ton})^*$$

\*Note: If Pay Factor <50, the contract unit price will be used in lieu of \$65/ton

The following weighted percentage (WP) values will be used for the corresponding parameter:

<u>Parameter</u>	<u>WP</u>
Air Voids	0.5
Density	0.5

Individual Pay Factors for each air voids (PF<sub>air voids</sub>) and density (PF<sub>density</sub>) will be determined. PF<sub>air voids</sub> will be multiplied by the total tonnage produced (i.e., from truck tickets), and PF<sub>density</sub> will be multiplied by the calculated tonnage used to pave the mainline only (i.e., traffic lane excluding shoulder) as determined in accordance with Appendix A.

The department will pay incentive for air voids under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
460.2005	Incentive Density PWL HMA Pavement	DOL
460.2010	Incentive Air Voids HMA Pavement	DOL



The department will administer disincentives under the Disincentive Density HMA Pavement and the Disincentive Air Voids HMA Pavement administrative items.  
bts-PWL Test Strip (20181030)

**24. Apron Endwalls for Pipe Arch Aluminum 21x15-Inch, Item SPV.0060.03; Pipe Arch Corrugated Aluminum 21x15 Inch SPV.0090.02.**

**A Description**

This special provision describes providing corrugated aluminum culvert pipe arch and aluminum apron endwalls for pipe arch. Conform to standard spec 525.

**B Materials**

Conform to standard spec 525.2.

**C Construction**

Conform to standard spec 525.3.

**D Measurement**

The department will measure Apron Endwalls for Pipe Arch Aluminum 21x15 Inch as each individual unit, acceptably completed. The department will measure Pipe Arch Corrugated Aluminum 21x15 Inch by the linear foot, acceptably completed.

**E Payment**

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.03	Apron Endwalls for Pipe Arch Aluminum 21x15 Inch	EACH
SPV.0090.02	Pipe Arch Corrugated Aluminum 21x15 Inch	LF

The department will pay for the work under this section as specified in standard spec 520.5 as follows:

-Pipe and apron endwall bid items.

**25. Ditch Cleaning, Item SPV.0090.01.**

**A Description**

This special provision describes reshaping existing ditches, cleaning debris from apron endwalls and disposing of the resulting materials.

**B Materials**

Provide Mulch according to standard spec 627.2.

Provide Fertilizer Type B according to standard spec 629.2.

Provide Seeding Mix No. 20 according to standard spec 630.2.

**C Construction**

Grade and shape the ditch flow line as necessary to restore and allow unimpeded flow at of each location. Grade and trim the lateral areas of disturbance to produce uniform side slopes. Dispose of surplus material according to standard specification 205.3.12.

Salvage and place topsoil according to standard spec 625.3.

Construct Mulch according to standard spec 627.3.

Construct Fertilizer Type B according to standard spec 629.3.

Construct Seeding Mix No. 20 according to standard spec 630.3.

**D Measurement**

The department will measure Ditch Cleaning by the linear foot, acceptably completed.

**E Payment**

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.01	Ditch Cleaning	LF

Payment is full compensation for salvaging topsoil; for excavating material from existing ditch; for removal of brush and trees up to 3-inch diameter; for cleaning apron endwalls to a depth of three feet; for placing and finishing salvaged topsoil and/or furnishing topsoil as needed; for furnishing and placing seed, fertilizer, mulch and erosion mat; for finishing all disturbed areas necessary to blend the slopes resulting from ditch cleaning back into existing inslopes and backslopes; and for disposing of all surplus material.

## **26. Material Transfer Vehicle, Item SPV.0105.01.**

### **A Description**

This special provision describes furnishing Material Transfer Vehicle (MTV) and an operator for use on this project during HMA upper layer paving operations, as shown in the plans or as directed by the engineer, and as hereinafter provided.

### **B Materials**

The MTV shall be self-propelled, remix and maintain constant temperature, and continually feed the paver hopper. The storage capacity shall be adequate to provide continuous forward movement of the paver. The paver speed shall be coordinated to match the delivery of material and capacity of the MTV to limit stopping of the paver.

### **C Construction**

An operator shall remain with the vehicle at all times during moving operations and the paver's hopper shall remain full at all times to avoid segregation of coarse aggregates. No placement of HMA upper layer pavement shall be allowed without the use of the MTV.

### **D Measurement**

The department will measure Material Transfer Vehicle as a single lump sum unit of work for material transfer vehicle, acceptably completed.

### **E Payment**

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.01	Material Transfer Vehicle	LS

Payment is full compensation for deploying the equipment and its operator.

## **27. Milling and Removing Temporary Joint, Item SPV.0105.02.**

### **A Description**

This special provision describes the milling and removing of the upper layer HMA wedge joint and any other temporary longitudinal or transverse joints, including sweeping and cleaning of the affected area prior to the abutting pavement placement.

### **B (Vacant)**

### **C Construction**

Immediately prior to the placement of the adjoining lane, mill any temporary wedge joint to a true line with a face perpendicular to the surface of the existing asphaltic surface pavement.

Immediately prior to continuation of paving operations, mill any temporary transverse joint to a true line with a face perpendicular to the surface of the existing asphaltic surface pavement.

The contractor becomes the owner of the removed asphaltic pavement and is responsible for the disposal as specified for disposing of materials under standard spec 204.3.1.3.

### **D Measurement**

The department will measure Milling and Removing Temporary Joint as a single lump sum unit of work for all wedge joints, acceptably removed.

**E Payment**

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.02	Milling and Removing Temporary Joint	LS

Payment is full compensation for milling, removing, sweeping, cleaning, and disposing of materials.

**28. Removing Asphaltic Surface Milling Lane Repair, Item SPV.0180.01.****A Description**

This special provision describes removing asphaltic surface or pavement and partial depth removal of milled asphalt pavement base at the location of asphaltic surface lane repairs according to the plans, and as hereinafter provided.

**B (Vacant)****C Construction**

Remove all existing asphaltic surface or pavement from the removal area to the depth the plans show by milling or other engineer-approved methods.

Remove all milled asphalt pavement base from the removal area to the depth the plans show by milling or other engineer-approved methods.

Dispose of all materials not designated for salvage as specified for disposing of materials under standard spec 204.3.1.3 and 205.3.12.

The type of material in the removal area could vary from location to location. Field boring indicates that the existing mainline asphalt depths vary from 3 to 5.75 inches.

Note: The areas where material was removed shall be replaced with and paid for under the bid item Asphaltic Surface Lane Repair.

**D Measurement**

The department will measure Removing Asphaltic Surface Milling Lane Repair by the square yard, acceptably completed.

**E Payment**

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0180.01	Removing Asphaltic Surface Milling Lane Repair	SY

Payment is full compensation for removing and disposing of materials not designated for salvage.

**29. Asphaltic Surface Lane Repair, Item SPV.0195.01.****A Description**

This special provision describes placing asphaltic surface lane repair as shown on plans or designated by the engineer in the field and as hereinafter provided.

**B Materials**

Materials shall conform to standard spec 465.2.

**C Construction**

Construct asphaltic surface according to standard spec 465.3 and as follows.

Repare the Asphaltic Surface Lane Repair area in same day as bid item Removing Asphaltic Surface Milling Lane Repair. The lane repair area may be repaved in one layer and must be completed after the item Removing Asphaltic Surface Milling.

**D Measurement**

The department will measure Asphaltic Surface Lane Repair by the ton, acceptably completed. The department will not measure asphaltic materials separately.

### E Payment

The department will pay for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0195.01	Asphaltic Surface Lane Repair	TON

Payment is full compensation for submitting an asphaltic mixture design, if required; for preparing the foundation; for providing the asphaltic mixture, including asphaltic material and reclaimed asphaltic pavement materials; and for compacting the mixture.

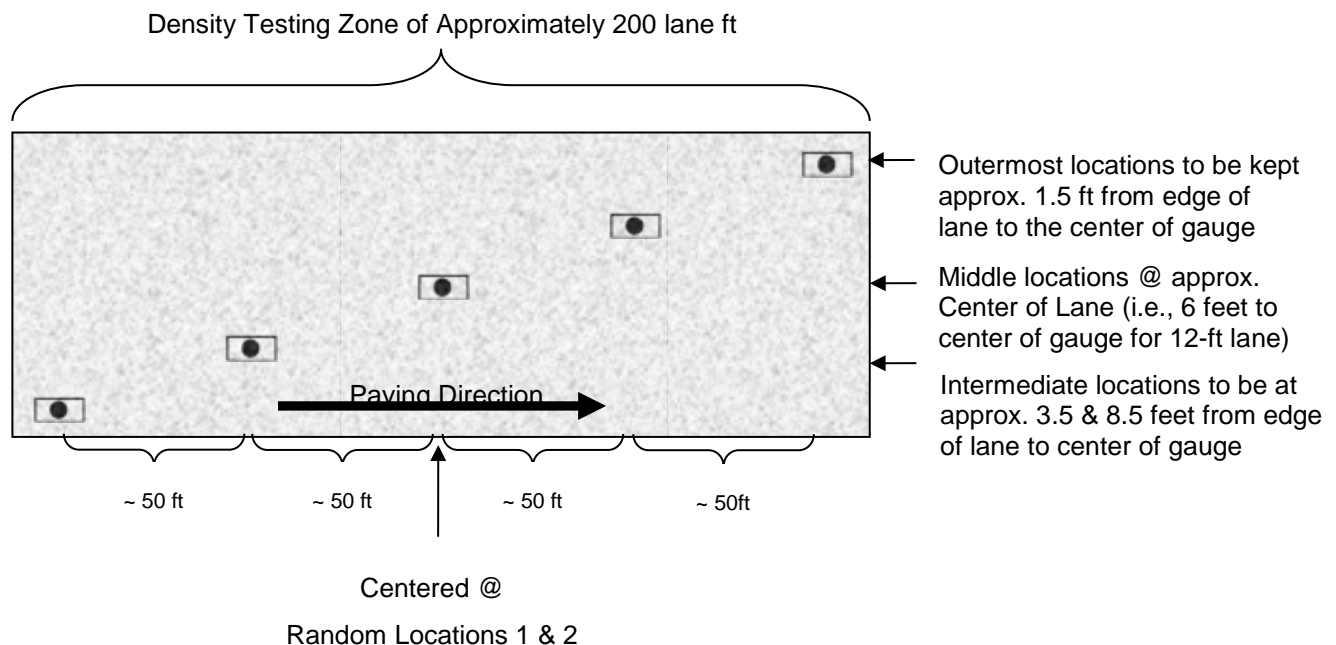
## 30. Appendix A.

### Test Methods & Sampling for HMA PWL QMP Projects.

The following procedures are included with the HMA Pavement Percent Within Limits (PWL) Quality Management Program (QMP) special provision:

- WisDOT Procedure for Nuclear Gauge/Core Correlation – Test Strip
- WisDOT Test Method for HMA PWL QMP Density Measurements for Main Production
- Sampling for WisDOT HMA PWL QMP
- Calculation of PWL Mainline Tonnage Example

### WisDOT Procedure for Nuclear Gauge/Core Correlation – Test Strip




**Figure 1: Nuclear/Core Correlation Location Layout**

The engineer will identify two zones in which gauge/core correlation is to be performed. These two zones will be randomly selected within each *half* of the test strip length. (Note: Density zones shall not overlap and must have a minimum of 100 feet between the two zones; therefore, random numbers may be shifted (evenly) in order to meet these criteria.) Each zone shall consist of five locations across the mat as identified in Figure 1. The following shall be determined at each of the five locations within both zones:

- two one-minute nuclear density gauge readings for QC team\*
- two one-minute nuclear density gauge readings for QV team\*
- pavement core sample

\*If the two readings exceed 1.0 pcf of one another, a third reading is conducted in the same orientation as the first reading. In this event, all three readings are averaged, the individual test reading of the three which falls farthest from the average value is discarded, and the average of the remaining two values is used to represent the location for the gauge.

The zones are supposed to be undisclosed to the contractor/roller operators. The engineer will not lay out density/core test sites until rolling is completed and the cold/finish roller is beyond the entirety of the zone. Sites are staggered across the 12-foot travel lane, and do not include shoulders. The outermost locations should be 1.5-feet from the center of the gauge to the edge of lane. [NOTE: This staggered layout is only applicable to the test strip. All mainline density locations after test strip should have a longitudinal- as well as transverse-random number to determine location as detailed in the *WisDOT Test Method for HMA PWL QMP Density Measurements for Main Production* section of this document.]

Individual locations are represented by the  symbol as seen in Figure 1 above. The symbol is two-part, comprised of the nuclear test locations and the location for coring the pavement, as distinguished here:



The nuclear site is the same for QC and QV readings for the test strip, i.e., the QC and QV teams are to take nuclear density gauge readings in the same footprint. Each of the QC and QV teams are to take a minimum of two one-minute readings per nuclear site, with the gauge rotated 180 degrees between readings, as seen here:



**Figure 2: Nuclear gauge orientation for (a) 1<sup>st</sup> one-minute reading and (b) 2<sup>nd</sup> one-minute reading**

Photos should be taken of each of the 10 core/gauge locations of the test strip. This should include gauge readings (pcf) and a labelled core within the gauge footprint. If a third reading is needed, all three readings should be recorded and documented. Only raw readings in pcf should be written on the pavement during the test strip, with a corresponding gauge ID/SN (generalized as QC-1 through QV-2 in the following Figure) in the following format:



**Figure 3: Layout of raw gauge readings as recorded on pavement**

Each core will then be taken from the center of the gauge footprint, and will be used to correlate each gauge with laboratory-measured bulk specific gravities of the pavement cores. One core in good condition must be obtained from each of the 10 locations. If a core is damaged at the time of extracting from the pavement, a replacement core should be taken immediately adjacent to the damaged core, i.e., from the same footprint. If a core is damaged during transport, it should be recorded as damaged and excluded from the correlation. Coring after traffic is on the pavement should be avoided. The contractor is responsible for coring of the pavement. Coring and filling of core holes must be approved by the engineer. The QV team is responsible for the labeling and safe transport of the cores from the field to the QC laboratory. Core density testing will be conducted by the contractor and witnessed by department personnel. The contractor is responsible for drying the cores following testing. The department will take possession of cores following initial testing and is responsible for any verification testing.

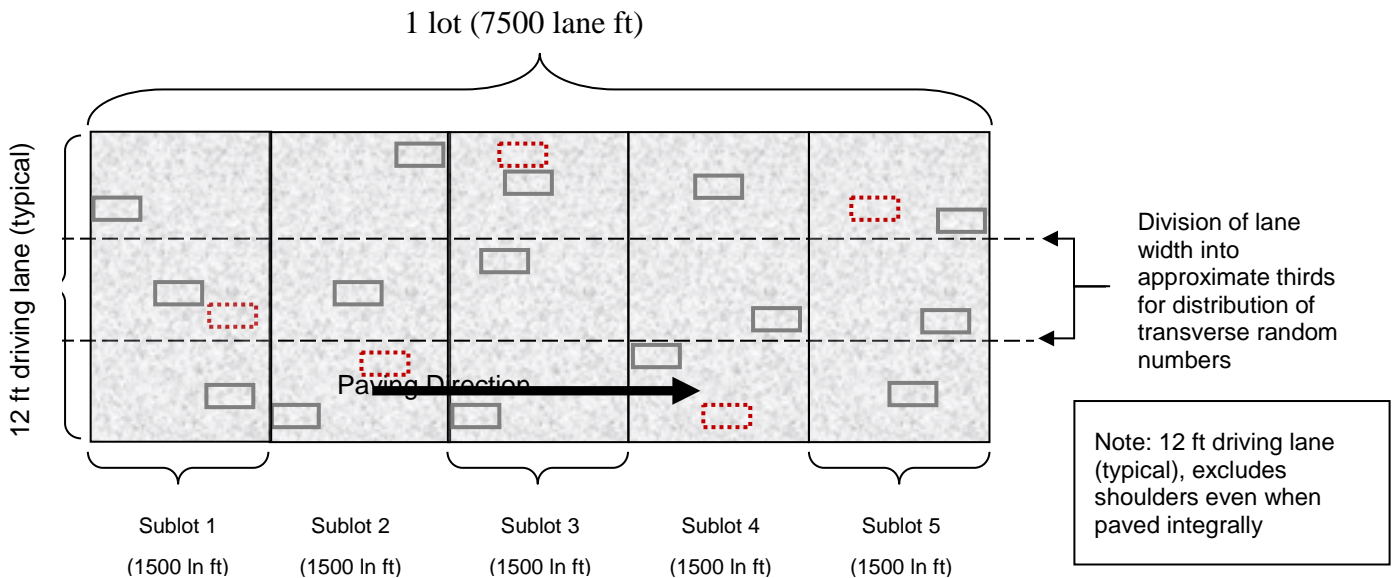
Each core 150 mm (6 inches) in diameter will be taken at locations as identified in Figure 1. Each random core will be full thickness of the layer being placed. The contractor is responsible for thoroughly drying cores obtained from the mat in accordance with ASTM D 7227 prior to using specimens for in-place density determination in accordance with AASHTO T 166.

Cores must be taken before the pavement is open to traffic. Cores are cut under Department/project staff observation. Relabel each core immediately after extruding, or ensure that labels applied to pavement prior to cutting remain legible. The layer interface should also be marked immediately following extrusion. Cores should be cut at this interface, using a wet saw, to allow for density measurement of only the most recently placed layer. Cores should be protected from excessive temperatures such as direct sunlight. Also, there should be department custody (both in transport and storage) for the cores until they are tested, whether that be immediately after the test strip or subsequent day if agreed upon between Department and Contractor. Use of concrete cylinder molds works well to transport cores. Cores should be placed upside down (flat surface to bottom of cylinder mold) in the molds, one core per mold, cylinder molds stored upright, and ideally transported in a cooler. Avoid any stacking of pavement cores.

Fill all core holes with non-shrink rapid-hardening grout, mortar or concrete, or with HMA. When using grout, mortar or concrete, remove all water from the core holes prior to filling. Mix the mortar or concrete in a separate container prior to placement in the hole. If HMA is used, fill all core holes with hot-mix matching the same day's production mix type at same day compaction temperature  $\pm 20$  F. The core holes shall be dry and coated with tack before filling, filled with a top layer no thicker than 2.25 inches, lower layers not to exceed 4 inches, and compacted with a Marshall hammer or similar tamping device using approximately 50 blows per layer. The finished surface shall be flush with the pavement surface. Any deviation in the surface of the filled core holes greater than 1/4 inch at the time of final inspection will require removal of the fill material to the depth of the layer thickness and replacement.

## **WisDOT Test Method for HMA PWL QMP Density Measurements for Main Production**

For nuclear density testing of the pavement beyond the test strip, QC tests will be completed at three locations per subplot, with a subplot defined as 1500 lane feet. The three locations will represent the outside, middle, and inside of the paving lane (i.e., the lane width will be divided into thirds as shown by the dashed longitudinal lines in Figure 3 and random numbers will be used to identify the specific transverse location within each third in accordance with CMM 8-15). Longitudinal locations within each subplot shall be determined with 3 independent random numbers. The PWL Density measurements do not include the shoulder and other appurtenances. Such areas are tested by the department and are not eligible for density incentive or disincentive. Each location will be measured with two one-minute gauge readings oriented 180 degrees from one another, in the same footprint as detailed in Figure 2 above. Each location requires a minimum of two readings per gauge. The density gauge orientation for the first test be with the source rod towards the direction of paving. QV nuclear testing will consist of one randomly selected location per subplot. The QV is also comprised of two one-minute readings oriented 180 degrees from one another. For both QC and QV test locations, if the two readings exceed 1.0 pcf of one another, a third reading is conducted in the same orientation as the first reading. In this event, all three readings are averaged, the individual test reading of the three which falls farthest from the average value is discarded, and the average of the remaining two values is used to represent the location for the gauge. The subplot density testing layout is depicted in Figure 4, with QC test locations shown as solid lines and QV as dashed.



**Figure 4: Locations of main lane HMA density testing (QC=solid lines, QV=dashed)**

QC and QV nuclear density gauge readings will be statistically analyzed in accordance with Section 460.3.3.3 of the HMA PWL QMP SPV. (Note: For density data, if F- and t-tests compare, QC data will be used for the subsequent calculations of PWL value and pay determination. However, if an F- or t-test does not compare, the QV data will be used in subsequent calculations.)

## **Sampling for WisDOT HMA PWL QMP Production**

Sampling of HMA mix for QC, QV and Retained samples shall conform to CMM 8-36 except as modified here.

*Delete CMM 8-36.4 Sampling Hot Mix Asphalt and replace with the following to update subplot tonnages:*

### **Sampling Hot Mix Asphalt**

At the beginning of the project, the contractor determines the anticipated tonnage to be produced. The frequency of sampling is 1 per 750 tons (subplot) for QC and Retained Samples and 1 per 3750 tons (lot or 5 sublots) for QV as defined by the HMA PWL QMP SPV. A test sample is obtained randomly from each subplot. Each random sample shall be collected at the plant according to CMM 8-36.4.1 and 8-36.4.2. The contractor must submit the random numbers for all mix sampling to the department before production begins.

#### *Example 1*

Expected project production is 12,400 tons. The number of required samples is determined based on this expected production (per HMA PWL QMP SPV) and is determined by the random sample calculation.

Sample 1 –	from 50 to 750 tons
Sample 2 –	from 751 to 1500 tons
Sample 3 –	from 1501 to 2250 tons
Sample 4 –	from 2251 to 3000 tons
Sample X –	.....
Sample 16 –	from 11,251 to 12,000 tons
Sample 17 –	from 12,001 to 12,400 tons

The approximate location of each sample within the prescribed sublots is determined by selecting random numbers using ASTM Method D-3665 or by using a calculator or computerized spreadsheet that has a random number generator. The random numbers selected are used in determining when a sample is to be taken and will be multiplied by the subplot tonnage. This number will then be added to the final tonnage of the previous subplot to yield the approximate cumulative tonnage of when each sample is to be taken.

To allow for plant start-up variability, the procedure calls for the first random sample to be taken at 50 tons or greater per production day (not intended to be taken in the first two truckloads). Random samples calculated for 0-50 ton should be taken in the next truck (51-75 ton).

This procedure is to be used for any number of samples per project.

If the production is less than the final randomly generated sample tonnage, then the random sample is to be collected from the remaining portion of that subplot of production. If the randomly generated sample is calculated to be within the first 0-50 tons of the subsequent day of production, it should be taken in the next truck. Add a random sample for any fraction of 750 tons at the end of the project. Lot size will consist of 3750 tons with sublots of 750 tons. Partial lots with less than three subplot tests will be included into the previous lot, by the engineer.

It's intended that the plant operator not be advised ahead of time when samples are to be taken. If the plant operator is involved in recording a Pb (%AC) to match up with the mix sample tonnage, then notification need not be earlier than 60 minutes before the mix sample being taken.

If belt samples are used during troubleshooting, the blended aggregate will be obtained when the mixture production tonnage reaches approximately the sample tonnage. For plants with storage silos, this could be up to 60 minutes in advance of the mixture sample that's taken when the required tonnage is shipped from the plant.

QC, QV and retained samples shall be collected for all test strip and production mixture testing using a three-part splitting procedure according to CMM 8-36.5.2.

### **Calculation of PWL Mainline Tonnage Example**

A mill and overlay project is being constructed with a 12-foot travel lane and an integrally paved 3-foot shoulder. The layer thickness is 2 inches for the full width of paving. Calculate the tonnage in each subplot eligible for density incentive or disincentive.

**Solution:**

$$\frac{1500 \text{ ft} \times 12 \text{ ft}}{9 \text{ sf/sy}} \times \frac{2 \text{ in} \times 112 \text{ lb/sy/in}}{2000 \text{ lb/ton}} = 224 \text{ tons}$$

Appendix A-Test Methods & Sampling for HMA PWL QMP Projects (20181030)



## **ADDITIONAL SPECIAL PROVISION 4**

### **Payment to First-Tier Subcontractors**

Within 10 calendar days of receiving a progress payment for work completed by a subcontractor, pay the subcontractor for that work. The prime contractor may withhold payment to a subcontractor if, within 10 calendar days of receipt of that progress payment, the prime contractor provides written notification to the subcontractor and the department documenting "just cause" for withholding payment.

The prime contractor may also withhold routine retainage from payments due subcontractors.

### **Payment to Lower-Tier Subcontractors**

Ensure that subcontracting agreements at all tiers provide prompt payment rights to lower-tier subcontractors that parallel those granted first-tier subcontractors in this provision.

### **Release of Routine Retainage**

After granting substantial completion the department may reduce the routine retainage withheld from the prime contractor to 75 percent of the original total amount retained.

When the Department sends the semi-final estimate the department may reduce the routine retainage withheld from the prime contractor to 10 percent of the original total amount retained.

Within 30 calendar days of receiving the semi-final estimate from the department, submit written certification that subcontractors at all tiers are paid in full for acceptably completed work and that no routine retainage is being withheld. The department will pay the prime contractor in full and reduce the routine retainage withheld from the prime contractor to zero when the department approves the final estimate.

This special provision does not limit the right of the department, prime contractor, or subcontractors at any tier to withhold payment for work not acceptably completed or work subject to an unresolved contract dispute.

## ADDITIONAL SPECIAL PROVISION 6

### ASP 6 - Modifications to the standard specifications

*Make the following revisions to the standard specifications:*

---

#### 107.17.1 General

*Replace paragraph seven with the following effective with the December 2018 letting:*

- (7) Have a professional engineer registered in the state of Wisconsin sign and seal the shop drawings. At least 30 calendar days before starting falsework, form, or shoring construction; submit a PDF file of shop drawings to the railroad's chief engineering officer and to the engineer. The engineer and the railroad may review the shop drawings. If the engineer or the railroad finds the shop drawings unsatisfactory, the contractor shall make the required changes. A satisfactory shop drawing review does not relieve the contractor of responsibility and liability for the structural integrity and proper functioning of the falsework, forms, or shoring.
- 

#### 305.2.1 General

*Replace paragraph two with the following effective with the December 2018 letting:*

- (2) Where the contract specifies or allows 1 1/4-inch base, do not place reclaimed asphalt, reprocessed material, or blended materials below virgin aggregate materials unless the contract specifies or the engineer allows in writing. The department will allow virgin aggregate above reclaimed asphalt, reprocessed material, or blended materials in shoulder areas adjacent to concrete pavement.
- 

#### 420.3.2.1 General

*Replace paragraph one with the following effective with the December 2018 letting:*

- (1) Use self-propelled grinding machines with depth, grade, and slope controls designed for grinding and texturing concrete. Equip grinding machines with diamond blades and a vacuuming system capable of removing liquid and solid residue from the ground surface. Shroud the machine to prevent discharging loosened material into adjacent work areas or live traffic lanes. Provide the specified effective wheelbase, defined as the center of the front to center of the rear main support wheels.
- 

#### 420.3.2.2 Continuous Grinding

*Replace paragraph one with the following effective with the December 2018 letting:*

- (1) Under the Continuous Diamond Grinding Concrete Pavement bid item, ensure that the grinding machine, including the grinding head, weighs 35,000 pounds or more, will grind a strip at least 4 feet wide, and has an effective wheel base of 25 feet or more. For pavements with a design speed less than 40 miles per hour and areas difficult to access, the contractor may use equipment with an effective wheel base of 12 feet or more.
- 

#### 450.3.2.8 Jointing

*Replace paragraphs three through five with the following effective with the December 2018 letting:*

- (3) Construct notched wedge longitudinal joints for mainline paving if the pavement thickness conforms to the minimums specified in 460.3.2, unless the engineer directs or allows an alternate joint. Construct the wedge using a slope no steeper than 3:1. Extend the wedge 12 inches beyond the normal lane width, or as the engineer directs. Ensure that the wedge for all layers directly overlaps and slopes in the same direction.
- (4) Locate the joint at the pavement centerline for 2-lane roadways, or at lane lines if the roadway has more than 2 lanes. Construct a vertical notch 1/2-inch to 3/4-inch high on the centerline or lane line at the top of each wedge. Place a 1/2-inch to 3/4-inch notch at the outside bottom edge of the wedge after compacting each layer. Align the finished longitudinal joint line of the upper layer with the centerline or lane line.
- (5) Construct the wedge for each layer using an engineer-approved strike-off device that will provide a uniform slope and will not restrict the main screed. Shape and compact the wedge with a weighted

steel side roller wheel the same width as the wedge. Apply a tack coat to the wedge surface and both notches before placing the adjacent lane.

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#### **455.2.4.3 Emulsified Asphalts**

Replace paragraph two with the following effective with the December 2018 letting:

- (2) The bill of lading for emulsified asphalts shall indicate the asphalt content of the original emulsion and dilution rate of the additional water added to the original emulsion. If undiluted samples are not available, test the diluted material and modify AASHTO M140, M208, or M316 to reflect properties resulting from dilution of the asphalt.
- 

#### **460.2.8.3.1.4 Department Verification Testing Requirements**

Replace paragraph three with the following effective with the December 2018 letting:

- (3) The department will perform testing conforming to the following standards:
    - Bulk specific gravity ( $G_{mb}$ ) of the compacted mixture according to AASHTO T166.
    - Maximum specific gravity ( $G_{mm}$ ) according to AASHTO T209.
    - Air voids ( $V_a$ ) by calculation according to AASHTO T269.
    - VMA by calculation according to AASHTO R35.
    - Asphalt content by ignition oven according to AASHTO T308 as modified in CMM 8-36.6.3.6, chemical extraction according to AASHTO T-164, or Asphalt Analyzer™ according to manufacturer recommendations.
- 

#### **460.2.8.3.1.6 Acceptable Verification Parameters**

Replace paragraph one with the following effective with the December 2018 letting:

- (1) The engineer will provide test results to the contractor within 2 mixture-production days after obtaining the sample. The quality of the product is acceptably verified if it meets the following limits:
    - $V_a$  is within a range of 2.0 to 4.3 percent. For SMA,  $V_a$  is within a range of 2.7 to 5.3 percent.
    - VMA is within minus 0.5 of the minimum requirement for the mix design nominal maximum aggregate size.
    - Asphalt content is within minus 0.3 percent of the JMF.
- 

#### **460.2.8.3.1.7 Dispute Resolution**

Replace paragraph one with the following effective with the December 2018 letting:

- (1) When QV test results do not meet the specified limits for 100 percent pay, the bureau's AASHTO accredited laboratory and certified personnel will referee test the retained portion of the QV sample and the retained portion of the required forward and backward QC retained samples according to CMM 8-36.
- 

#### **460.5.2.1 General**

Replace paragraphs five and six with the following effective with the December 2018 letting:

- (5) The department will reduce pay for nonconforming QMP HMA mixtures as specified in 460.2.8.2.1.7, starting from the stop point to the point when the running average of 4 is back inside the warning limits. The engineer will determine the quantity of material subject to pay reduction based on the testing data and an inspection of the completed pavement. The department will reduce pay as follows:

**PAYMENT FOR MIXTURE<sup>[1] [2] [3]</sup>**

ITEM	PRODUCED WITHIN WARNING BANDS	PRODUCED OUTSIDE JMF LIMITS
Gradation	90%	75%
Asphalt Content <sup>[4]</sup>	—	—
Air Voids	70%	50%
VMA	90%	75%

<sup>[1]</sup> For projects or plants where the total production of each mixture design requires less than 4 tests refer to CMM 8-36.

<sup>[2]</sup> Payment is in percent of the contract unit price for the HMA Pavement bid item. The department will reduce pay based on the nonconforming property with lowest percent pay. If the quantity of material subject to pay adjustment based on the running average of 4 is also subject to pay adjustment resulting from dispute resolution in accordance with 460.2.8.3.1.7, the department will apply the single pay adjustment resulting in the lowest percent pay.

<sup>[3]</sup> In addition to any pay adjustment listed in the table above, the department will adjust pay for nonconforming binder under the Nonconforming QMP Asphaltic Material administrative item. The department will deduct 25 percent of the contract unit price of the HMA Pavement bid item per ton of pavement placed with nonconforming PG binder the engineer allows to remain in place.

<sup>[4]</sup> The department will not adjust pay based on a running average of 4 asphalt content tests; however, corrective action will be applied to nonconforming material according to 460.2.8.2.1.7.

- (6) If during a QV dispute resolution investigation the department discovers unacceptable mixture defined by one or more of the following:
- Va greater than 5.0 or less than 1.5.
  - VMA more than 1.0 below the minimum allowed in table 460-1.
  - AC more than 0.5 % below the JMF target.

Remove and replace the material, or if the engineer allows the mixture to remain in place, the department will pay for the quantity of affected material at 50 percent of the contract price.

**506.3.2 Shop Drawings**

Replace paragraph four with the following effective with the December 2018 letting:

- (4) Ensure that the fabricator submits a PDF file of shop drawings for railroad structures to the railroad company's chief engineering officer upon contract completion.

**650.3.1 General**

Replace the entire text with the following effective with the December 2018 letting:

- (1) Department and contractor responsibilities for construction staking are specified in 105.6. Conform to 105.6 and the additional requirements specified here in 650.3 for the individual contractor-staking bid items the contract includes.
- (2) Protect and preserve known property and survey marks and land monuments as specified in 107.11.3. The contract may require related work under the 621 bid items.
- (3) Obtain or calculate benchmark data, grades, and alignment from plan information. The engineer will furnish data for the horizontal and vertical control points, control point ties, horizontal alignments, profiles, and elevations. Reestablish, set additional, and maintain the horizontal and vertical control points and control point ties, as needed for bid items.
- (4) Check horizontal and vertical information including but not limited to alignments, locations, elevations, and dimensions, that either the plans show or the engineer provides, for compatibility with existing field conditions. Conduct similar compatibility checks and accuracy checks of horizontal and vertical positions either the department or the contractor establishes in the field.
- (5) Perform survey work using conventional methods, or AMG methods capable of achieving the lines and grades the plans show for the work in question. Establish additional benchmarks and control points as necessary to support the method of operation.

**650.3.1.1 Staking**

- (1) Furnish, set, reference, and maintain stakes and markings necessary to establish the alignment, location, benchmarks, elevations, and continuous profile-grades for road and structure work as needed for bid items. Supervise and coordinate construction staking.
- (2) Maintain neat, orderly, and complete survey notes, drawings, and computations used in establishing the lines and grades. Make the survey notes and computations available to the engineer within 24 hours, upon request, as the work progresses.
- (3) Furnish surveying equipment, stakes, flags, pins, lath, whiskers, and other materials necessary to perform this work, subject to the engineer's approval.

**650.3.1.2 Automated Machine Guidance****650.3.1.2.1 General**

- (1) The contractor may substitute AMG for conventional staking on all or part of the work under the individual staking bid items. Coordinate with the engineer throughout the course of construction to ensure that work performed using AMG conforms to the contract tolerances and that the methods employed conform to the contractor's AMG work plan and accepted industry standards. Revert to conventional staking methods for all or part of the work at any point during construction if AMG is producing unacceptable results.

**650.3.1.2.2 AMG Work Plan**

- (1) Submit a comprehensive written AMG work plan for department review at least 5 business days before the preconstruction conference. In that plan discuss how AMG technology will be integrated into other technologies employed on the project. List the staking bid items that will have work performed using AMG and, for each bid item listed, include the following:
  1. Designate which portions of the contract will be done using AMG and which portions will be done using conventional staking.
  2. Designate a single staff person as the primary contact for AMG technology issues.
  3. List and map the primary and secondary control points required under 105.6.2 enveloping the site.
  4. Describe the contractor's quality control procedures. Include the frequency and type of checks performed to ensure that the work conforms to the contract plans.
- (2) The engineer will review the plan to determine if it conforms to the contract. Do not perform AMG work until the engineer approves the governing portion of the AMG workplan. Perform the work as the contractor's AMG work plan provides. Update the plan as necessary.

**650.3.1.2.3 Geometric and Surface Information****650.3.1.2.3.1 Department Responsibilities**

- (1) At any time after the contract is awarded the contractor may request the contractor data packet. The department will provide the packet within 5 business days of receiving the contractor's request.

**650.3.1.2.3.2 Contractor Responsibilities**

- (1) Develop and maintain a contractor construction model for areas of the project employing AMG. Confirm that the resulting model agrees with the contract plans.
- (2) If the engineer requests, provide the construction model to the department in LandXML or other engineer-approved format.

**650.3.1.2.4 Managing and Updating Information**

- (1) Notify the department of any errors or discrepancies in department-provided information. The department will determine what revisions may be required. The department will revise the contract plans, if necessary, to address errors or discrepancies that the contractor identifies. The department will provide the best available information related to those contract plan revisions.
- (2) Revise the construction model as required to support construction operations and to reflect any contract plan revisions the department makes. Perform checks to confirm that the revised construction model agrees with the contract plan revisions. If the engineer requests, provide construction model updates to the engineer. The department will pay for costs incurred to incorporate contract plan revisions as extra work.

**650.3.1.2.5 Construction Checks**

- (1) Check the work against the plan elevation at randomly selected points on cross-sections located at stations evenly divisible by 100 at the frequency the engineer approved as a part of the AMG work plan. Submit the results of these random checks to the engineer daily. Notify the engineer immediately if a check exceeds the tolerances specified in 650.3.1.2.6 below.
- (2) Check the work at additional points as the engineer directs. The department may conduct periodic independent checks.

**650.3.1.2.6 Construction Tolerances**

- (1) Ensure that the finished work vertically matches existing or other completed features. Ensure that the work conforms to revised plan elevations as follows:
  - Subgrade : +/- 0.10 feet.
  - Base : within the tolerance specified in 301.3.4.1(2).

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**650.3.3 Subgrade**

*Retitle and replace the entire text with the following effective with the December 2018 letting:*

**650.3.3 Subgrade Staking**

- (1) Set construction stakes or marks at intervals of 100 feet, or more frequently, for rural sections and at intervals of 50 feet, or more frequently, for urban sections. Include additional stakes at each cross-section as necessary to match the plan cross-section, achieve the required accuracy, and to support construction operations. Also set and maintain stakes as necessary to establish the horizontal and vertical positions of intersecting road radii, auxiliary lanes, horizontal and vertical curves, and curve transitions. Locate stakes to within 0.25 feet horizontally and establish the grade elevation to within 0.03 feet vertically.

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**Errata**

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**520.3.3 Laying Pipe**

*Correct errata by replacing "sections" with "joints" to clarify the intent that the last 3 joints need ties.*

- (5) Provide joint ties on the upstream and downstream ends of circular and horizontal elliptical concrete culvert and concrete cattle pass installations. Tie the next 3 pipe joints or, if using apron endwalls, the endwall joint and the last 2 pipe joints. Ties are not required on culverts with masonry endwalls unless the plans show otherwise.

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**608.3.3 Laying Pipe**

*Correct errata by replacing "sections" with "joints" to clarify the intent that the last 3 joints need ties.*

- (5) Provide joint ties on concrete storm sewer system infall and outfall pipes. Tie the last 3 pipe joints or, if using apron endwalls, the endwall joint and the next 2 pipe joints. Ties are not required on installations with masonry endwalls unless the plans show otherwise.

### ADDITIONAL SPECIAL PROVISION 7

- A. Reporting 1<sup>st</sup> Tier and DBE Payments During Construction
1. Comply with reporting requirements specified in the department's Civil Rights Compliance, Contractor's User Manual, Sublets and Payments.
  2. Report payments to all DBE firms within 10 calendar days of receipt of a progress payment by the department or a contractor for work performed, materials furnished, or materials stockpiled by a DBE firm. Report the payment as specified in A(1) for all work satisfactorily performed and for all materials furnished or stockpiled.
  3. Report payments to all first tier subcontractor relationships within 10 calendar days of receipt of a progress payment by the department for work performed. Report the payment as specified in A(1) for all work satisfactorily performed.
  4. All tiers shall report payments as necessary to comply with the DBE payment requirement as specified in A(2).
  5. Require all first tier relationships, DBE firms and all other tier relationships necessary to comply with the DBE payment requirement in receipt of a progress payment by contractor to acknowledge receipt of payment as specified in A(1), (2), (3) and (4).
  6. All agreements made by a contractor shall include the provisions in A(1), (2), (3), (4) and (5), and shall be binding on all first tier subcontractor relationships and all contractors and subcontractors utilizing DBE firms on the project.
- B. Costs for conforming to this special provision are incidental to the contract.

NOTE: CRCS Prime Contractor payment is currently not automated and will need to be manually loaded into the Civil Rights Compliance System. Copies of prime contractor payments received (check or ACH) will have to be forwarded to [paul.ndon@dot.wi.gov](mailto:paul.ndon@dot.wi.gov) within 5 days of payment receipt to be logged manually.

\*\*\*Additionally, for information on Subcontractor Sublet assignments, Subcontractor Payments and Payment Tracking, please refer to the CRCS Payment and Sublets manual at:

<https://wisconsindot.gov/Documents/doing-bus/civil-rights/labornwage/crcs-payments-sublets-manual.pdf>

**ADDITIONAL SPECIAL PROVISION 9-S**  
**Electronic Labor Data Submittal for**  
***State Funded Only Projects***

(1) Use the Workforce Utilization Report Microsoft Excel spread sheet, or other compatible spread sheet (i.e., Google Spread Sheet), to report required labor data. Details and the Excel spreadsheet are available online through the department's highway construction contract information (HCCI) site on the Labor, Wages, and EEO Information page at:

<http://wisconsindot.gov/Pages/doing-bus/civil-rights/labornwage/default.aspx>

(2) Ensure that all tiers of subcontractors, including all trucking firms, submit their labor data electronically via the Excel spread sheet to the prime contractor within 14 calendar days of the end of each quarter (quarters are defined as January-March, April-June, July-September, and October-December). The prime contractor shall coordinate collection of their subcontractors' spread sheets and forward them to the Regional Labor Compliance Specialist within 21 calendar days of the end of each quarter. Every company or contractor providing physical labor towards completing the project is a subcontractor under this special provision.

(3) Upon receipt of contract execution, promptly make all affected companies or contractors aware of the requirements under this special provision and arrange for them to receive an Excel spreadsheet as part of their subcontract documents.

(4) The department will reject all paper submittals of information required under this special provision. All costs for conforming to this special provision are incidental to the contract.



## **Non-discrimination Provisions**

**During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees as follows:**

**1. Compliance with Regulations:** The contractor (hereinafter includes consultants) will comply with the Acts and the Regulations relative to Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation, Federal Highway Administration, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.

**2. Non-discrimination:** The contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor will not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR Part 21.

**3. Solicitations for Subcontracts, Including Procurements of Materials and Equipment:** In all solicitations, either by competitive bidding, or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the contractor of the contractor's obligations under this contract and the Acts and the Regulations relative to Non-discrimination on the grounds of race, color, or national origin.

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

**5. Sanctions for Noncompliance:** In the event of a contractor's noncompliance with the Non-discrimination provisions of this contract, the Recipient will impose such contract sanctions as it or the Federal Highway Administration may determine to be appropriate, including, but not limited to:

- a. Withholding payments to the contractor under the contract until the contractor complies; and/or
- b. Cancelling, terminating, or suspending a contract, in whole or in part.

**6. Incorporation of Provisions:** The contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The contractor will take action with respect to any subcontract or procurement as the Recipient or the Federal Highway Administration may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the contractor may request the Recipient to enter into any litigation to protect the interests of the Recipient. In addition, the contractor may request the United States to enter into the litigation to protect the interests of the United States.

**During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:**

**Pertinent Non-Discrimination Authorities:**

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d et seq., 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin); and 49 CFR Part 21.
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 et seq.), (prohibits discrimination on the basis of sex);
- Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 et seq.), as amended, (prohibits discrimination on the basis of disability); and 49 CFR Part 27;
- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 et seq.), (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982, (49 USC § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131-12189) as implemented by Department of Transportation regulations at 49 C.F.R. parts 37 and 38;
- The Federal Aviation Administration's Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);

- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures Non-discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of Limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 et seq).

**Effective August 2015 letting**

### **BUY AMERICA PROVISION**

All steel and iron materials permanently incorporated in this project shall be domestic products and all manufacturing and coating processes for these materials from smelting forward in the manufacturing process must have occurred within the United States. Coating includes epoxy coating, galvanizing, painting and any other coating that protects or enhances the value of a material subject to the requirements of Buy America. The exemption of this requirement is the minimal use of foreign materials if the total cost of such material permanently incorporated in the product does not exceed one-tenth of one percent (1/10 of 1%) of the total contract cost or \$2,500.00, whichever is greater. For purposes of this paragraph, the cost is that shown to be the value of the subject products as they are delivered to the project. The contractor shall take actions and provide documentation conforming to CMM 2-28.5 to ensure compliance with this "Buy America" provision.

<https://wisconsindot.gov/rdwy/cmm/cm-02-28.pdf>

Upon completion of the project certify to the engineer, in writing using department form WS4567, that all steel, iron, and coating processes for steel or iron incorporated into the contract work conform to these "Buy America" provisions. Attach a list of exemptions and their associated costs to the certification form. Department form WS4567 is available at:

<https://wisconsindot.gov/hcciDocs/contracting-info/ws4567.doc>



## Proposal Schedule of Items

Page 1 of 8

Proposal ID: 20181211031 Project(s): 7510-02-60, 7510-02-62

Federal ID(s): N/A, N/A

SECTION: 0001

Contract Items

Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0002	203.0100 Removing Small Pipe Culverts	49.000 EACH	_____.	_____.
0004	204.0120 Removing Asphaltic Surface Milling	500,600.000 SY	_____.	_____.
0006	204.0150 Removing Curb & Gutter	50.000 LF	_____.	_____.
0008	204.0180 Removing Delineators and Markers	217.000 EACH	_____.	_____.
0010	204.0185 Removing Masonry	6.000 CY	_____.	_____.
0012	204.9060.S Removing (item description) 01. Apron Endwalls	5.000 EACH	_____.	_____.
0014	205.0100 Excavation Common	89.000 CY	_____.	_____.
0016	208.0100 Borrow	216.000 CY	_____.	_____.
0018	211.0100 Prepare Foundation for Asphaltic Paving (project) 01. 7510-02-60	LS	LUMP SUM	_____.
0020	211.0100 Prepare Foundation for Asphaltic Paving (project) 01. 7510-02-62	LS	LUMP SUM	_____.
0022	213.0100 Finishing Roadway (project) 01. 7510-02-60	1.000 EACH	_____.	_____.
0024	213.0100 Finishing Roadway (project) 01. 7510-02-62	1.000 EACH	_____.	_____.
0026	305.0110 Base Aggregate Dense 3/4-Inch	4,300.000 TON	_____.	_____.
0028	305.0120 Base Aggregate Dense 1 1/4-Inch	220.000 TON	_____.	_____.
0030	305.0500 Shaping Shoulders	2,724.000 STA	_____.	_____.



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Contract Items

Alt Set ID:

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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0032	305.0504.S Hauling Excess Shoulder Material	700.000 CY	_____.	_____.
0034	455.0605 Tack Coat	50,150.000 GAL	_____.	_____.
0036	460.2005 Incentive Density PWL HMA Pavement	36,659.000 DOL	1.00000	36,659.00
0038	460.2010 Incentive Air Voids HMA Pavement	83,110.000 DOL	1.00000	83,110.00
0040	460.4110.S Reheating HMA Pavement Longitudinal Joints	142,035.000 LF	_____.	_____.
0042	460.6244 HMA Pavement 4 MT 58-34 S	83,110.000 TON	_____.	_____.
0044	465.0105 Asphaltic Surface	7,750.000 TON	_____.	_____.
0046	465.0110 Asphaltic Surface Patching	150.000 TON	_____.	_____.
0048	465.0475 Asphalt Centerline Rumble Strips 2-Lane Rural	112,010.000 LF	_____.	_____.
0050	504.0900 Concrete Masonry Endwalls	5.000 CY	_____.	_____.
0052	520.3318 Culvert Pipe Class III-A 18-Inch	32.000 LF	_____.	_____.
0054	520.8000 Concrete Collars for Pipe	38.000 EACH	_____.	_____.
0056	520.8700 Cleaning Culvert Pipes	68.000 EACH	_____.	_____.
0058	520.9700.S Culvert Pipe Liners (size) 01. 24-Inch	63.000 LF	_____.	_____.
0060	520.9750.S Cleaning Culvert Pipes for Liner Verification	1.000 EACH	_____.	_____.
0062	521.1018 Apron Endwalls for Culvert Pipe Steel 18-Inch	10.000 EACH	_____.	_____.



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Contract Items

Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0064	521.1024 Apron Endwalls for Culvert Pipe Steel 24-Inch	4.000 EACH	_____.	_____.
0066	521.1228 Apron Endwalls for Pipe Arch Steel 28x20-Inch	1.000 EACH	_____.	_____.
0068	521.3118 Culvert Pipe Corrugated Steel 18-Inch	8.000 LF	_____.	_____.
0070	521.3136 Culvert Pipe Corrugated Steel 36-Inch	20.000 LF	_____.	_____.
0072	521.3728 Pipe Arch Corrugated Steel 28x20-Inch	8.000 LF	_____.	_____.
0074	522.0124 Culvert Pipe Reinforced Concrete Class III 24-Inch	280.000 LF	_____.	_____.
0076	522.0130 Culvert Pipe Reinforced Concrete Class III 30-Inch	80.000 LF	_____.	_____.
0078	522.0142 Culvert Pipe Reinforced Concrete Class III 42-Inch	32.000 LF	_____.	_____.
0080	522.0148 Culvert Pipe Reinforced Concrete Class III 48-Inch	80.000 LF	_____.	_____.
0082	522.0160 Culvert Pipe Reinforced Concrete Class III 60-Inch	112.000 LF	_____.	_____.
0084	522.1060 Apron Endwalls for Culvert Pipe Reinforced Concrete 60-Inch	2.000 EACH	_____.	_____.
0086	601.0415 Concrete Curb & Gutter 6-Inch Sloped 30-Inch Type J	50.000 LF	_____.	_____.
0088	611.8115 Adjusting Inlet Covers	5.000 EACH	_____.	_____.
0090	614.0010 Barrier System Grading Shaping Finishing	28.000 EACH	_____.	_____.



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0092	614.0920 Salvaged Rail	5,206.000 LF	_____.	_____.
0094	614.2300 MGS Guardrail 3	975.000 LF	_____.	_____.
0096	614.2310 MGS Guardrail 3 HS	150.000 LF	_____.	_____.
0098	614.2330 MGS Guardrail 3 K	4,063.000 LF	_____.	_____.
0100	614.2350 MGS Guardrail Short Radius	63.000 LF	_____.	_____.
0102	614.2500 MGS Thrie Beam Transition	630.000 LF	_____.	_____.
0104	614.2610 MGS Guardrail Terminal EAT	28.000 EACH	_____.	_____.
0106	614.8010 Anchor Post Assembly Top Mount	16.000 EACH	_____.	_____.
0108	618.0100 Maintenance And Repair of Haul Roads (project) 01. 7510-02-60	1.000 EACH	_____.	_____.
0110	618.0100 Maintenance And Repair of Haul Roads (project) 01. 7510-02-62	1.000 EACH	_____.	_____.
0112	619.1000 Mobilization	1.000 EACH	_____.	_____.
0114	624.0100 Water	65.000 MGAL	_____.	_____.
0116	625.0500 Salvaged Topsoil	800.000 SY	_____.	_____.
0118	627.0200 Mulching	1,800.000 SY	_____.	_____.
0120	628.1504 Silt Fence	8,100.000 LF	_____.	_____.
0122	628.1520 Silt Fence Maintenance	8,100.000 LF	_____.	_____.





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Alt Set ID:

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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0124	628.1905 Mobilizations Erosion Control	5.000 EACH	_____.	_____.
0126	628.1910 Mobilizations Emergency Erosion Control	4.000 EACH	_____.	_____.
0128	628.2004 Erosion Mat Class I Type B	8,600.000 SY	_____.	_____.
0130	628.7015 Inlet Protection Type C	24.000 EACH	_____.	_____.
0132	628.7504 Temporary Ditch Checks	810.000 LF	_____.	_____.
0134	628.7555 Culvert Pipe Checks	122.000 EACH	_____.	_____.
0136	629.0210 Fertilizer Type B	1.000 CWT	_____.	_____.
0138	630.0171 Seeding Mixture No. 70A	4.000 LB	_____.	_____.
0140	630.0200 Seeding Temporary	20.000 LB	_____.	_____.
0142	633.0200 Delineators Flexible	36.000 EACH	_____.	_____.
0144	633.5200 Markers Culvert End	154.000 EACH	_____.	_____.
0146	634.0616 Posts Wood 4x6-Inch X 16-FT	158.000 EACH	_____.	_____.
0148	634.0618 Posts Wood 4x6-Inch X 18-FT	29.000 EACH	_____.	_____.
0150	637.2210 Signs Type II Reflective H	1,233.350 SF	_____.	_____.
0152	637.2230 Signs Type II Reflective F	259.290 SF	_____.	_____.
0154	638.2602 Removing Signs Type II	173.000 EACH	_____.	_____.
0156	638.3000 Removing Small Sign Supports	187.000 EACH	_____.	_____.



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0158	642.5001 Field Office Type B	1.000 EACH	_____.	_____.
0160	643.0300 Traffic Control Drums	16,700.000 DAY	_____.	_____.
0162	643.0310.S Temporary Portable Rumble Strips	1.000 LS	_____.	_____.
0164	643.0420 Traffic Control Barricades Type III	540.000 DAY	_____.	_____.
0166	643.0715 Traffic Control Warning Lights Type C	500.000 DAY	_____.	_____.
0168	643.0800 Traffic Control Arrow Boards	60.000 DAY	_____.	_____.
0170	643.0900 Traffic Control Signs	8,050.000 DAY	_____.	_____.
0172	643.5000 Traffic Control	2.000 EACH	_____.	_____.
0174	646.1020 Marking Line Epoxy 4-Inch	367,530.000 LF	_____.	_____.
0176	646.1545 Marking Line Grooved Wet Ref Contrast Epoxy 4-Inch	2,175.000 LF	_____.	_____.
0178	646.3020 Marking Line Epoxy 8-Inch	1,900.000 LF	_____.	_____.
0180	646.5020 Marking Arrow Epoxy	28.000 EACH	_____.	_____.
0182	646.5120 Marking Word Epoxy	9.000 EACH	_____.	_____.
0184	646.5320 Marking Railroad Crossings Epoxy	4.000 EACH	_____.	_____.
0186	646.7120 Marking Diagonal Epoxy 12-Inch	1,250.000 LF	_____.	_____.
0188	646.8120 Marking Curb Epoxy	390.000 LF	_____.	_____.



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Contract Items

Alt Set ID:

Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0190	646.8220 Marking Island Nose Epoxy	9.000 EACH	_____.	_____.
0192	648.0100 Locating No-Passing Zones	24.800 MI	_____.	_____.
0194	649.0105 Temporary Marking Line Paint 4-Inch	158,000.000 LF	_____.	_____.
0196	650.6000 Construction Staking Pipe Culverts	1.000 EACH	_____.	_____.
0198	650.8000 Construction Staking Resurfacing Reference	140,295.000 LF	_____.	_____.
0200	650.9910 Construction Staking Supplemental Control (project) 01. 7510-02-60	LS	LUMP SUM	_____.
0202	650.9910 Construction Staking Supplemental Control (project) 01. 7510-02-62	LS	LUMP SUM	_____.
0204	690.0250 Sawing Concrete	25.000 LF	_____.	_____.
0206	740.0440 Incentive IRI Ride	107,307.000 DOL	1.00000	107,307.00
0208	SPV.0060 Special 01. HMA Pavement PWL Test Strip Volumetrics	2.000 EACH	_____.	_____.
0210	SPV.0060 Special 02. HMA Pavement PWL Test Strip Density	2.000 EACH	_____.	_____.
0212	SPV.0060 Special 03. Apron Endwalls for Pipe Arch Aluminum 21x15-Inch	6.000 EACH	_____.	_____.
0214	SPV.0090 Special 01. Ditch Cleaning	1,850.000 LF	_____.	_____.
0216	SPV.0090 Special 02. Pipe Arch Corrugated Aluminum 21x15-Inch	32.000 LF	_____.	_____.
0218	SPV.0105 Special 01. Material Transfer Vehicle	LS	LUMP SUM	_____.



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0220	SPV.0105 Special 02. Milling And Removing Temporary Joint	LS	LUMP SUM	_____.
0222	SPV.0180 Special 01. Removing Asphaltic Surface Milling Lane Repair	3,333.000 SY	_____.	_____.
0224	SPV.0195 Special 01. Asphaltic Surface Lane Repair	730.000 TON	_____.	_____.
Section: 0001			Total:	_____.
			Total Bid:	_____.



**PLEASE ATTACH SCHEDULE OF ITEMS HERE**