

HIGHWAY WORK PROPOSAL

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

Proposal Number: **018**

<u>COUNTY</u>	<u>STATE PROJECT</u>	<u>FEDERAL</u>	<u>PROJECT DESCRIPTION</u>	<u>HIGHWAY</u>
Fond Du Lac	3360-16-60	N/A	Lomira-Fond Du Lac; Scl-Ush 151	STH 175

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: \$75,000.00 Payable to: Wisconsin Department of Transportation	Attach Proposal Guaranty on back of this PAGE.
Bid Submittal Date: May 11, 2021 Time (Local Time): 11:00 am	Firm Name, Address, City, State, Zip Code
Contract Completion Time 50 Working Days	SAMPLE NOT FOR BIDDING PURPOSES
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: Grading, Base, Milling, Asphalt Pavement, Culvert Pipe, Curb and Gutter, Concrete Barrier, Guardrail, Pavement Markings	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 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, 4th 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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STSP'S Revised January 13, 2021

SPECIAL PROVISIONS

1. General.

Perform the work under this construction contract for Project 3360-16-60, Lomira – Fond du Lac, SCL – USH 151, STH 175, Fond du Lac 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, 2021 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 (20210113)

2. Scope of Work.

The work under this contract shall consist of asphalt, base aggregate dense, culvert pipes, concrete barrier, beam guard 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 time frame for construction of the project within the 2021 construction season to the engineer in writing within a month after executing the contract but at least 14 calendar days before the preconstruction conference. Assure that the time frame is consistent with the contract completion time. Upon approval, the engineer will issue the notice to proceed within ten calendar days before the beginning of the approved time frame.

To revise the time frame, submit a written request to the engineer at least two weeks before the beginning of the intended time frame. 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.

The Notice to Proceed will be issued such that work shall start no later than July 6, 2021, unless otherwise approved by the engineer.

Maintain local and emergency vehicles at all times. The contractor shall notify all emergency services a minimum of 10 days prior to closure. Advanced notification as described above is considered incidental to the Traffic Control item.

Interim Completion

At the beginning of the culvert replacements, beam guard removal and installation, and concrete barrier operations, close STH 175 to through traffic for a maximum of 30 working days. Do not reopen until completing the following work: Culvert replacements, beam guard and concrete barrier installation.

If the contractor fails to complete the work necessary to reopen STH 175 to traffic within 30 working days, the department will assess the contractor \$2,000 in interim liquidated damages for each working day contract work remains incomplete beyond 30 working days. An entire working day will be charged for any period of time within a working day that the road remains closed beyond 12:01 AM.

If contract time expires prior to completing all work specified in the contract, additional liquidated damages will be affixed according to standard spec 108.11.

4. Traffic.

Maintain through traffic on STH 175 while construction is occurring, except for the 30 working day interim full closure as specified in the Progress and Prosecution article. STH 175 traffic during the interim full closure will be detoured as follows:

Southbound 175 will be rerouted east on US 151 then south on I 41 then west on STH 49, back to STH 175. Northbound STH 175 will follow the reverse path of the southbound detour.

Perform work on culverts in a manner that will allow emergency vehicles and local traffic to cross.

Provide an even cross sectional profile of the roadway at the end of each day's milling operation on roadways open to through traffic.

During the period when STH 175 is open to through traffic, complete contract work using traffic control and flaggers to protect traffic at all locations where traffic is confined to a single lane. Work will be done using traffic control suitable for moving operations.

Do not allow the milled surface to remain exposed for a period greater than 72 hours unless adverse weather prevents placement of asphalt surface layer. In the event of adverse weather, resume placement of asphalt surface layer as soon as conditions permit.

Maintain STH 175 traffic with a minimum one 10-foot travel lane at all times. Local road traffic shall be maintained with a minimum base aggregate dense surface.

Maintain access for local, business and emergency traffic at all times. Maintain reasonable access to all properties according to standard spec 104.6.4. When construction operations will temporarily restrict access to a property or change existing access to a property, coordinate with the owner or resident at least 48 hours prior to the work.

Temporary Work Zone Clear Zone Working Restrictions

Park equipment and store materials, including stockpiles, a minimum of 18-feet from the edge of the traveled way unless protected by concrete barrier temporary precast.

If the contractor is unsure whether an individual work operation will meet the safety requirements for working within the clear zone, review the proposed work operation with the engineer before proceeding with the work.

ner-104-005 (20200227)

Portable Changeable Message Signs – Message Prior Approval

After coordinating with department construction field staff, notify the Northeast Region Traffic Section at (920) 366-8033 (secondary contact number is (920) 360-3107) three business days prior to deploying or changing a message on a PCMS to obtain approval of the proposed message. The Northeast Region Traffic Unit will review the proposed message and either approve the message or make necessary changes.

PCMS boards must be deployed 7 calendar days prior to the start of construction and 7 calendar days prior to implementing the detour.

Ner-643-035 (20171213)

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

Closure type with height, weight, or width restrictions (available width, all lanes in one direction < 16 feet)	MINIMUM NOTIFICATION
Lane and shoulder closures	7 calendar days
Full roadway closures	7 calendar days
Ramp closures	7 calendar days
Detours	7 calendar days
Closure type without height, weight, or width restrictions (available width, all lanes in one direction ≥ 16 feet)	MINIMUM NOTIFICATION
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 and Special Event Work Restrictions.**

Do not perform work on, nor haul materials of any kind along or across any portion of the highway carrying STH 175 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 28, 2021 to 6:00 AM Tuesday, June 1, 2021 for Memorial Day;
- From noon Friday, July 2, 2021 to 6:00 AM Tuesday, July 6, 2021 for Independence Day;
- From noon Friday, September 3, 2021 to 6:00 AM Tuesday, September 7, 2021 for Labor Day.

stp-107-005 (20210113)

6. **Utilities.**

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

107-065 (20080501)

Some of the utility work described below is dependent on prior work being performed by the contractor at a specific site. In such situations, provide the engineer and the affected utility a good faith notice of when the utility is to start work at the site. Provide this notice 14 to 16 calendar days in advance of when the prior work will be completed, and the site will be available to the utility owner. Follow-up with a confirmation notice to the engineer and the utility owner not less than three working days before the site will be ready for the utility owner to begin its work.

Additional detailed information regarding the location of utility facilities is available at the region WisDOT office during normal working hours.

Alliant Energy has overhead and underground **electric** facilities within the project limits. Alliant Energy will remove the following at the approximate stations:

- Pole 360+75 RT 32, 26/30
- Overhead line 361+30 – 366+47 LT
- Anchor 361+25 LT 47
- Pole and anchor 361+90 RT 32, 26/31
- Pole 362+65 LT 48, 25/32
- Overhead crossing 362+65 LT 48, 125
- Pole and anchor 362+80 RT 29, 26/32
- Pole and anchor 364+10 RT 29, 27/33
- Pole 365+25 LT 35, 26/34
- Pole 366+47 LT 32, 26/35

Alliant Energy will install the following at the approximate stations:

- 361+30 LT 47 Install pole and underground electric outside R right-of-way
- 361+30 LT 47 – 363+60 RT 32 Install overhead crossing in R right-of-way
- 361+24 RT 50 Install pole
- 361+24 RT 44 Install anchor
- 363+60 RT 32 Install pole
- 363+60 RT 26 Install anchor
- 366+52 LT 32, 26/35 Install pole
- 366+47 LT 32 Install anchor
- 355+00 RT - 367+50 RT Transfer overhead electric to new poles

Work will be complete prior to construction. The field contact for this project is Nick Gorman, (920) 322-6765, (262) 379-9393, nicholasgorman@alliantenergy.com.

Alliant Energy has underground **gas** facilities within the project limits. No conflicts are anticipated. The field contact for this project is Nick Gorman, (920) 322-6765, (262) 379-9393, nicholasgorman@alliantenergy.com.

AT&T Wisconsin has underground and overhead **communication** facilities within the project limits. AT&T will transfer all attachments, place new down guys/anchors and overhead guys to We Energies' poles at the following approximate stations:

- 249+03, 27' RT to new pole at 248+92, 27' RT
- 264+39, 24' RT to new pole at 264+77, 25' RT

In addition, AT&T will eliminate and bury the riser cables and pedestal at approximately Station 264+40 RT and eliminate the pedestals at approximately Stations 270+20 LT and 335+10 RT by burying the splices. AT&T will expose and lower the existing fiber and copper cables near the east right-of-way line from approximately Station 360+00 – 362+25 to a min. 24" below subgrade and lower the pedestal near Station 361+25 RT. Work will be complete prior to construction.

There is also a service wire crossing in the beam guard location at approximately Station 334+80. No conflicts anticipated. The contractor may contact AT&T to expose the facility to assist in beam post placement during construction. The field contact for this project is Chuck Bartelt, (920) 410-5104, (920) 929-1013, cb1461@att.com.

ATC Management, Inc. has overhead **electric transmission** facilities within the project limits. No conflicts are anticipated. The field contact for this project is Doug Vosberg, (608) 877-7650, dvosberg@atcllc.com.

Charter Communications has aerial and underground **communication** facilities within the project limits. Charter will transfer aerial facilities and risers from approximately Station 264+39, 24' RT to new We Energies pole at approximately Station 264+77, 25' RT. Work will be completed prior to construction. The field contact for this project is Ron Frase, (608) 438-9648, (920) 349-3202, ron.frase@charter.com.

City of Fond du Lac Department of Public Works has underground **sewer** facilities within the project limits. No conflicts are anticipated. The field contact for this project is Paul DeVries, (920) 517-7890, (920) 322-3473, pdevries@fdl.wi.gov.

City of Fond du Lac Department of Public Works has underground **water** facilities within the project limits. No conflicts are anticipated. The field contact for this project is Zach Miller, (920) 539-4673, (920) 322-3694, zmiller@fdl.wi.gov.

Frontier Communications of WI LLC has underground **communication** facilities within the project limits from approximately Station 11+90 to 118+00. No conflicts are anticipated. The field contact for this project is Russ Ryan, (920) 737-9662, (920) 583-3275, Russell.ryan@ftr.com.

Guardian Pipeline has underground **gas** facilities within the project limits. A 30" high pressure natural gas pipeline crosses STH 175 approximately 1280-feet south of CTH Y. No conflicts are anticipated. The field contact for this project is Jude Mengel, (262) 374-2758, jude.mengel@oneok.com.

We Energies has underground and overhead **electric** facilities within the project limits. We Energies will replace the following poles and notify AT&T and Charter when poles are ready for transfer at the following approximately Stations:

- | | |
|------------------|----------------------|
| - 249+03, 27' RT | Remove/relocate pole |
| - 248+92, 27' RT | Proposed pole |
| - 264+39, 24' RT | Remove/relocate pole |
| - 264+77, 25' RT | Proposed pole |
| - 270+26, 27'T | Remove/relocate pole |
| - 270+29, 42' LT | Proposed pole |

Work will be complete prior to construction. The field contact for this project is Greg Boerner, (618) 409-5861, Gregory.Boerner@we-energies.com.

7. 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. The railroad will provide 3 days of flagging at its expense.

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; 3912 S. Pokegama Road, Superior, WI 54880; Telephone (715) 345-2503; E-mail: Jackie.macewicz@cn.ca.

Also send a copy to the following: Jared Kinziger, NE and NC Region Railroad Coordinator; 944 Vanderperren Way, Green Bay, WI 54304; Telephone (920) 492-7713; E-mail: jared.kinziger@dot.wi.gov.

Include the following information on the insurance document:

- Project ID: 3360-16-60
- Project Location: Town of Byron, Wisconsin
- Route Name: STH 175, Fond du Lac County
- Crossing ID: 692326A
- Railroad Subdivision: Waukesha
- Railroad Milepost: 146.94
- Work Performed: Resurfacing highway, pavement markings and traffic control

A.2 Train Operation

Approximately 45 through freight trains operate daily at up to 60 mph. In addition to through trains, there are switch trains at slower speeds.

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

Construction Contact

Jackie Macewicz, Manager Public Works; 3192 S. Pokegama Road, Superior, WI 54880; Telephone (715) 345-2503; E-mail 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: Flagging-US, 17641 South Ashland Avenue, Homewood, IL 60430; Flagging_US@CN.CA. The form can be obtained at:

<http://www.cn.ca/en/safety/employees/contractors-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 Wisconsin Central Ltd (CN) 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. The railroad is planning to rehab the crossing by removing full depth HMA on each side of each track and replacing the timber planks during the highway detour.

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.

A.6 Rail Security Awareness and Contractor Orientation

All employees of contractors who work on CN properties are required to have minimum CN Safety and Security Awareness training. This training can be obtained by registering and following the CN link through www.contractororientation.com. This training is good for a period of one year.

- a. Exception: CN has exempted from this training those it classifies as "Delivery Persons". Delivery Persons include contractors such as UPS, FedEx, trucking companies, etc. who merely access the property to supply materials or equipment.

The security awareness and contractor orientation certification must be renewed for projects that will carry over beyond the one-year period. Contractor and subcontractor employees shall wear the identification badge issued by www.contractororientation.com when on railroad right-of-way. Costs associated with training and registration are incidental to other items in the contract.

If employees of contractors have a current eRailSafe badge for CN then an additional badge is not required from www.contractororientation.com.

stp-107-026 (20200629)

8. Coordination with Railroad

The contractor is required to coordinate with the railroad regarding the exact limits of pavement removal and timing of railroad work for staging/hauling needs.

9. Information to Bidders, WPDES General Construction Storm Water Discharge Permit.

The department has obtained coverage through the Wisconsin Department of Natural Resources to discharge storm water associated with land disturbing construction activities of this contract under the Wisconsin Pollutant Discharge Elimination System General Construction Storm Water Discharge Permit (WPDES Permit No. WI-S066796-1). A certificate of permit coverage is available from the regional office by contacting Bryan Learst at (920) 366-5639. Post the permit in a conspicuous place at the construction site.

stp-107-056 (20180628)

10. Coordination with Businesses and Residents

The contractor will arrange and conduct a meeting between the contractor, the department, local officials, residents and business people to discuss the project schedule of operations including vehicular and pedestrian access during construction operations. Hold the first meeting 14 days prior to the start of work under this contract and monthly thereafter. The contractor shall notify all parties in writing a minimum of 10 days before the first meeting being held.

ner-105-005 (20180212)

11. Archaeological Site.

Byron Cemetery, BFD-0022 (unnamed cemetery) site is located approximately Station 104+26 – Station 106+40 LT and RT within the limits shown on the plans.

Notify the Bureau of Technical Services – Environmental Process and Document Section (BTS-EPDS) at (608) 266-0099 at least two weeks before commencement of any ground disturbing activities beyond the existing shoulder. BTS-EPDS will determine if a qualified archaeologist will need to be on site during construction of this area.

Do not use the site for borrow or waste disposal. Do not use the site area not currently capped by asphalt/concrete for the staging of personnel, equipment and/or supplies.

stp-107-220 (20180628)

12. Environmental Protection, By-Pass Pumping.

Add the following to standard spec 107.18:

If by-pass pumping is required, the means and methods proposed to be used during construction shall be submitted for approval as part of the Erosion Control Implementation Plan for each location it is required. The submittal shall include how the intake will be managed to not cause an increase in the background level turbidity during pumping; equipment pumping rate capabilities; discharge energy dissipation; and erosion controls. For by-pass pumping that will extend beyond one working day, the submittal should also include how the work zone will be managed and protected should the pump fail; be shut down due to unacceptable water quality; or storm water flows exceed the pumping rate of equipment. After setup of the approved by-pass pumping operation, the contractor shall demonstrate that the means and methods will pump the water at an acceptable water quality before starting work that necessitates the by-pass pumping. The cost of all work and materials associated with by-pass pumping is incidental to the bid items the work is associated with. Erosion control devices beyond the discharge energy dissipation point will be paid for at the contract unit prices for the items that are included in the plan.

ner-107-035 (20180212)

13. Environmental Protection, Dewatering.

Add the following to standard spec 107.18:

If dewatering is required, treat the water to remove suspended sediments by filtration, settlement or other appropriate best management practice before discharge. The means and methods proposed to be used during construction shall be submitted for approval as part of the Erosion Control Implementation Plan for dewatering at each location it is required. The submittal shall also include the details of how the intake will be managed to not cause an increase in the background level turbidity before treatment and any additional erosion controls necessary to prevent sediments from reaching the project limits or wetlands and waterways. Guidance on dewatering can be found on the Wisconsin Department of Natural Resources website located in the Storm Water Construction Technical Standards, Dewatering Code #1061, "Dewatering". This document can be found at the WisDNR website:

http://dnr.wi.gov/topic/stormwater/standards/const_standards.html

The cost of all work and materials associated with water treatment and/or dewatering is incidental to the bid items the work is associated.

ner-107-040 (20180212)

14. 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)

15. Preparing the Foundation

Add the following to standard spec 211.3.1:

The contractor shall plan construction activities such that the earth subgrade is covered by the roadway base in a timely manner upon completion of preparation of the subgrade or as the engineer directs. The contractor is responsible for the removal of any excess water from the subgrade as a result of rainfall events or natural drainage.

ner-211-005 (20171213)

16. HMA Percent Within Limits (PWL) Test Strip Volumetrics, Item 460.0105.S; HMA Percent Within Limits (PWL) Test Strip Density Item 460.0110.S.

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 contracts 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 contract 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 follows.

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 assess the contractor \$2,000 for each instance 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: adjust tonnage to accommodate natural break points in the project.) Locate test strips 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, obtain sufficient HMA mixture for three-part split samples from trucks prior to departure from the plant. Collect three split samples during the production of test strip material. Perform sampling from the truck box and three-part splitting of HMA according to 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>
1	50 to 1/3 T
2	1/3 T to 2/3 T
3	2/3 T 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.

C.1.2 Field Tests

C.1.2.1 Density

For contracts that include STSP 460-020 QMP Density in addition to PWL, 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 according to 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 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 contract. 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/ft³. 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/ft³. 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 according to 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 as modified in CMM 8-36.6.6. Bulk specific gravities of both gyratory compacted samples and field cores shall be determined according to AASHTO T 166 as modified in CMM 8-36.6.5. 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 ^[1]	- 0.5
Air Voids	-1.5 & +2.0
VMA in percent ^[2]	- 1.0
Maximum specific gravity	+/- 0.024

^[1] 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 ASTM D8159 as modified in CMM 8-36.6.3.1.

^[2] 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^[1]

LAYER	MIXTURE TYPE	
	LT & MT	HT
LOWER	93.0 ^[2]	93.0 ^[3]
UPPER	93.0	93.0

^[1] 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.

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

^[3] 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-furnished 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 ¹	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

¹ 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 contract. 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 contract, no additional compensation will be paid by the department for the required additional test strip and the department will assess the contractor \$2,000 for the additional test strip according to Section E of this special provision. 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 according to 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
460.0105.S	HMA Percent Within Limits (PWL) Test Strip Volumetrics	EACH
460.0110.S	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 contracts 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 assess the contractor \$2,000 for each instance, under the HMA 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 assess the contractor \$2,000 for each additional test strip (i.e. \$2,000 for each individual volumetrics or density test strip) under the HMA 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</i> (PWL)	<i>PAYMENT FACTOR, PF</i> (percent of \$65/ton)
≥ 90 to 100	$PF = ((PWL - 90) * 0.4) + 100$
≥ 50 to < 90	$(PWL * 0.5) + 55$
<50	50% ^[1]

where, PF is calculated per air voids and density, denoted $PF_{\text{air voids}}$ & PF_{density}

^[1] 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 according to 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 ($PF_{\text{air voids}}$) and density (PF_{density}) will be determined. $PF_{\text{air voids}}$ will be multiplied by the total tonnage produced (i.e., from truck tickets), and PF_{density} 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
SPV.0055.01	Incentive Density PWL HMA Pavement	DOL
SPV.0055.02	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.

stp-460-040 (20191121)

17. Culvert Pipe Backfill, Item. 520.

For culvert pipes where depth from top of pipe to top of final pavement is 4.0-ft or less the entire backfill area will conform and be classified as standard spec 520.2.5.2 foundation backfill.

Remove standard spec 520.5.2(2) for culvert pipes described above. No extra pay items will be added for the substitution of foundation backfill for trench backfill.

Ner-520-010 (20190719)

18. Survey Monument Coordination.

The contractor is to notify the Northeast Regional Survey Coordinator, Cormac McInnis, (920) 492-5638, at least 30 days before the beginning of construction activities. The Regional Survey Coordinator will then make the arrangements to have the Public Land Survey Monument and Landmark Reference Monuments tied out.

After the majority of construction is complete (before restoration) the contractor is again to notify the Survey Coordinator that the site is ready for the replacement of the monuments. The Survey Coordinator will then make arrangements to have the Public Land Survey Monument and Landmark Reference Monuments reset.

ner-621-010 (20171213)

19. Field Office.

Add the following to standard spec 642:

For field offices without indoor handwashing facilities, provide and maintain a portable handwashing station at every project field office. The station shall include a hands-free sink with foot pump-operated faucet, soap dispenser, paper towel dispenser, fresh water supply, and collection tank for gray water. When daily low temperatures fall below 40 degrees F, provide a hand sanitizing station consisting of lotion and/or wipes inside the field office within 2 feet of the field office entry. Regularly service and maintain the stations and all supplies as needed, and properly dispose of all materials. Costs associated with the handwashing station are incidental to the field office bid item.

stp-642-010 (20210113)

20. Traffic Control.

Perform this work conforming to standard spec 643, and as the plans show, or as the engineer approves, except as follows.

Submit to engineer for approval a detailed traffic control plan for any changes to the proposed traffic control detail as the plans show. Submit this plan 10 days before the preconstruction conference.

The turning of traffic control devices when not in use to obscure the message will not be allowed under this contract.

Obtain prior approval from the engineer for the location of egress and ingress for construction vehicles to prosecute the work.

Conduct operations in such a manner that causes the least interference and inconvenience to the free flow of vehicles on the roadways. This includes the following:

Do not park or store any vehicle, piece of equipment, or construction materials on the right-of-way, unless otherwise specified in the traffic control article or without approval of the engineer.

All construction vehicles and equipment entering or leaving live traffic lanes shall yield to through traffic.

Equip all vehicles and equipment entering or leaving the live traffic lanes with a hazard identification beam (flashing yellow signal) capable of being visible on a sunny day when viewed without the sun directly on or behind the device from a distance of 1000 feet. Activate the beam when merging into or exiting a live traffic lane.

Do not disturb, remove or obliterate any traffic control signs, advisory signs, shoulder delineators or beam guard in place along the traveled roadways without the approval of the engineer. Immediately repair or replace any damage done to the above during the construction operations at contractor expense.

The traffic requirements are subject to change at the direction of the engineer in the event of an emergency.

ner-643-065 (20190410)

21. Pavement Marking and Centerline Rumble Strip/Type 2 Rumble Strip.

Before installing Centerline Rumble Strips place centerline Temporary Marking Line (Epoxy) 4-Inch.

Before installing Type 2 Rumble Strips place edgelines Temporary Marking Line (Epoxy) 4-Inch. Except

where removed with the rumble application, do not remove the centerline/edgeline Temporary Marking Line (Epoxy) 4-Inch. After the Centerline Rumble Strips or Type 2 Rumble Strips have been installed, place permanent centerline/edgeline Marking Line (Epoxy) 4-Inch.

ner-646-001 (20180205)

22. Foundation Backfill, Item SPV.0035.01.

A Description

This special provision describes providing foundation backfill that conforms to standard spec 520.

B Materials

Furnish Foundation Backfill according to standard spec 520.2.5.2.

C Construction

Place foundation backfill in layers no more than 8 inches thick after compaction to the top of the subgrade. Mechanically compact the entire length of each layer to the same degree as the material abutting the trench.

D Measurement

The department will measure Foundation Backfill by the cubic 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.0035.01	Foundation Backfill	CY

Payment is full compensation for placing, shaping and compacting.

ner-520-025 (20190409)

23. HMA Pavement Percent Within Limits (PWL) QMP, Core Pilot Project; Incentive Density PWL HMA Pavement, Item SPV.0055.01; Incentive Air Voids HMA Pavement SPV.0055.02.

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 contract, 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 according to 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 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 special provision 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, discard the QC sample and test a split of the QV sample.

(3) Perform sampling from the truck box and three-part splitting of HMA samples according to 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. Label samples according to 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 according to AASHTO T 30
- Asphalt content (AC) in percent determined by ignition oven method according to AASHTO T 308 as modified in CMM 8-36.6.3.6, chemical extraction according to AASHTO T 164 Method A or B, or automated extraction according to ASTM D8159 as modified in CMM 8-36.6.3.1.
- Bulk specific gravity (Gmb) of the compacted mixture according to AASHTO T 166 as modified in CMM 8-36.6.5.
- Maximum specific gravity (Gmm) according to AASHTO T 209 as modified in CMM 8-36.6.6.
- Air voids (V_a) 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 as part of the contract. Add a random sample for any fraction of 750 tons at the end of production for a specific mixture design. 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 according to 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 ^[1]	-0.3	-0.5
V _a		- 1.5 & +2.0
VMA in percent ^[2]	- 0.5	-1.0

^[1] The department will not adjust pay based on 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.

^[2] 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 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 HMA mixtures.

(2) Under departmental observation, a contractor TMS technician shall 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 make an organizational chart available 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 furnish 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. The department will retain samples until surpassing the analysis window of up to 5 lots, as defined in 460.2.8.3.1.7(2) of this special provision. 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 as modified in CMM 8-36.6.5.
- Maximum specific gravity (Gmm) according to AASHTO T 209 as modified in CMM 8-36.6.6.
- 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 determined by ignition oven method according to AASHTO T 308 as modified in CMM 8-36.6.3.6, chemical extraction according to AASHTO T 164 Method A or B, or automated extraction according to ASTM D8159 as modified in CMM 8-36.6.3.1.

(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 4th and 5th 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 contract (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 lot in the analysis window with a QV test result furthest from the QV mean (not necessarily the subplot identifying that variances or means do not compare) will be referee tested by the bureau's AASHTO accredited laboratory and certified personnel. All previous lots within the analysis window are subject to referee testing and regional lab testing as deemed necessary. 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 assess a pay reduction for the additional testing of the remaining 4 sublots at \$2,000/lot under the HMA Regional Lab 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 pay for 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 department will assess a pay reduction for the additional referee testing at \$2,000/lot 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 data, and inspecting the completed pavement according to the 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 and those test results used for analysis. 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 will 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 by Cores

- (1) For mainline pavement, PWL density determination will be by cores. Full-width passing lanes, turn lanes, or auxiliary lanes must be 1500 lane feet or greater to be eligible for PWL density determination. Shoulder and appurtenance density will be by nuclear density gauge according to 460.3.3.2.1(5).
- (2) Sublots are typically 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. A partial quantity less than 750 lane feet will be included with the previous subplot.
- (3) A typical lot consists of 5 sublots. Partial lots with less than three sublots will be included in 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.
- (4) 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.

460.3.3.2.2 Density Determination by Cores

- (1) Core the pavement at one random location, determined by the engineer, per subplot. Each core location will represent the entire length and width of the subplot.
- (2) Under the direct observation of the engineer, cut 100 or 150 mm (4 or 6 inch) diameter cores. Cores will be cut by the next working day not to exceed 48 hours after placement. Prepare cores and determine density according to AASHTO T166 as modified in CMM 8-36.6.5. Dry cores after testing. Fill core holes according to Appendix A and obtain engineer approval before opening to traffic. The department will maintain custody of cores throughout the entire sampling and testing process. The department will label cores, transport cores to testing facilities, witness testing, store dried cores, and provide subsequent verification testing.
- (3) If a core is damaged at the time of coring, immediately take a replacement core 1 foot ahead of the existing testing location in the direction of traffic at the same offset as the damaged core. If a core is damaged during transport, record it as damaged and notify the engineer immediately.

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

460.3.3.3 Data Analysis for Density

- (1) The department will determine mixture density conformance and acceptability by analyzing test results, reviewing mixture data, and inspecting the completed pavement according to standard spec, this special provision, and accompanying Appendix A.
- (2) Core data for each lot will be used by the department for PWL and pay adjustment calculation.
- (3) 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 will 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 as specified in 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.
- iv. Unacceptable material identified by core density will be removed and replaced or paid at 50% of the contract unit price on a subplot basis.

460.3.3.3.1 Analysis of Core Density Data

(1) As random density locations are paved, the core data will be recorded in the HMA PWL Production Spreadsheet for analysis in chronological order. Each lot will contain core density data from a single HMA mixture type placed over a specific underlying material. Upon the completion of each lot the core data will be used for PWL and pay adjustment calculations.

(2) The department reserves the right to verify the density of any core and the department's result may be used for PWL and pay adjustment calculations, at the discretion of the engineer.

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 in this special provision.

E Payment

Replace standard spec 460.5.2 HMA Pavement with the following:

460.5.2 HMA Pavement

460.5.2.1 General

(1) 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.

(2) 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

(1) Pay adjustments will be calculated using 65 dollars per ton of HMA pavement. The HMA PWL Production Spreadsheet, including data, will be made available 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 according to the HMA PWL Production Spreadsheet:

PAY FACTOR FOR HMA PAVEMENT AIR VOIDS & DENSITY

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

where PF is calculated per air voids and density, denoted PF_{air voids} & PF_{density}

^[1] 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 according to standard spec Table 460-3. Pay adjustment will be determined on a lot basis and will be computed as shown in the following equation.

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

*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_{air voids}) and density (PF_{density}) will be determined. PF_{air voids} will be multiplied by the total tonnage placed (i.e., from truck tickets), and PF_{density} will be multiplied by the calculated tonnage used to pave the mainline only (i.e., traffic lanes excluding shoulder) as determined according to Appendix A.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0055.01	Incentive Density PWL HMA Pavement	DOL
SPV.0055.02	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 according to 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% ^[1]

^[1] 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 ASTM D8159 as modified in CMM 8-36.6.3.1.

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

24. Appendix A, Core Pilot Project.

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

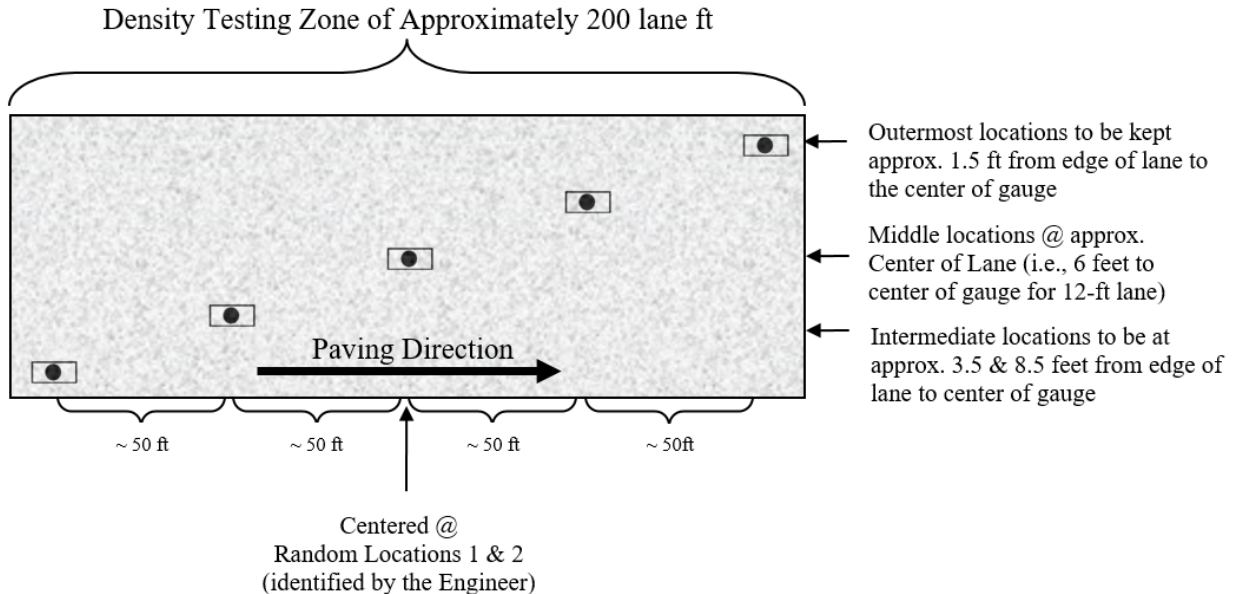



Figure 1: Nuclear/Core Correlation Location Layout

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) 1st one-minute reading and (b) 2nd 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 according to ASTM D 7227 prior to using specimens for in-place density determination according to AASHTO T 166 as modified by CMM 8-36.6.5.

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 ± 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 Determination for Main Production

For mainline density determination beyond the test strip, typical subplot lengths are 1500 lane feet and lots typically consist of 5 sublots. Partial lots with less than three sublots remaining at the end of the project will be included in the previous lot, by the engineer. 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.

Determination by Cores

For mainline density determination by cores, collect one core per subplot. Each core is tested for density according to AASHTO T166 as modified in CMM 8-36.6.5. Each core location is determined by the engineer using random numbers and represents the entire length and width of the subplot. The contractor is responsible for all work related to coring, testing of the cores, and filling of the core holes according to the guidance provided in the *WisDOT Procedure for Nuclear Gauge/Core Correlation – Test Strip* portion of this document. The engineer must always maintain custody of the cores during collection, transportation and testing. Figure 5 shows an example coring layout for a 12-foot-wide lane.

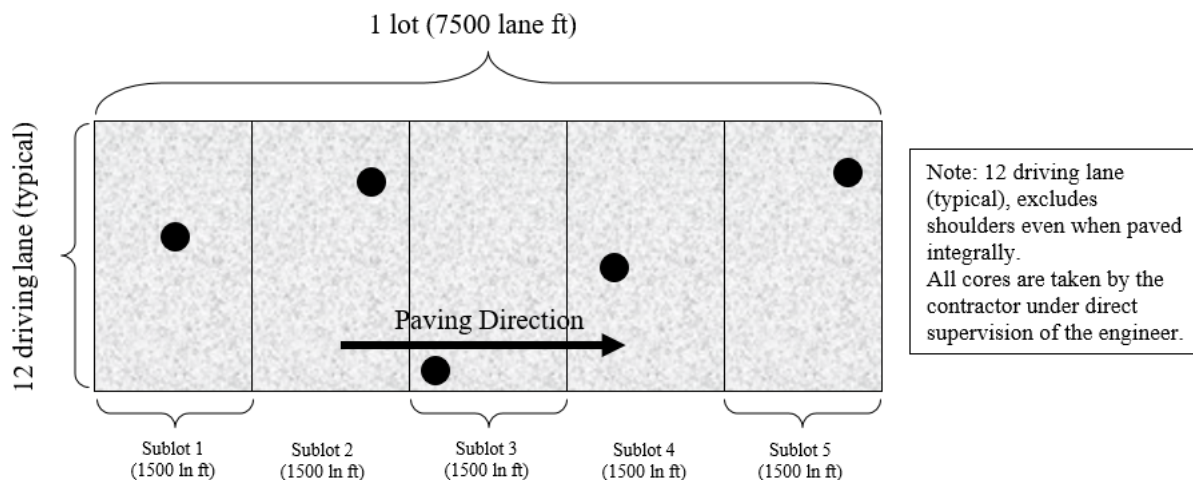


Figure 5: Example core density locations for traffic lanes

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 contract, 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 production for a contract 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 contract.

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 contract. 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 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 traffic 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:

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

**25. HMA Pavement Longitudinal Joint Density, Core Pilot Project;
Incentive Density HMA Pavement Longitudinal Joints, Item SPV.0055.03.**

A Description

This special provision incorporates longitudinal joint density requirements into the contract and describes the data collection, acceptance, and procedure used for determination of pay adjustments for HMA pavement longitudinal joint density. Pay adjustments will be made on a linear foot basis, as applicable per pavement layer and paving lane. Applicable longitudinal joints are defined as those between any two or more traffic lanes including full-width passing lanes, turn lanes, or auxiliary lanes more than 1,500 lane feet, and those lanes must also include the 460.2005 Incentive Density PWL HMA Pavement bid item. This excludes any joint with one side defined as a shoulder and ramp lanes of any length. If echelon paving is required in the contract, the longitudinal joint density specification shall not apply for those joints. Longitudinal joints placed during a test strip will be tested for information only to help ensure the roller pattern will provide adequate longitudinal joint density during production. Longitudinal joint density test results collected during a test strip are not eligible for pay adjustment.

Pay is determined according to standard spec 460, HMA Pavement Percent Within Limits QMP special provisions, and as modified within.

B Materials

Compact all applicable HMA longitudinal joints to the appropriate density based on the layer, confinement, and mixture type shown in Table B-1.

TABLE B-1 MINIMUM REQUIRED LONGITUDINAL JOINT DENSITY

Layer	Percent of Target Maximum Density			
	Unconfined		Confined	
	LT and MT	HT	LT and MT	HT
Lower (on crushed/recycled base)	88	89	89.5	90.5
Lower (on Concrete/HMA)	90	90	91.5	91.5
Upper	90	90	91.5	91.5

C Construction

Add the following to standard spec 460.3.3.2:

- (5) Establish companion density locations at each applicable joint. Each companion location shares longitudinal stationing with a QV density location within each subplot and is located transversely with the center of the core 6-inches from the final joint edge of the paving area. Sublot and lot numbering remains the same as mainline densities, however, in addition to conventional naming, joint identification must clearly indicate "M" for inside/median side of lane or "O" for outside shoulder side of lane, as well as "U" for an unconfined joint or "C" for a confined joint (e.g., XXXXX-MC or XXXXX-OU).
- (6) Each joint will be measured, reported, and accepted under methods, testing times, and procedures consistent with the program employed for mainline density, i.e., PWL.
- (7) For single density test results greater than 3.0% below specified minimums per Table B-1 herein, perform the following:
 - a) Testing at 50-foot increments both ahead and behind the unacceptable site
 - b) Continued 50-foot incremental testing until test values indicate higher than or equal to -3.0 percent from target joint density.
 - c) Materials within the incremental testing indicating lower than -3.0 percent from target joint density are defined as unacceptable and will be handled with remedial action as defined in the payment section of this document.

- d) The remaining subplot average (exclusive of unacceptable material) will be determined by the first forward and backward 50-foot incremental tests that reach the criteria of higher than or equal to -3.0 percent from target joint density.

Note: If the 50-foot testing extends into a previously accepted subplot, remedial action is required up to and inclusive of such material; however, the results of remedial action must not be used to recalculate the previously accepted subplot density. When this occurs, the lane feet of any unacceptable material will be deducted from the subplot in which it is located, and the previously accepted subplot density will be used to calculate pay for the remainder of the subplot.

- (8) Joint density measurements will be kept separate from all other density measurements and entered as an individual data set into Atwood Systems.
- (9) Placement and removal of excess material outside of the final joint edge, to increase joint density at the longitudinal joint testing location, will be done at the contractor's discretion and cost. This excess material and related labor will be considered waste and will not be paid for by the department. Joints with excess material placed outside of the final joint edge to increase joint density or where a notched wedge is used will be considered unconfined joints.
- (10) When not required by the contract, echelon paving may be performed at the contractor's discretion to increase longitudinal joint density and still remain eligible to earn incentive. The additional costs incurred related to echelon paving will not be paid for by the department. If lanes are paved in echelon, the contractor may choose to use a longitudinal vertical joint or notched wedge longitudinal joint as described in [SDD 13c19 HMA Longitudinal Joints](#). Lanes paved in echelon shall be considered confined on both sides of the joint regardless of the selected joint design. The joint between echelon paved lanes shall be placed at the centerline or along lane lines.
- (11) When performing inlay paving below the elevation of the adjacent lane, the longitudinal joint along the adjacent lane to be paved shall be considered unconfined. Inlay paving operations will limit payment for additional material to 2 inches wider than the final paving lane width at the centerline.

D Measurement

- (1) The department will measure each side of applicable longitudinal joints, as defined in Section A of this special provision, by the linear foot of pavement, acceptably placed. Measurement will be conducted independently for the inside or median side and for the outside or shoulder side of paving lanes with two applicable longitudinal joints. Each paving layer will be measured independently at the time the mat is placed.

E Payment

Add the following as 460.5.2.4 Pay Adjustment for HMA Pavement Longitudinal Joint Density:

- (1) The department will administer longitudinal joint density adjustments under the Incentive Density HMA Pavement Longitudinal Joints and Disincentive Density HMA Pavement Longitudinal Joints items. The department will adjust pay based on density relative to the specified targets in Section B of this special provision, and linear foot of the HMA Pavement bid item for that subplot as follows:

PAY ADJUSTMENT FOR HMA PAVEMENT LONGITUDINAL JOINT DENSITY

PERCENT SUBLOT DENSITY	PAY ADJUSTMENT PER LINEAR FOOT
ABOVE/BELOW SPECIFIED MINIMUM	
Equal to or greater than +1.0 confined, +2.0 unconfined	\$0.40
From 0.0 to +0.9 confined, 0.0 to +1.9 unconfined	\$0
From -0.1 to -1.0	\$(0.20)
From -1.1 to -2.0	\$(0.40)
From -2.1 to -3.0	\$(0.80)
More than -3.0	REMEDIAL ACTION ^[1]

^[1] Remedial action must be approved by the engineer and agreed upon at the time of the pre-pave meeting and may include partial sublots as determined and defined in 460.3.3.2(7) of this document. If unacceptable material is removed and replaced per guidance by the engineer, the removal and replacement will be for the full lane width of the side of which the joint was constructed with unacceptable material.

- (2) The department will not assess joint density disincentives for pavement placed in cold weather because of a department-caused delay as specified in [standard spec 450.5.2\(3\)](#).
- (3) The department will not pay incentive on the longitudinal joint density if the traffic lane is in disincentive. A disincentive may be applied for each mainline lane and all joint densities if both qualify for a pay reduction.

The department will pay incentive for longitudinal joint density under the following bid items:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0055.03	Incentive Density HMA Pavement Longitudinal Joints	DOL

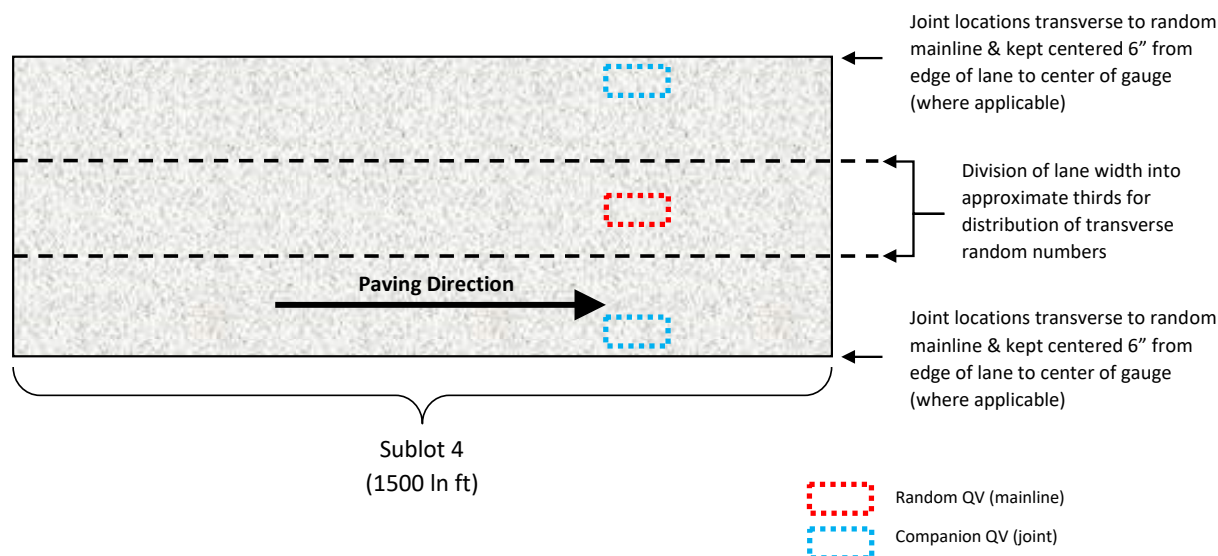
The department will administer disincentives under the Disincentive Density HMA Pavement Longitudinal Joints administrative item.

Appendix

WisDOT Longitudinal Joint – Gauge Density Layout

Each QV density location must have a companion density location at any applicable joint. This companion location must share longitudinal stationing with each QV density location and be located transversely with the center of the core 6-inches from the edge of the paving area.

For HMA Pavement Percent Within Limits QMP projects, this appears as follows:



Further Explanation of **PAY ADJUSTMENT FOR HMA PAVEMENT LONGITUDINAL JOINT DENSITY**
Table

	Confined				Pay Adjust
	Lower Layer (On Base)		Upper Layer		
	LT/MT	HT	LT/MT	HT	
Mainline Target (SS 460-3)	91.0	92.0	93.0	93.0	-
Confined Target (mainline - 1.5)	89.5	90.5	91.5	91.5	-
Equal to or greater than +1.0	≥ 90.5	≥ 91.5	≥ 92.5	≥ 92.5	\$0.40
From 0.0 to +0.9	90.4 - 89.5	91.4 - 90.5	92.4 - 91.5	92.4 - 91.5	\$0
From -0.1 to -1.0	89.4 - 88.5	90.4 - 89.5	91.4 - 90.5	91.4 - 90.5	(\$0.20)
From -1.1 to -2.0	88.4 - 87.5	89.4 - 88.5	90.4 - 89.5	90.4 - 89.5	(\$0.40)
From -2.1 to -3.0	87.4 - 86.5	88.4 - 87.5	89.4 - 88.5	89.4 - 88.5	(\$0.80)
More than -3.0	< 86.5	< 87.5	< 88.5	< 88.5	REMEDIAL ACTION

	Unconfined				Pay Adjust
	Lower Layer (On Base)		Upper Layer		
	LT/MT	HT	LT/MT	HT	
Mainline Target (SS 460-3)	91.0	92.0	93.0	93.0	-
Unconfined Target (Mainline -3.0)	88.0	89.0	90.0	90.0	-
Equal to or greater than +2.0	≥ 90.0	≥ 91.0	≥ 92.0	≥ 92.0	\$0.40
From 0.0 to +1.9	89.9 - 88.0	90.9 - 89.0	91.9 - 90.0	91.9 - 90.0	\$0
From -0.1 to -1.0	87.9 - 87.0	88.9 - 88.0	89.9 - 89.0	89.9 - 89.0	(\$0.20)
From -1.1 to -2.0	86.9 - 86.0	87.9 - 87.0	88.9 - 88.0	88.9 - 88.0	(\$0.40)
From -2.1 to -3.0	85.9 - 85.0	86.9 - 86.0	87.9 - 87.0	87.9 - 87.0	(\$0.80)
More than -3.0	< 85.0	< 86.0	< 87.0	< 87.0	REMEDIAL ACTION

26. Grading, Shaping and Finishing Culvert Pipes and Apron Endwalls, Item SPV.0060.01.

A Description

Grade, Shape and Finish Culvert Pipes and Apron Endwalls outside of the shoulder point as the plans show and as follows.

B Materials

Furnish materials conforming to the following:

Common excavation and material disposal.....	205.2
Borrow	208.2
Topsoil	625.2
Mulch	627.2
Erosion mat.....	628.2
Fertilizer	629.2
Seeding.....	630.2

C Construction

Grade, shape and finish embankments slopes for apron endwalls and culvert pipes at the locations the plan show. Construct as plans show and engineer directs conforming to the following:

Common excavation and material disposal.....	205.3
Borrow	208.3
Topsoil	625.3
Mulch	627.3
Erosion mat.....	628.3
Fertilizer	629.3
Seeding.....	630.3

D Measurement

The department will measure Grading, Shaping and Finishing Culvert Pipes and Apron Endwalls as a unit for each endwall or culvert end, 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.0060.01	Grading, Shaping and Finishing Culvert Pipes and Apron Endwalls	EACH

Payment is full compensation for all, borrow, topsoil, erosion mat, mulch, fertilizer and seeding when culvert pipes and endwalls are out of the contract grading limits. If the work specified above falls within the contract grading limits, the department will pay separately for that work under the excavation, borrow, topsoil, erosion mat, mulch, fertilizer and seeding bid items.

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ADDITIONAL SPECIAL PROVISION 4

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.

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 is not allowed to withhold 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.

Additional Special Provision 6**ASP 6 - Modifications to the standard specifications**

Make the following revisions to the standard specifications:

102.1 Prequalifying Bidders

Replace paragraph two with the following effective with the October 2020 letting:

- (2) Furnish a dated prequalification statement on the department's form at least 10 business days before the time set for the letting to close.

102.6 Preparing the Proposal

Replace the entire text with the following effective with the October 2020 letting:

102.6.1 General

- (1) Submit completed proposals on the department's bidding proposal described in 102.2. Submit legible information only. Write everything in ink, by typewriter, or by computer-controlled printer. Provide all dollar amounts in dollars and cents, in numerals. Attach all addenda to the submitted proposal.
- (2) Properly execute the proposal. Place the required signatures, in ink, in the space provided on the bidding proposal as indicated below:

ENTITY SUBMITTING PROPOSALREQUIRED SIGNATURE

Individual The individual or a duly authorized agent.

Partnership A partner or a duly authorized agent.

Joint venture A member or a duly authorized agent of at least one of the joint venture firms.

Corporation An authorized officer or duly authorized agent of the corporation. Also show the name of the state chartering that corporation and affix the corporate seal.

Limited liability company A manager, a member, or a duly authorized agent.

- (3) Instead of using the schedule of items provided on the department's bidding proposal, the bidder may submit a substitute schedule with the proposal. Use a format for the substitute schedule conforming to the department's guidelines for approval of a bidder-generated schedule of items. Obtain the department's written approval before using a substitute schedule.
- (4) Provide a unit price for each bid item listed in the schedule of items. Calculate and show, in the bid amount column, the products of the respective unit prices and quantities. For a lump sum bid item, show the same price in the unit price column and in the bid amount column pertaining to that bid item. Show the total bid obtained by adding the values entered in the bid amount column for the listed bid items.
- (5) If a unit price or lump sum bid already entered in the proposal needs to be altered, cross out the entered unit price or lump sum bid with ink or typewriter and enter the new price above or below and initial it in ink.
- (6) A change that the bidder makes in the proposal is not an alteration if the bidder makes that change as directed in a specific instruction contained in an addendum.

102.6.2 Disadvantaged Business Enterprise (DBE) Commitment

- (1) Before the letting is closed, submit the following documentation for proposals with a DBE goal:
1. Commitment to subcontract to DBE on department form DT1506.
 2. Attachment A for each subcontractor listed on the DT1506.
 3. If the DBE goal is not attained, certificate of good faith efforts on department form DT1202.
- (2) Within 24 hours after the letting is closed, email all supplemental documentation for the DT1202 verifying efforts made to attain the DBE goal to DBE_Alert@dot.wi.gov.

102.7.3 Department Will Reject

Replace paragraph one with the following effective with the January 2021 letting:

- (1) Proposals are irregular and the department will reject and will not post them if the bidder:
 1. Does not furnish the required proposal guaranty in the proper form and amount as specified in 102.8.
 2. Does not submit a unit price for each bid item listed, except for lump sum bid items where the bidder may show the price in the bid amount column for that bid item.
 3. Includes conditions or qualifications not provided for in the department-supplied bidding proposal.
 4. Submits a bid on a bidding proposal issued to a different bidder without obtaining departmental authorization to do so.
 5. Submits a bid that contains unauthorized revisions in the name of the party to whom the bidding proposal was issued.
 6. Submits a schedule of items with illegibly printed bid item numbers, descriptions, or unit prices.
 7. Submits a schedule of items for the wrong contract.
 8. Submits a bidder-generated schedule of items with an incorrect bid item number and incorrect description for a single bid item.
 9. Omits a bid item or bid items on a bidder-generated schedule of items.
 10. Submits a materially unbalanced bid.
 11. Does not sign the proposal.
 12. Does not submit the DBE forms and required supplemental documentation of the good faith efforts as specified in 102.6.2.

102.12 Public Opening of Proposals

Replace paragraph one with the following effective with the October 2020 letting:

- (1) The letting will close at the time and place indicated in the notice to contractors. The department will publicly open and post the total bid for each proposal on the Bid Express web site beginning at noon on the day after the letting is closed except as specified in 102.7.3 and 102.8. If a proposal has no total bid shown, the department will not post the bid. After verification for accuracy under 103.1, the department will post bid totals on the HCCI web site.

<https://wisconsin.gov/Pages/doing-business/contractors/hcci/bid-let.aspx>

103.1 Consideration of Proposals

Replace paragraph one with the following effective with the October 2020 letting:

- (1) Following the public opening of the proposals received, the department will compare them based on the summation of the products of the quantities of work listed and the contract unit prices offered. In case of discrepancies, errors, or omissions, the department will make corrections as specified in 102.7.1. In awarding contracts, the department, in addition to considering the amounts stated in the proposals, may consider one or more of the following:
 1. The responsibility of the various bidders as determined from a study of the data required under 102.1.
 2. The responsiveness of the bid as determined under 102.6.
 3. Information from other investigations that the department may make.

107.17.1 General

Replace paragraph four with the following effective with the November 2020 letting:

- (4) Comply with the railroad's rules and regulations regarding operations on or near the railroad right-of-way as follows:
 - When working on the railroad right-of-way.
 - When working within 25 feet of the track centerline or adjacent facilities, including equipment or extensions of equipment that can fall within 25 feet of the track centerline or adjacent facilities.

If the railroad's chief engineering officer requires, arrange with the railroad to obtain the services of qualified railroad employees to protect railroad traffic through the work area. Bear the cost of these services and pay the railroad directly. Notify the railroad's representative, specified in the project special provisions, in writing at least 40 business days before starting work near a track. Provide the specific time planned to start the operations.

109.6.3.3 Retainage

Delete paragraph two effective with the December 2020 letting:

450.2.1 Acronyms and Definitions

Add the following definitions to 450.2.1(2) effective with the November 2020 letting:

Butt Joint	A transverse joint between existing and newly paved surfaces, formed by milling or sawing a vertical notch into the existing surface and then paving against the notch.
Echelon Paving	Paving two or more adjacent lanes with adjacent pavers offset from each other by 200 feet or less.
Notched Wedge Joint	A longitudinal joint consisting of a wedge placed at the edge of the initially paved lane with an overlapping wedge placed on the subsequent lane.
Tandem Paving	Paving two or more adjacent lanes with adjacent pavers offset from each other by more than 200 feet.
Vertical Joint	A longitudinal joint between 2 paved lanes with a vertical or nearly vertical interface between the adjacent mats.

450.3.2.8 Jointing

Replace paragraph two with the following with the November 2020 letting:

- (2) Where placing against existing HMA pavement, saw or mill the existing mat to form a full-depth joint.

Replace paragraphs five and six with the following effective with the November 2020 letting:

- (5) At the prepave meeting, submit documentation to the engineer that includes the brand name and model of each extruding and compacting device proposed for notched wedge joint construction. Alternatively, submit pictures of fabricated wedging and compacting devices. Do not use devices before engineer approval.
- (6) For notched wedge joints, construct and shape the wedge for each layer using the engineer-approved extruding device and compacting device that will provide a uniform slope and will not restrict the main screed. Compact the wedge with a weighted roller wheel or vibratory plate compactor the same width as the wedge. Clean and apply tack coat to the wedge surface and both notches before placing the adjacent lane.
- (7) For butt and vertical joints, clean and apply tack coat to promote bonding and seal the joint.
- (8) If paving in echelon, the contractor may use a vertical or notched wedge joint. Joints paved in echelon need not be tack coated.

460.2.2.3 Aggregate Gradation Master Range

Replace table 460-1 with the following effective with the November 2020 letting:

TABLE 460-1 AGGREGATE GRADATION MASTER RANGE AND VMA REQUIREMENTS

SIEVE	PERCENT PASSING DESIGNATED SIEVES							
	NOMINAL SIZE							
	No. 1 (37.5 mm)	No. 2 (25.0 mm)	No. 3 (19.0 mm)	No. 4 (12.5 mm)	No. 5 (9.5 mm)	No. 6 (4.75 mm)	SMA No. 4 (12.5 mm)	SMA No. 5 (9.5 mm)
50.0-mm	100							
37.5-mm	90 - 100	100						
25.0-mm	90 max	90 - 100	100					
19.0-mm	—	90 max	90 - 100	100			100	
12.5-mm	—	—	90 max	90 - 100	100		90 - 97	100
9.5-mm	—	—	—	90 max	90 - 100	100	58 - 80	90 - 100
4.75-mm	—	—	—	—	90 max	90 - 100	25 - 35	35 - 45
2.36-mm	15 - 41	19 - 45	23 - 49	28 - 58	32 - 67	90 max	15 - 25	18 - 28
1.18-mm	—	—	—	—	—	30 - 55	—	—
0.60-mm	—	—	—	—	—	—	18 max	18 max
0.075-mm	0 - 6.0	1.0 - 7.0	2.0 - 8.0	2.0 - 10.0	2.0 - 10.0	6.0 - 13.0	8.0 - 11.0	8.0 - 12.0
% VMA	11.0 min	12.0 min	13.0 min	14.0 min ^[1]	15.0 min ^[2]	16.0 - 17.5	16.0 min	17.0 min

^[1] 14.5 for LT and MT mixes.

^[2] 15.5 for LT and MT mixes.

522.2 Materials

Replace paragraph three with the following effective with the January 2021 letting:

- (3) Manufacture precast reinforced concrete pipe, cattle pass, and apron endwalls in a plant listed under precast concrete fabricators on the APL. Conform to the specified AASHTO standard materials requirements except as follows:
- The contractor may use cement conforming to 501.2.1 or may substitute for portland cement at the time of batching conforming to 501.2.6 for fly ash, 501.2.7 for slag, or 501.2.8 for other pozzolans. In either case the maximum total supplementary cementitious content is limited to 30 percent of the total cementitious content by weight.

532.2.1 General

Replace paragraph one with the following effective with the November 2020 letting:

- (1) Furnish structural steel conforming to ASTM as follows:

<= 1/2 inch thick structural tube and pipe ASTM A500 grade C
 > 1/2 inch thick structural tube and pipe API 5L PSL 2 grade 46 or ASTM 1085
 Tapered vertical supports ASTM A595 grade A or ASTM A572 grade 55
 Multi-sided or greater than 26-inch diameter round tapered poles ASTM A572 grade 65
 Structural angles and plates ASTM A709 grade 36

532.3.8 Acceptance and Inspection

Add the following new subsection effective with the November 2020 letting:

532.3.8 Acceptance and Inspection

- (1) Demonstrate to the engineer that electrical and mechanical systems for each high mast tower installation are fully operational. The department will not accept an installation until the engineer is satisfied that it functions properly.
- (2) Inspect completed "S" or "L" designated structures before opening to public traffic conforming to the BOS structure inspection manual part 4 for sign, signal, and high mast towers available at:

<https://wisconsindot.gov/Pages/doing-bus/eng-consultants/cnslt-rsrcs/strct/inspection-manual.aspx>

Ensure that a department-certified active team leader for sign/signal inspections, listed on the department's highway structures information system (HSIS) website, performs inspections. Conform to the following:

- Notify the engineer at least 5 business days before inspection.
- Ensure that the team leader performing inspections submits the signed inspection reports and provides punch list items as maintenance items in the inspection report to the engineer within one business day after completing each inspection. Submit that signed final inspection report to the engineer and HSIS at:

<https://wisconsindot.gov/Pages/doing-bus/eng-consultants/cnslt-rsrcs/strct/hsi.aspx>

- Notify the engineer and region ancillary structure project manager upon completion of the punch list items.

550.2.1 Steel Piles and Pile Shells

Replace paragraph three with the following effective with the November 2020 letting:

- (3) For steel pipe sections and steel pile shells for cast-in-place concrete piles, use ASTM A252 grade 3 steel.

608.2.1 Pipe

Replace paragraph three with the following effective with the January 2021 letting:

- (3) Manufacture precast reinforced concrete pipe for storm sewer in a plant listed under precast concrete fabricators on the APL. Conform to the specified AASHTO materials requirements for the class of precast concrete pipe specified except as follows:
 - The contractor may use cement conforming to 501.2.1 or may substitute for portland cement at the time of batching conforming to 501.2.6 for fly ash, 501.2.7 for slag, or 501.2.8 for other pozzolans. In either case the maximum total supplementary cementitious content is limited to 30 percent of the total cementitious content by weight.

611.2 Materials

Replace paragraph three with the following effective with the January 2021 letting:

- (3) For precast structures conform to AASHTO M199 for circular structures and ASTM C913 for square and rectangular structures. Manufacture in a plant listed under precast concrete fabricators on the APL. Conform to the specified AASHTO materials requirements for the structure specified except as follows:
 - Use concrete with 4700 pounds or more cementitious material per cubic yard.
 - The contractor may use cement conforming to 501.2.1 or may substitute for portland cement at the time of batching conforming to 501.2.6 for fly ash, 501.2.7 for slag, or 501.2.8 for other pozzolans. In either case the maximum total supplementary cementitious content is limited to 30 percent of the total cementitious content by weight.
 - For wet cast use air-entrained concrete with 7.0 percent +/- 1.5 percent air content.

614.3.2.1 Installing Posts

Replace paragraphs four and five with the following effective with the December 2020 letting:

- (4) For bid items 614.0220, 0230, and 2500; do not trim posts before installation and mark one face of each post as follows:

- Draw an embedment depth line.
- Above the embedment line, write the post length.
- Posts 3 through 8 of bid item 614.0220 do not require marking.

Install posts with the markings on the roadway side. Ensure the markings remain on the posts until guardrail final acceptance.

- (5) Ensure that posts are at least the minimum length and minimum embedment the plans show before cutting post tops to the finished elevation. After installation, the engineer may direct the contractor to remove and re-install up to 5% of the posts to verify they were placed to the required plan depth. If a post is embedded less than the required plan depth, the engineer may direct additional sampling. Re-install sampled posts at the locations and to the depths the plans show. Replace posts and other components that are damaged during sampling.
- (6) Provide offset block-mounted reflectors as the plans show.

650.3.7 Structure Layout Staking

Replace the entire text with the following effective with the January 2021 letting:

- (1) Set construction stakes or marks on a line offset from the structure centerline or on a reference line, whichever is appropriate, for both roadway and substructure units. Establish the plan horizontal and vertical positions to the required accuracy. Also, set and maintain stakes and marks as necessary to support the method of operations. Locate stakes and marks to within 0.02 feet of the true horizontal position, and establish the grade elevation to within 0.01 feet of true vertical position.
- (2) For girder bridges, the department will compute deck grades with contractor-supplied girder elevation data.
- (3) For slab span bridges, the department will compute slab grades using contractor-supplied falsework settlement and deflection data at tenth points along slab edges, the crown, and reference line locations. Before releasing falsework, survey top-of-slab elevations at the centerline of the abutments and at the 5/10th point along slab edges, the crown, and reference line locations to verify the camber.

710.2 Small Quantities

Replace paragraph one with the following effective with the November 2020 letting:

- (1) For contracts with only small quantities of material subject to testing, as defined under specific contract QMP provisions, modify the requirements of 710 as follows:
1. The contractor may submit an abbreviated quality control plan as allowed in 701.1.2.3.
 2. The engineer may accept aggregate based on documented previous testing and non-random start-up gradation testing as allowed in 710.5.6.1.

710.4 Concrete Mixes

Replace paragraph two with the following effective with the January 2021 letting:

- (2) At least 3 business days before producing concrete, document that materials conform to 501 unless the engineer allows or individual QMP specifications provide otherwise. Include the following:
1. For mixes: quantities per cubic yard expressed as SSD weights and net water, water to cementitious material ratio, and air content.
 2. For cementitious materials and admixtures: type, brand, and source.
 3. For aggregates: absorption, SSD bulk specific gravity, wear, soundness, freeze thaw test results if required, and air correction factor. Also include proposed combined gradation limits and target individual gradations, including P200 limits..

710.5.6 Aggregate Testing

Replace the entire text with the following effective with the January 2021 letting:

710.5.6.1 General

- (1) Test aggregate gradations during concrete production. The department will accept non-random start-up testing during concrete production for the following:
 - Small quantities, as defined in 715.1.1.2, of class I concrete placed under 715.
 - Less than 400 cubic yards of class II ancillary concrete placed under the contract.

710.5.6.2 Gradation Testing During Concrete Production

- (1) Test aggregate gradation during concrete production batching either at a central mix batch plant or at a ready mix plant. The contractor's concrete production QC tests can be used for the same mix design on multiple contracts.
- (2) Conform to combined gradation limits either calculated using department form WS3012 or custom limits approved as a part of the contractor's quality control plan. For class II concrete, also conform to the additional combined gradation requirements specified for class I concrete in 715.2.2.
- (3) Determine the complete gradation using a washed analysis for both fine and coarse aggregates. Report results for the 1 1/2", 1", 3/4", 1/2", 3/8", #4, #8, #16, #30, #50, #100, and #200 sieves.
- (4) Contractor QC testing frequency is based on the cumulative plant production for each mix design across multiple WisDOT contracts.

TABLE 710-1 PLANT PRODUCTION QC GRADATION TESTING FREQUENCY

Daily Plant Production Rate for WisDOT Work	Minimum QC Frequency per Stockpile
250 cubic yards or less	one test per cumulative total of 250 cubic yards
more than 250 through 1000 cubic yards	one test per day
more than 1000 cubic yards	two tests per day

- (5) Department QV testing frequency is based on the quantity of each mix design placed under each individual WisDOT contract.

TABLE 710-2 CONTRACT PLACEMENT QV GRADATION TESTING FREQUENCY

Anticipated Daily Placement Rate Each WisDOT Contract	Minimum QV Frequency per Stockpile
less than or equal to 1000 cubic yards	one test per 5 days of placement
more than 1000 cubic yards	two tests per 5 days of placement

715.2.2 Combined Aggregate Gradation

Replace the entire text with the following effective with the January 2021 letting:

- (1) Ensure that the combined aggregate gradation conforms to the following, expressed as weight percentages of the total aggregate:
 1. One hundred percent passes the 2-inch sieve.
 2. For mixes containing size No. 2 stone, the percent passing the 1-inch sieve is less than or equal to 89. The engineer may waive this requirement if the clear spacing between reinforcing bars is less than 2 inches.
 3. The percent passing the No. 4 sieve is less than or equal to 42, except if the coarse aggregate is completely composed of crushed stone, up to 47 percent may pass the No. 4 sieve. For pavement, coarse aggregate may be completely composed of crushed concrete, in which case up to 47 percent may pass the No. 4 sieve.
 4. The percent passing the No. 200 sieve is less than or equal to 2.3 percent.

716.2.1 Class II Concrete

Replace paragraphs four through six with the following effective with the November 2020 letting:

- (4) Provide concrete with a 28-day compressive strength that equals or exceeds the following:
 - If the contract specifies f'_c , then f'_c .
 - If the contract does not specify f'_c , then 3000 psi.

ERRATA

101.3 Definitions

Adopt AASHTO change order definition.

Change order A written order to the contractor detailing changes to the specified work quantities or modifications within the scope of the original contract..

Delete existing contract change order, contract modification, and contract revision definitions.

460.2.7(1) HMA Mixture Design

Correct table 460-2 errata by eliminating plasticity index requirements for LT, MT, and HT mixes.

TABLE 460-2 MIXTURE REQUIREMENTS

Mixture type	LT	MT	HT	SMA
LA Wear (AASHTO T96)				
100 revolutions(max % loss)	13	13	13	13
500 revolutions(max % loss)	50	45	45	35
Soundness (AASHTO T104) (sodium sulfate, max % loss)	12	12	12	12
Freeze/Thaw (AASHTO T103 as modified in CMM 860.2.7) (specified counties, max % loss)	18	18	18	18
Fractured Faces (ASTM D5821 as modified in CMM 860.7.2) (one face/2 face, % by count)	65/___	75 / 60	98 / 90	100/90
Flat & Elongated (ASTM D4791) (max %, by weight)	5 (5:1 ratio)	5 (5:1 ratio)	5 (5:1 ratio)	20 (3:1 ratio)
Fine Aggregate Angularity (AASHTO T304, method A, min)	40 ^[1]	43 ^[1]	45	45
Sand Equivalency (AASHTO T176, min)	40	40 ^[2]	45	50
Clay Lumps and Friable Particle in Aggregate (AASHTO T112)	<= 1%	<= 1%	<= 1%	<= 1%
Plasticity Index of Material Added to Mix Design as Mineral Filler (AASHTO T89/90)				<= 4
Gyratory Compaction				
Gyrations for Nini	6	7	8	7
Gyrations for Ndes	40	75	100	65
Gyrations for Nmax	60	115	160	100
Air Voids, %Va (%Gmm Ndes)	4.0 (96.0)	4.0 (96.0)	4.0 (96.0)	4.5 (95.5)
% Gmm Nini	<= 91.5 ^[3]	<= 89.0 ^[3]	<= 89.0	___
% Gmm Nmax	<= 98.0	<= 98.0	<= 98.0	<= 98.0
Dust to Binder Ratio ^[4] (% passing 0.075/Pbe)	0.6 - 1.2 ^[5]	0.6 - 1.2 ^[5]	0.6 - 1.2 ^[5]	1.2 - 2.0
Voids filled with Binder (VFB or VFA, %)	68 - 80 ^[6] ^[8]	65 - 75 ^[6] ^[7] ^[9]	65 - 75 ^[6] ^[7] ^[9]	70 - 80
Tensile Strength Ratio (TSR) (AASHTO T283) ^[10] ^[11]				
no antistripping additive	0.75 min	0.75 min	0.75 min	0.80 min
with antistripping additive	0.80 min	0.80 min	0.80 min	0.80 min
Draindown (AASHTO T305) (%)	___	___	___	<= 0.30
Minimum Effective Asphalt Content, Pbe (%)	___	___	___	5.5

^[1] For No 6 (4.75 mm) nominal maximum size mixes, the specified fine aggregate angularity is 43 for LT and 45 MT mixes.

^[2] For No 6 (4.75 mm) nominal maximum size mixes, the specified sand equivalency is 43 for MT mixes.

^[3] The percent maximum density at initial compaction is only a guideline.

^[4] For a gradation that passes below the boundaries of the caution zone (ref. AASHTO M323), the dust to binder ratio limits are 0.6 - 1.6.

^[5] For No 6 (4.75 mm) nominal maximum size mixes, the specified dust to binder ratio limits are 1.0 - 2.0 for LT mixes and 1.5 - 2.0 for MT and HT mixes.

^[6] For No. 6 (4.75mm) nominal maximum size mixes, the specified VFB is 67 - 79 percent for LT mixes and 66 - 77 percent for MT and HT mixes.

^[7] For No. 5 (9.5mm) and No. 4 (12.5 mm) nominal maximum size mixtures, the specified VFB range is 70 - 76 percent.

^[8] For No. 2 (25.0mm) nominal maximum size mixes, the specified VFB lower limit is 67 percent.

^[9] For No. 1 (37.5mm) nominal maximum size mixes, the specified VFB lower limit is 67 percent.

^[10] WisDOT eliminates freeze-thaw conditioning cycles from the TSR test procedure.

^[11] Run TSR at asphalt content corresponding to 3.0% air void regressed design, or 4.5% air void design for SMA, using distilled water for testing.

513.2.1(2) General

Correct errata by changing the CMM reference from 875.2 to 875.4.

- (2) Conform to the department's certification method of acceptance, as defined in CMM 875.4, for railing and railing components. Furnish a certificate of compliance for miscellaneous hardware.
-

531.1(1) Description

Correct errata by adding structural steel sign supports constructed under 635.

- (1) This section describes constructing drilled shaft foundations for the following:
- Overhead sign structures constructed under 532.
 - High mast light towers constructed under 532.
 - Structural steel sign supports constructed under 635.
 - Camera poles constructed under 677.
-

635.3.1(1) Structural Steel Sign Supports

Correct errata by adding "type NS" concrete footings.

- (1) Locate and erect the supports as specified for placement and orientation in 637.3.3.2. Construct Type NS concrete footings conforming to 531.
-

654.5(2) Payment

Correct errata by changing excavating to drilling.

- (2) Payment for the Bases bid items is full compensation for providing concrete bases; for embedded conduit and electrical components; for anchor templates, rods, nuts, and washers; for bar steel reinforcement; and for drilling and backfilling.
-

ADDITIONAL SPECIAL PROVISION 7

- A. Reporting 1st 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 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

Electronic Certified Payroll or Labor Data Submittal

(1) Use the department's Civil Rights Compliance System (CRCS) to electronically submit certified payroll reports for contracts with federal funds and labor data for contracts with state funds only. Details are available online through the department's highway construction contractor information (HCCI) site on the Labor, Wages, and EEO Information page at:

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

(2) Ensure that all tiers of subcontractors, including all trucking firms, either submit their weekly certified payroll reports (contracts with federal funds) or labor data (contracts with state funds only) electronically through CRCS. These payrolls or labor data are due within seven calendar days following the close of the payroll period. Every firm providing physical labor towards completing the project is a subcontractor under this special provision.

(3) Upon receipt of contract execution, promptly make all affected firms aware of the requirements under this special provision and arrange for them to receive CRCS training as they are about to begin their submittals. The department will provide training either in a classroom setting at one of our regional offices or by telephone. Contact Paul Ndon at (414) 438-4584 to schedule the training.

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

(5) Firms wishing to export payroll/labor data from their computer system into CRCS should have their payroll coordinator contact Paul Ndon at paul.ndon@dot.wi.gov. Not every contractor's payroll system is capable of producing export files. For details, see Section 4.8 CPR Auto Submit (Data Mapping) on pages 49-50; 66-71 of the CRCS Payroll Manual at:

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

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 November 2020 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 DT4567, 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 DT4567 is available at:

<https://wisconsindot.gov/Documents/formdocs/dt4567.docx>



Proposal Schedule of Items

Page 1 of 8

Proposal ID: 20210511018 Project(s): 3360-16-60

Federal ID(s): 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	201.0105 Clearing	10.000 STA	_____.	_____.
0004	201.0205 Grubbing	10.000 STA	_____.	_____.
0006	203.0100 Removing Small Pipe Culverts	7.000 EACH	_____.	_____.
0008	203.0200 Removing Old Structure (station) 01. STA 76+66	LS	LUMP SUM	_____.
0010	203.0200 Removing Old Structure (station) 02. STA 317+08	LS	LUMP SUM	_____.
0012	203.0200 Removing Old Structure (station) 03. STA 343+13	LS	LUMP SUM	_____.
0014	204.0100 Removing Concrete Pavement	874.000 SY	_____.	_____.
0016	204.0110 Removing Asphaltic Surface	1,769.000 SY	_____.	_____.
0018	204.0115 Removing Asphaltic Surface Butt Joints	142.000 SY	_____.	_____.
0020	204.0120 Removing Asphaltic Surface Milling	119,072.000 SY	_____.	_____.
0022	204.0157 Removing Concrete Barrier	180.000 LF	_____.	_____.
0024	204.0165 Removing Guardrail	2,213.000 LF	_____.	_____.
0026	205.0100 Excavation Common	1,662.000 CY	_____.	_____.
0028	208.0100 Borrow	117.000 CY	_____.	_____.
0030	211.0100 Prepare Foundation for Asphaltic Paving (project) 01. 3360-16-60	LS	LUMP SUM	_____.



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0032	211.0400 Prepare Foundation for Asphaltic Shoulders	43.000 STA	_____.	_____.
0034	213.0100 Finishing Roadway (project) 01. 3360-16-60	1.000 EACH	_____.	_____.
0036	305.0110 Base Aggregate Dense 3/4-Inch	3,445.000 TON	_____.	_____.
0038	305.0120 Base Aggregate Dense 1 1/4-Inch	908.000 TON	_____.	_____.
0040	455.0605 Tack Coat	8,827.000 GAL	_____.	_____.
0042	460.0105.S HMA Percent Within Limits (PWL) Test Strip Volumetrics	1.000 EACH	_____.	_____.
0044	460.0110.S HMA Percent Within Limits (PWL) Test Strip Density	1.000 EACH	_____.	_____.
0046	460.6224 HMA Pavement 4 MT 58-28 S	15,300.000 TON	_____.	_____.
0048	465.0110 Asphaltic Surface Patching	500.000 TON	_____.	_____.
0050	465.0120 Asphaltic Surface Driveways and Field Entrances	12.000 TON	_____.	_____.
0052	465.0315 Asphaltic Flumes	2.000 SY	_____.	_____.
0054	465.0475 Asphalt Centerline Rumble Strips 2-Lane Rural	29,845.000 LF	_____.	_____.
0056	520.8700 Cleaning Culvert Pipes	8.000 EACH	_____.	_____.
0058	521.1018 Apron Endwalls for Culvert Pipe Steel 18-Inch	4.000 EACH	_____.	_____.
0060	521.1024 Apron Endwalls for Culvert Pipe Steel 24-Inch	4.000 EACH	_____.	_____.



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0062	521.1235 Apron Endwalls for Pipe Arch Steel 35x24-Inch	2.000 EACH	_____.	_____.
0064	521.3118 Culvert Pipe Corrugated Steel 18-Inch	111.000 LF	_____.	_____.
0066	522.0172 Culvert Pipe Reinforced Concrete Class III 72-Inch	116.000 LF	_____.	_____.
0068	522.0415 Culvert Pipe Reinforced Concrete Class IV 15-Inch	55.000 LF	_____.	_____.
0070	522.0424 Culvert Pipe Reinforced Concrete Class IV 24-Inch	92.000 LF	_____.	_____.
0072	522.0436 Culvert Pipe Reinforced Concrete Class IV 36-Inch	46.000 LF	_____.	_____.
0074	522.0448 Culvert Pipe Reinforced Concrete Class IV 48-Inch	44.000 LF	_____.	_____.
0076	522.1015 Apron Endwalls for Culvert Pipe Reinforced Concrete 15-Inch	1.000 EACH	_____.	_____.
0078	522.1024 Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	4.000 EACH	_____.	_____.
0080	522.1036 Apron Endwalls for Culvert Pipe Reinforced Concrete 36-Inch	2.000 EACH	_____.	_____.
0082	522.1048 Apron Endwalls for Culvert Pipe Reinforced Concrete 48-Inch	2.000 EACH	_____.	_____.
0084	522.1072 Apron Endwalls for Culvert Pipe Reinforced Concrete 72-Inch	2.000 EACH	_____.	_____.
0086	522.2429 Culvert Pipe Reinforced Concrete Horizontal Elliptical Class HE-IV 29x45- Inch	48.000 LF	_____.	_____.



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0088	522.2629 Apron Endwalls for Culvert Pipe Reinforced Concrete Horizontal Elliptical 29x45-Inch	2.000 EACH	_____.	_____.
0090	601.0584 Concrete Curb & Gutter 4-Inch Sloped 30-Inch Type TBT	181.000 LF	_____.	_____.
0092	603.1136 Concrete Barrier Type S36	1,237.000 LF	_____.	_____.
0094	603.1436 Concrete Barrier Type S36C	1,152.000 LF	_____.	_____.
0096	606.0200 Riprap Medium	20.000 CY	_____.	_____.
0098	611.0642 Inlet Covers Type MS	1.000 EACH	_____.	_____.
0100	611.3901 Inlets Median 1 Grate	1.000 EACH	_____.	_____.
0102	614.0397 Guardrail Mow Strip Emulsified Asphalt	219.000 SY	_____.	_____.
0104	614.2300 MGS Guardrail 3	185.000 LF	_____.	_____.
0106	614.2310 MGS Guardrail 3 HS	75.000 LF	_____.	_____.
0108	614.2340 MGS Guardrail 3 L	215.000 LF	_____.	_____.
0110	614.2500 MGS Thrie Beam Transition	240.000 LF	_____.	_____.
0112	614.2610 MGS Guardrail Terminal EAT	10.000 EACH	_____.	_____.
0114	618.0100 Maintenance And Repair of Haul Roads (project) 01. 3360-16-60	1.000 EACH	_____.	_____.
0116	619.1000 Mobilization	1.000 EACH	_____.	_____.



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0118	624.0100 Water	56.000 MGAL	_____.	_____.
0120	625.0500 Salvaged Topsoil	7,182.000 SY	_____.	_____.
0122	628.1504 Silt Fence	7,415.000 LF	_____.	_____.
0124	628.1520 Silt Fence Maintenance	7,415.000 LF	_____.	_____.
0126	628.1905 Mobilizations Erosion Control	10.000 EACH	_____.	_____.
0128	628.1910 Mobilizations Emergency Erosion Control	4.000 EACH	_____.	_____.
0130	628.2004 Erosion Mat Class I Type B	7,062.000 SY	_____.	_____.
0132	628.7005 Inlet Protection Type A	1.000 EACH	_____.	_____.
0134	628.7555 Culvert Pipe Checks	56.000 EACH	_____.	_____.
0136	629.0210 Fertilizer Type B	5.000 CWT	_____.	_____.
0138	630.0120 Seeding Mixture No. 20	194.000 LB	_____.	_____.
0140	630.0200 Seeding Temporary	194.000 LB	_____.	_____.
0142	630.0500 Seed Water	161.000 MGAL	_____.	_____.
0144	633.1000 Delineators Barrier Wall	27.000 EACH	_____.	_____.
0146	633.5200 Markers Culvert End	22.000 EACH	_____.	_____.
0148	634.0616 Posts Wood 4x6-Inch X 16-FT	7.000 EACH	_____.	_____.
0150	638.2102 Moving Signs Type II	7.000 EACH	_____.	_____.



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0152	638.3000 Removing Small Sign Supports	7.000 EACH	_____.	_____.
0154	642.5201 Field Office Type C	1.000 EACH	_____.	_____.
0156	643.0300 Traffic Control Drums	5,850.000 DAY	_____.	_____.
0158	643.0420 Traffic Control Barricades Type III	5,920.000 DAY	_____.	_____.
0160	643.0705 Traffic Control Warning Lights Type A	9,205.000 DAY	_____.	_____.
0162	643.0715 Traffic Control Warning Lights Type C	600.000 DAY	_____.	_____.
0164	643.0900 Traffic Control Signs	11,780.000 DAY	_____.	_____.
0166	643.0910 Traffic Control Covering Signs Type I	7.000 EACH	_____.	_____.
0168	643.1000 Traffic Control Signs Fixed Message	225.500 SF	_____.	_____.
0170	643.1050 Traffic Control Signs PCMS	28.000 DAY	_____.	_____.
0172	643.5000 Traffic Control	1.000 EACH	_____.	_____.
0174	645.0120 Geotextile Type HR	76.000 SY	_____.	_____.
0176	646.1020 Marking Line Epoxy 4-Inch	42,070.000 LF	_____.	_____.
0178	646.1040 Marking Line Grooved Wet Ref Epoxy 4-Inch	75,120.000 LF	_____.	_____.
0180	646.3040 Marking Line Grooved Wet Ref Epoxy 8-Inch	250.000 LF	_____.	_____.
0182	646.5320 Marking Railroad Crossings Epoxy	2.000 EACH	_____.	_____.



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0184	646.7120 Marking Diagonal Epoxy 12-Inch	11.000 LF	_____.	_____.
0186	649.0105 Temporary Marking Line Paint 4-Inch	74,860.000 LF	_____.	_____.
0188	649.0120 Temporary Marking Line Epoxy 4-Inch	37,430.000 LF	_____.	_____.
0190	650.4000 Construction Staking Storm Sewer	1.000 EACH	_____.	_____.
0192	650.5500 Construction Staking Curb Gutter and Curb & Gutter	181.000 LF	_____.	_____.
0194	650.6000 Construction Staking Pipe Culverts	9.000 EACH	_____.	_____.
0196	650.7500 Construction Staking Concrete Barrier	2,389.000 LF	_____.	_____.
0198	650.8000 Construction Staking Resurfacing Reference	37,400.000 LF	_____.	_____.
0200	650.9910 Construction Staking Supplemental Control (project) 01. 3360-16-60	LS	LUMP SUM	_____.
0202	690.0150 Sawing Asphalt	5,572.000 LF	_____.	_____.
0204	690.0250 Sawing Concrete	216.000 LF	_____.	_____.
0206	715.0603 Incentive Strength Concrete Barrier	2,389.000 DOL	1.00000	2,389.00
0208	740.0440 Incentive IRI Ride	56,680.000 DOL	1.00000	56,680.00
0210	SPV.0035 Special 01. Foundation Backfill	1,009.000 CY	_____.	_____.
0212	SPV.0055 Special 01. Incentive Density PWL HMA Pavement	11,090.000 DOL	1.00000	11,090.00



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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0214	SPV.0055 Special 02. Incentive Air Voids HMA Pavement	15,300.000 DOL	1.00000	15,300.00
0216	SPV.0055 Special 03. Incentive Density HMA Pavement Longitudinal Joints	14,940.000 DOL	1.00000	14,940.00
0218	SPV.0060 Special 01. Grading, Shaping & Finishing Culvert Pipes & Apron Endwalls	16.000 EACH	_____.	_____.
Section: 0001			Total:	_____.
			Total Bid:	_____.

PLEASE ATTACH ADDENDA HERE