

HIGHWAY WORK PROPOSAL

Wisconsin Department of Transportation
 DT1502 01/2020 s.66.0901(7) Wis. Stats

Proposal Number: **013**

<u>COUNTY</u>	<u>STATE PROJECT</u>	<u>FEDERAL</u>	<u>PROJECT DESCRIPTION</u>	<u>HIGHWAY</u>
St Croix	8110-01-77	N/A	New Richmond - Connorsville; 142nd St to USH 63 S	STH 064

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: April 9, 2024 Time (Local Time): 11:00 am	Firm Name, Address, City, State, Zip Code <div style="text-align: center;"> SAMPLE NOT FOR BIDDING PURPOSES </div>
Contract Completion Time 60 Working Days	
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, Curb and Gutter, Guardrail, Signs, Pavement Markings.	For Department Use Only
Notice of Award Dated	Date Guaranty Returned

**PLEASE ATTACH
PROPOSAL GUARANTY HERE**

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.

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://wisconsin.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://wisconsin.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:
 4. Have a properly executed annual bid bond on file with the department.
 5. 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://wisconsin.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 envelope 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.

B 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)

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

(Signature of Attorney-in-Fact)

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

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)

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 June 29, 2023

SPECIAL PROVISIONS

1. General.

Perform the work under this construction contract for Project 8110-01-77, New Richmond – Connorsville, 142nd St to USH 63 S, STH 64, St. Croix 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, 2024 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 (20230629)

2. Scope of Work.

The work under this contract shall consist of milling asphaltic surface, HMA pavement, box culvert joint repair, pavement marking, permanent signing, beam guard grading, MGS guardrail 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 10 calendar days after the engineer issues a written notice to do so.

Provide the time frame for construction of the project within the 2024 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 10 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 lower layer of HMA pavement on milled surfaces is required to be placed 72 hours after the milling operation is completed in areas that are open to through traffic.

Fish Spawning

There shall be no instream disturbance of Willow River at Station 412+50 as a result of construction activity under or for this contract, from September 15 to May 15 both dates inclusive, in order to avoid adverse impacts upon the spawning of Trout.

Any change to this limitation will require submitting a written request by the contractor to the engineer, subsequent review and concurrence by the Department of Natural Resources in the request, and final approval by the engineer. The approval will include all conditions to the request as mutually agreed upon by WisDOT and DNR.

Migratory Birds

No evidence of swallow or other migratory bird nests have been observed on or under the following structures(s) during the preconstruction inspection. However, if nesting is later observed prior to or during construction, the contractor shall implement avoidance/deterrent measures or obtain a depredation permit. All active nests (when eggs or young are present) of migratory birds are protected under the federal Migratory Bird Treaty Act. The nesting season for swallows and other birds is from April 15 to August 31.

- C-55-1381

Northern Long-eared Bat (*Myotis septentrionalis*)

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

Ensure all operators, employees, and subcontractors working in areas of known or presumed bat habitat are aware of environmental commitments and avoidance and minimization measures (AMMs) to protect both bats and their habitat.

Direct temporary lighting, if used, away from wooded areas during the bat active season April 1 to October 31, both dates inclusive.

The department has contracted with others and will perform the following operations after October 31 and prior to April 1:

- Cutting trees.

If there are clearing operations required to remove previously cut trees, submit a schedule and description with the ECIP 14 days prior to the work. The department will determine, based on schedule and scope of work, what additional erosion control measures shall be implemented prior to the start of clearing operations, and list those additional measures in the approval letter for the ECIP.

Contractor means and methods to remove additional trees will not be allowed. If it is determined that additional trees with a 3-inch or greater diameter at breast height (dbh) need to be removed beyond contractor means and methods, notify the engineer to coordinate with the WisDOT REC to determine if consultation with United States Fish and Wildlife Service (USFWS) is required. The contractor must be aware that the WisDOT REC and/or USFWS may not permit modifications.

4. Traffic.

Keep STH 64, on which this project is located, open to traffic at all times during the construction project. Keep all side roads open to traffic at all times during the construction project. Maintain vehicular access for all emergency vehicles. Maintain access to all farms, farm fields, businesses, and residential properties at all times unless approved by the engineer.

Have available at all times experienced personnel to promptly install, remove and reinstall the required traffic control devices to route traffic in order to perform the necessary construction operations.

Provide the engineer with a list for 24-hour contacts. The engineer will be responsible for distributing the contact list.

Do not remove side road butt joint transitions until 24 hours prior to side road paving.

Coordinate with the owner or resident at least 48 hours prior to the work when construction operations temporarily restrict access to a property.

Conduct construction and hauling operations in such a manner that minimizes the duration and intensity of interference to the free flow of traffic on STH 64. This includes immediately cleaning up all debris falling onto the roadway.

Shoulders may be closed at any time if required by the work operation, but the right and left shoulder may not be closed in the same area at the same time.

Do not deliver or store materials and equipment within open travel lanes or open side roads during any stage of construction.

Do not store machinery, equipment, or materials within the 18-foot clear zone of the open roadway of STH 64 or within railroad right-of-way or sight triangles.

Traffic may be restricted to a single lane with the use of flaggers in the work zone on Monday through Saturday during daylight hours. Lane closures shall not exceed 1 mile in length between 3:00 PM to 6:00 PM unless authorized by the engineer. A flagger shall be stationed at all side roads intersecting STH 64 within the work zone. The flagger shall be in sight of or in direct communication with flaggers controlling traffic flows on STH 64.

At least 14 calendar days prior to the preconstruction meeting submit to the engineer for approval a schedule of closures necessary for completion of the contract. Identify general information including the construction activity requiring a closure, location of closure, type of closure, duration of closure, and times of closure.

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
Shoulder Closures	3 calendar days
Lane 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 64 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 and special event periods:

- From noon Friday, May 24, 2024 to 6:00 AM Tuesday, May 28, 2024 for Memorial Day;
- From noon Wednesday, July 3, 2024 to 6:00 AM Monday, July 8, 2024 for Independence Day;
- From noon Friday, August 30, 2024 to 6:00 AM Tuesday, September 3, 2024 for Labor Day;
- From noon Wednesday, November 27, 2024 to 6:00 AM Monday, December 2, 2024 for Thanksgiving.

stp-107-005 (20210113)

6. Utilities.

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

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.

The utility work plan includes additional detailed information regarding the location of discontinued, relocated, or removed utility facilities. These can be requested during the bid preparation process or from the project engineer after the contract has been awarded and executed.

Frontier (Communication Line)

Frontier has existing underground lines generally parallel to STH 64 from Station 125+00 to Station 469+70.

Frontier will relocate the existing underground line from Station 410+00 to approximately 408+25 to account for the new beam guard. The new communication line will be installed in the same general area, but deeper. This work will take 45 working days and will be completed prior to construction.

St. Croix Electric Cooperative (Electricity)

St. Croix Electric Cooperative has existing overhead lines generally parallel to STH 64 from Station 265+50 to Station 469+70.

No conflicts are anticipated.

Xcel Energy – Electric (Electricity)

Xcel Energy - Electric has existing overhead lines generally parallel to STH 64 from Station 125+00 to Station 234+50.

No conflicts are anticipated.

Xcel Energy – Gas (Gas/Petroleum)

Xcel Energy - Gas has existing underground gas lines generally parallel to STH 64 from Station 125+00 to Station 137+25. Xcel Energy has a 4" High Pressure gas main crossing located at the intersection of STH 64 and CTH T (Station 347+10). The contractor must contact Xcel Energy's Jenny Borgerson at (715) 386-4811 prior to any excavation over the existing gas line.

No conflicts anticipated.

stp-107-065 (20080501)

7. Information to Bidders, U.S. Army Corps of Engineers Section 404 Permit.

The department has assumed coverage under the U.S. Army Corps of Engineers Section 404 Transportation Regional General Permit (TRGP). The department has determined that a pre-construction notification (permit application) to U.S. Army Corps of Engineers and their written verification of TRGP coverage is not necessary for this project.

A copy of the Section 404 Transportation Regional General Permit can be obtained on USACE's website:

<https://www.mvp.usace.army.mil/Portals/57/docs/regulatory/RGP/Transportation.pdf>

If the contractor requires work outside the proposed slope intercepts, based on their method of operation to construct the project, it is the contractor's responsibility to determine whether a pre-construction notification (permit application) and written verification from U.S. Army Corps of Engineers under the Section 404 Transportation Regional General permit is required. If written verification under the TRGP is necessary, submit a pre-construction notification to U.S. Army Corps of Engineers and obtain written verification of permit coverage prior to beginning construction operations requiring the permit. No time extensions as discussed in standard spec 108.10 will be granted for the time required to apply for and obtain the written verification of permit coverage. The contractor must be aware that the U.S. Army Corps of Engineers may not grant the permit request.

stp-107-054 (20230629)

8. Information to Bidders, WPDES Transportation Construction General Permit (TCGP) for Storm Water Discharges.

The department has obtained permit coverage through the Wisconsin Department of Natural Resources to discharge storm water associated with land disturbing construction activities under this contract. Conform to all permit requirements for the project.

This permit is the Wisconsin Pollutant Discharge Elimination System, Transportation Construction General Permit, (WPDES Permit No. WI-S066796-2). The permit can be found at:

<https://widnr.widen.net/s/s5mwp2gd7s/finalsignedwisdotcsgp>

A certificate of permit coverage is available from the regional office by contacting Christopher Zacharias at (262) 548-6716. Post the permit certificate in a conspicuous place at the construction site.

stp-107-056 (20230629)

9. 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)

10. Archaeological Sites.

47SC131 is located approximately Station 413+00 – 414+00 RT within the limits shown on the plan overview sheet. If the undertaking includes ground disturbance beyond the existing right-of-way limits, a qualified archaeologist shall monitor the construction-related ground disturbing activities. The site should not be used for borrow or waste disposal, or for the staging of personnel, equipment and/or supplies.

47SC132 is located approximately Station 395+00 – 398+00 LT within the limits shown on the plan overview sheet. If the undertaking includes ground disturbance beyond the existing right-of-way limits, a qualified archaeologist shall monitor the construction-related ground disturbing activities. The site should not be used for borrow or waste disposal, or for the staging of personnel, equipment and/or supplies.

47SC138 is located approximately Station 427+00 – 443+50 RT within the limits shown on the plan overview sheet. If the undertaking includes ground disturbance beyond the existing ditch back slope intercept, a qualified archaeologist shall monitor the construction-related ground disturbing activities. The site should not be used for borrow or waste disposal, or for the staging of personnel, equipment and/or supplies.

11. Notice to Contractor, Electronic Load Tickets.

Replace standard spec 109.1.4.3 (1) with the following:

(1) Submit an electronic ticket for each load of material for the following bid items:

- 460.6645 HMA Pavement 5 MT 58-34 V
- 465.0105 Asphaltic Surface
- 465.0110 Asphaltic Surface Patching
- 465.0120 Asphaltic Surface Driveways and Field Entrances

Include the information as specified in standard spec 109.1.4.2 on each electronic ticket. If there is a failure in the electronic ticket system, provide a printed ticket for each load of material as a substitute for electronic tickets.

12. Removing Culvert Pipe Endwalls, Item 204.9060.S.01.

A Description

This special provision describes Removing Culvert Pipe Endwalls conforming to standard spec 204.

B (Vacant)

C (Vacant)

D Measurement

The department will measure Removing Culvert Pipe Endwalls as each, acceptably completed.

E Payment

Add the following to standard spec 204.5:

ITEM NUMBER	DESCRIPTION	UNIT
204.9060.S.01	Removing Culvert Pipe Endwalls	EACH
stp-204-025 (20230113)		

**13. 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 WTM R47. 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) according to 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 WTM T355 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 WTM T355. 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 according to 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 QV volumetric test is to be taken in a density-only test strip, a non-random QV test will be taken according to 460.2.8.3.1.4 as modified in HMA Pavement Percent Within Limits (PWL) QMP and if non-conforming to C.2.1 herein, follow corrective action outlined in 460.2.8.2.1.7(4) as modified in HMA Pavement Percent Within Limits (PWL) QMP.

Exclusions such as shoulders and appurtenances shall be tested and reported according to CMM 815. 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 815.11.

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. Bulk specific gravities of both gyratory compacted samples and field cores shall be determined. 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.

^[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 according to Table 460-3.

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 according to 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) and (ii), while density must accomplish (iii) and (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, and for the proper labeling, handling, and retention of the 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>	<i>PAYMENT FACTOR, PF</i>
<i>(PWL)</i>	<i>(percent of \$65/ton)</i>
≥ 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} and 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. Pay adjustment will be determined for an acceptably completed test strip 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 and the weighted percentage (WP) will equal 1.0.

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 according to Appendix A.

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

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

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

stp-460-040 (20230629)

14. HMA Pavement Percent Within Limits (PWL) QMP.

A Description

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

B Materials

Conform to the requirements of standard spec 450, 455, and 460 except where superseded by this special provision. The department will allow only one mix design for each HMA mixture type per layer required for the 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 WTM R47. 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 WTM R97. Additional handling instructions for retained samples are found in CMM 836.4 and CMM 836.5.

(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 WTM T30.
- Asphalt content (AC) in percent.

Determine AC using one of the following methods:

- AC by ignition oven according to WTM T308. If the department is using an ignition oven to determine AC, conform to WTP [H-003](#). If the department is not using an ignition oven to determine AC, IOCFs must still be reverified for any of the reasons listed in [WTP H-003 Table 2](#) and conform to WTP H-003 section 3.
- AC by chemical extraction according to AASHTO T 164 Method A or B.
- AC by automated extraction according to WTM D8159.
- Bulk specific gravity (Gmb) of the compacted mixture according to WTM T166.
- Maximum specific gravity (Gmm) according to WTM T209.
- Air voids (V_a) by calculation according to WTM T269.
- Voids in Mineral Aggregate (VMA) by calculation according to WTM R35.

(5) Lot size shall consist of 3750 tons with sublots of 750 tons. Test each design mixture at a frequency of one 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, without freeze-thaw conditioning cycles, on each qualifying mixture according to WTM T283 CMM 836.6.14. 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	-0.3	-0.5
V _a		- 1.5 & +2.0
VMA in percent ^[1]	- 0.5	-1.0

^[1] 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 non-random 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. If the department's non-random test does not conform to the acceptance limits, the retained sample will be tested by the BTS lab. If the BTS results also do not meet the acceptance limits, the material will be considered unacceptable as described in (5) below.

(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. For AC in percent, unacceptable material is defined as any individual QV test result outside of the acceptance limit. 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 standard spec 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 standard spec 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 WTM T166.
- Maximum specific gravity (Gmm) according to WTM T209.
- Air voids (Va) by calculation according to WTM T269.
- Voids in Mineral Aggregate (VMA) by calculation according to WTM R35.
- Asphalt Content (AC) in percent determined by ignition oven method according to WTM T308 and conforming to WTP H-003, chemical extraction according to AASHTO T 164 Method A or B, or automated extraction according to WTM D8159.

(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 for Gmm, Gmb, and Asphalt Content 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 for Gmm, Gmb, and Asphalt Content 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 within 7 days after receiving the results from the region. 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

- (1) The engineer will determine the target maximum density using department procedures described in WTM T355 and CMM 815. The engineer will determine density as soon as practicable after compaction and before placement of subsequent layers or before opening to traffic.
- (2) Do not re-roll compacted mixtures with deficient density test results. Do not operate continuously below the specified minimum density. Stop production, identify the source of the problem, and make corrections to produce work meeting the specification requirements.
- (3) A lot is defined as 7500 lane feet with sublots of 1500 lane feet (excluding shoulder, even if paved integrally) and placed within a single layer for each location and target maximum density category indicated in table 460-3. The contractor is required to complete three tests randomly per subplot and the department will randomly conduct one QV test per subplot. A partial quantity less than 750 lane feet will be included with the previous subplot. Partial lots with less than three sublots will be included 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. Exclusions such as shoulders and appurtenances shall be tested and recorded according to CMM 815. 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 or else be subject to disincentives according to 460.5.2.2(5) herein. No density incentive will be applied to shoulders or appurtenances. Offsets will not be applied to nuclear density gauge readings for shoulders or appurtenances. Unacceptable shoulder material will be handled according to standard spec 460.3.3.1 and CMM 815.11.
- (4) The three QC locations per subplot represent the outside, middle, and inside of the paving lane. The QC density testing procedures are detailed in Appendix A.
- (5) QV nuclear testing will consist of one randomly selected location per subplot. The QV density testing procedures will be the same as the QC procedure at each testing location and are also detailed in Appendix A.
- (6) An HTCP-certified nuclear density technician (NUCDENSITYTEC-I) shall identify random locations and perform the testing for both the contractor and department. The responsible certified technician shall ensure that sample location and testing is performed correctly, analyze test results, and provide density results to the contractor weekly, or at the completion of each lot.
- (7) For any additional tests outside the random number testing conducted for density, the data collected will not be entered into PWL calculations. However, additional QV testing must meet the tolerances for material conformance as specified in the standard specification and this special provision. If additional density data identifies unacceptable material, proceed as specified in CMM 815.11.

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

460.3.3.3 Analysis of Density Data

- (1) Analysis of test data for pay determination will be contingent upon test results from both the contractor (QC) and the department (QV).
- (2) As random density locations are paved, the data will be recorded in the HMA PWL Production Spreadsheet for analysis in chronological order. 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.

A rolling window of 3 lots will be used to conduct F & t comparison for the remainder of the contract (i.e., lots 2-4, then lots 3-5, etc.), reporting comparison results for each individual lot. Analysis will use a set alpha value of 0.025.

- i. If the F- and t-tests indicate variances and means compare, the QC and QV data sets are determined to be statistically similar and QC data will be used for PWL and pay adjustment calculations.
- ii. If the F- and t-tests indicate variances or means do not compare, the QV data will be used for subsequent calculations.

(3) The department will determine mixture density conformance and acceptability by analyzing test results, reviewing mixture data, and inspecting the completed pavement according to standard spec, this special provision, and accompanying Appendix A.

(4) Density resulting in a PWL value less than 50 or not meeting the requirements of 460.3.3.1 (any individual density test result falling more than 3.0 percent below the minimum required target maximum density as specified in standard spec Table 460-3) is unacceptable and may be subject to remove and replace at no additional cost to the department, at the discretion of the engineer.

- i. Replacement may be conducted on a subplot basis. If an entire PWL subplot is removed and replaced, the test results of the newly placed material 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 815.11. The quantity of material paid at 50% the contract unit price will be deducted from PWL pay adjustments, along with accompanying data of this material.

D Measurement

The department will measure the HMA Pavement bid items acceptably completed by the ton, as specified in standard spec 450.4 and as follows in standard spec 460.5, as modified 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>	<i>PAYMENT FACTOR, PF</i>
<i>(PWL)</i>	<i>(percent of \$65/ton)</i>
≥ 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} and 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.

(2) 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.

(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 and the weighted percentage (WP) will equal 1.0.

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

(4) 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., travel lane excluding shoulder) as determined according to Appendix A.

(5) Pay adjustment for shoulders and appurtenances accepted by department testing will be determined on a lot basis. If the lot density is less than the specified minimum in table 460-3, the department will reduce pay based on the contract unit price for the HMA pavement bid item for that lot as follows:

DISINCENTIVE PAY REDUCTION FOR HMA PAVEMENT DENSITY

PERCENT LOT DENSITY	PAYMENT FACTOR
BELOW SPECIFIED MINIMUM	(percent of contract price)
From 0.5 to 1.0 inclusive	98
From 1.1 to 1.5 inclusive	95
From 1.6 to 2.0 inclusive	91
From 2.1 to 2.5 inclusive	85
From 2.6 to 3.0 inclusive	70
More than 3.0 ^[1]	—

^[1] Remove and replace the lot with a mixture at the specified density. When acceptably replaced, the department will pay for the replaced work at the contract unit price. Alternatively, the engineer may allow the nonconforming material to remain in place with a 50 percent payment factor.

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

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

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

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

<u>AC Binder Relative to JMF</u>	<u>Pay Adjustment / Sublot</u>
-0.4% to -0.5%	75% ^[1]
More than -0.5%	50% ^{[1][2]}

^[1] Any material resulting in an asphalt binder content more than 0.3% below the JMF AC content will be referee tested by the department's AASHTO accredited laboratory and HTCP certified personnel using automated extraction according to WTM D8159.

^[2] 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.

Note: PWL value determination is further detailed in the PWL Production Spreadsheet Instructions located in the *Project Info & Instructions* tab of the HMA PWL Production spreadsheet.

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15. Appendix A.

Test Methods & Sampling for HMA PWL QMP Projects

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

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

WisDOT Procedure for Nuclear Gauge/Core Correlation – Test Strip

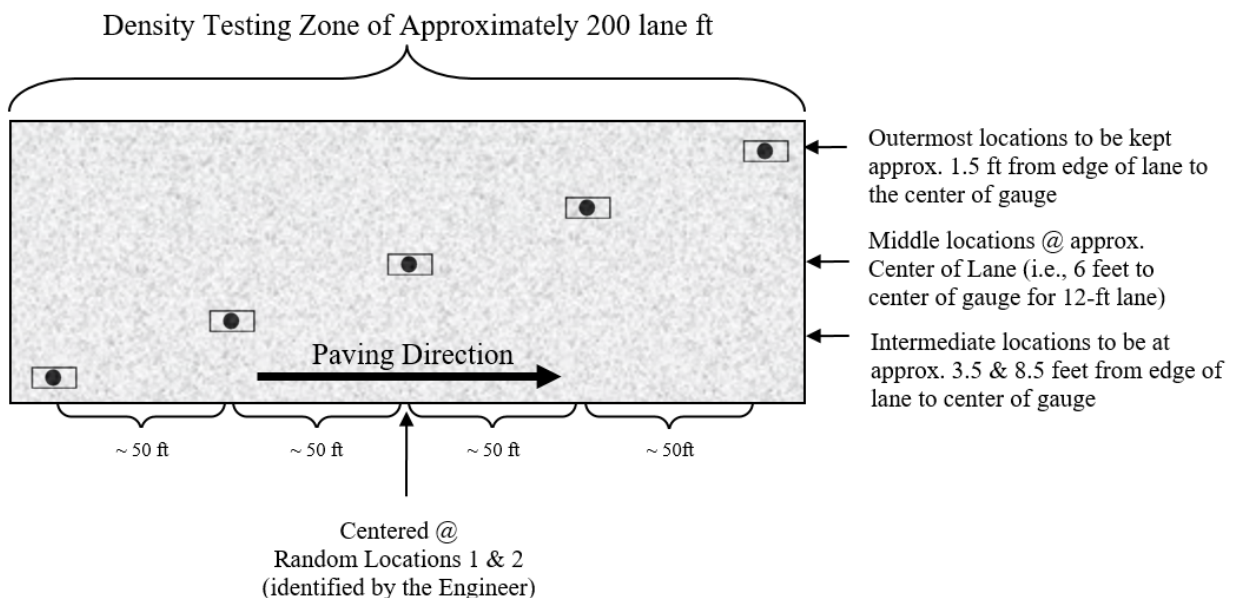



Figure 1: Nuclear/Core Correlation Location Layout

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

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

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

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

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



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



Figure 2: Nuclear gauge orientation for (a) 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 100 or 150 mm (4 or 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 WTM R79 prior to using specimens for in-place density determination according to WTM T166.

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 Measurements for Main Production

For nuclear density testing of the pavement beyond the test strip, QC tests will be completed at three locations per subplot, with a subplot defined as 1500 lane feet. The three locations will represent the outside, middle, and inside of the paving lane (i.e., the lane width will be divided into thirds as shown by the dashed longitudinal lines in Figure 3 and random numbers will be used to identify the specific transverse location within each third according to CMM 815). Longitudinal locations within each subplot shall be determined with 3 independent random numbers. The PWL Density measurements do not include the shoulder and other appurtenances. Such areas are tested by the department and are not eligible for density incentive but are subject to disincentive according to 460.5.2.2(5) of the HMA PWL QMP article. Each location will be measured with two one-minute gauge readings oriented 180 degrees from one another, in the same footprint as detailed in Figure 2 above. Each location requires a minimum of two readings per gauge. The density gauge orientation for the first test will be with the source rod towards the direction of paving. QV nuclear testing will consist of one randomly selected location per subplot. The QV is also comprised of two one-minute readings oriented 180 degrees from one another. For both QC and QV test locations, if the two readings exceed 1.0 pcf of one another, a third reading is conducted in the same orientation as the first reading. In this event, all three readings are averaged, the individual test reading of the three which falls farthest from the average value is discarded, and the average of the remaining two values is used to represent the location for the gauge. The subplot density testing layout is depicted in Figure 4, with QC test locations shown as solid lines and QV as dashed.

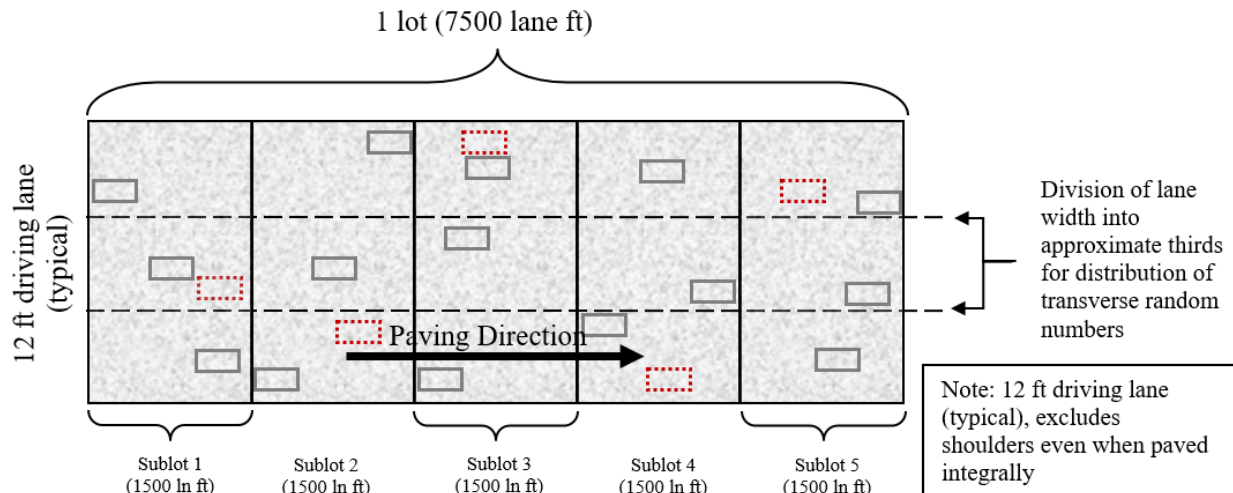


Figure 4: Locations of main lane HMA density testing (QC=solid lines, QV=dashed)

Raw nuclear density data must be shared by both parties at the end of each shift. Paving may be delayed if the raw data is not shared in a timely manner. QC and QV nuclear density gauge readings will be statistically analyzed according to Section 460.3.3.3 of the HMA PWL QMP article. (Note: For density data, if F- and t-tests compare, QC data will be used for the subsequent calculations of PWL value and pay determination. However, if an F- or t-test does not compare, the QV data will be used in subsequent calculations.)

Investigative cores will be allowed on the approaching side of traffic outside of the footprint locations. Results must be shared with the department.

The QV density technician is expected to be onsite within 1 hour of the start of paving operations and should remain on-site until all paving is completed. Perform footprint testing as soon as both the QC and QV nuclear density technician are onsite and a minimum of once per day to ensure the gauges are not drifting apart during a project. Footprint testing compares the density readings of two gauges at the same testing location and can be done at any randomly selected location on the project. Both teams are encouraged to conduct footprint testing as often as they feel necessary. Footprint testing does not need to be performed at the same time. At project start-up, the QV should footprint the first 10 QC locations. Individual density tests less than 0.5% above the lower limit should be communicated to the other party and be footprint tested. Each gauge conducts 2 to 3 1-minute tests according to WTM T355 and the final results from each gauge are compared for the location. If the difference between the QC and QV gauges exceeds 1.0 pcf (0.7 percent) for an average of 10 locations, investigate the cause, check gauge moisture and density standards and perform additional footprint testing. If the cause of the difference between gauge readings cannot be identified, the regional HMA Coordinator will consult the RSO, the regional PWL representative and the BTS HMA unit to determine necessary actions. If it is agreed that there is a gauge comparison issue, perform one of the following two options:

New Gauge Combination

- All 4 gauges used on the test strip must footprint 10 locations on the pavement. Pavement placed on a previous day may be used.
- The results of the footprint testing will be analyzed to see if a better combination of acceptable gauges is available.
- If a better combination is found, those gauges should be used moving forward.
- If a better combination cannot be found, a new gauge correlation must be performed. (see below)

Re-correlation of Gauges

- Follow all test strip procedures regarding correlating gauges except the following:
 - The 10 locations can be QC or QV random locations.
 - The locations used may have been paved on a previous day.
- Retesting with gauges must be done immediately prior to coring.
- New gauge offsets will be used for that day's paving and subsequent paving days. New gauge offsets will not be used to recalculate density results from prior days.

Density Dispute Resolution Procedure

Density results may be disputed by the contractor on a lot-by-lot basis if one of the following criteria is met:

- The lot average for either QC or QV is below the lower specification limit.
- The lot average for QC is different from the lot average for QV by more than 0.5%.

In lieu of using density gauges for acceptance of the lot, the lot will be cored in the QV locations. The results of the cores from the entire lot will be entered in the spreadsheet and used for payment. If the pay factor increases, the contractor will only receive the additional difference in payment for the disputed lot. If the pay factor does not increase, the department will assess the contractor \$2,000 for the costs of additional testing.

Notify the engineer in writing before dispute resolution coring. Immediately prior to coring, QC and QV will test the locations with nuclear density gauges.

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 day after completion of the lot, except if the next day is not a working day, then they shall be cut within 48 hours of placement. Prepare cores and determine density according to WTM T166. 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. 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.

Sampling for WisDOT HMA PWL QMP Production

Sampling of HMA mix for QC, QV and Retained samples shall conform to WTM R97 and WTM R47 except as modified here.

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 (sublot) for QC and Retained Samples and 1 per 3750 tons (lot or 5 sublots) for QV as defined by the HMA PWL QMP article. A test sample is obtained randomly from each sublot. Each random sample shall be collected at the plant according to WTM R97. 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 WTM D3665 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 is 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 WTM R47.

Calculation of PWL Mainline Tonnage Example

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

Solution:

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

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16. HMA Pavement Longitudinal Joint Density.

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 ^[1]	90 ^[1]	91.5 ^[1]	91.5 ^[1]
Upper	90	90	91.5	91.5

^[1] Minimum reduced by 1.0 percent for a 1.25-inch-thick No. 5 mix lower layer constructed on a paved or milled surface.

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 QC or QV density location within each subplot and is located transversely with the center of the gauge 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 nuclear 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 nuclear 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](#). 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.

D Measurement

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	\$0.20
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	<i>REMEDIAL ACTION ^[1]</i>

^[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.
- (4) Inlay paving operations will limit payment for additional material to 2 inches wider than the final paving lane width at the centerline.

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

ITEM NUMBER	DESCRIPTION	UNIT
460.2007	Incentive Density HMA Pavement Longitudinal Joints	DOL

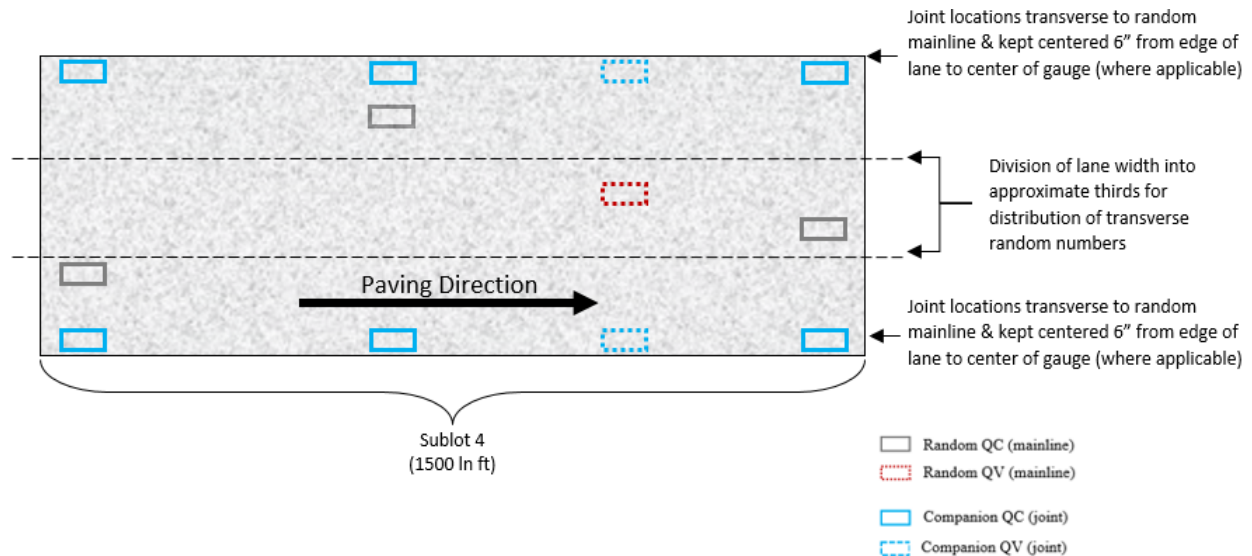
The department will administer disincentives under the Disincentive Density HMA Pavement Longitudinal Joints administrative item.

Appendix

WisDOT Longitudinal Joint – Nuclear Gauge Density Layout

Each QC and QV density location must have a companion density location at any applicable joint. This companion location must share longitudinal stationing with each QC or QV density location and be located transversely with the center of the gauge 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	\$0.20
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	\$0.20
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

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17. Material Transfer Vehicle, Item 460.9000.S.

A Description

This special provision describes providing Material Transfer Vehicles (MTV) and operators for use during HMA upper layer paving operations of the travel lanes as shown in the plan or as directed by the engineer.

B Materials

Furnish a self-propelled MTV with the ability to remix, maintain constant temperature, and continually feed the paver hopper. MTV storage capacity shall be adequate to provide continuous forward movement of the paver. Coordinate paver speed to match the delivery of material and capacity of the MTV to minimize stopping of the paver.

C Construction

Ensure that an operator stays with the MTV at all times during moving operations. Keep the paver's hopper full at all times and the MTV's hopper filled such that the conveying augers are never exposed to avoid segregation of the material. Placement of HMA upper layer pavement in the travel lanes will not be allowed without the MTV. Tie ins of intersections, shoulders paved separately, and other non-travel lane areas will not require the use of the MTV.

D Measurement

The department will measure Material Transfer Vehicle once for the contract, acceptably completed, regardless the number of vehicles in use.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
460.9000.S	Material Transfer Vehicle	EACH

Payment is full compensation for furnishing all material transfer vehicles and operators.

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18. Electrical/Lighting.

Notify the department's Electrical Field Unit at (715) 577-5399 at least 3 weeks prior to the beginning of the Electrical work. The department's Regional Electrical personnel will perform the inspections.

Electrical item inspections are required at the following times: after the staking of all electrical underground items, islands, curb and gutter and medians; before the pouring of all lighting and cabinet bases; before cable and wire are pulled; during field terminations at the lighting bases; and prior to the installation of any poles or other above ground electrical items.

Request electrical inspections of the completed lighting work to the engineer and contact the department's Electrical Field Unit at (715) 577-5399 at least five working days prior to the time of the requested inspection.

19. Conduit System for Flashers, Item SPV.0060.01.

A Description

This special provision describes furnishing, transporting, and installing a conduit system for the TRAWS advance flashers according to the pertinent provisions of standard spec 652 and as hereinafter provided. Specific items are noted in the plans.

B Materials

Furnish rigid nonmetallic schedule 80 conduit according to standard spec 652.2.

C Construction

Install conduit as shown on the plans and according to standard spec 652.3.

D Measurement

The department will measure Conduit System for Flashers by each unit, 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	Conduit System for Flashers	EACH

Payment is full compensation for furnishing and installing conduit and fittings; for furnishing and installing attachments and fittings used to support external conduit; and for furnishing and installing pull wires or ropes; and for excavating, bedding, and backfilling.

20. Install State-Furnished Radar Detection System, Item SPV.0060.02.

A Description

This special provision describes transporting and installing a state-furnished Radar Detection System.

B Materials

Pick up the state-furnished radar detection system at the Northwest Region – Eau Claire Office Electrical Field Unit at 5009 USH 53 South, Eau Claire, WI 54701. Notify the Electrical Field Unit at (715) 577-5399 to make arrangements for picking up the state-furnished materials at least five working days prior to material pick-up.

C Construction

Install the state-furnished Wavetronix Smart Sensor Mounting Kits, Matrix Smart Sensors, and Advance Smart Sensors per manufacturer recommendations in the locations determined by the department.

Notify the department's Electrical Shop at (715) 577-5399 upon completion of the installation and aiming of the radar units. The department will coordinate programming of the detectors. Assist the department with adjusting of the radar units during the radar system programming, if necessary.

D Measurement

The department will measure Install State-Furnished Radar Detection System by each unit, 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.0060.02	Install State-Furnished Radar Detection System	EACH

Payment is full compensation for transporting and installing the radar detection system, including mounting hardware and radar units; and assisting the department during the radar system programming.

21. Install State-Furnished Traffic Signal Cabinet & Controller, Item SPV.0060.03.

A Description

This special provision describes transporting and installing a state-furnished signal cabinet, signal controller, and Wavetronix Click 650 cabinet interface.

B Materials

Install state-furnished materials, including: the traffic signal controller, the traffic signal cabinet, the Wavetronix Click 650 cabinet interface device, and SDLC cable.

Pick up the state-furnished signal equipment at the Northwest Region – Eau Claire Office Electrical Field Unit at 5009 USH 53 South, Eau Claire, WI 54701. Notify the Electrical Field Unit at (715) 577-5399 to make arrangements for picking up the state-furnished materials at least five working days prior to material pick-up.

Provide all other needed materials in conformance with standard spec 651.2, 652.2, 653.2, 655.2, 656.2, 657.2, and 658.2.

C Construction

Perform work according to standard spec 651.3, 652.3, 653.3, 655.3, 656.3, and 658.3 except as specified below.

Submit to the engineer a request for an inspection of the completed installation at least five working days prior to the requested inspection date. The department's Region Electrical personnel will perform the inspection.

D Measurement

The department will measure Install State-Furnished Traffic Signal Cabinet & Controller by each unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.03	Install State-Furnished Traffic Signal Cabinet & Controller	EACH

Payment is full compensation for transporting and installing the traffic signal controller, traffic signal cabinet, Wavetronix Click 650 cabinet interface device and making all necessary wiring and cable connections; for furnishing and installing all other items necessary to make the proposed system complete from the source of supply to the most remove unit and for clean-up and waste disposal.

22. Junction Boxes 4x4x4-Inch, Item SPV.0060.04.

A Description

This special provision describes furnishing, transporting, and installing 4x4x4-inch junction boxes according to the pertinent provisions of standard spec 653, the plans, standard detail drawings, and as hereinafter provided.

B Materials

Furnish 4x4x4-inch junction boxes according to standard spec 653.2.

C Construction

Install 4x4x4-inch junction boxes as shown on the plans and according to standard spec 653.3.

D Measurement

The department will measure Junction Boxes 4x4x4-Inch by each unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.04	Junction Boxes 4x4x4-Inch	EACH

Payment is full compensation according to standard spec 653.5.

23. Install State-Furnished 6/C Sensor Cable, Item SPV.0090.01.

A Description

This special provision describes the transporting and installing of state-furnished 6-conductor cable.

B Materials

Pick up the state-furnished 6-conductor cable at the Northwest Region – Eau Claire Office Electrical Field Unit at 5009 USH 53 South, Eau Claire, WI 54701. Notify the Electrical Field Unit at (715) 577-5399 to make arrangements for picking up the state-furnished materials at least five working days prior to material pick-up.

C Construction

Install the 6-conductor cable according to the plans to run continuously (without splices) from the traffic signal cabinet to the pole handhole plus an additional 16-feet in each pull box and an extra 10-feet in the pole handhole. Install the state furnished detector unit cable whip from the detector unit to the pole handhole. Splice the detector unit cable whip to the power and communication cable in the pole handhole using the state furnished junction boxes. All open field ends shall be taped and covered with a sealant according to standard spec 655.3.1.

Mark each end of the lead in the traffic signal cabinet and each cable in the pole handhole to indicate the equipment label (i.e., M1, A2, etc.) on the plans.

Notify the Northwest Region – Eau Claire Office Electrical Field Unit at (715) 577-5399 upon installation completion at the intersection.

D Measurement

The department will measure Install State-Furnished 6/C Sensor Cable by the linear foot of cable, acceptably installed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.01	Install State-Furnished 6/C Sensor Cable	LF

24. Flexible Nonmetallic Conduit 1-Inch, Item SPV.0090.02.

A Description

This special provision describes furnishing, transporting, and installing flexible nonmetallic conduit for the TRAWS according to the pertinent provisions of standard spec 652, the plans, standard detail drawings, and as hereinafter provided. All work shall be performed according to standard spec 651.

B Materials

The flexible nonmetallic conduit shall be Type LFNC-B. The conduit shall be nonconductive, noncorrosive to oil, acid, ozone, and alkaline. The conduit shall have a smooth inner surface with integral reinforcement within the conduit wall.

The flexible nonmetallic conduit shall be UL listed for use as indicated in Article 356 of the latest NEC, and for outdoor use and sunlight resistant.

The fittings and adapters shall be of the same manufacturer as the conduit.

C Construction

Install the fittings, adapters, and conduit in conjunction with the TRAWS. Install per the manufacturer's instructions and as shown on the plans.

D Measurement

The department will measure Flexible Nonmetallic Conduit 1-Inch by the linear foot, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.02	Flexible Nonmetallic Conduit 1-Inch	LF

Payment is full compensation for furnishing and installing the conduit, including connectors.

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.

Acceptance and Final Payment

Within 30 calendar days of receiving the semi-final estimate from the department, submit written certification that subcontractors at all tiers are paid in full for acceptably completed work.

Additional Special Provision 6 (ASP-6)

Modifications to the standard specifications

Make the following revisions to the standard specifications:

108 Prosecution and Progress

Add subsection 108.9.4.1 effective with the November 2023 letting:

108.9.4.1 Winter Suspension for Completion Date Contracts

- (1) The contractor may request a winter suspension for a completion date contract. If the department determines weather conditions do not allow for the completion of the remaining work, the department may approve the contractor's request and determine the start date of the winter suspension. The end date of the winter suspension is March 31 or a date mutually agreed upon by both parties. For multi-year contracts, the department will only consider winter suspension for the final year of the contract.
 - (2) During winter suspension, store all materials in a manner that does not obstruct vehicular and pedestrian traffic and protect the materials from damage. Install traffic control and other safety devices necessary to protect the traveling public and pedestrians. Provide suitable drainage and install temporary erosion control where necessary. If the winter suspension begins when liquidated damages are being assessed, or when the work has not progressed as scheduled and would not have been completed prior to the completion date, the cost of necessary pre-suspension work is incidental. If the winter suspension begins prior to the contract completion date, and the work has progressed as scheduled and would have been completed prior to the completion date, the cost of pre-suspension work will be paid as specified under 109.4.
 - (3) For a winter suspension that begins prior to the contract completion date and the work has progressed as scheduled and would have been completed prior to the completion date, the engineer will extend contract time to correspond with the end of the winter suspension and liquidated damages will not be assessed during the winter suspension.
 - (4) For a winter suspension that begins when liquidated damages are being assessed or when the work has not progressed as scheduled and would not have been completed prior to the completion date, the engineer will not extend contract time. Time will be suspended until the end of the winter suspension. Liquidated damages will not be assessed during the winter suspension and liquidated damages will resume at the end of the winter suspension.
-

108.10.2 Excusable, Non-Compensable Delays

108.10.2.1 General

Replace entire section with the following effective with the January 2024 letting:

- (1) Non-compensable delays, 108.10.2.1(3), are excusable delays not the contractor's or the department's fault. The engineer will not pay for the delay costs listed in 109.4.7 for non-compensable delays.
 - (2) For non-compensable delays under calendar day and completion date contracts, the engineer will extend contract time if the conditions specified in 108.10.1 are met. The department will relieve the contractor from associated liquidated damages, as specified in 108.11, if the engineer extends time under 108.10.1.
 - (3) The following are non-compensable delays:
 1. Delays due to earthquakes, other cataclysmic phenomena of nature the contractor cannot foresee and avoid, severe weather or job conditions caused by recent weather as specified in 108.10.2.2.
 2. Extraordinary delays in material deliveries the contractor or their suppliers cannot foresee and forestall resulting from strikes, lockouts, freight embargoes, industry-wide shortages, governmental acts, or sudden disasters.
 3. Delays due to acts of the government, a political subdivision other than the department, or the public enemy.
 4. Delays from fires or epidemics.
 5. Delays from strikes beyond the contractor's power to settle not caused by improper acts or omissions of the contractor, their subcontractors, or their suppliers.
 6. Altered quantities as specified in 109.3.
-

108.10.3 Excusable Compensable Delays

Replace entire section with the following effective with the January 2024 letting:

- (1) Compensable delays are excusable delays due to the department's actions or lack of actions. The engineer will grant a time extension for a compensable delay if the conditions specified in 108.10.1 are met.
- (2) The following are compensable delays:

1. A contract change for revised work as specified for extra work under 104.2.2.1, for a differing site condition under 104.2.2.2, or for significant changes in the character of the work under 104.2.2.4.
 2. A contract change for an engineer-ordered suspension under 104.2.2.3.
 3. The unexpected discovery of human remains, an archaeological find, or historical find consistent with 107.25.
 4. The unexpected discovery of a hazardous substance consistent with 107.24.
 5. The non-completion of work that utilities or other third parties perform, if that work is not completed as specified in the contract.
- (3) For a compensable delay or a time extension, the department will relieve the contractor from associated liquidated damages under 108.11, and will pay the contractor for delay costs determined as follows:
1. Adjust the contract price as specified in 109.4.2 through 109.4.5 for delays under item 1 of 108.10.3(2).
 2. Adjust the contract price as specified in 109.4.7 for delays under items 2 through 5 of 108.10.3(2).

310 Open Graded Base

310.2 Materials

Replace paragraph two with the following effective with the November 2023 letting:

- (2) The contractor may substitute material conforming to the gradation requirements for crushed aggregate specified in Table 310-01 if that material conforms to the fracture requirements for open-graded crushed gravel specified in 301.2.4.5.

TABLE 310-01 COARSE AGGREGATE (% passing by weight)

AASHTO No. 67 ^[1]	
SEIVE	COARSE AGGREGATE (% PASSING by WEIGHT) AASHTO No. 67
2-inch	-
1 1/2-inch	-
1-inch	100
3/4-inch	90 – 100
1/2-inch	-
3/8-inch	20 – 55
No. 4	0 – 10
No. 8	0 – 5
No. 16	-
No. 30	-
No. 50	-
No. 100	-
No. 200	<=1.5

[1] Size according to AASHTO M43.

390 Base Patching

390.4 Measurement

Replace entire section with the following effective with the November 2023 letting:

- (1) The department will measure Removing Pavement for Base Patching by the cubic yard acceptably completed. Measure the depth from the bottom of the adjacent pavement to the top of the patch.
- (2) The department will measure Base Patching Asphaltic by the ton acceptably completed as specified for asphaltic pavement in 450.4.
- (3) The department will measure Base Patching Concrete HES and Base Patching Concrete SHES by the cubic yard acceptably completed. Measure the depth from the bottom of the adjacent pavement to the top of the patch.

390.5 Payment

Replace entire section with the following effective with the November 2023 letting:

- (1) The department will pay for measured quantities at the contract unit price under the following bid items:

<u>ITEM NUMBER</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
390.0100	Removing Pavement for Base Patching	CY
390.0201	Base Patching Asphaltic	TON
390.0305	Base Patching Concrete HES	CY
390.0405	Base Patching Concrete SHES	CY

- (2) Payment for Removing Pavement for Base Patching is full compensation for removing old pavement; for preparing the foundation and bringing up to grade. If the engineer orders the contractor to excavate yielding or unstable subgrade materials and backfill with suitable materials, the department will pay for that work with contract bid items or as agreed upon using 109.4.
- (3) Payment for Base Patching Asphaltic is full compensation for providing and compacting asphaltic mixture including asphaltic binder.
- (4) Payment for Base Patching Concrete HES and Base Patching Concrete SHES is full compensation for providing, curing, and protecting concrete. Payment also includes providing tie bars and dowel bars in unhardened concrete and steel within the patch. For tie bars and dowel bars provided in concrete not placed under the contract, the department will pay separately under the Drilled Tie Bars and Drilled Dowel Bars bid items as specified in 416.5.
- (5) Payment for Base Patching SHES also includes providing test data to the engineer as specified in 416.2.4.
- (6) The department will pay for sawing existing concrete pavement for removal under the Sawing Concrete bid item as specified in 690.5.

460 Hot Mix Asphalt Pavement**460.2.8.2.1.3.1 Contracts with 5000 Tons of Mixture or Greater**

Replace paragraph four with the following effective with the November 2023 letting:

- (4) Use the test methods identified below, or other methods the engineer approves, to perform the following tests at the frequency indicated:

Blended aggregate gradations:

Drum plants:

- Field extraction by ignition oven according to WTM T308, chemical extraction according to AASHTO T-164 method A or B; or automated extraction according to WTM D8159. Gradation of resulting aggregate sample determined according to WTM T30.
- Belt samples, optional for virgin mixtures, obtained from stopped belt or from the belt discharge using an engineer-approved sampling device and performed according to WTM T11 and T27.

Batch plants:

- Field extraction by ignition oven according to WTM T308, chemical extraction according to AASHTO T-164 method A or B; or automated extraction according to WTM D8159. Gradation of resulting aggregate sample determined according to WTM T30.

Asphalt content (AC) in percent:

Determine AC using one of the following methods:

- AC by ignition oven according to WTM T308.
- AC by chemical extraction according to AASHTO T-164 method A or B.
- AC by automated extraction according to WTM D8159.
- If the department is using an ignition oven to determine AC, conform to WTP H003.
- If the department is not using an ignition oven to determine AC, ignition oven correction factor (IOCF) must still be reverified for any of the reasons listed in WTP H003 Table 2 and conform to WTP H-003 sections 3 through 6.
- Gradation of resulting aggregate sample determined according to WTM T30.

Bulk specific gravity of the compacted mixture:

According to WTM T166.

Theoretical maximum specific gravity:

According to WTM T209.

Air voids (Va) by calculation according to WTM T269.

VMA by calculation according to WTM R35.

460.2.8.3.1.4 Department Verification Testing Requirements

Replace paragraph three with the following effective with the November 2023 letting:

- (3) The department will perform testing conforming to the following standards:
 - Bulk specific gravity (G_{mb}) of the compacted mixture according to WTM T166.
 - Maximum specific gravity (G_{mm}) according to WTM T209.
 - Air voids (V_a) by calculation according to WTM T269.
 - VMA by calculation according to WTM R35.
 - Asphalt content by ignition oven according to WTM T308, chemical extraction according to AASHTO T-164 method A or B, or automated extraction according to WTM D8159. If using an ignition oven to determine AC, conform to WTP H-003.

460.3.3.2 Pavement Density Determinations

Replace entire section with the following effective with the February 2024 letting:

- (1) The engineer will determine the target maximum density using department procedures described in WTM T355. The engineer will determine density according to CMM 815 and WTM T355 as soon as practicable after compaction and before placement of subsequent layers or before opening to traffic.
- (2) Do not re-roll compacted mixtures with deficient density test results. Do not operate continuously below the specified minimum density. Stop production, identify the source of the problem, and make corrections to produce work meeting the specification requirements.
- (3) A lot is defined as one day's production for each subplot type or one production shift if running 24 hours per day and placed within a single layer for each location and target maximum density category indicated in table 460-3. The lot density is the average of the tests taken for that lot. The department determines the number of tests per lot according to WTP H-002.
- (4) An HTCP-certified Nuclear Density Technician I (NUCDENSITYTEC-I) or a nuclear density ACT working under a NUCDENSITYTEC-I technician, will locate samples and perform the testing. A NUCDENSITYTEC-I technician will coordinate and take responsibility for the work an ACT performs. No more than one ACT can work under a single NUCDENSITYTEC-I technician. The responsible NUCDENSITYTEC-I technician will ensure that sample location and testing is performed correctly, analyze test results, and provide density results to the contractor weekly.

503 Prestressed Concrete Members

503.2.2 Concrete

Replace paragraph five with the following effective with the November 2023 letting:

- (5) Furnish prestressed concrete members cast from air-entrained concrete, except I-type girders may use non-air-entrained concrete. Use type I, IL, IS, IP, IT, II, or III cement. The contractor may replace up to 30 percent of type I, IL, II, or III cement with an equal weight of fly ash, slag, or a combination of fly ash and slag. Ensure that fly ash conforms to 501.2.4.2.2 and slag conforms to 501.2.4.2.3. Use only one source and replacement rate for work under a single bid item. Use a department-approved air-entraining admixture conforming to 501.2.5.2 for air-entrained concrete. Use only coarse aggregate conforming to 310.2(2).

604 Slope Paving

604.2 Materials

Replace paragraph three with the following effective with the November 2023 letting:

- (3) Under the Slope Paving Crushed Aggregate bid item, furnish crushed stone or crushed gravel conforming to the gradation in Table 604-01, but with the additional requirements that at least 75 percent of the particles, by count, have at least one fractured face. Determine fracture according to WTM D5821.

TABLE 604-01 COARSE AGGREGATE (% passing by weight)

AASHTO No. 4^[1]	
SEIVE	COARSE AGGREGATE (% PASSING by WEIGHT) AASHTO No. 4
2-inch	100
1 1/2-inch	90 - 100
1-inch	20 - 55
3/4-inch	0 - 15
1/2-inch	-
3/8-inch	0 - 5
No. 4	-
No. 8	-
No. 16	-
No. 30	-
No. 50	-
No. 100	-
No. 200	<=1.5

^[1] Size according to AASHTO M43.

612 Underdrains

612.3.9 Trench Underdrains

Replace paragraph one with the following effective with the November 2023 letting:

- (1) Under the Underdrain Trench bid item, excavate and backfill underdrain trenches. Backfill with coarse aggregate gradation conforming to 604.2(3). Before backfilling place geotextile as the plans show.

614 Semi-rigid Barrier Systems and End Treatments

614.2.6 Sand Barrel Arrays

Replace paragraph one with the following effective with the November 2023 letting:

- (1) Furnish sand barrels from the APL. Use fine aggregate conforming to gradation shown in Table 614-2 mixed with sodium chloride conforming to AASHTO M143. Apply an object marker to front-most barrel in the array.

TABLE 614-2 FINE AGGREGATE GRADATION

SEIVE	FINE AGGREGATE (% PASSING by WEIGHT)
3/8-inch	100
No. 4	90 - 100
No. 8	-
No. 16	45 - 85
No. 30	-
No. 50	5 - 30
No. 100	0 - 10
No. 200	<=3.5

628 Erosion Control**628.2.13 Rock Bags**

Replace paragraph two with the following effective with the November 2023 letting:

- (2) Fill the bags with a clean, sound, hard, durable, engineer-approved coarse aggregate conforming by visual inspection to the gradation specified for coarse aggregate gradation in 604.2(3).

639 Drilling Wells**639.2.1 General**

Replace paragraph two with the following effective with the November 2023 letting:

- (2) For grout use fine aggregate conforming to 501.2.7.2; and gradation conforming to 614.2.6(1); and type I, IL, IS, IP, or IT cement.

652 Electrical Conduit**652.3.1.2 Installing Underground**

Replace paragraph two with the following effective with the November 2023 letting:

- (2) Excavate trenches true to line and grade to provide the conduit uniform bearing throughout its length. Do not backfill the trench before inspecting the conduit. Carefully tamp the backfill in place as specified for placing backfill in layers in 651.3. Place at least 0.7 cubic feet of coarse aggregate gradation conforming to 604.2(3) directly under each drainage hole.

ERRATA

390.3.4 Special High Early Strength Concrete Patching

Correct errata link in paragraph (1) by changing from 416.3.8 to 416.3.7.

- (1) Construct as specified for special high early strength repairs under 416.3.7 except as follows:
 - The contractor may delay removal for up to 14 calendar days after cutting the existing pavement.
 - Open to traffic as specified for concrete base in 320.3.

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. DBE firms must enter all payments to DBE and non-DBE firms regardless of tier.
6. 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).
7. All agreements made by a contractor shall include the provisions in A(1), (2), (3), (4), (5), and (6), and shall be binding on all first tier subcontractor relationships, all contractors and subcontractors utilizing DBE firms on the project, and all payments from DBE firms.

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).

BUY AMERICA PROVISION

Buy America (as documented in [88 FR 57750 \(2 CFR part 184 and 200\)](#) from the Office of Management and Budget: [Federal Register: Guidance for Grants and Agreements](#)) shall be domestic products and permanently incorporated in this project as classified in the following three categories, and as noted in the Construction and Materials Manual (CMM):

1. Iron and Steel

All iron and steel manufacturing and coating processes (from the initial melting stage through the application of coatings) 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 the iron and steel manufacturing and coating processes Buy America 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.

2. Manufactured Product

All manufactured products (as defined in CMM 228.5) are covered under a previous waiver from 1983 and are currently exempt from Buy America.

3. Construction Material

All construction materials (as defined in [88 FR 57750 \(2 CFR part 184 and 200\)](#) and as referenced in CMM 228.5) must comply with Buy America. All manufacturing process of construction materials must occur in the United States.

[88 FR 55817 \(DOT-OST-2022-0124\)](#) allows a limited waiver of Buy America requirements for de minimis costs and small grants.

- The Total value of the non-compliant products is no more than the lesser of \$1,000,000 or 5% of total applicable costs for the project¹; or
- The total amount of Federal financial assistance applied to the project, through awards or subaward, is below \$500,000²

The contractor shall take actions and provide documentation conforming to CMM 228.5 to ensure compliance with this Buy America provision.

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

Upon completion of the project, certify to the engineer, in writing using department form DT4567 that all iron and steel, manufactured products, and construction materials conform to this Buy America provision.

Form DT4567 is available at: <https://wisconsin.gov/Documents/formdocs/dt4567.docx>

Attach a list of iron or steel and construction material exemptions and their associated costs to the certification form.

¹ The de minimis public interest waiver does not apply to iron and steel subject to the requirements of 23 U.S.C. 313 on financial assistance administered by FHWA. The de minimis threshold in 23 CFR 635.410(b)(4) continues to apply for iron and steel.

² The small grant portion of the waiver does not apply to iron, steel, and manufactured goods subject to the requirements of 49 U.S.C. 22905(a).



Proposal Schedule of Items

Proposal ID: 20240409013 Project(s): 8110-01-77

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	3.000 STA	_____.	_____.
0004	201.0205 Grubbing	3.000 STA	_____.	_____.
0006	204.0110 Removing Asphaltic Surface	310.000 SY	_____.	_____.
0008	204.0115 Removing Asphaltic Surface Butt Joints	1,770.000 SY	_____.	_____.
0010	204.0120 Removing Asphaltic Surface Milling	124,610.000 SY	_____.	_____.
0012	204.0165 Removing Guardrail	2,931.000 LF	_____.	_____.
0014	204.0170 Removing Fence	100.000 LF	_____.	_____.
0016	204.0190 Removing Surface Drains	2.000 EACH	_____.	_____.
0018	204.9060.S Removing (item description) 01. Culvert Pipe Endwalls	2.000 EACH	_____.	_____.
0020	205.0100 Excavation Common	124.000 CY	_____.	_____.
0022	208.0100 Borrow	2,457.000 CY	_____.	_____.
0024	211.0101 Prepare Foundation for Asphaltic Paving (project) 01. 8110-01-77	1.000 EACH	_____.	_____.
0026	213.0100 Finishing Roadway (project) 01. 8110-01-77	1.000 EACH	_____.	_____.
0028	305.0110 Base Aggregate Dense 3/4-Inch	4,000.000 TON	_____.	_____.
0030	455.0605 Tack Coat	14,080.000 GAL	_____.	_____.



Proposal Schedule of Items

Proposal ID: 20240409013 Project(s): 8110-01-77

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
0032	460.0105.S HMA Percent Within Limits (PWL) Test Strip Volumetrics	1.000 EACH	_____.	_____.
0034	460.0110.S HMA Percent Within Limits (PWL) Test Strip Density	2.000 EACH	_____.	_____.
0036	460.2005 Incentive Density PWL HMA Pavement	16,750.000 DOL	1.00000	16,750.00
0038	460.2007 Incentive Density HMA Pavement Longitudinal Joints	35,380.000 DOL	1.00000	35,380.00
0040	460.2010 Incentive Air Voids HMA Pavement	22,750.000 DOL	1.00000	22,750.00
0042	460.6645 HMA Pavement 5 MT 58-34 V	22,750.000 TON	_____.	_____.
0044	460.9000.S Material Transfer Vehicle	1.000 EACH	_____.	_____.
0046	465.0105 Asphaltic Surface	500.000 TON	_____.	_____.
0048	465.0110 Asphaltic Surface Patching	300.000 TON	_____.	_____.
0050	465.0120 Asphaltic Surface Driveways and Field Entrances	35.000 TON	_____.	_____.
0052	465.0560 Asphaltic Rumble Strips, Centerline	30,715.000 LF	_____.	_____.
0054	509.1500 Concrete Surface Repair	35.000 SF	_____.	_____.
0056	520.8700 Cleaning Culvert Pipes	12.000 EACH	_____.	_____.
0058	521.1024 Apron Endwalls for Culvert Pipe Steel 24-Inch	2.000 EACH	_____.	_____.
0060	601.0588 Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type TBT	120.000 LF	_____.	_____.



Proposal Schedule of Items

Proposal ID: 20240409013 Project(s): 8110-01-77

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
0062	602.3010 Concrete Surface Drains	5.000 CY	_____.	_____.
0064	606.0200 Riprap Medium	5.200 CY	_____.	_____.
0066	614.0200 Steel Thrie Beam Structure Approach	21.000 LF	_____.	_____.
0068	614.0305 Steel Plate Beam Guard Class A	6.000 LF	_____.	_____.
0070	614.0390 Steel Plate Beam Guard Short Radius Terminal	1.000 EACH	_____.	_____.
0072	614.2300 MGS Guardrail 3	2,036.000 LF	_____.	_____.
0074	614.2330 MGS Guardrail 3 K	497.000 LF	_____.	_____.
0076	614.2350 MGS Guardrail Short Radius	87.000 LF	_____.	_____.
0078	614.2500 MGS Thrie Beam Transition	272.000 LF	_____.	_____.
0080	614.2610 MGS Guardrail Terminal EAT	17.000 EACH	_____.	_____.
0082	614.2630 MGS Guardrail Short Radius Terminal	2.000 EACH	_____.	_____.
0084	618.0100 Maintenance and Repair of Haul Roads (project) 01. 8110-01-77	1.000 EACH	_____.	_____.
0086	619.1000 Mobilization	1.000 EACH	_____.	_____.
0088	624.0100 Water	75.000 MGAL	_____.	_____.
0090	625.0500 Salvaged Topsoil	10,115.000 SY	_____.	_____.
0092	627.0200 Mulching	7,920.000 SY	_____.	_____.



Proposal Schedule of Items

Proposal ID: 20240409013 Project(s): 8110-01-77

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
0094	628.1504 Silt Fence	5,648.000 LF	_____.	_____.
0096	628.1520 Silt Fence Maintenance	5,648.000 LF	_____.	_____.
0098	628.1905 Mobilizations Erosion Control	3.000 EACH	_____.	_____.
0100	628.1910 Mobilizations Emergency Erosion Control	4.000 EACH	_____.	_____.
0102	628.2008 Erosion Mat Urban Class I Type B	1,280.000 SY	_____.	_____.
0104	628.2027 Erosion Mat Class II Type C	3,050.000 SY	_____.	_____.
0106	629.0210 Fertilizer Type B	25.000 CWT	_____.	_____.
0108	630.0120 Seeding Mixture No. 20	950.000 LB	_____.	_____.
0110	630.0200 Seeding Temporary	330.000 LB	_____.	_____.
0112	630.0500 Seed Water	791.000 MGAL	_____.	_____.
0114	633.5200 Markers Culvert End	2.000 EACH	_____.	_____.
0116	634.0616 Posts Wood 4x6-Inch X 16-FT	2.000 EACH	_____.	_____.
0118	637.2210 Signs Type II Reflective H	14.000 SF	_____.	_____.
0120	637.2230 Signs Type II Reflective F	50.560 SF	_____.	_____.
0122	638.2602 Removing Signs Type II	7.000 EACH	_____.	_____.
0124	638.3000 Removing Small Sign Supports	2.000 EACH	_____.	_____.



Proposal Schedule of Items

Proposal ID: 20240409013 Project(s): 8110-01-77

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
0126	642.5001 Field Office Type B	1.000 EACH	_____.	_____.
0128	643.0300 Traffic Control Drums	200.000 DAY	_____.	_____.
0130	643.0420 Traffic Control Barricades Type III	25.000 DAY	_____.	_____.
0132	643.0900 Traffic Control Signs	2,700.000 DAY	_____.	_____.
0134	643.3165 Temporary Marking Line Paint 6-Inch	54,508.000 LF	_____.	_____.
0136	643.3170 Temporary Marking Line Epoxy 6-Inch	28,030.000 LF	_____.	_____.
0138	643.3265 Temporary Marking Line Paint 10-Inch	1,786.000 LF	_____.	_____.
0140	643.3505 Temporary Marking Arrow Paint	16.000 EACH	_____.	_____.
0142	643.3605 Temporary Marking Word Paint	4.000 EACH	_____.	_____.
0144	643.5000 Traffic Control	1.000 EACH	_____.	_____.
0146	645.0120 Geotextile Type HR	160.000 SY	_____.	_____.
0148	646.2020 Marking Line Epoxy 6-Inch	1,140.000 LF	_____.	_____.
0150	646.2040 Marking Line Grooved Wet Ref Epoxy 6-Inch	103,075.000 LF	_____.	_____.
0152	646.4020 Marking Line Epoxy 10-Inch	953.000 LF	_____.	_____.
0154	646.5020 Marking Arrow Epoxy	8.000 EACH	_____.	_____.
0156	646.5120 Marking Word Epoxy	2.000 EACH	_____.	_____.



Proposal Schedule of Items

Proposal ID: 20240409013 Project(s): 8110-01-77

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
0158	646.6120 Marking Stop Line Epoxy 18-Inch	80.000 LF	_____.	_____.
0160	646.7120 Marking Diagonal Epoxy 12-Inch	431.000 LF	_____.	_____.
0162	650.5500 Construction Staking Curb Gutter and Curb & Gutter	120.000 LF	_____.	_____.
0164	650.8000 Construction Staking Resurfacing Reference	34,470.000 LF	_____.	_____.
0166	650.9911 Construction Staking Supplemental Control (project) 01. 8110-01-77	1.000 EACH	_____.	_____.
0168	650.9920 Construction Staking Slope Stakes	3,216.000 LF	_____.	_____.
0170	652.0125 Conduit Rigid Metallic 2-Inch	10.000 LF	_____.	_____.
0172	652.0225 Conduit Rigid Nonmetallic Schedule 40 2-Inch	1,950.000 LF	_____.	_____.
0174	653.0164 Pull Boxes Non-Conductive 24x42-Inch	13.000 EACH	_____.	_____.
0176	654.0105 Concrete Bases Type 5	2.000 EACH	_____.	_____.
0178	655.0230 Cable Traffic Signal 5-14 AWG	2,605.000 LF	_____.	_____.
0180	655.0515 Electrical Wire Traffic Signals 10 AWG	460.000 LF	_____.	_____.
0182	655.0525 Electrical Wire Traffic Signals 6 AWG	390.000 LF	_____.	_____.
0184	656.0201 Electrical Service Meter Breaker Pedestal (location) 01. STA 348+75	1.000 EACH	_____.	_____.
0186	656.0501 Electrical Service Breaker Disconnect Box (location) 01. STA 348+75	1.000 EACH	_____.	_____.



Proposal Schedule of Items

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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
0188	657.0255 Transformer Bases Breakaway 11 1/2-Inch Bolt Circle	2.000 EACH	_____.	_____.
0190	657.0322 Poles Type 5-Aluminum	2.000 EACH	_____.	_____.
0192	658.0171 Traffic Signal Face 1S 12-Inch	4.000 EACH	_____.	_____.
0194	658.5070 Signal Mounting Hardware (location) 01. STA 338+25	1.000 EACH	_____.	_____.
0196	658.5070 Signal Mounting Hardware (location) 02. STA 356+75	1.000 EACH	_____.	_____.
0198	671.0212 Conduit HDPE Directional Bore 1-Duct 2-Inch	440.000 LF	_____.	_____.
0200	690.0150 Sawing Asphalt	321.000 LF	_____.	_____.
0202	740.0440 Incentive IRI Ride	26,800.000 DOL	1.00000	26,800.00
0204	SPV.0060 Special 01. Conduit System for Flashers	2.000 EACH	_____.	_____.
0206	SPV.0060 Special 02. Install State-Furnished Radar Detection System	2.000 EACH	_____.	_____.
0208	SPV.0060 Special 03. Install State-Furnished Traffic Signal Cabinet & Controller	1.000 EACH	_____.	_____.
0210	SPV.0060 Special 04. Junction Boxes 4x4x4-Inch	2.000 EACH	_____.	_____.
0212	SPV.0090 Special 01. Install State-Furnished 6/C Sensor Cable	460.000 LF	_____.	_____.
0214	SPV.0090 Special 02. Flexible Nonmetallic Conduit 1-Inch	30.000 LF	_____.	_____.



Proposal Schedule of Items

Proposal ID: 20240409013 **Project(s):** 8110-01-77

Federal ID(s): N/A

Section: 0001

Total: _____.

Total Bid: _____.

PLEASE ATTACH ADDENDA HERE