HIGHWAY WORK PROPOSAL

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

Proposal Number: 012

COUNTY	STATE PROJECT	FEDERAL	PROJECT DESCRIPTION	HIGHWAY
Racine Milwaukee	2290-24-70	N/A	Caledonia - Oak Creek; Linwood Rd To E Oakwood Rd	STH 038

ADDENDUM REQUIRED

ATTACHED AT BACK

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

Proposal Guaranty Required: $75,000.00 Payable to: Wisconsin Department of Transportation	Attach Proposal Guaranty on back of this PAGE.
Bid Submittal Date: May 9, 2023 Time (Local Time): ~~9:00 am~~ 11:00 am	Firm Name, Address, City, State, Zip Code SAMPLE NOT FOR BIDDING PURPOSES
Contract Completion Time October 13, 2023	
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

For Department Use Only

Type of Work:
Sidewalk, Storm Sewer, Beam Guard, Signs, Pavement Marking, Traffic Signals, Retaining Wall, Structure Rehab.

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://wisconsindot.gov/Pages/doing-bus/contractors/hcci/bid-let.aspx

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

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

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

(5) The department will address equipment and process failures, if the bidder can demonstrate that those failures were beyond their control.

(6) Contractors are responsible for checking on the issuance of addenda and for obtaining the addenda. Notice of issuance of addenda is posted on the department's web site at:

https://wisconsindot.gov/Pages/doing-bus/contractors/hcci/bid-let.aspx

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

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

B. Submitting Electronic Bids

B.1 On the Internet

(1) Do the following before submitting the bid:

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://wisconsindot.gov/Pages/doing-bus/contractors/hcci/bid-let.aspx

Use Expedite™ software to prepare and print the schedule of items. Provide a valid amount for all price fields. Follow instructions and review the help screens provided on the Bid Express™ web site to assure that the schedule of items is prepared properly.

(2) Staple an 8 1/2 by 11 inch printout of the Expedite□□ generated schedule of items to the other proposal documents submitted to the department as a part of the bidder's sealed bid. As a separate submittal, not in the sealed bid envelop but due at the same time and place as the sealed bid, also provide the Expedite™ generated schedule of items on a 3 1/2 inch computer diskette or CD ROM. Label each diskette or CD ROM with the bidder's name, the 4 character department-assigned bidder identification code from the top of the bidding proposal, and a list of the proposal numbers included on that diskette or CD ROM as indicated in the following example:

Bidder Name
BN00
Proposals: 1, 12, 14, & 22

(3) If bidding on more than one proposal in the letting, the bidder may include all proposals for that letting on one diskette or CD ROM. Include only submitted proposals with no incomplete or other files on the diskette or CD ROM.

(4) The bidder-submitted printout of the Expedite□□ generated schedule of items is the governing contract document and must conform to the requirements of section 102 of the standard specifications. If a printout needs to be altered, cross out the printed information with ink or typewriter and enter the new information and initial it in ink. If there is a discrepancy between the printout and the diskette or CD ROM, the department will analyze the bid using the printout information.

(5) In addition to the reasons specified in section 102 of the standard specifications, proposals are irregular and the department may reject them for one or more of the following:

1. The check code printed on the bottom of the printout of the Expedite™ generated schedule of items is not the same on each page.
2. The check code printed on the printout of the Expedite™ generated schedule of items is not the same as the check code for that proposal provided on the diskette or CD ROM.
3. The diskette or CD ROM is not submitted at the time and place the department designates.

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

Wisconsin Department of Transportation

DT1303 1/2006

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

Wisconsin Department of Transportation

DT1305 8/2003

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)

Effective with March 2010 Letting

LIST OF SUBCONTRACTORS

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

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

Name of Subcontractor	Class of Work	Estimated Value

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

Instructions for Certification

1. By signing and submitting this proposal, the prospective contractor is providing the certification set out below.

2. The inability of a person to provide the certification required below will not necessarily result in denial of participation in this covered transaction. The prospective contractor shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective contractor to furnish a certification or an explanation shall disqualify such person from participation in this transaction.

3. The certification in this clause is a material representation of fact upon which reliance was placed when the department determined to enter into this transaction. If it is later determined that the contractor knowingly rendered an erroneous certification in addition to other remedies available to the Federal Government the department may terminate this transaction for cause or default.

4. The prospective contractor shall provide immediate written notice to the department to whom this proposal is submitted if at any time the prospective contractor learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

5. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of the rules implementing Executive Order 12549. You may contact the department to which this proposal is being submitted for assistance in obtaining a copy of those regulations.

6. The prospective contractor agrees by submitting this proposal that, should this contract be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department entering into this transaction.

7. The prospective contractor further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," which is included as an addendum to PR- 1273 - "Required Contract Provisions Federal Aid Construction Contracts," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions.

8. The contractor may rely upon a certification of a prospective subcontractor/materials supplier that it is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A contractor may decide the method and frequency by which it determines the eligibility of its principals. Each contractor may, but is not required to, check the Disapproval List (telephone # 608/266/1631).

9. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of a contractor is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

10. Except for transactions authorized under paragraph 6 of these instructions, if a contractor in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department may terminate this transaction for cause or default.

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

1. The prospective contractor certifies to the best of its knowledge and belief, that it and its principals:

   (a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;

   (b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements or receiving stolen property;

   (c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offense enumerated in paragraph (1)(b) of this certification; and

   (d) Have not within a three-year period preceding this proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

2. Where the prospective contractor is unable to certify to any of the statements in this certification, such prospective contractor shall attach an explanation to this proposal.

Special Provisions

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SPECIAL PROVISIONS

1. General.

Perform the work under this construction contract for Project 2290-24-70, Caledonia – Oak Creek, Linwood Rd to Oakwood Rd, STH 38, Racine and Milwaukee Counties, 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, 2023 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 (20230113)

2. Scope of Work.

The work under this contract shall consist of milling, HMA pavement, traffic signals, curb ramps, culvert rehabilitation, signing, pavement marking, beam guard, drainage culverts, erosion control, restoration, traffic control, 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 start date to the engineer in writing within a month after executing the contract but at least 14 calendar days before the preconstruction conference. Upon approval, the engineer will issue the notice to proceed within 10 calendar days before the approved start date.

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

Hold prosecution and progress meetings once a week. The contractor's superintendent or designated representative and subcontractor's representatives for ongoing subcontract work or subcontractor work expected to begin within the next 2 weeks shall attend and provide a written schedule of the next 2 weeks' operations. The written schedule shall include begin and end dates of specific prime and subcontractor work operations. Agenda items at the meeting will include review of the contractor's schedule and subcontractors' schedule, evaluation of progress and pay items, and making revisions if necessary. Plans and specifications for upcoming work will be reviewed to prevent potential problems or conflicts between contractors.

Do not start work on Structures C-51-09 and C-51-10 until September 1 to avoid the swallow and migratory bird nesting period.

Existing section corner survey monuments shall not be disturbed by the base patching, milling, and paving operations. The contractor shall protect the survey monuments by means approved by the engineer to prevent the pavement work from damaging or covering them. The cost of protecting the existing section corner survey monuments is incidental to other items in the contract.

Enhanced Final Liquidated Damages

Replace standard spec 108.11 paragraph (3) as follows:

The department will assess $8,000 in daily liquidated damages. These liquidated damages reflect the cost of engineering, supervision, and a portion of road user costs.

Interim Completion and Liquidated Damages – C-51-10: 19 Calendar Days

STH 38 in the vicinity of Structure C-51-10 will require a hard closure to complete structural repairs to the box culvert. STH 38 may be closed as shown in the plans for a onetime period not to exceed 19 consecutive calendar days to complete culvert work, shoulder work, beam guard work, stone gabions, and paving.

If the contractor fails to complete the work necessary to restore local traffic on STH 38 over C-51-10 within 19 calendar days, the department will assess the contractor $3,000 in interim liquidated damages for each calendar day the contract work remains incomplete beyond 19 calendar days. An entire calendar day will be charged for any period of time within a calendar day that the road remains closed beyond 12:01 AM.

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

Work Restrictions

There may be multiple mobilizations for such items as: traffic control, base aggregate dense, shaping shoulders, milling, asphalt paving, pavement marking, and other incidental items related to the staging. The department will make no additional payment for these additional mobilizations.

Do not leave milled pavement surfaces exposed for more than 96 hours.

All work activities shall be completed under a closure of STH 38 to through traffic while local traffic access will be maintained. During construction STH 38 will be detoured, except for the section of STH 38 south of the CTH G/River Road/6 Mile Road signalized intersection.

Due to local access within the detour being maintained throughout the project duration, traffic control requirements within the project limits are as follows:

During Working Hours

Traffic control shall include protecting and delineating of work zone hazards / drop-offs greater than 6-inches. Two lanes of traffic (one in each direction) will be maintained with a minimum lane width of 10 feet. A 2-foot buffer between traffic and work operations will be required unless under a flagging operation. A flagging operation will be required during any work activities that limit existing roadway to a single lane for both directions of traffic. A lane is defined as a minimum of 10 feet in width. At side roads one minimum 10-foot lane in each direction will be maintained at all times, unless a flagger is utilized on side road and mainline. Under flagging operations at side roads, one minimum 10-foot lane will be required.

During Non-Working Hours

Traffic control must include protecting and delineating of work zone hazards / drop-offs greater than 6-inches. One minimum 11-foot lane in each direction is required to be maintained. At side roads one minimum 10-foot lane in each direction is required to be maintained. Stop signs shall be maintained at all applicable side roads.

Acceptable driving surfaces shall be maintained within the project limits for local traffic to be maintained. Acceptable driving surfaces include, existing non-milled HMA pavement, milled HMA pavement, new HMA pavement, or 6 inches of compacted and uniform base aggregate dense.

Areas where the contractor is performing asphaltic repair/patching will be completed the same day and will match adjacent pavement areas for that day’s activities. Asphaltic repair/patching will be completed after the milling operation.

Pavement Markings

Temporary Marking Raised Pavement Markers Type II shall be removed, and permanent markings shall be installed within 20 calendar days of the existing pavement markings being obliterated.

Temporary Marking Raised Pavement Markers Type II shall be applied along the centerline prior to opening lanes to traffic after each day of paving/milling.

Fish Spawning

There shall be no instream disturbance of the following waterways as a result of construction activity under or for this contract, from March 1 to June 15, both dates inclusive, in order to avoid adverse impacts upon the spawning of various fish species.

- Unnamed stream at Station 241+00
- Unnamed stream at Station 264+99
- Unnamed stream at Station 300+20
- Husher Creek at Station 309+00
- Unnamed stream at Station 345+83
- Husher Creek at Station 370+00
- Root River at Station 427+00

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.

Red-shouldered Hawk

Tree clearing and grubbing activities that may impact nesting areas of the hawk must be avoided from April 1 to July 31. If tree clearing and grubbing is needed during this time period, contact Tommy Curran at (262) 548-5682 to coordinate activities.

Migratory Birds

Swallow or other migratory bird nests have been observed on the following structures; however, deterrent is not needed because (1) construction activities that may affect the underside or interior of structure(s) will not occur during the migratory bird nesting season, or (2) it has been determined that anticipated construction activities on the structure will not disturb active nests. If it is later determined during construction that the nests will be disturbed 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-51-09
- C-51-10

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 cut down and clear all required trees for this project prior to April 1.

The contractor shall remove any downed trees and grub the stumps and any remaining vegetation within the identified grubbing limits.

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.

Submit a schedule and description of clearing operations with the ECIP 14 days prior to any clearing operations. 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.

4. Traffic.

Construct the project using the traffic control shown in the traffic control plan, detour plan, standard detail drawings and as described in these special provisions.

Provide the Racine County Sheriff's Department, the Milwaukee County Sheriff's Department, the Village of Caledonia Police Department, the City of Oak Creek Police Department, and the engineer a current telephone number with which the contractor or his representative can be contacted during non-working hours in the event a safety hazard develops.

Provide a 24-hour-a-day availability of equipment and forces to expeditiously restore signs, barricades, lights, markers, and other traffic control devices that are damaged or disturbed. The cost to maintain, restore and replace the above items is incidental to the bid item Traffic Control and no additional payment will be made.

Employ flaggers, signs, barricades, and drums as may be necessary to safeguard and direct vehicular and pedestrian traffic at all locations where construction operations may interfere with or restrict the smooth flow of traffic and to protect and delineate hazards such as open excavations and abrupt drop-offs. Drop-offs greater than 6-inches within 4 feet of a local traffic travel way shall be graded or paved to maintain a 3:1 maximum slope.

At all times maintain emergency vehicle access to all properties within the project limits. Access to all driveways where alternative access is not available shall remain open at all times, except when it is absolutely necessary to close them for the purpose of roadway construction activities in the immediate vicinity of the driveway.

Coordinate traffic requirements under this project with other adjacent and concurrent department or local municipality projects. Contractor is responsible for implementing and coordinating with other contractors all traffic control shown on the plans. The engineer may require modifications to the traffic control plan to be safe and consistent with adjacent work by others.

Do not proceed with any operation until all traffic control devices for such work are in the proper location. Place traffic control devices as the plans and standard detail drawings show or as directed by the engineer. Maintain adequate turning provisions for vehicles, including trucks at all intersections within the construction limits.

Comply with all local ordinances that apply to work operations, including those pertaining to working during nighttime hours. Provide any ordinance variance issued by the municipality or required permits to the engineer in writing 3 days before performing such work.

Work will require flagging in a moving operation as specified in the standard detail drawings. Maintain access to all side roads and driveways within the project limits.

When a side road intersects the facility on which the work is being performed under flagging operations, additional flaggers and advance signing shall be provided on side roads following standard detail drawing Traffic Control for Lane Closure with Flagging Operation.

Do not, at any time, conduct construction operations on both sides of the roadway at the same time unless approved by the engineer.

At no time shall traffic lanes be open in both directions without centerline pavement marking or Temporary Marking Raised Pavement Markers Type II installed.

Keep flagging operations limited to a maximum of ½ mile segments unless approved by the engineer in the field.

Keep a minimum of one lane open to through traffic during flagging operations for milling, base patching, and paving.

Public lands associated with the Root River Parkway and the Oak Leaf Trail must remain accessible during construction.

Portable changeable message signs included in the plans shall be placed 7 calendar days in advance of the STH 38 through traffic closure and again 7 calendar in advance of the STH 38 hard closure for C-51-10 work. Obtain acceptance from the engineer regarding the wording of all messages on portable changeable message signs prior to placing the message.

Wisconsin Lane Closure System Advance Notification

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

TABLE 108-1 CLOSURE TYPE AND REQUIRED MINIMUM ADVANCE NOTIFICATION

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

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

5. Holiday and Special Event Work Restrictions.

Do not perform work on, nor haul materials of any kind along or across any portion of the highway carrying STH 38 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, June 30, 2023 to 6:00 AM Wednesday, July 5, 2023 for Independence Day;
- From noon Friday, September 1, 2023 to 6:00 AM Tuesday, September 5, 2023 for Labor Day.

stp-107-005 (20210113)

6. Utilities.

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

stp-107-065 (20080501)

There are underground and overhead utility facilities located within the project limits. Utility adjustments are required for this construction project. Coordinate construction activities with a call to Digger's Hotline or a direct call to the utilities that have facilities in the area as required per statutes. Use caution to ensure the integrity of underground and overhead facilities.

Bidders are advised to contact each utility company listed in the plans prior to preparing their bids, to obtain current information on the status of any utility within the project work limits.

Known utilities on the project are as follows:

AT&T Legacy – Communication Line has underground facilities within the construction limits. The existing facilities are located as follows:

- Underground along the Union Pacific Railroad, at approximately Station 241+00

No conflicts are anticipated.

AT&T Local Network – Communication Line has overhead facilities within the construction limits. The existing facilities are located as follows:

- Overhead along the east side of STH 38 from approximately Station 329+00 to Station 419+00, attached to WE Energies poles.
- An overhead crossing of STH 38 at approximately Station 419+00, attached to WE Energies poles.
- Overhead along the west side of STH 38 from approximately Station 419+00 to Oakwood Road, attached to WE Energies poles.

Proposed facility adjustments/relocations to resolve conflicts and be completed prior to construction are as follows:

- Aerial facilities will be transferred from the existing WE Energies pole at station 428+10, 35’ LT to the new WE Energies pole at station 428+10, 42’ LT
- Aerial facilities will be transferred from existing WE poles to new WE Energies poles from station 461+68, LT to station 474+60, LT

No conflict is anticipated but AT&T Local Network has underground facilities close to where riprap is being installed near Station 241+00. Arrange for a site watch to be present to mark the utility lines and monitor the work.

AT&T Wisconsin – Communication Line has overhead and underground facilities within the construction limits. The existing facilities are located as follows:

- Underground along the east and west sides of STH 38 from Linwood Road through the CTH G/6 Mile/River Road intersection.
- Overhead along the north side of STH 38 from the CTH G/6 Mile/River Road intersection to the 6 Mile Road/CTH H/CTH G intersection, with intermittent underground crossings to the south side of STH 38.
- Underground at the 6 Mile Road/CTH H/CTH G intersection.
- Overhead and underground along the east side of STH 38 from the 6 Mile Road/CTH H intersection to Oakwood Road, with intermittent overhead and underground crossings to the west side of STH 38.

Proposed facility adjustments/relocations to resolve conflicts and be completed prior to construction are as follows:

- Aerial facilities attached to the existing WE Energies pole at station 271+55, 33’ LT will be relocated to the proposed WE Energies pole at station 271+55, 40’ LT
- A handhole at station 456+80, 43’ RT will be moved 2’ to the north
- A pedestal at station 456+77, 42’ RT will be moved 5’ to the east
- A new handhole will be installed over an existing fiber line at station 435+00, 41’ RT
- New conduit will be bored, and fiber cable installed 2’ inside the right of way from an existing handhole at station 422+18, 35’ RT to the new handhole at station 435+00, 41’ RT. The conduit will be installed at an estimated depth of 14’.
- The existing copper and fiber cable from station 422+18 to station 435+00 will be removed from service
- The existing fiber cable from approximately station 458+10 to 458+97 will be exposed and the cable will be lowered from a current 4’ to approximately 9’ deep to be below the proposed drainage structure at 41’ RT

No conflict is anticipated but AT&T Wisconsin has underground facilities in close proximity to the drainage structures on the east side of STH 38 that are being replaced near Station 459+00. Arrange for an observer to be on site when working to replace the drainage structures.

ATC Management – Electricity Transmission has overhead facilities within the construction limits. The existing facilities are located as follows:

- An overhead crossing of STH 38 at approximately Station 242+25
- An overhead crossing of STH 38 at approximately Station 365+75
- An overhead crossing of STH 38 at approximately Station 392+00
- An overhead crossing of STH 38 at approximately Station 444+50

No conflicts are anticipated.

Caledonia Storm Sewer Utility Commission – Storm Sewer has underground facilities within the construction limits. The existing facilities are located as follows:

- Storm sewer in the northwest quadrant of the STH 38/Nicholson Road intersection

No conflicts are anticipated.

Caledonia – Water has underground facilities within the construction limits. The existing facilities are located as follows:

- Underground along the east side of STH 38 from approximately Station 408+25 to Station 420+25.

No conflicts are anticipated.

Century Link Communications LLC – Communication Line has overhead and underground facilities within the construction limits. The existing facilities are located as follows:

- Underground along the Union Pacific Railroad, at approximately Station 241+00.

No conflicts are anticipated.

City of Oak Creek – Storm Water Utility has facilities within the construction limits. The existing facilities are located as follows:

- Storm sewer along the south side of Elm Road and a crossing of Elm Road along the east side of STH 38 from the median island between STH 38 and the Service Road to the southeast quadrant of the intersection.
- Storm sewer along the east side of STH 38 from Elm Road to approximately Station 461+70.
- Storm sewer along the west side of STH 38 from the southwest quadrant of Oakview Parkway to approximately Station 466+00.

No conflicts are anticipated.

City of Oak Creek – Street Lighting has facilities within the construction limits. The existing facilities are located as follows:

- Streetlights along the south side of Elm Road.
- Streetlights along the north and south sides of Oakview Parkway.

No conflicts are anticipated.

Oak Creek Water and Sewer Utility – Sanitary Sewer has underground facilities within the construction limits. The existing facilities are located as follows:

- A crossing of STH 38 at approximately Station 457+20.
- Along the east side of STH 38 within the Service Road north of Elm Road.

No conflicts are anticipated.

Oak Creek Water and Sewer Utility – Water has underground facilities within the construction limits. The existing facilities are located as follows:

- A crossing of STH 38 at approximately Station 457+30.
- Along the east side of STH 38 within the Service Road north of Elm Road and continuing to the north project limit.

No conflicts are anticipated.

Spectrum – Communication Line has overhead and underground facilities within the construction limits. The existing facilities are located as follows:

- Overhead, attached to WE Energies poles, switching between both sides of STH 38 from the south project limit (Linwood Road) to approximately Station 232+00, with intermittent overhead crossings.
- Overhead, attached to WE Energies poles, along the north side of STH 38 from approximately Station 245+00 to the STH 38/CTH H/CTH G intersection, with an overhead crossing at approximately Station 275+50 (west of Nicholson Road).
- Overhead, attached to WE Energies poles, along the east side of STH 38 from Station 329+00 to Station 419+00, and along the west side of STH 38 from Station 419+00 to Oakwood Road, with intermittent overhead and underground crossings.

Proposed facility adjustments/relocations to resolve conflicts and be completed prior to construction are as follows:

- Aerial facilities attached to the existing WE Energies pole at Station 226+41, 60’ RT will be relocated to the proposed WE Energies pole at Station 226+30, 60’ RT
- Aerial facilities attached to the existing WE Energies pole at Station 227+95, 43’ RT will be relocated to the proposed WE Energies pole at Station 227+59, 44’ RT
- Aerial facilities attached to the existing WE Energies pole at Station 428+10, 35’ LT will be relocated to the proposed WE Energies pole at Station 428+10, 42’ LT
- Aerial facilities will be transferred from existing WE Energies poles to new WE Energies poles from Station 461+68, LT to Station 475+60, LT

No conflict is anticipated but Spectrum has underground facilities close to where riprap is being installed near Station 241+00 and Station 423+36, LT. Arrange for a site watch to be present to mark the utility lines and monitor the work.

Sprint Communications Co LP – Communication Line has underground facilities within the construction limits. The existing facilities are located as follows:

- Underground along the Union Pacific Railroad, at approximately Station 241+00.

No conflicts are anticipated. When excavating for and installing the riprap near Station 241+00, arrange for a site watch to be present to mark the utility lines and monitor the work.

TDS Metrocom LLC – Communication Line has underground facilities within the construction limits. The existing facilities are located as follows:

- Underground along the west side of STH 38 from approximately Station 328+00 to the north project limit at Oakwood Road.

Proposed facility adjustments/relocations to resolve conflicts and be completed prior to construction are as follows:

- Expose the existing facility and lower in place from Station 345+33 to Station 346+33, 42' LT for ditch grading and riprap placement at Station 345+83.
- Install new handholes at Station 458+04, 71’ LT and Station 465+00, 74' LT.
- Install a new utility line from between new handholes at Station 458+04, 71’ LT and 465+00, 74, LT. Splice the new and old utility lines at Station 465+00 from 39’ LT to 74’ LT.
- Remove from service/abandon in place the existing utility line that runs from Station 458+04, 71’ LT, to Station 457+98, 34’ LT, to Station 465+00, 39’ LT.

Proposed facility adjustments/relocations to resolve conflicts and be completed during construction are as follows:

- Manhole to be removed at Station 457+98, 34’ LT – Contractor to provide TDS Metrocom five working day notification prior to starting work on the storm sewer crossing at Station 458+96. TDS Metrocom will remove the old manhole and restore the pavement concurrently with the storm sewer work. Removing the manhole and restoring the pavement is estimated to take five working days.

No conflicts are anticipated but TDS Metrocom has underground facilities in close proximity to proposed work at numerous other locations within the project. Arrange for an observer to be on site when completing work at the following locations:

- Station 372+65, 24' LT to 373+95, 27' LT for beam guard approach grading.
- Station 379+15, 63' LT for traffic signal installation.
- Station 380+03, 64' LT to 380+36, 65' LT for riprap placement.
- Station 388+80 to Station 389+17, 36' LT for culvert replacment and riprap placement.
- Station 401+82 to Station 402+18, 39' LT for culvert replacment and riprap placement.

WE Energies – Electricity has overhead and underground facilities within the construction limits. The existing facilities are located as follows:

- Overhead along the west side of STH 38 from approximately Station 220+30 to approximately Station 222+20, including overhead crossings at approximately Station 220+30 and 222+20.
- Overhead along east side of STH 38 from approximately Station 222+20 to the STH 38/CTH G/River Road intersection.
- An overhead crossing within the STH 38/CTH G/River Road intersection, from the southeast quadrant to the northwest quadrant.
- Overhead along the north side of the east/west portion of STH 38 from the STH 38/CTH G/River Road intersection to the STH 38/CTH G/CTH H intersection, including overhead crossings at approximately Stations 231+70, 263+50, 275+50, 326+00 and 329+00.
- Overhead along the east side of STH 38 from approximately Station 329+00 to Station 419+00, including overhead crossings at approximately Stations 333+20, 342+00, 353+40, 368+80, 380+50 and 405+50, and an underground crossing at approximately Station 415+25.
- An overhead crossing of STH 38 at approximately Station 419+00.
- Overhead along the west side of STH 38 from Station 419+00 to Oakwood Road, including overhead crossings at approximately Stations 421+80 and 456+75, and an underground crossing at approximately Station 466+30.

Proposed facility adjustments/relocations to resolve conflicts and be completed prior to construction are as follows:

- The existing pole at Station 226+41, 60’ RT will be removed and replaced with a new pole at Station 226+30, 60’ RT and the existing aerial facilities transferred.
- A new pole will be placed at Station 227+59, 44’ RT and the existing aerial facilities transferred.
- The existing pole at Station 227+95, 43’ RT will remain for other utilities to continue to be attached to it.

- The existing pole at Station 271+55, 26’ LT will be removed and replaced with a new pole at Station 271+55, 40’ LT.
- The existing pole and guy wire at Station 423+14, 31’ RT will be removed and replaced with a new pole at Station 423+04, 32’ RT, a guy pole at Station 423+11, 30’RT, and the existing aerial facilities transferred.
- The existing pole at Station 428+10, 35’ LT will be removed and replaced with a new pole at Station 428+10, 42’ LT and the existing aerial facilities transferred. The existing guy pole and Station 428+09, 28’ RT will be removed.
- The existing pole at Station 461+68, 51’ LT will have a guy wire attached to the east side of the pole.
- The existing pole at Station 463+16, 39’ LT will be removed and replaced with a new pole at Station 463+16, 51’ LT and the existing aerial facilities transferred.
- The existing pole at Station 464+70, 28’ LT will be removed and replaced with a new pole at Station 464+70, 50’ LT and the existing aerial facilities transferred.
- The existing pole at Station 464+66, 30’ RT will be removed along with the guy wire to the east of the pole.
- The existing pole at Station 466+12, 28’ LT will be removed and replaced with a new pole at Station 466+12, 50’ LT and the existing aerial facilities transferred.
- The existing pole at Station 467+80, 32’ RT will be moved/shifted 3’ east to 35’ RT.
- The existing pole at Station 467+92, 29’ LT will be removed and replaced with a new pole at Station 467+92, 49’ LT and the existing aerial facilities transferred.
- The existing pole at Station 468+76, 29’ LT will be removed and replaced with a new pole at Station 467+92, 55’ LT, a guy wire added to the west side, and the existing aerial facilities transferred.
- The existing pole at Station 469+97, 28’ LT will be removed and replaced with a new pole at Station 469+98, 41’ LT and the existing aerial facilities transferred.
- The existing pole at Station 471+45, 32’ LT will be moved/shifted 4’ west to 36’ LT, a guy wire added to the east side.
- The existing pole at Station 473+00, 32’ LT will be moved/shifted 3’ west to 35’ LT.

WE Energies – Gas has underground facilities within the construction limits. The existing facilities are located as follows:

- Along the west side of STH 38 from approximately Station 220+20 to the STH 38/CTH G/River Road intersection, including crossings at approximately Station 220+20, 222+25 and 224+65.
- Along the west side of STH 38 within the southeast quadrant of the STH 38/CTH G/River Road intersection.
- Along both side of STH 38 from the STH 38/CTH G/River Road intersection to approximately Station 231+60, including a crossing of STH 38 at approximately Station 231+60.
- Along the north side of STH 38 from approximately Station 231+60 to 234+05, including a crossing of STH 38 at approximately Station 234+05.
- Along the south side of STH 38 from approximately Station 234+05 to STH 38/CTH G/CTH H intersection, including crossings at approximately Station 244+05, 275+05, 283+50, 287+00 and 297+00.
- Along the west side of STH 38 from the STH 38/CTH G/CTH H intersection to the north project limit at Oakwood Road, including crossings at approximately Station 328+40, 330+30, 341+25, 342+10, 349+25, 349+90, 350+60, 352+50, 355+50, 357+50, 359+00, 361+00, 362+70, 372+00, 376+45, 378+50, 383+90, 396+20, 405+45, 420+75, 457+00, 459+50, 460+60, 461+75, 462+80, 463+50, 464+50 and 468+00.

Proposed facility adjustments/relocations to resolve conflicts and be completed prior to construction are as follows:

- The existing pole at Station 226+41, 60’ RT will be removed and replaced with a new pole at Station 226+30, 60’ RT and the existing aerial facilities transferred.
- A new pole will be placed at Station 227+59, 44’ RT and the existing aerial facilities transferred.

- The existing pole at Station 227+95, 43’ RT will remain for other utilities to continue to be attached to it.
- The existing pole at Station 271+55, 26’ LT will be removed and replaced with a new pole at Station 271+55, 40’ LT.
- The existing pole and guy wire at Station 423+14, 31’ RT will be removed and replaced with a new pole at Station 423+04, 32’ RT, a guy pole at Station 423+11, 30’RT, and the existing aerial facilities transferred.
- The existing pole at Station 428+10, 35’ LT will be removed and replaced with a new pole at Station 428+10, 42’ LT and the existing aerial facilities transferred. The existing guy pole and Station 428+09, 28’ RT will be removed.
- The existing pole at Station 461+68, 51’ LT will have a guy pole placed on the east side of STH 38 at Station 461+65, 33’ RT and a guy wire anchor at 45’ RT.
- The existing pole at Station 463+16, 39’ LT will be removed and replaced with a new pole at Station 463+16, 51’ LT and the existing aerial facilities transferred.
- The existing pole at Station 464+70, 28’ LT will be removed and replaced with a new pole at Station 464+70, 50’ LT and the existing aerial facilities transferred.
- The existing pole at Station 464+66, 30’ RT will be removed along with the guy wire to the east of the pole.
- The existing pole at Station 466+12, 28’ LT will be removed and replaced with a new pole at Station 466+12, 50’ LT and the existing aerial facilities transferred.
- The existing pole at Station 467+80, 32’ RT will be moved/shifted 3’ east to 35’ RT.
- The existing pole at Station 467+92, 29’ LT will be removed and replaced with a new pole at Station 467+92, 49’ LT and the existing aerial facilities transferred.
- The existing pole at Station 468+76, 29’ LT will be removed and replaced with a new pole at Station 467+92, 55’ LT and the existing aerial facilities transferred.
- The existing pole at Station 469+97, 28’ LT will be removed and replaced with a new pole at Station 469+98, 46’ LT and the existing aerial facilities transferred.
- The existing pole at Station 471+45, 28’ LT will be removed and replaced with a new pole at Station 471+45, 43’ LT and the existing aerial facilities transferred.
- The existing pole at Station 473+00, 29’ LT will be removed and replaced with a new pole at Station 473+00, 40’ LT and the existing aerial facilities transferred.
- The existing pole at Station 474+47, 32’ LT will be removed and replaced with a new pole at Station 474+47, 37’ LT and the existing aerial facilities transferred.

WE Energies Electric has facilities within the construction limits. It is imperative that the highway contractor contact WE Energies if removing any electrical underground cables, to verify that they have been discontinued and carry no electrical current. The contractor must not assume that unmarked facilities have been discontinued. At no time is it acceptable to push, pull, cut, or drill an unmarked facility without explicit consent from WE Energies. The contractor must call the WE Energies 24-hour Dispatch lines to arrange for this verification. The WE Energies Electric Dispatch number is 1 (800) 662-4797.

WisDOT – Street Lighting has underground and overhead facilities within the construction limits. The existing facilities are located as follows:

- At the STH 38/CTH G/River Road signalized intersection.
- At the STH 38/7 Mile Road signalized intersection.

The WisDOT street lighting at both intersections will be replaced as part of the project.

WisDOT – Traffic Signals has underground and overhead facilities within the construction limits. The existing facilities are located as follows:

- At the STH 38/CTH G/River Road signalized intersection.
- At the STH 38/7 Mile Road signalized intersection.

The WisDOT traffic signals at both intersections will be replaced as part of the project.

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

A Description

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

A.1 Railroad Insurance Requirements

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

Notify evidence of the required coverage, and duration to David C. LaPlante, Senior Manager-Real Estate-Special and Public Projects, 1400 Douglas St. STOP 1690, Omaha, NE 68179; Telephone (402) 544-8563; E-mail: dclaplante@up.com.

Also send a copy to the following: Jason Kazmierski, SE Region Railroad Coordinator, 141 N. Barstow Street, Waukesha, WI 53188; Telephone (262) 548-6700; E-mail jason.kazmierski@dot.wi.gov.

Include the following information on the insurance document:

- Project ID: 2290-24-70
- Work Performed: Mill and pave up to saw cut joints on either side of grade-separated crossing. Guardrail work. Placement of erosion control/riprap at existing drainage facilities.

  Traffic control.

#	Route Name	City/County	Crossing ID	RR Subdivision	RR Milepost
1	STH 38 / 6 Mile Road	Oak Creek/Milwaukee	176806P	Milwaukee Sub	68.43
2	STH 100	Oak Creek/Milwaukee	178770R	Milwaukee Sub	72.21

A.2 Train Operation

#	Passenger Train Volume	Passenger Train Speed	Freight Train Volume	Freight Train Speed	Frequency	Switch Train Comment*
1	N/A	N/A	2	50	Weekly	No switch trains
2	N/A	N/A	2	50	Weekly	No switch trains

* Switch trains are in addition to freight and passenger trains.

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

Construction Contact

Chris T. Keckeisen, Manager Special Projects - Industry & Public Projects Engineering Department; 1400 Douglas, MS 0910, Omaha, NE, 68179; Telephone (402) 5445131; E-mail ctkeckei@up.com or Richard Ellison, Project coordinator, 207 Powell Avenue, Labadie, MO, 63055; Telephone (847) 323-7197; E-mail richardellison@up.com for consultation on railroad requirements during construction.

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

Flagging Contact

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

Cable Locate Contact

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

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

A.4 Work by Railroad

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

A.5 Temporary Grade Crossing

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

stp-107-026 (20230113)

8. 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_RGP.pdf?ver=2018-02-22-093530-183

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 (20230113)

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

The department has obtained coverage through the Wisconsin Department of Natural Resources to discharge storm water associated with land disturbing construction activities of this contract under the Wisconsin Pollutant Discharge Elimination System General Construction Storm Water Discharge Permit (WPDES Permit No. WI-S066796-1). A certificate of permit coverage is available from the regional office by contacting Stephen Pales at (262) 548-5940. Post the permit in a conspicuous place at the construction site.

stp-107-056 (20180628)

10. Coordination with Businesses and Residents.

The contractor shall arrange and conduct a meeting between the contractor, the department, affected residents, local officials, and businesspeople to discuss the project schedule of operations including vehicular and pedestrian access during construction operations. Hold the first meeting at least one week before the start of work under this contract and no further meetings will be required unless directed by the engineer. The contractor shall arrange for a suitable location for meetings that provides reasonable accommodation for public involvement. The department will prepare and coordinate publication of the meeting notices and mailings for meetings. The contractor shall schedule meetings with at least two weeks' prior notice to the engineer to allow for these notifications.

stp-108-060 (20141107)

11. Public Convenience and Safety.

Revise standard spec 107.8(6) as follows:

Check for and comply with local ordinances governing the hours of operation of construction equipment. Do not operate motorized construction equipment from 9:00 PM until the following 6:00 AM, unless prior written approval is obtained from the engineer.

stp-107-001 (20060512)

12. Construction Over or Adjacent to Navigable Waters.

The Root River and Husher Creek are classified as state navigable waterways under standard spec 107.19.

stp-107-060 (20171130)

13. Erosion Control.

Supplement standard spec 107.20 with the following:

Erosion control best management practices (BMP's) shown on the plans are at suggested locations. The actual locations will be determined by the contractor's ECIP and by the engineer. Include dust control and each dewatering or by-pass (mechanical pumping) operation in the ECIP submittal. The ECIP will supplement information shown on the plans and not reproduce it. The ECIP will identify how to implement the project's erosion control plan. ECIP will demonstrate timely and diligently staged operations, continuing all construction operations methodically from the initial removals and topsoil stripping operations through the subsequent grading, paving, re-application of topsoil, and restoration of permanent vegetation to minimize the period of exposure to possible erosion.

Provide the ECIP 14 days prior to the pre-construction meeting. Provide 1 copy of the ECIP to the department and 1 copy of the ECIP to the WDNR Liaison Benton Stelzel, (262) 623-0194, benton.stelzel@wisconsin.gov, Do not implement the ECIP without department approval and perform all work conforming to the approved ECIP

Maintain Erosion Control BMP's until permanent vegetation is established or until the engineer determines that the BMP is no longer required.

Stockpile excess materials or spoils on upland areas away from wetlands, floodplains, and waterways. Immediately install perimeter silt fence protection around stockpiles. If stockpiled materials will be left for more than 14 days, install temporary seed or other temporary erosion control measures the engineer orders.

Re-apply topsoil on graded areas, as the engineer directs, immediately after the grading is completed within those areas. Seed, fertilize, and mulch/erosion mat top-soiled areas, as the engineer directs, within 5 days after placement of topsoil. If graded areas are left not completed and exposed for more than 14 days, seed those areas with temporary seed and mulch.

Dewatering (Mechanical Pumping) for Bypass Water (sediment-free) Operations

If dewatering bypass operations are required from one pipe structure to another downstream pipe structure or from the upstream to downstream end of a culvert and the bypass flow is not transporting sediments (sand, silt, and clay particles) from a tributary work site area, bypass pumping operations will be allowed provided that the department has been made aware of and approves operation. When pumping bypass flows, the discharge location will need to be stable and not produce any erosion from the discharge velocity that would cause release of sediment downstream. Dewatering is considered incidental to the contract.

Dewatering (Mechanical Pumping) for Treatment Water (sediment-laden) Operations

If dewatering operations require pumping of water containing sediments (sand, silt, and clay particles), the discharge will not be allowed to leave the work site or discharge to a storm water conveyance system without sediment removal treatment. Do not allow any excavation for; structures, utilities, grading, maintaining drainage that requires dewatering (mechanical pumping) of water containing sediments (sand, silt, and clay particles) to leave the work site or discharge to a storm water conveyance system without sediment removal treatment.

Prior to each dewatering operation, submit to the department a separate ECIP amendment for sediment removal. Guidance on dewatering can be found on the Wisconsin DNR website located in the Storm Water Construction Technical Standards, Dewatering Code #1061,

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

Include reasoning, location, and schedule duration proposed for each operation. Per Code 1061, include all selection criteria: site assessment, dewatering practice selection, calculations, plans, specifications, operations, maintenance, and location of proposed treated water discharge. Provide a stabilized discharge area. If directing discharge towards or into an inlet structure, provide additional inlet protection for back-up protection. Dewatering is considered incidental to the contract.

Maintaining Drainage

Maintain drainage at and through worksite during construction conforming to standard spec 107.20, 204.3.2.1(3), 205.3.3 and 520.3.1(2). Use existing storm sewers, existing culvert pipes, existing drainage channels, temporary culvert pipes, or temporary drainage channels to maintain existing surface and pipe drainage. Pumps may be required to drain the surface, pipe, and structure discharges during construction. Costs for furnishing, operating, and maintaining the pumps is considered incidental to the contract.

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14. Environmental Protection for Culvert Work.

Supplement standard spec 107.18 with the following:

There are existing culvert pipes requiring work that is within or adjacent to wetland areas. Limit wetland disturbance as much as possible unless some ditch grading is required. Equipment used in this area shall exert low ground pressure (no wheeled vehicles) or be done by hand. Use silt fence to protect adjacent wetland areas from siltation and disturbance.

The contractor will be allowed to isolate the work area with bypass pumping for a maximum of two working days to complete pipe work at each culvert.

Protect wetlands against erosion and sedimentation during the construction phase of the project.

Do not place any fills in waterways or wetlands.

Properly dispose of all sediment removed from the cleaning process at a site that is approved by the engineer.

Divert flow in any drainage ditches that have twin culverts. Use rock bags to isolate the flow into the second culvert while cleaning the first. If site dewatering is required, pump the sediment-laden water into an adequately sized sediment basin prior to discharging it to a ditch, wetland, or waterway.

Utilize all best management practices for erosion control for this work as directed by the engineer.

Restore any disturbed area around the work area with specified landscaping as directed by the engineer.

Best Management Practices

Each culvert location should be classified based on the required level of environmental protection. As part of the erosion control bid items, the contractor shall include protection as described below. BMP's shown on the erosion control plan sheets are a minimum level of protection. Additional guidance is below:

Type 1: For culverts that have water running or standing in them during dry periods:

- Provide a rock bag dam at both the upstream and the downstream end of the culvert.
- Place silt fence or other erosion control BMP's to protect undisturbed areas.
- Dewater work area.
- Complete culvert work. Limit culvert replacement operation to a maximum of two consecutive working days.
- Reshape and restore all disturbed areas adjacent to culvert with topsoil, seed, and erosion mat.

Type 2: For culverts that are next to wetland areas without standing water or water in the culvert:

- Place silt fence or other erosion control BMP's to protect undisturbed area.
- Complete culvert work. Limit culvert replacement operation to a maximum of two consecutive working days.
- Reshape and restore all disturbed areas adjacent to culvert with topsoil, seed, and erosion mat.

Type 3: For culverts not near water or wetlands:

- Complete culvert work. Limit culvert replacement operation to a maximum of two consecutive working days.
- Reshape and restore all disturbed areas adjacent to culvert with topsoil, seed, and erosion mat.

C-51-10

Bid item 'Cofferdams C-51-10' includes all sandbags, or other methods approved by the engineer, for dewatering needed to complete reconstruction of wing 3, reconstruction of the top slab, reconstruction of the headers, and concrete surface repair at culvert C-51-10.

Dewatering

Perform all repair/replacement work in a fully dewatered ditch or waterway.

In instances where topography or space does not allow for passive diversion of water, use pumps and pipes to divert the water. The contractor shall provide the pumps required for flow conditions as well as have available additional pumps in the event the flow increases.

All pumps shall be supervised during hours of pumping.

Provide pumps that are in good operating order and free of leaks. Pumps that are leaking fuel, lubricants or other material shall be removed immediately from the work area and then repaired or replaced, as necessary.

During the dewatering operation, provide adequate protection from erosion at the discharge area. All materials placed to protect the discharge outfalls are temporary in nature and shall be removed from the project area upon completion of the dewatering process.

Dewatering is incidental to the project.

15. Removing Traffic Signals, STH 38 & 6 Mile Rd, Item 204.9060.S.01; Removing Traffic Signals, STH 38 & 7 Mile Rd, Item 204.9060.S.02.

A Description

This special provision describes removing the existing traffic signals at the intersections of STH 38 & 6 Mile Road and STH 38 & 7 Mile Road, conforming to standard spec 204 and as follows. Specific removal items are noted in the plans.

B (Vacant)

C Construction

Arrange for the de-energizing of the traffic signals with the local electrical utility after receiving approval from the engineer that the existing traffic signals can be removed.

Notify the department's Electrical Field Unit at (414) 266-1170 at least five working days prior to the removal of the traffic signals. Complete the removal work as soon as possible following shut down of this equipment.

All existing equipment shall remain in operation until the temporary traffic signal is energized and fully operational. The existing signal equipment shall only be de-energized when the temporary equipment is energized and fully operational. The de-energizing and removal of the existing equipment may only take place after receiving the approval from the engineer. The existing equipment shall be removed the same day as to not obstruct the newly operating equipment. Any remaining existing signal heads shall be bagged while the temporary signal is in operation.

Remove all designated standards and poles per plan from their concrete footings and disassemble out of traffic. Remove the transformer or pedestal bases from each pole. Remove the signal heads, mast arms, luminaires, wiring/cabling, and traffic signal mounting devices from each signal standard, arm or pole. Ensure that all access hand hole doors and all associated hardware remain intact. Properly dispose of the underground signal cable, internal wires, and street lighting cable. Deliver the remaining materials as directed by the department.

D Measurement

Removing Traffic Signals will be measured as a single unit of work for each intersection, acceptably completed.

E Payment

Removing Traffic Signals will be paid for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
204.9060.S.01	Removing Traffic Signals STH 38 & 6 Mile Rd	EACH
204.9060.S.02	Removing Traffic Signals STH 38 & 7 Mile Rd	EACH

Payment is full compensation for removing specified traffic signal components, disassembly, and delivery of parts to the department.

16. Removing Loop Detector Wire and Lead-in Cable, STH 38 & 6 Mile Rd, Item 204.9060.S.03; Removing Loop Detector Wire and Lead-in Cable, STH 38 & 7 Mile Rd, Item 204.9060.S.04.

A Description

This special provision describes removing loop detector wire and lead-in cable at the intersections of STH 38 & 6 Mile Road and STH 38 & 7 Mile Road as the plans show, conforming to standard spec 204, and as follows.

B (Vacant)

C Construction

Remove and dispose of detector lead-in cable including loop wire for abandoned loops off the project site.

D Measurement

Removing Loop Detector Wire and Lead-in Cable will be measured as a single unit of work for each intersection, acceptably completed.

E Payment

Removing Loop Detector Wire and Lead-in Cable will be paid for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
204.9060.S.03	Removing Loop Detector Wire and Lead-in Cable STH 38 & 6 Mile Rd	EACH
204.9060.S.04	Removing Loop Detector Wire and Lead-in Cable STH 38 & 7 Mile Rd	EACH

Payment is full compensation for removing and properly disposing of loop detector wire and lead-in cable.

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

A Description

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

Perform work according to standard spec 460 and as follows.

B Materials

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

C Construction

C.1 Test Strip

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

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

C.1.1 Sampling and Testing Intervals

C.1.1.1 Volumetrics

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

During production for the test strip, obtain sufficient HMA mixture for three-part split samples from trucks prior to departure from the plant. Collect three split samples during the production of test strip material. Perform sampling from the truck box and three-part splitting of HMA according to CMM 836. These three samples will be randomly selected by the engineer from each *third* of the test strip tonnage (T), excluding the first 50 tons:

Sample Number	Production Interval (tons)
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 CMM 815.7 shall be completed prior to the day of test strip construction. Daily standardization of gauges on reference blocks and a project reference site shall be performed according to CMM 815.8. A standard count shall be performed for each gauge on the material placed for the test strip, prior to any additional data collection. Nuclear gauge readings and pavement cores shall be used to determine nuclear gauge correlation 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/ft^3. In the event mix and density portions of the test strip procedure are separated, or if an additional density test strip is required, the mix portion must be conducted prior to density determination. The target maximum density to determine core densities shall then be the Gmm four-test running average (or three-test average from a PWL volumetric-only test strip) from the end of the previous day's production multiplied by 62.24 lb/ft^3. 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

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

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

[1] 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:

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

*Note: If Pay Factor = 50, the contract unit price will be used in lieu of $65/ton and the weighted percentage (WP) will equal 1.0.

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

Parameter	WP
Air Voids	0.5
Density	0.5

Individual Pay Factors for each air voids ($PF_{air\ voids}$) and density ($PF_{density}$) will be determined. $PF_{air\ voids}$ will be multiplied by the total tonnage 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.

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18. 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 sublot in which a QV sample is collected, discard the QC sample and test a split of the QV sample.

(3) Perform sampling from the truck box and three-part splitting of HMA samples according to CMM 836. 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 sublot. All QC samples shall provide the following: QC, QV, and Retained. The contractor shall take possession and test the QC portions. The department will observe the splitting and take possession of the samples intended for QV testing (i.e., QV portion from each sample) and the Retained portions. Additional sampling details are found in Appendix A. Label samples according to CMM 836. Additional handling instructions for retained samples are found in CMM 836.

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

- Blended aggregate gradations according to AASHTO T 30.
- Asphalt content (AC) in percent.

  Determine AC using one of the following methods:

  - AC by ignition oven according to AASHTO T 308 as modified in CMM 836.6.3.6. If the department is using an ignition oven to determine AC, conform to CMM 836.6.3.7. If the department is not using an ignition oven to determine AC, IOCFs must still be reverified for any of the reasons listed in CMM 836.6.3.7.2 Table 836-2 and conform to CMM 836.6.3.7.3.
  - AC by chemical extraction according to AASHTO T 164 Method A or B.
  - AC by automated extraction according to ASTM D8159 as modified in CMM 836.6.3.1.
- Bulk specific gravity (Gmb) of the compacted mixture according to AASHTO T 166 as modified in CMM 836.6.5.
- Maximum specific gravity (Gmm) according to AASHTO T 209 as modified in CMM 836.6.6.
- Air voids (V_a) by calculation according to AASHTO T 269.
- Voids in Mineral Aggregate (VMA) by calculation according to AASHTO R35.

(5) Lot size shall consist of 3750 tons with sublots of 750 tons. Test each design mixture at a frequency of 1 test per 750 tons of mixture type produced and placed as part of the contract. Add a random sample for any fraction of 750 tons at the end of production for a specific mixture design. Partial lots with less than three sublot 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 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
Va		- 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 sublot. 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 AASHTO T 166 as modified in CMM 836.6.5.
- Maximum specific gravity (Gmm) according to AASHTO T 209 as modified in CMM 836.6.6.
- Air voids (Va) by calculation according to AASHTO T 269.
- Voids in Mineral Aggregate (VMA) by calculation according to AASHTO R 35.
- Asphalt Content (AC) in percent determined by ignition oven method according to AASHTO T308 as modified in CMM 836.6.3.6 and conforming to CMM 836.6.3.7, chemical extraction according to AASHTO T 164 Method A or B, or automated extraction according to ASTM D8159 as modified in CMM 836.6.3.1.

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

Delete standard spec 460.2.8.3.1.6.

Replace standard spec 460.2.8.3.1.7 Dispute Resolution with the following:

460.2.8.3.1.7 Data Analysis for Volumetrics

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

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

[1] The Retained portion of the split from the lot in the analysis window with a QV test result furthest from the QV mean (not necessarily the sublot 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 sublot(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 sublot 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 sublot basis. If an entire PWL sublot is removed and replaced, the test results of the newly placed material will replace the original data for the sublot. Any remove and replace shall be performed at no additional cost to the department. Testing of replaced material must include a minimum of one QV result. [Note: If the removed and replaced material does not result in replacement of original QV data, an additional QV test will be conducted and under such circumstances will be entered into the HMA PWL Production spreadsheet for data analysis and pay determination.] The quantity of material paid at 50% the contract unit price will be deducted from PWL pay adjustments, along with accompanying data of this material.

Delete standard spec 460.2.8.3.1.8 Corrective Action.

C Construction

Replace standard spec 460.3.3.2 Pavement Density Determination with the following:

460.3.3.2 Pavement Density Determination

(1) The engineer will determine the target maximum density using department procedures described in CMM 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 sublot and the department will randomly conduct one QV test per sublot. A partial quantity less than 750 lane feet will be included with the previous sublot. 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 sublot 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 sublot. 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 sublot basis. If an entire PWL sublot is removed and replaced, the test results of the newly placed material will replace the original data for the sublot.

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

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

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

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

(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:

Pay Adjustment = (PF-100)/100 x (WP) x (tonnage) x ($65/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:

Parameter	WP
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 BELOW SPECIFIED MINIMUM	PAYMENT FACTOR (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 sublot of mix at 65 dollars per ton of HMA pavement multiplied by the following pay adjustment calculated according to the HMA PWL Production Spreadsheet:

AC Binder Relative to JMF	Pay Adjustment / Sublot
-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 automated extraction according to ASTM D8159 as modified in CMM 836.6.3.1.

[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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19. 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

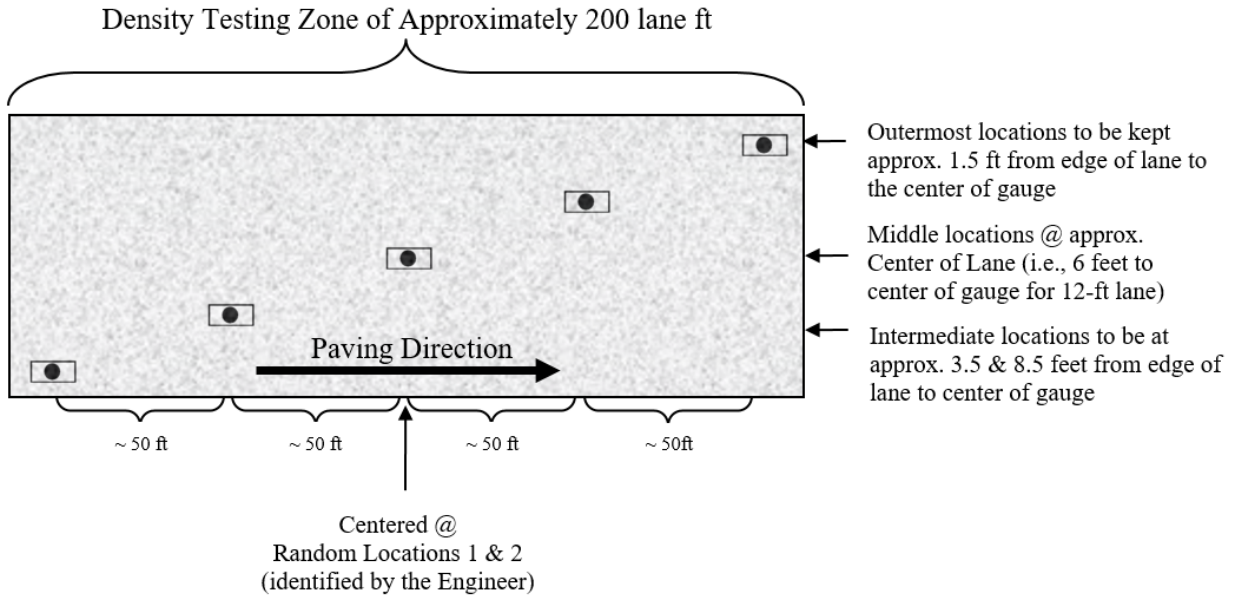


Figure 1: Nuclear/Core Correlation Location Layout

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:

(a) (b)

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 AASHTO R79 as modified by CMM 836.6.10 prior to using specimens for in-place density determination according to AASHTO T 166 as modified by CMM 836.6.5.

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

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

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

For nuclear density testing of the pavement beyond the test strip, QC tests will be completed at three locations per sublot, with a sublot 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 sublot 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 sublot. 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 sublot density testing layout is depicted in Figure 4, with QC test locations shown as solid lines and QV as dashed.

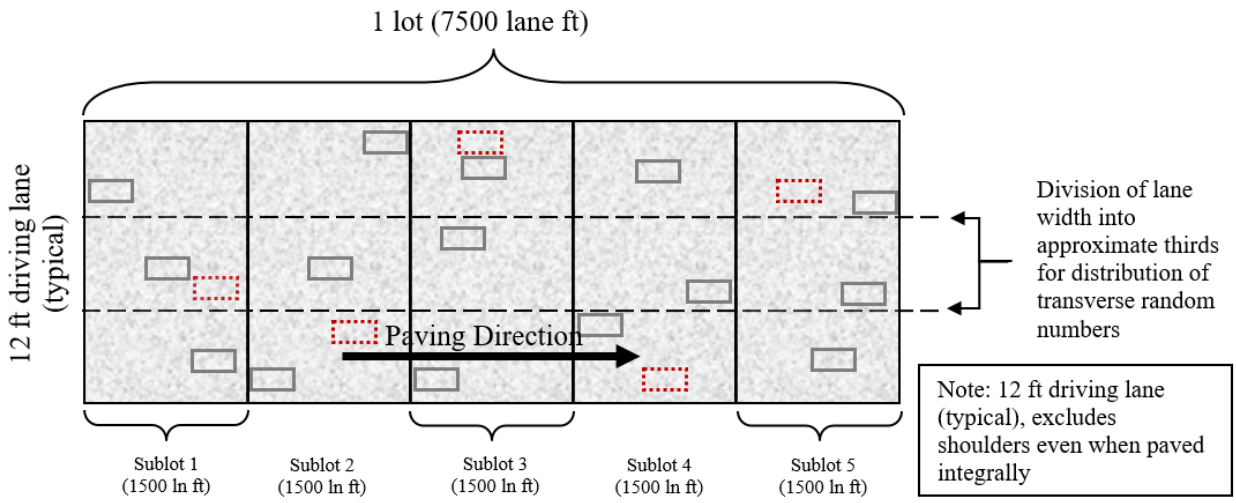


Figure 4: Locations of main lane HMA density testing (QC=solid lines, QV=dashed)

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 CMM 815 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 2 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 AASHTO T166 as modified in CMM 836.6.5. Dry cores after testing. Fill core holes according to Appendix A and obtain engineer approval before opening to traffic. The department will maintain custody of cores throughout the entire sampling and testing process. The department will label cores, transport cores to testing facilities, witness testing, store dried cores, and provide subsequent verification testing. 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 CMM 836 except as modified here.

Delete CMM 836.4 Sampling Hot Mix Asphalt and replace with the following to update sublot tonnages:

Sampling Hot Mix Asphalt

At the beginning of the contract, the contractor determines the anticipated tonnage to be produced. The frequency of sampling is 1 per 750 tons (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 CMM 836.4.1 and 836.4.2. The contractor must submit the random numbers for all mix sampling to the department before production begins.

Example 1

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

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

The approximate location of each sample within the prescribed sublots is determined by selecting random numbers using ASTM Method D-3665 or by using a calculator or computerized spreadsheet that has a random number generator. The random numbers selected are used in determining when a sample is to be taken and will be multiplied by the sublot tonnage. This number will then be added to the final tonnage of the previous sublot 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 sublot 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 sublot 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 CMM 836.5.2.

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 sublot eligible for density incentive or disincentive.

Solution:

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

stp-460-055 (20230113)

20. 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 sublot 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 sublot 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 sublot, 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 sublot density. When this occurs, the lane feet of any unacceptable material will be deducted from the sublot in which it is located, and the previously accepted sublot density will be used to calculate pay for the remainder of the sublot.

(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

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

E Payment

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

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

PAY ADJUSTMENT FOR HMA PAVEMENT LONGITUDINAL JOINT DENSITY

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

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

(2) The department will not assess joint density disincentives for pavement placed in cold weather because of a department-caused delay as specified in standard spec 450.5.2(3).

(3) The department will not pay incentive on the longitudinal joint density if the traffic lane is in disincentive A disincentive may be applied for each mainline lane and all joint densities if both qualify for a pay reduction.

(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

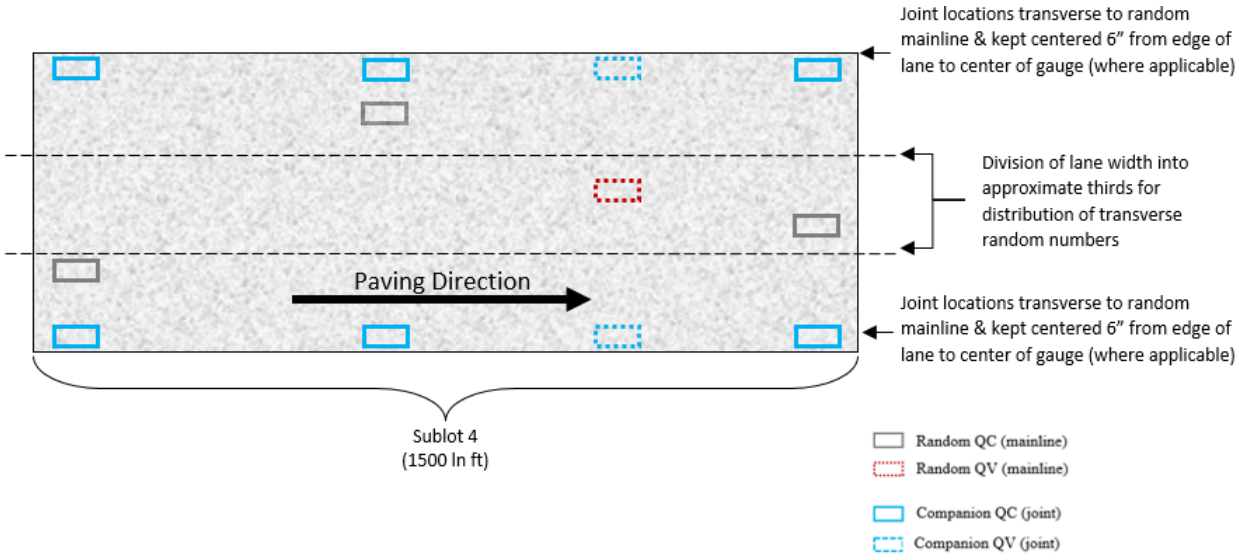
The department will administer disincentives under the Disincentive Density HMA Pavement Longitudinal Joints administrative item.

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

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

stp-460-075 (20230113)

21. Sheet Membrane Waterproofing for Buried Structures, Item 516.0610.S.

A Description

This special provision describes providing a primer, waterproofing membrane, hot rubberized sealer or mastic, or both, on the concrete faces of buried structures as the plans show.

B Materials

B.1 Waterproofing System

For pedestrian underpasses and buried structures other than box culverts with no asphaltic overlay or with a minimum earth cover of 6” or more between the waterproofing membrane and the asphaltic pavement, select a membrane from the Sheet Membrane Waterproofing for Buried Structures Approved Products List (APL), or furnish a waterproofing system meeting the requirements as specified herein.

Provide a material in the waterproofing system that is specifically designed for use on buried structures. The membrane shall consist of a cold-applied, self-adhering membrane with a layer of polymer modified bitumen or SBS modified rubberized asphalt. The membrane shall have a release film, polyester or polyethylene on the downside.

Provide a composite sheet membrane with the following properties:

Property	Test Method	Specific Value
Width		36 inch min.
Tensile Strength	ASTM D412 or ASTM D882	325 psi min. (Membrane), 5,000 psi min. (Film)
Thickness		60 mils to 80 mils
Puncture Resistance	ASTM E154	40 lb min.
Permeance	ASTM E96, Method B	0.05 US Perms max.
Low Temperature Pliability	ASTM D146, 1-inch Mandrel @ -25º F Or ASTM D1970	Unaffected
Water Absorption	ASTM D570, 72 hours	0.25% max.
Peel Adhesion	ASTM D903	5 lb/in width min.

Provide rubberized asphalt compound containing not more than 15% inorganic residue or filler material.

Provide primer, mastic and/or hot rubberized asphalt sealer conforming to the specified properties required by the manufacturer of the waterproofing membrane.

B.2 Materials Certification for Products Not on APL

Waterproofing products not on the APL are required to provide material certification.

Before membrane approval for initial submittals and/or upon reformulation of membrane material compounds, submit to the engineer a notarized certification by an independent test laboratory stating that the materials conform to the requirements of these specifications.

The certification shall include or have attached specific results of tests performed on the material supplied. Samples of any material for testing may be required by the engineer.

C Construction

C.1 Application Methods

Apply materials in strict accordance with the manufacturer's instructions. In order to install the waterproofing membrane, the slab temperature shall be a minimum of 45º F and rising. Before applying the system, become acquainted with the materials specified and their handling characteristics and become thoroughly familiar with the construction procedures recommended by the manufacturer. Furnish a copy of the recommended procedures to the engineer. To establish procedures for maintaining optimum working conditions and to coordinate work related to adjacent construction, hold a pre-installation conference with a manufacturer's representative, the engineer, and other affected contractors before starting construction. To provide quality assurance that the membrane has been properly installed, a manufacturer's representative familiar with membrane installation procedures shall be present during placement of the membrane.

Finish all concrete surfaces that will be in contact with the membrane with a magnesium float finish. Provide a minimum concrete cure time of seven days before placing the primer.

The slab shall be clean, dry, and free from mud, dirt, sand, oil, or grease, and any other contaminants before application of the primer. No vehicles or equipment will be permitted on the concrete slab after surface preparation except those necessary for the installation of the waterproofing membrane. The engineer will inspect the concrete slab before the application of the primer. Do not begin application of either the primer or membrane until after the engineer grants approval.

To coat all surfaces that will be covered with the membrane, apply primer uniformly as recommended by the manufacturer. Use roller, brush, or spray to apply primer to the surfaces. If spraying is used, an approved method of protecting the environment is required.

Allow the primer to dry until tack free, approximately 45 minutes, before applying the membrane. Apply primer only to an area that will be covered with the membrane within the same calendar day. If the surface of the concrete slab becomes contaminated, clean and re-prime the area.

Apply primer to the inside face of any header to the top of the header. Take care to ensure that all inside corners are coated with primer.

After the primer has dried to a tack free condition, apply one layer of membrane to the slab starting on the low side edge.

To form a bond with the primed slab, remove the release film from the membrane on the tacky side while the membrane is rolled face down. Apply the membrane using hand methods or by using mechanical applicators. Overlap a minimum of 2.5 inches at the edges of each strip and overlap the membrane in such a manner to provide a shingling effect toward the low side of the slab cross section. Overlap a minimum of 5 inches at the ends of each strip of membrane and overlap the membrane in such a manner to provide a shingling effect toward the lower side of the slab profile. Roll the entire membrane surface with a rubber tire roller to ensure firm and uniform contact with the primed surface. Use special care to ensure that the membrane is uniformly adhered to the concrete and that the entire membrane is free of wrinkles, air bubbles, and other placement defects. In the event bubbles or blisters do form under the membrane, puncture the bubbles or blisters with a sharp pointed instrument such as an awl and press the membrane firmly into contact with the slab. Repair any membrane punctures, tears, holes, and misaligned or inadequate seams with a patch of waterproofing membrane sized as required to ensure that the membrane is watertight.

Cover the inside corners of any concrete header and all other perimeter edges with narrow strips (flashing strips of approximately 12 inches), hot rubberized sealer, or mastic according to the manufacturer's guidelines. As an additional method of ensuring a watertight bond, all terminating edges, transverse overlaps and longitudinal overlaps may be heated with a propane torch to soften the top mat and fuse the surfaces together.

Place a 6-inch-thick layer of clean granular fill material (sand), free of any aggregate, stones or other angular materials that may puncture the membrane, over the membrane covered slab. Cover all exposed membrane with the clean granular fill within five days after installation. Only rubber-tired construction vehicles shall be permitted on the membrane. Use caution not to turn the tires when a vehicle is stationary. To prevent tearing the membrane, avoid sudden starts, stops, accelerations, or decelerations. Chemical solvents, gasoline, diesel fuel, mineral spirits, or other deleterious substances shall not be spilled or leaked onto the membrane. When required to accommodate traffic control staging, the placement of fill material shall stay at least 12 inches away from the terminating edge of the membrane to provide for overlap. The membrane applicator contractor shall have a minimum of one employee present during the placement of the clean granular fill material to ensure that all necessary membrane repairs are accomplished.

D Measurement

The department will measure Sheet Membrane Waterproofing for Buried Structures, installed according to the contract and accepted, in area by the square yard. Measurement shall be based on the horizontal distance between the faces of any concrete headers and the horizontal length of membrane installed. Any material specified to be applied up vertical faces of any header or vertically down at the ends of the buried structure shall be included in the measured quantity.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
516.0610.S	Sheet Membrane Waterproofing for Buried Structures	SY

Payment is full compensation for furnishing and placing the primer, membrane, mastic, and hot rubberized asphalt sealer, preparing the surface, and placing all strips of membranes. The department will pay separately for providing fill material over the sheet membrane waterproofing under the Backfill Structure Type B bid item.

stp-516-061 (20230113)

22. Removing and Installing Guardrail and Energy Absorbing Terminals.

This special provision describes maintaining the work site during removing and installing guardrail, type 2 terminals, thrie beam, and energy absorbing terminals conforming to standard spec 204 and 614 and as follows.

Perform removal and installation at each location in one continuous operation. Removal and installation of guardrail, type 2 terminals, thrie beam, and energy absorbing terminal shall be completed within 72 hours.

Appropriate traffic control measures must be in place during the removal and installation as approved by the engineer.

Blunt guardrail ends shall not be left unprotected at any time.

SER-614-003 (20180109)

23. Guardrail Mow Strips.

Replace standard spec 614.5.7 with the following:

Payment for the Guardrail Mow Strip bid items is full compensation for removing any debris or weeds from between the posts, providing the paved strip adjacent to the guardrail installation; for concrete, asphaltic surface material, or emulsified asphalt; and for controlled low-strength backfill including mix design and testing.

24. Topsoil and Salvaged Topsoil.

Replace standard spec 625.2 (1) with the following:

(1) Topsoil consists of loam, sandy loam, silt loam, silty clay loam, or clay loam humus-bearing soils adapted to sustain plant life, and ensure the topsoil consists of the following:

Topsoil Requirements	Minimum Range	Maximum Range
pH	6.0	8.0
Organic Matter*	5%	20%
Clay	5%	30%
Silt	10%	70%
Sand	10%	70%

*Organic matter determined by loss on ignition test of samples oven dried to constant weight at 212 F (100 C).

Add the following to standard spec 625.2:

(3) Furnish material that is free from large roots, sticks, weeds, brush, stones, litter, and waste products.

(4) Do not furnish surface soils from ditch bottoms, drained ponds, and eroded areas, or soils which are supporting growth of NR 40 listed plants and noxious weeds or other undesirable vegetation.

Replace standard spec 625.3.3 (3) with the following:

(3) Ensure that for the upper 2 inches, 100 percent of the material passes a one-inch sieve and at least 90 percent passes the No. 10 sieve.

SER-625-001 (20221007)

25. Silt Fence Heavy Duty, Item 628.1530.S; Silt Fence Heavy Duty Maintenance, Item 628.1535.S.

A Description

This special provision describes furnishing, installing, maintaining, repairing, and removing heavy duty silt fence as the plans show, as directed by the engineer, and as hereinafter described.

B Materials

Provide Silt Fence Heavy Duty consisting of a composite of fence posts, fence fabric, geotextile fabric, sand bags or rock bags, and fasteners to be assembled by the contractor.

Furnish new or salvaged notched conventional metal “T” or “U” shaped fence posts with a length of 8 feet and minimum weight of 1.25 lb/ft.

Furnish new fence fabric, or salvaged fence fabric that is free of rust or other structural defects, conforming to standard spec 616.2.2.1 or 616.2.3.2, or one of the following alternatives:

- Woven wire fence - Standard field fence type, minimum 14-½ gauge wire, maximum mesh spacing of 6 inches, and a height of 4 feet.
- Chain link fence – minimum 12-½ gauge, maximum 2.5-inch diamond pattern, and a height of 4 feet.
- Welded wire fence – minimum 14 gauge, maximum mesh spacing of 4 inches, and a height of 4 feet.

Furnish Geotextile Fabric Type HR according to standard spec 645.2.2.7.

Furnish sand bags according to standard spec 628.2.8 or rock bags according to standard spec 628.2.13.

Furnish wire ties, nylon zip ties, or other engineer approved materials.

C Construction

Complete the installation prior to any ground disturbing activities within the drainage area adjacent to the required location. Construct according to the plan details and as described below.

Install posts with a minimum embedment of two feet and as necessary to provide a stable fence system.

Attach fence fabric to posts with at least three ties on each post (top, middle, bottom).

Attach geotextile fabric to fence fabric and/or posts at a maximum spacing of every 2 feet along the top and additionally as necessary to prevent displacement or damage by wind and wave actions. Overlap joints in the geotextile fabric by a minimum of 12 inches. Excess geotextile fabric may be cut or draped over the backside of the fence system.

Secure the bottom of the geotextile fabric by either of the following methods:

- For installation in wet conditions, anchor the lower flap of the geotextile fabric to the ground using a continuous line of sand bags or rock bags. The lower flap shall be a minimum width of 1 foot.
- For installation in dry conditions, bury the bottom edge in a trench that is a minimum of 4 inches wide and 6 inches deep. Fold material to fit trench and backfill and compact trench with excavated soil.

Maintain the fence throughout construction and until removal. Repair or replace fence materials as necessary. Remove sediment whenever it accumulates to approximately one-half the original fence height and as directed by the engineer. Remove all sediment prior to final stabilization.

Keep system in place until the site is permanently vegetated and is ordered for removal by the engineer. Clean up and restore the surface after removal.

D Measurement

The department will measure Silt Fence Heavy Duty by the linear foot, acceptably completed, measured along the base of the fence, center-to-center of end post, for each section of fence.

The department will measure Silt Fence Heavy Duty Maintenance by the linear foot, acceptably completed, measured along the base of the fence, end-to-end of the section maintained, for each time a section of fence is cleaned and repaired.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
628.1530.S	Silt Fence Heavy Duty	LF
628.1535.S	Silt Fence Heavy Duty Maintenance	LF

Payment for Silt Fence Heavy Duty is full compensation for erecting fence, including excavating or trenching, posts, geotextile fabric, sand bags or rock bags, backfilling, removal, restoration, and disposal.

Payment for Silt Fence Heavy Duty Maintenance is full compensation for required cleaning and repairing; for removing and disposing sediment or spreading accumulated sediment to form a surface suitable for seeding; and for replacing fence and damages caused by overloading sediment material or ponding water adjacent to fence.

stp-628-005 (20220628)

26. Covering Signs.

Replace standard spec 643.2.3.3(2) with the following:

(2) Ensure that covers are flat black, blank, and opaque.

Add the following to standard spec 643.3.4.1 as paragraph four:

(4) If multiple messages on a single sign are required to be covered, minimize the number of holes created by covering the sign with a single rectangular shaped covering. Multiple coverings on a single sign is only permissible where necessary to avoid covering necessary content or as directed by the engineer. Submit sign covering plans to the engineer for single signs requiring multiple coverings 3 days before performing work. Obtain engineer approval before covering signs. Remove sign coverings before placing fixed messages signs unless otherwise directed by the engineer.

sef-643-005 (20180104)

27. Temporary Marking Raised Pavement Markers Type II, Item 643.3770.

Temporary Marking Raised Pavement Markers Type II shall match the color of the marking they supplement or replace. Centerline markers shall be reflective on both sides. Channelizing, lane line, and edge line markers may be reflective on a single side.

If the engineer approves, Temporary Marking Line Removeable Tape may be used in lieu of Temporary Marking Raised Pavement Markers Type II. If Temporary Marking Line Removeable Tape is used in lieu of Temporary Marking Raised Pavement Markers Type II, temporary centerline markings shall be placed according to the Locating No-Passing Zones bid item and according to S.D.D. 15C 8-19a Longitudinal Marking (Mainline). Regardless of the item used, payment will be made based on the quantity of Temporary Raised Pavement Markers Type II to complete the work.

28. Locating No-Passing Zones, Item 648.0100.

For this project, the spotting sight distance in areas with a 55-mph posted speed limit is 0.16 miles (845 feet).

stp-648-005 (20060512)

29. Traffic Signals, General.

All traffic signal work shall be according to the State of Wisconsin Department of Transportation Standard Specifications for Highway and Structure Construction, 2023 edition, the plans, and these special provisions.

Note that the failure to comply with the state standards and specifications may result in the cost of corrections to be made at the contractor's expense. Also, any additional disruption of State-owned facilities shall be repaired or relocated as needed at the contractor's expense.

Notify the department's Electrical Field Unit at (414) 266-1170 at least three weeks prior to the beginning of the traffic signal work.

30. General Requirements for Electrical Work.

Replace standard spec 651.3.3(3) with the following:

Request a signal inspection of the completed signal installation to the engineer at least five working days prior to the time of the requested inspection. Notify the department's Electrical Field Unit at (414) 266-1170 to coordinate the inspection. The department's Region Electrical personnel will perform the inspection. In the event of deficiencies, request a re-inspection when the work is corrected. The engineer will not authorize turn-on until the contractor corrects all deficiencies.

31. Electrical Wiring.

Replace standard spec 655.5(12) with the following:

(12) Payment for Traffic Signal EVP Detector Cable is full compensation for providing emergency vehicle preemption detector cable and for making all necessary connections.

32. Electrical Service Meter Breaker Pedestal STH 38 & 6 Mile Rd, Item 656.0201.01; Electrical Service Meter Breaker Pedestal STH 38 & 7 Mile Rd, Item 656.0201.02

Append standard spec 656.2.3 with the following:

(2) The department will be responsible for the electrical service installation or relocation request for any department-maintained facility. Notify the maintaining authority if the signal is not state maintained that it is their responsibility to arrange for the electrical service installation.

(3) Electrical utility company service installation and energy cost will be billed to and paid for by the department.

(4) Install the cabinet base and meter breaker pedestal first, so the electrical utility company can install the service lateral. Install a 3" conduit from the point of service from the utility to the meter breaker pedestal. Finish grade the service trench, replace topsoil that is lost or contaminated with other materials, fertilize, seed, and mulch all areas that are disturbed by the electrical utility company.

Append standard spec 656.5 with the following:

(8) Payment is full compensation for grading the service trench; replacing topsoil; and for fertilizing, seeding, and mulching to restore the disturbed area of the service trench.

33. Traffic Signal Faces.

Append standard spec 658.3 with the following:

(5) Connect all ungrounded conductors with wire nuts in the appropriate sections of the signal heads, when directed by WisDOT personnel. Connect the neutral conductors to the terminal strip. Be certain to twist wires prior to installing the wire nuts. All wire nuts must be installed facing up to prevent the entrance of water.

34. Lamp, Ballast, LED, Switch Disposal by Contractor, Item 659.5000.S.

A Description

This special provision describes the packaging of lamps, ballasts, LEDs, and mercury containing switches (e.g., overhead roadway lighting, underdeck bridge, wall packs, pedestrian signals, traffic control stop lights and warning flashers, fluorescent bulbs, and thermostats) removed under this contract for disposal as hazardous materials.

For Lamp, Ballast, LED, Switch Disposal by Contractor, coordinate removal from the work site by the department's hazardous waste disposal vendor.

B Materials

Items removed under this contract will be considered the property of the department for waste generator identification. The contractor is responsible for coordinating with the department's hazardous waste vendor for disposal:

https://wisconsindot.gov/Documents/doing-bus/eng-consultants/cnslt-rsrces/environment/hazwaste-contacts.pdf

C Construction

Provide a secure, level location removed from the travelled way for storage of the material for disposal.

Pack intact fixtures in the packaging of the new lamps used to replace them, or packaging affording the equivalent protection. Place in full, closed stackable cartons.

Pile cartons no more than four high if palletized and secure cartons with shrink wrap to prevent shifting or falling of the loads. Clearly mark each pallet with the words "Universal Waste Lamps" or "Universal Waste Ballasts", the date, and the number of fixtures on each pallet.

Pack broken fixtures into (min.) 6 mil thick plastic bags and place inside sturdy cardboard boxes or the equivalent. Mark the outer packaging with the term "Broken Fixtures/Lamps", the date and the number of broken fixtures clearly marked on the box.

The hazardous waste vendor will not accept fixtures improperly packaged. The vendor will reject any fixtures not removed as part of a contract pay item or otherwise required under this contract.

Pack ballasts and mercury containing switches in appropriate containers.

Complete the lamp and ballast inventory (https://wisconsindot.gov/Documents/doing-bus/eng-consultants/cnslt-rsrces/environment/dotlampballastinventory.dotx) and contact the hazardous waste vendor to coordinate pickup and disposal at a location specified by the contractor. Consolidate all pallets and boxes from one project at a single location. Contact the hazardous waste vendor to set up an appointment for pickup. The hazardous waste vendor requires a minimum of one week advance notice to schedule pickup.

D Measurement

The department will measure Lamp, Ballast, LED, Switch Disposal by Contractor as each individual unit received by the hazardous waste vendor, properly packaged and acceptably completed, matching the total number of units provided on the inventory form. The department will not measure broken fixtures that exceed a total of 10 percent of all fixtures to be disposed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
659.5000.S	Lamp, Ballast, LED, Switch Disposal by Contractor	EACH

Payment for Lamp, Ballast, LED, Switch Disposal by Contractor is full compensation for handling, packaging, labeling, and scheduling disposal with the hazardous waste vendor; and scrapping and disposal of all other materials.

stp-659-500 (20220628)

35. Temporary Traffic Signal for Intersections, STH 38 & 6 Mile Rd, Item 661.0201.01; Temporary Traffic Signal for Intersections, STH 38 & 7 Mile Rd, Item 661.0201.02.

Replace standard spec 661.2.1 (1) with the following:

(1) Furnish control cabinet and control equipment. The department will supply, maintain, and install a signal controller, cellular modem, and ethernet switch to establish remote communication to the signal controller. The cabinet must be equipped with a 6-circuit Isotel independent of the GFI receptacles. Provide a cabinet with a Corbin #2 door lock and an access door that allows placing the controller in emergency flash. Provide keys to the access door to the engineer and law enforcement agencies as required. Also provide a manual control accessible by the police. Test traffic signal control cabinets before installation. The department will provide the signal controller with the initial traffic signal timing, and the department will be responsible for all subsequent signal timing changes.

Replace standard spec 661.2.1 (3) with the following:

(3) Use existing underground electric service and meter breaker pedestal for the operation of the Temporary Traffic Signal. The contractor will be responsible for arranging any additional service connection to the temporary signal. The department will pay for all Energy Costs for the operation of the Temporary Traffic Signal.

Furnish and install a generator to operate the temporary traffic signals for the times required to switch the existing permanent traffic signal over to the temporary traffic signal and for the time required to switch the temporary traffic signal back over to the permanent traffic signal.

Contact the local electrical utility at least four days prior to making the switch from the Temporary Traffic Signal to the new Permanent Traffic Signal.

Append standard spec 661.2.1 (6) with the following:

(6) Control equipment or controller equipment is defined as anything inside the control cabinet excluding the department furnished signal controller, cellular modem, and ethernet switch.

Replace standard spec 661.3.1 (2) with the following:

(2) Request a signal inspection of the completed temporary traffic signal installation to the engineer at least five working days prior to the time of the requested inspection. Notify the SE Region Electrical Field Unit at (414) 266-1170 to coordinate the inspection. The SE Region electrical personnel will perform the inspection.

Append standard spec 661.3.1.4 (4) with the following:

(4) Arrange for every other week inspections with the engineer to check the height of the span wire above the roadways to ensure that the bottom of the traffic signal heads remain within the minimum and maximum heights allowed above the roadway. Make all height adjustments within 1-hour of an inspection indicating that adjustments are required. Notify the engineer in writing upon completion of all necessary adjustments. Maintain a written log to properly document the date of each every other week inspection, the heights above the roadway, the roadway clearance after adjustments have been made, and acceptance by the engineer. Provide all documentation related to the every other week span wire height checks as well as all records related to maintenance performed on the temporary traffic signal installations to the engineer.

Replace standard spec 661.3.2.2 (2) with the following:

(2) Install the tether wire at 20 feet to 22 feet over the roadway.

Replace standard spec 661.3.2.4 (1) with the following:

(1) Install the span wires free of any splices or kinks. Install the span wire mounted signal faces so the bottom is a maximum of 22 feet above the roadway (minimum height is 20 feet). Compute the vertical height of the span wire on the span pole using the following formula:

HD (0.05) + RC + HH = SH

Replace standard spec 661.3.2.6 (2) with the following:

(2) Upon acceptance of new signal and completion of work, the department will switch control of the intersection over to the permanent cabinet installation. Remove signal cable and wires, wood poles, wood posts, control cabinet, control equipment, and incidental materials. Upon deactivation of the controller, call the electrical utility immediately for the temporary electrical service disconnect. The department shall remove the signal controller, cellular modem, and ethernet switch.

Append standard spec 661.3.2.6 (6) with the following:

(6) Remove the CCTV camera, hardware, mounting brackets and cabling from the temporary traffic signal installation and return it to the department.

Replace standard spec 661.3.2.7 (2) with the following:

(2) Respond within one hour of notification to provide corrective action to any emergency such as but not limited to knockdowns, signal cable problems, and controller equipment failures. If equipment becomes damaged or faulty beyond repair, replace it within one working day. In order to fulfill this requirement, maintain, in stock, sufficient materials and equipment to provide repairs. Replace the traffic signal control equipment including the cabinet and cabinet accessories within 4 hours. If the outcome of the response identifies damage to the department furnished signal controller, notify the Traffic Management Center at (800) 375-7302 who will then dispatch the SE Region Electrical Field Unit

Replace standard spec 661.5 (2) with the following:

(2) Payment for the Temporary Traffic Signals for Intersections bid item is full compensation for providing, maintaining, and repairing the complete temporary installation; and for removal. Payment also includes the following:

1. Furnishing and installing replacement equipment.
2. The cost of delivery and pick-up of the cabinet assemblies.

Payment is full compensation for drilling holes; furnishing and installing all materials, including bricks, and coarse aggregate; for excavation, bedding, and backfilling, including any sand or other required materials; furnishing and placing topsoil, fertilizer, seed, and mulch in disturbed areas; for properly disposing of surplus materials; for making inspections; for cleaning up and properly disposing of waste; for removing and delivering the CCTV camera, hardware, mounting brackets and cabling from the temporary traffic signal installation to the department; and for furnishing all labor, tools, equipment, and incidentals necessary to complete the work.

36. Stone Gabion Wall, Item SPV.0035.01.

A Description

This special provision describes furnishing materials and constructing stone gabion walls as shown on the plans. The wall shall be soundly constructed of rectangular baskets made of polyvinyl chloride (PVC) coated and heavily galvanized steel wire mesh filled with rock as indicated on the plans.

B Materials

Provide wire mesh gabion baskets that are manufactured from welded wire mesh according to the requirements of ASTM A974 or from twisted/woven mesh according to the requirements of ASTM A975. The wire mesh gabion baskets shall have a mesh opening of not less than 9 square inches and shall meet the following requirements:

1. All wire mesh will be formed from wire having a minimum diameter of 0.105 inches for with fuse-bonded PVC coating and galvanizing that is according to the applicable requirements of ASTM A974 and ASTM A975.
2. Additionally, coat all galvanized steel wire with gray polyvinyl chloride that shall resist destructive effects of immersion in acidic, salt or polluted water, and exposure to ultra-violet light and abrasion, when subjected to 20,000 hours of testing according to ASTM specification B-117-73.
3. All other aspects of the wire mesh and fastening systems, including the galvanizing and PVC coating, shall meet the pertinent requirements of ASTM A974 and A975.

Provide lacing and stay wires for gabion diaphragms and for securing tops according to the wire specifications for the mesh, except the diameter shall not be less than 0.086 inch. Mechanical fasteners made of galvanized steel with zinc coating (as described above) or stainless steel and supplied by the gabion manufacturer may be used in lieu of the lacing wire, with the approval of the engineer.

Provide rock, which will be used inside of the gabions, that is hard durable gravel or stone and is free of organic matter, lumps of clay, shale or other deleterious substances. Provide rock that is graded in size between 4 inches and 8 inches.

C Construction

Tightly close mechanical fasteners and space the fasteners as recommended by the manufacturer, the spacing between fasteners shall not exceed 6 inches.

Securely fasten individual gabions to adjacent gabions along the top, bottom, and vertical edges, and fill and place stone inside of the gabions in such a manner that conforms to specifications and details shown in the plan. Carefully place the stone in layers and densely pack the stone into the gabions. Layers of stone shall be approximately 12 inches thick. Use internal connecting wires between each stone layer to stiffen the basket and to ensure rectangular basket configurations after filling. Use a minimum of two internal connecting wires per stone layer for each 3 linear feet of wall length. Uniformly overfill the top layer of stone in each basket 1 to 2 inches to compensate for future rock settlement; allow for proper closing of the lid and for providing an even surface that is uniform in appearance. After closing, securely attach the lid to the surrounding baskets.

Prior to beginning wall construction, the engineer shall inspect the compacted wall foundation soils to determine if the foundation is adequate for the intended loads. Any required foundation improvements will be paid for at the appropriate bid prices for the items. Place the wall units to the lines, elevations and batter shown in the plans. Place wall units in horizontal layers, unless otherwise specified in the plan. Stagger basket-to-basket end joints in relation to adjacent layer basket end joints. Maintain the design wall face batter as wall construction proceeds. Do not place subsequent layers of baskets until the backfill has been placed and compacted behind all lower basket layers. Backfill with homogeneous soils previously excavated. Compact all backfill behind the wall in 6-inch lifts.

Place Geotextile Fabric Type HR between the fill and gabion wall.

D Measurement

The department will measure Stone Gabion Wall for payment in volume by the cubic yard of wall, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0035.01	Stone Gabion Wall	CY

Payment is full compensation for excavating and preparing the bed; furnishing, hauling, and placing the gabion baskets and rock; filling baskets with rock; backfilling and compacting around stone gabion wall with homogeneous material, placing geotextile fabric, and disposing of unnecessary excavated material.

37. Install Type 9 Special Pole, Item SPV.0060.01; Install Type 10 Pole, Item SPV.0060.02; Install Type 10 Special Pole, Item SPV.0060.03; Install Type 13 Pole, Item SPV.0060.04; Install Monotube Arms 25-FT, Item SPV.0060.05; Install Monotube Arms 40-FT Special, Item SPV.0060.06; Install Monotube Arms 45-FT Special, Item SPV.0060.07; Install Monotube Arms 50-FT, Item SPV.0060.08; Install Luminaire Arms Steel 15-FT, Item SPV.0060.09.

A Description

This special provision describes installing department furnished monotube poles, monotube arms, and luminaire arms as shown on the plans and as directed by the engineer.

B Materials

Conform to the pertinent requirements of standard spec 657.2 and as shown on the plans.

C Construction

Conform to the pertinent requirements of standard spec 657.3 and as shown on the plans.

D Measurement

The department will measure Install (Pole Type) Pole, Install Monotube Arms (Length) and Install Luminaire Arms Steel 15-FT by each item, 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	Install Type 9 Special Pole	EACH
SPV.0060.02	Install Type 10 Pole	EACH
SPV.0060.03	Install Type 10 Special Pole	EACH
SPV.0060.04	Install Type 13 Pole	EACH
SPV.0060.05	Install Monotube Arms 25-FT	EACH
SPV.0060.06	Install Monotube Arms 40-FT Special	EACH
SPV.0060.07	Install Monotube Arms 45-FT Special	EACH
SPV.0060.08	Install Monotube Arms 50-FT	EACH
SPV.0060.09	Install Luminaire Arms Steel 15-FT	EACH

Payment is full compensation for installing all materials, including all associated hardware, fittings, mounting devices, and attachments necessary to completely install the pole and arms.

38. Transport and Install State Furnished EVP Detector Heads, 6 Mile Rd, Item SPV.0060.10; Transport and Install State Furnished EVP Detector Heads, 7 Mile Rd, Item SPV.0060.11.

A Description

This special provision describes transporting and installing department furnished Emergency Vehicle Preemption (EVP) Detector Heads, confirmation lights, and mounting brackets as the plans show and as follows.

B Materials

Pick up the department furnished materials at the department's Electrical Shop located at 935 South 60th Street, West Allis. Notify the department's Electrical Field Unit at (414) 266-1170 and make arrangements for picking up the department furnished materials five working days prior to picking the materials up.

C Construction

Install the EVP detector heads as shown on the plans. The department will determine the exact location to ensure that the installation does not create a sight obstruction. Mount the EVP detector heads and wire them per manufacturer instructions. For a cabinet that is not operating the signal, the contractor will terminate the ends and install the discriminators and card rack in the cabinet. If the cabinet is operating the signal, the cabinet wiring will be done by the department.

Notify the department's Electrical shop at (414) 266-1170 upon completion of the installation of the Emergency Vehicle Preemption (EVP) Detector Heads with Confirmation Beacons.

D Measurement

The department will measure Transport and Install State Furnished EVP Detector Heads (location) by each intersection location, 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.0060.10	Transport and Install State Furnished EVP Detector Heads 6 Mile Rd	EACH
SPV.0060.11	Transport and Install State Furnished EVP Detector Heads 7 Mile Rd	EACH

Payment is full compensation for transporting and installing department furnished Emergency Vehicle Preemption (EVP) Detector Heads and mounting brackets.

39. Transport and Install State Furnished Traffic Signal Cabinet, 6 Mile Rd, Item SPV.0060.12; Transport and Install State Furnished Traffic Signal Cabinet, 7 Mile Rd, Item SPV.0060.13.

A Description

This special provision describes the transporting and installing the state furnished traffic signal cabinet, signal controller, and other cabinet equipment for traffic signals, and for making the cabinet fully operational as shown in the plans.

B Materials

Use materials furnished by the department including: the traffic signal controller and the traffic signal cabinet.

Pick up the state furnished materials at the department's Electrical Shop located at 935 South 60th Street, West Allis. Notify the department's Electrical Field Unit at (414) 266-1170 and make arrangements for picking up the state furnished materials five working days prior to picking up the materials.

Provide all other needed materials in conformance with standard spec 651.2, 652.2, 653.2, 654.2, 655.2, 656.2, 657.2, 658.2 and 659.2.

C Construction

Perform work according to standard spec 651.3, 652.3, 653.3, 654.3, 655.3, 656.3, 657.3, 658.3 and 659.3 except as specified below.

Install the state furnished traffic signal cabinet on the concrete control cabinet base the same day it is delivered to the site location.

Request a signal inspection of the completed signal installation to the engineer at least five working days prior to the time of the requested inspection. The department's Region Electrical personnel will perform the inspection.

D Measurement

The department will measure Transport and Install State Furnished Traffic Signal Cabinet (Location) by each intersection location, 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.0060.12	Transport and Install State Furnished Traffic Signal Cabinet 6 Mile Rd	EACH
SPV.0060.13	Transport and Install State Furnished Traffic Signal Cabinet 7 Mile Rd	EACH

Payment is full compensation for installing and testing the Traffic Signal Cabinet and cabinet equipment; for furnishing and installing all other items necessary (such as, wire nuts, splice kits and/or connectors, tape, insulating varnish, ground lug fasteners, etc.) to make the proposed system complete from the source of supply to the most remote unit; and for clean-up and waste disposal.

40. Transport and Install State Furnished Radar Detection System, 6 Mile Rd, Item SPV.0060.14; Transport and Install State Furnished Radar Detection System, 7 Mile Rd, Item SPV.0060.15.

A Description

This special provision describes the transporting and installing of department furnished Radar Detection System for installation on monotube poles or arms.

B Materials

Pick up the department furnished Radar System at the department's electrical shop located at 935 South 60th Street, West Allis. Notify the department's electrical field unit (EFU) at (414) 266-1170 to make arrangements for picking up the department furnished materials at least five working days prior to material pick-up.

C Construction

Contact the EFU at (414) 266-1170 to coordinate the locations of the radar units at least five working days prior to installation. Install the department furnished pole/arm mounting brackets, extension arms (if required), and radar units per manufacturer recommendations. Install the power and communication cables to run continuously (without splices) from the traffic signal cabinet to the radar units plus an additional 16-feet in each pull box and an extra 10-feet in the monotube pole handhole. Terminate the ends of the cables, if required, and make all connections to the radar units. The EFU will install all required cabinet equipment in the traffic signal control cabinet. Make all final cable connections in the traffic signal cabinet.

Mark each end of the lead in the traffic signal cabinet and each cable in the monotube handhole to indicate the equipment label (i.e., RE1, RE2, etc.). For a cabinet that is not operating the signal, the contractor will terminate the ends.

Notify department's Electrical Shop at (414) 266-1170 upon completion of the installation.

The department will provide notification of the radar detection system vendor and provide the vendor's contact information. Coordinate directly with the department's radar detection system vendor to arrange for the vendor to program the radar detection system on-site. Notify the department and vendor at least five (5) working days prior to the date of programming. Assist the department and vendor with adjusting the radar units during the radar system programming.

D Measurement

The department will measure Transport and Install State Furnished Radar Detection System (location) by each intersection location, 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.0060.14	Transport and Install State Furnished Radar Detection System 6 Mile Rd	EACH
SPV.0060.15	Transport and Install State Furnished Radar Detection System 7 Mile Rd	EACH

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

41. Temporary Infrared EVP System, 6 Mile Rd, Item SPV.0060.16; Temporary Infrared EVP System, 7 Mile Rd, Item SPV.0060.17.

A Description

This special provision describes furnishing, installing, maintaining and placing into operation temporary infrared EVP systems at the temporary signalized intersections as shown in the plans.

B Materials

Furnish an infrared emergency vehicle preemption system compatible with the temporary traffic signal controller.

C Construction

The temporary infrared EVP system, as shown in the temporary traffic signal plans or as directed by the engineer, shall be complete in place, tested, and in full operation during each stage of construction.

Install the temporary infrared EVP system as shown in the plans and according to the manufacturer's recommendations. Detectors may be mounted on the temporary traffic signal span wire or wood poles. It shall be the contractor's responsibility to relocate the temporary infrared EVP detectors to a suitable location if there is impedance on the sensor operation. Arrange for testing of equipment prior to acceptance of the installation for each construction stage.

All cables associated with the temporary infrared EVP system shall be routed to the cabinet. Each lead shall be appropriately marked as to which EVP channel it is associated.

Periodic adjustment and/or moving of the temporary infrared EVP detectors may be required due to changes in traffic control, staging, or other construction operations.

Ensure that the temporary infrared EVP system stays in clean working order. Periodic cleaning of the equipment may be required due to dirt and dust build-up.

D Measurement

The department will measure Temporary Infrared EVP System (location) by each intersection location, 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.0060.16	Temporary Infrared EVP System 6 Mile Rd	EACH
SPV.0060.17	Temporary Infrared EVP System 7 Mile Rd	EACH

Payment is full compensation for furnishing and installing all required equipment, materials, and supplies; for maintaining and changing the EVP detectors to match the plans, traffic control, and construction staging; for relocating the temporary EVP detectors due to construction activities, if required; for testing the EVP system for each stage and sub-stage of construction; for periodically cleaning all temporary EVP detectors; and for removing the equipment at the completion of the project.

42. Curb Ramp Grading, Shaping and Finishing, Item SPV.0060.18.

A Description

This special provision describes excavating, grading, filling, shaping, compacting, and finishing as necessary to construct each curb ramp location conforming to standard spec 205, 208, 211, 305, 625, 627, 629, and 630, as the plans show, and as follows.

B Materials

Furnish materials as the plans show and engineer directs conforming the standard specs for the following:

Common excavation	205.2
Borrow	208.2
Base Aggregate Dense	305.2
Topsoil or Salvaged Topsoil	625.2
Mulching	627.2
Fertilizer	629.2
Seeding	630.2

C Construction

Construct the final subgrade and base for the curb ramp at the locations on the plans and as the engineer directs. Restore disturbed areas with topsoil or salvaged topsoil, fertilizer, seed, and mulch.

Dispose of all surplus and unsuitable material as specified in standard spec 205.3.12.

D Measurement

The department will measure Curb Ramp Grading, Shaping, and Finishing as each individual location, 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. 18	Curb Ramp Grading, Shaping, and Finishing	EACH

Payment is full compensation for all excavating, grading, placing borrow, base aggregate, shaping, and compacting, and for providing and placing topsoil or salvaged topsoil, fertilizer, seed, and mulch at each curb ramp location.

Sidewalk removal, construction staking, curb ramp detectable warning field, and concrete sidewalk will be paid under respective contract bid items.

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43. Salvage and Reinstall Steel Plate Beam Energy Absorbing Terminal, Item SPV.0060.19.

A Description

This special provision describes removing and salvaging the existing steel plate beam energy absorbing terminal (EAT), providing replacement components, and reinstalling the EAT as shown in the plans or as directed by the engineer, and as hereinafter provided.

B Materials

For components of the EAT replaced as part of the bid item, conform to standard spec 614.2. The contractor shall provide replacement parts compatible with the existing EAT system. Furnish new nuts, washers, and bolts.

C Construction

Dismantle and remove the rail, posts, blocks, end treatment, or other components the salvaged bid item indicates from the locations in the plans. Minimize damage to reusable materials. Do not cut material that would otherwise be reusable. Replace wood posts and blocks deemed unsalvageable by the engineer upon inspection. Replace contractor damaged materials that are to remain in place or to be reinstalled at no cost to the department. Remove and dispose of all unwanted or damaged materials.

Stockpile reusable materials in an engineer approved location on the project. Reinstall the salvaged EAT, including rail and end treatment, at the locations the plan designates, or as directed by the engineer. Replace all existing hardware (nuts, washers, and bolts) with new hardware.

D Measurement

The department will measure Salvage and Reinstall Steel Plate Beam Energy Absorbing Terminal by each end treatment, 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.0060.19	Salvage and Reinstall Steel Plate Beam Energy Absorbing Terminal	EACH

Payment is full compensation for dismantling and stockpiling reusable EAT system elements; for removing and disposing of unwanted or damaged materials; for providing and installing any missing components; for supplying new wood posts and blocks to replace those deemed unsalvageable; for providing and installing new hardware; for setting and driving posts; for reinstalling end treatment; for excavating, backfilling, and disposing of surplus material.

44. Utility Line Opening (ULO), Item SPV.0060.20.

A Description

This special provision describes excavating to uncover utilities for the purpose of determining elevation or location and potential conflicts as shown on the plans or as directed by the engineer.

B (Vacant)

C Construction

Perform the excavation in such a manner that the utility in question is not damaged and the safety of the workers is not compromised.

Perform the utility line openings as soon as possible and at least 10 working days in advance of proposed work that may have a utility conflict, to allow any conflicts to be resolved with minimal disruption. Allow the engineer a minimum of 3 working days once utility line opening information is received to review all relevant design information prior to proceeding with work or relocating utilities in conflict.

Approve and coordinate all utility line openings with the engineer. Notify the utility engineers or their agents of this work a minimum of 5 working days prior to the work so they may be present when the work is performed. Backfill the excavation with suitable backfill material and thoroughly compact.

D Measurement

The department will measure Utility Line Opening by each individual unit, acceptably completed.

Utility line openings include a trench up to 10 feet long as measured at the trench bottom, and of any width and depth required to locate the intended utility. Where utilities are within 6 feet of each other at a potential conflict location, only one utility line opening will be measured. In these cases, a single utility line opening will be considered full payment to locate multiple utilities.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.20	Utility Line Opening (ULO)	EACH

Payment is full compensation for performing the excavation required to expose the utility line; backfilling with existing material removed from the excavation; compacting the backfill material; restoring the site; and cleanup.

Existing pavement, concrete curb, gutter, and sidewalk removals necessary to facilitate utility line openings are not considered part of or paid for under Utility Line Openings but are considered separate and measured and paid for separately as removal items. Pavement replacement material, concrete curb, gutter, and sidewalk items will also be considered separate from Utility Line Openings and will be measured and paid for separately.

45. Transport Traffic Signal and Intersection Lighting Materials, 6 Mile Rd, Item SPV.0060.21; Transport Traffic Signal and Intersection Lighting Materials, 7 Mile Rd, Item SPV.0060.22.

A Description

This special provision describes the transporting of department furnished materials for traffic signals and intersection lighting.

B Materials

Transport materials furnished by the department including: Monotube arms/poles and luminaire arms (to be installed on monotube assemblies).

Pick up the department furnished materials at the department's Electrical Shop located at 935 South 60th Street, West Allis. Notify the department's Electrical Field Unit at (414) 266-1170 and make arrangements for picking up the department furnished materials five working days prior to picking the materials up.

Provide all other needed materials in conformance with standard spec 651.2, 652.2, 653.2, 654.2, 655.2, 656.2, 657.2, 658.2 and 659.2.

C Construction

Perform work according to standard spec 651.3, 652.3, 653.3, 654.3, 655.3, 656.3, 657.3, 658.3 and 659.3 except as specified below.

D Measurement

The department will measure Transport Traffic Signal and Intersection Lighting Materials (location] by each intersection location, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.21	Transport Traffic Signal and Intersection Lighting Materials 6 Mile Rd	EACH
SPV.0060.22	Transport Traffic Signal and Intersection Lighting Materials 7 Mile Rd	EACH

Payment is full compensation for transporting the monotube poles/arms and luminaire arms (to be installed on monotubes). Installation of these materials is included under a separate pay item.

46. Debris Removal C-51-09, Item SPV.0060.23.

A Description

This special provision describes removing and disposing of debris at box culvert C-51-09. No in-stream disturbance is allowed between March 1 and June 15, both dates inclusive.

B (Vacant)

C Construction

C.1 Debris Removal

Remove debris at box culvert C-51-09 within the limits of the right of way and any TLEs acquired. Additional removal of debris interfering with the structure or channel flow to be as directed by the engineer. Debris removal (such as car tires, concrete pieces, fallen or cut timber, etc.) is the primary intent of this work. Removal of these items at discrete locations are expected to cause minor stream bed disturbance and do not require the water to be diverted. Any larger scale removals requiring in stream excavation will require a diversion plan for active water flow. If stream bed excavation is required to complete the work, include a plan to divert active water flow and submit with the ECIP.

Perform vegetation removal work per standard spec 201.3, except as modified herein.

D Measurement

The department will measure bid items as 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.0060.23	Debris Removal C-51-09	EACH

Payment is full compensation for all debris removal required under this section and performed within the right of way and TLE limits defined under this section and identified on the plans; handling, hauling, piling, re-handling; water diversion; disposing of waste and debris.

47. Survey Project 2290-24-70, Item SPV.0060.24.

A Description

This special provision describes modifying standard spec 105.6 and 650 to define the requirements for construction staking for this contract. Conform to standard spec 105.6 and 650 and as follows.

The department will not perform any construction staking for this contract. Obtain engineer's approval before performing all survey required to lay out and construct the work under this contract.

Replace standard spec 650.1 with the following:

This section describes the contractor-performed construction staking required under individual contract bid items to establish the horizontal and vertical position for all aspects of construction including:

- asphalt repair / base patching
- storm sewer
- subgrade
- base
- curb and gutter
- curb ramps
- pipe culverts
- drainage structures
- structure layout
- bridges
- pavement
- pavement markings (temporary and permanent)
- resurfacing reference
- supplemental control
- slope stakes
- traffic signals/electrical equipment (temporary and permanent)
- utilities
- traffic control items
- fencing

B (Vacant)

C Construction

Add the following to standard spec 650.3.1 (5):

Confirm with engineer before using global positioning methods to establish the following:

1. Structure layout horizontal or vertical locations.
2. Concrete pavement vertical locations.
3. Curb, gutter, and curb & gutter vertical locations.
4. Concrete barrier vertical locations.
5. Storm Sewer layout horizontal or vertical locations, including structure centers, offsets, access openings, rim, and invert elevations.

Replace standard spec 650.3.1.1(2) with the following:

Maintain neat, orderly, and complete survey notes, drawings, and computations used in establishing the lines and grades. This includes:

- Raw data files
- Digital stakeout reports
- Control check reports
- Supplemental control files (along with method used to establish coordinates and elevation)
- Calibration report

Make the survey notes and computations available to the engineer within 24 hours as the work progresses unless a longer period is approved by the engineer.

Replace standard spec 650.3.3.1 with the following:

Under the Survey Project bid item, global positioning system (GPS) machine guidance for conventional subgrade staking on all or part of the work may be substituted. The engineer may require reverting to conventional subgrade staking methods for all or part of the work at any point during construction if the GPS machine guidance is producing unacceptable results.

Replace standard spec 650.3.3.3.4.1 with the following:

The department will provide the contractor staking packet as described in the Construction and Materials Manual (CMM) 7.10. At any time after the contract is awarded, the available survey and design information may be requested. The department will provide that information within 5 business days of receiving the contractor's request. The department incurs no additional liability beyond that specified in standard spec 105.6 or standard spec 650 by having provided this additional information.

Add the following to standard spec 650.3.3.3.6.2 as paragraph four:

Record all subgrade elevation checks and submit a hard copy to the engineer within 24 hours or as requested by the engineer.

D Measurement

Replace standard spec 650.4 with the following:

The department will measure Survey Project (Project ID) as a single unit for each project, acceptably completed.

E Payment

Replace standard spec 650.5 with the following:

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.24	Survey Project 2290-24-70	EACH

Payment is full compensation for performing all survey work required to lay out and construct all work under this contract and for adjusting stakes to ensure compatibility with existing field conditions. The department will not make final payment for this item until the contractor submits all survey notes and computations used to establish the required lines and grades to the engineer within 24 hours of completing this work. Re-staking due to construction disturbance and knock-outs will be performed at no additional cost to the department.

48. Salvage and Reinstall Steel Plate Beam Guard, Item SPV.0090.01.

A Description

This special provision describes removing and salvaging the existing steel plate beam guard, providing replacement components, and reinstalling the beam guard as shown in the plans or as directed by the engineer, and as hereinafter provided.

B Materials

For components of the beam guard replaced as part of the bid item, conform to standard spec 614.2. The contractor shall provide replacement parts compatible with the existing system. Furnish new nuts, washers, and bolts.

C Construction

Dismantle and remove the rail, posts, blocks, or other components the salvaged bid item indicates from the locations in the plans. Minimize damage to reusable materials. Do not cut material that would otherwise be reusable. Replace wood posts and blocks deemed unsalvageable by the engineer upon inspection. Replace contractor damaged materials that are to remain in place or to be reinstalled at no cost to the department. Remove and dispose of all unwanted or damaged materials.

Stockpile reusable materials in an engineer approved location on the project. Reinstall the salvaged beam guard at the locations the plan designates, or as directed by the engineer. Replace all existing hardware (nuts, washers, and bolts) with new hardware.

D Measurement

The department will measure Salvage and Reinstall Steel Plate Guard by the linear foot, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.01	Salvage and Reinstall Steel Plate Beam Guard	LF

Payment is full compensation for dismantling and stockpiling reusable beam guard elements; for removing and disposing of unwanted or damaged materials; for providing and installing any missing components; for supplying new wood posts and blocks to replace those deemed unsalvageable; for providing and installing new hardware; for setting and driving posts; for reinstalling beam guard; for excavating, backfilling, and disposing of surplus material.

49. Salvage and Reinstall Steel Thrie Beam Structure Approach, Item SPV.0090.02.

A Description

This special provision describes removing and salvaging the existing steel thrie beam structure approach, providing replacement components, and reinstalling the thrie beam as shown in the plans or as directed by the engineer, and as hereinafter provided.

B Materials

For components of the thrie beam replaced as part of the bid item, conform to standard spec 614.2. The contractor shall provide replacement parts compatible with the existing thrie beam system. Furnish new nuts, washers, and bolts.

C Construction

Dismantle and remove the rail, posts, blocks, or other components the salvaged bid item indicates from the locations in the plans. Minimize damage to reusable materials. Do not cut material that would otherwise be reusable. Replace wood posts and blocks deemed unsalvageable by the engineer upon inspection. Replace contractor damaged materials that are to remain in place or to be reinstalled at no cost to the department. Remove and dispose of all unwanted or damaged materials.

Stockpile reusable materials in an engineer approved location on the project. Reinstall the salvaged thrie beam at the locations the plan designates, or as directed by the engineer. Replace all existing hardware (nuts, washers, and bolts) with new hardware.

D Measurement

The department will measure Salvage and Reinstall Steel Thrie Beam Structure Approach by the linear foot, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.02	Salvage and Reinstall Steel Thrie Beam Structure Approach	LF

Payment is full compensation for dismantling and stockpiling reusable thrie beam elements; for removing and disposing of unwanted or damaged materials; for providing and installing any missing components; for supplying new wood posts and blocks to replace those deemed unsalvageable; for providing and installing new hardware; for setting and driving posts; for reinstalling thrie beam; for excavating, backfilling, and disposing of surplus material.

50. Asphaltic Repair, Item SPV.0195.01.

A Description

This special provision describes repairing areas of existing asphalt pavement with asphaltic mixtures for overlaying with new pavement.

B Material

Furnish nominal size No. 4 (12.5mm) aggregate blend graded as specified in standard spec 460.2.2.3 and conform to the other material and mixture requirements specified for asphaltic surface in standard spec 465. Use tack coat as required under standard spec 450.3.2.7.

C Construction

(1) Remove areas of existing asphalt pavement, including existing patching or surfacing materials, at locations the plans show, or the engineer directs in the field as specified for removing asphaltic surface milling in standard spec 204.3.2.2.2. Mill the connecting edges as true and perpendicular as possible, both parallel and perpendicular to the roadway, creating a vertical edge on all sides. Remove the pavement without injury to the remaining pavement. Dispose of removed material as specified in standard spec 204.3.1.3.

(2) As an option for areas of full depth removal, the contractor may remove areas of existing asphalt pavement, including existing patching or surfacing materials, as specified for removing asphaltic surface in standard spec 204.3.2.2.1. Saw cut the connecting edges as true and perpendicular as possible, as specified for sawing pavement in 690. Remove the pavement without injury to the remaining pavement. Dispose of removed material as specified in standard spec 204.3.1.3.

(3) Construct as specified for asphaltic surface under standard spec 465.3 except as modified here.

Replace standard spec 465.3.1(2) with the following:

(2) Place using self-propelled pavers. Pave at a constant speed, appropriate for the paver and mixture, that ensures uniform spreading and strike-off with a smooth, dense texture and no tearing or segregation.

Replace standard spec 465.3.1(3) with the following:

(3) Immediately after placement, compact the mixture to produce a dense smooth surface using ordinary compaction procedures as specified in standard spec 450.3.2.6. Unless the engineer directs otherwise, compact each layer to a thickness of 6 inches or less so that the finished surface is 1/16 inch to 1/8 inch above the existing pavement surface.

D Measurement

The department will measure Asphaltic Repair by the ton, acceptably completed, as specified for asphaltic pavement in 450.4.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0195.01	Asphaltic Repair	TON

(2) Payment is full compensation for removing old pavement; for preparing the foundation; and for providing and compacting asphaltic mixture including asphaltic binder. Sawing existing asphalt pavement as a contractor option is incidental to the Asphaltic Repair bid item.

(3) The department will pay separately for tack coat under the Tack Coat bid item as specified in standard spec 455.5.

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ADDITIONAL SPECIAL PROVISION 4

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

Payment to First-Tier Subcontractors

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

The prime contractor is not allowed to withhold retainage from payments due subcontractors.

Payment to Lower-Tier Subcontractors

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

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:

416.2.4 Concrete Pavement Repair and Replacement

Replace the entire text with the following effective with the November 2022 letting:

(1) Except as specified in 416.3.6 for inlaid rumble strips, use grade C concrete as specified in 501.

(2) The engineer will allow the contractor to open to construction and public traffic when the concrete reaches 2000 psi.

416.2.5 Special High Early Strength Concrete Pavement Repair and Replacement

416.2.5.1 Composition and Proportioning of Concrete

Replace paragraph one with the following effective with the November 2022 letting:

(1) For the concrete mixture, use a minimum of 846 pounds of cementitious material per cubic yard of concrete. The engineer will allow the contractor to open to construction and public traffic when the concrete reaches 2000 psi. The contractor may add one or a combination of admixtures to the ingredients or to the mixture in order to obtain the required minimum strength and required air content. Do not retemper the concrete mixture.

455.2.4.3 Emulsified Asphalts

Replace paragraph one with the following effective with the November 2022 letting:

(1) Furnish material conforming, before dilution, to the following:

Anionic emulsified asphalts[1] ..... AASHTO M140
Cationic emulsified asphalts[1] ..... AASHTO M208
Polymer-modified cationic emulsified asphalts ..... AASHTO M316

[1] Non-tracking emulsified asphalts shall conform to TABLE 455-1 for the type and grade specified.

TABLE 455-1 Requirements for Non-Tracking Emulsified Asphalt

PRODUCT	ANTT	CNTT
Saybolt Viscosity at 77°F (25°C), (AASHTO T 59), SFS	15-100	15-100
Paddle Viscosity at 77°F (25°C), (AASHTO T 382), cPs[1]	30-200	30-200
Storage Stability Test, 24 hr, (AASHTO T 59), %	1 max	1 max
Residue by Distillation, 500 ± 10 °F (260 ± 5 °C), or Residue by Evaporation, 325 ± 5 °F (163 ± 3 °C), (AASHTO T 59), %	50 min	50 min
Sieve Test, No. 20 (850 µm), (AASHTO T 59), %	0.3	0.3
Penetration at 77°F (25°C), 100 g, 5 sec, (AASHTO T 49), dmm	10-40	10-40
Ash Content, (AASHTO T 111), %	1 max	1 max
Solubility in Trichlorethylene Test, (AASHTO T 44)[2]	97.5% min	97.5% min

[1] Paddle Viscosity (AASHTO T 382) may be run in lieu of Saybolt Viscosity (AASHTO T 59).

[2] The solubility in Trichlorethylene test (AASHTO T 44) may be run in lieu of Ash Content (AASHTO T 111).

455.2.5 Tack Coat

Replace paragraph one with the following effective with the November 2022 letting:

(1) Under the Tack Coat bid item, furnish type SS-1h, CSS-1h, QS-1h, CQS-1h, ANTT, CNTT, or modified emulsified asphalt with an “h” suffix, unless the contract specifies otherwise.

710.5.7 Corrective Action

710.5.7.1 Optimized Aggregate Gradations

Replace paragraph one with the following effective with the November 2022 letting:

(1) If the contractor's 4-point running average or a department test result of the volumetric percent retained exceeds the tarantula curve limits by less than or equal to 1.0 percent on a single sieve size, notify the other party immediately and do one of the following:

- Perform corrective action documented in the QC plan or as the engineer approves. Continue with the following:
  1. Document and provide corrective action results to the engineer as soon as they are available.
  2. Department will conduct two tests within the next business day after corrective action is complete.

     If blended aggregate gradations are within the tarantula curve limits by the second department test:
     - Continue with concrete production.
     - Include a break in the 4-point running average.
     - For Class I Pavements: The department will discontinue reduced frequency testing and will test at a frequency of 1 test per placement day. Once 5 consecutive samples are passing at the 1 test per placement day frequency, the reduced frequency testing will be reapplied.
  - If blended aggregate gradations are not within the tarantula curve limits by the second department test and the contract requires an optimized aggregate gradation mix under 501.2.7.4.2.1(2), stop concrete production and submit a new optimized aggregate gradation mix design.
  - If blended aggregate gradations are not within the tarantula curve limits by the second department test and the contract does not require an optimized aggregate gradation mix under 501.2.7.4.2.1(2), stop concrete production and submit either a new optimized aggregate gradation mix design or a combined aggregate gradation mix design.
- Submit a new optimized aggregate gradation mix design and perform the following:
  1. Restart control charts for the new mix design.
  2. Amend contractor Quality Control Plan

715.5 Payment

Replace the entire text with the following effective with the November 2022 letting:

715.5.1 General

(1) The department will pay incentive for concrete strength under the following bid items:

ITEM NUMBER	DESCRIPTION	UNIT
715.0502	Incentive Strength Concrete Structures	DOL
715.0603	Incentive Strength Concrete Barrier	DOL
715.0715	Incentive Flexural Strength Concrete Pavement	DOL
715.0720	Incentive Compressive Strength Concrete Pavement	DOL

(2) Incentive payment may be more or less than the amount the schedule of items shows.

(3) The department will administer disincentives for strength under the Disincentive Strength Concrete Structures, Disincentive Strength Concrete Barrier, Disincentive Flexural Strength Concrete Pavement, and Disincentive Compressive Strength Concrete Pavement, administrative items.

(4) The department will adjust pay for each lot using PWL of the 28-day sublot average strengths for that lot. The department will measure PWL relative to strength lower specification limits as follows:

- Compressive strength of 3700 psi for pavements.
- Flexural strength of 650 psi for pavements.
- Compressive strength of 4000 psi for structures and barrier.

(5) The department will not pay a strength incentive for concrete that is nonconforming in another specified property, for ancillary concrete accepted based on tests of class I concrete, or for high early strength concrete unless placed in pavement gaps as allowed under 715.3.1.2.2.

(6) Submit test results to the department electronically using MRS software. The department will verify contractor data before determining pay adjustments.

(7) All coring and testing costs under 715.3.2.2 including filling core holes and providing traffic control during coring are incidental to the contract.

715.5.2 Pavements

715.5.2.1 Compressive

(1) The department will adjust pay for each lot using equation "QMP 3.01" as follows:

Percent within Limits (PWL)	Pay Adjustment (dollars per square yard)
>= 95 to 100	(0.1 x PWL) – 9.5
>= 85 to < 95	0
>= 30 to < 85	(1.5/55 x PWL) – 127.5/55
< 30	-1.50

(2) The department will not pay incentive if the lot standard deviation is greater than 400 psi compressive.

(3) For lots with a full battery of QC tests at less than 4 locations, there is no incentive, but the department will assess a disincentive based on the individual sublot average strengths. The department will reduce pay for sublots with an average strength below 3700 psi compressive by $1.50 per square yard.

(4) For integral shoulder pavement and pavement gaps accepted using tests from the adjacent travel lane, the department will adjust pay using strength results of the travel lane for integrally placed concrete shoulders and pavement gaps regardless of mix design and placement method, included in a lane-foot lot.

715.5.2.2 Flexural

(1) The department will adjust pay for each lot using equation "QMP 6.02" as follows:

Percent within Limits (PWL)	Pay Adjustment (dollars per square yard)
>= 95 to 100	(0.2 x PWL) – 19
>= 85 to < 95	0
>= 50 to < 85	(2.0/35 x PWL) – 170/35
< 50	-2.00

(2) The department will not pay incentive if the lot standard deviation is greater than 60 psi flexural.

(3) For lots with a full battery of QC tests at less than 4 locations, there is no incentive, but the department will assess a disincentive based on the individual sublot average strengths. The department will reduce pay for sublots with an average strength below 650 psi flexural by $2.00 per square yard.

(4) For integral shoulder pavement and pavement gaps accepted using tests from the adjacent travel lane, the department will adjust pay using strength results of the travel lane for integrally placed concrete shoulders and pavement gaps regardless of mix design and placement method, included in a lane-foot lot.

715.5.3 Structures and Cast-in-Place Barrier

(1) The department will adjust pay for each lot using equation "QMP 2.01" as follows:

Percent within Limits (PWL)	Pay Adjustment (dollars per square yard)
>= 99 to 100	10
>= 90 to < 99	0
>= 50 to < 90	(7/8 x PWL) – 78.75
< 50	-35

(2) The department will not pay incentive if the lot standard deviation is greater than 350 psi.

(3) For lots with less than 4 sublots, there is no incentive, but the department will assess a disincentive based on the individual sublot average strengths. The department will reduce pay for sublots with an average strength below 4000 psi by $35 per cubic yard.

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 M-22-11 from the Office of Management and Budget: https://www.whitehouse.gov/wp-content/uploads/2022/04/M-22-11.pdf) 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 smelting forward in the manufacturing process) must have occurred within the United States. Coating includes epoxy coating, galvanizing, painting and any other coating that protects or enhances the value of a material subject to the requirements of Buy America.

   The exemption of 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 OMB M-22-11 and as referenced in CMM 228.5) must comply with Buy America. No exemptions (0.0%) are allowed.

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

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

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

Form DT4567 is available at: https://wisconsindot.gov/Documents/formdocs/dt4567.docx

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

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Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0002	201.0210 Grubbing	80.000 SY	_____.____	_____.____
0004	203.0220 Removing Structure (structure) 01. STA 264+99	1.000 EACH	_____.____	_____.____
0006	203.0220 Removing Structure (structure) 02. STA 300+20	1.000 EACH	_____.____	_____.____
0008	203.0220 Removing Structure (structure) 03. STA 389+00	1.000 EACH	_____.____	_____.____
0010	203.0220 Removing Structure (structure) 04. STA 401+99	1.000 EACH	_____.____	_____.____
0012	203.0220 Removing Structure (structure) 05. STA 458+96	1.000 EACH	_____.____	_____.____
0014	203.0220 Removing Structure (structure) C-51-10	1.000 EACH	_____.____	_____.____
0016	204.0110 Removing Asphaltic Surface	96.000 SY	_____.____	_____.____
0018	204.0115 Removing Asphaltic Surface Butt Joints	459.000 SY	_____.____	_____.____
0020	204.0120 Removing Asphaltic Surface Milling	125,600.000 SY	_____.____	_____.____
0022	204.0150 Removing Curb & Gutter	208.000 LF	_____.____	_____.____
0024	204.0155 Removing Concrete Sidewalk	423.000 SY	_____.____	_____.____
0026	204.0165 Removing Guardrail	153.000 LF	_____.____	_____.____
0028	204.0195 Removing Concrete Bases	20.000 EACH	_____.____	_____.____
0030	204.0210 Removing Manholes	1.000 EACH	_____.____	_____.____

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Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0032	204.9060.S Removing (item description) 01. Traffic Signals STH 38 & 6 Mile RD	1.000 EACH	_____.____	_____.____
0034	204.9060.S Removing (item description) 02. Traffic Signals STH 38 & 7 Mile RD	1.000 EACH	_____.____	_____.____
0036	204.9060.S Removing (item description) 03. Loop Detector Wire and Lead-in Cable STH 38 & 6 Mile RD	1.000 EACH	_____.____	_____.____
0038	204.9060.S Removing (item description) 04. Loop Detector Wire and Lead-in Cable STH 38 & 7 Mile RD	1.000 EACH	_____.____	_____.____
0040	205.0100 Excavation Common	64.000 CY	_____.____	_____.____
0042	206.2001 Excavation for Structures Culverts (structure) C-51-10	1.000 EACH	_____.____	_____.____
0044	206.5001 Cofferdams (structure) C-51-10	1.000 EACH	_____.____	_____.____
0046	209.2100 Backfill Granular Grade 2	320.000 CY	_____.____	_____.____
0048	210.2500 Backfill Structure Type B	310.000 TON	_____.____	_____.____
0050	211.0101 Prepare Foundation for Asphaltic Paving (project) 01. 2290-24-70	1.000 EACH	_____.____	_____.____
0052	211.0400 Prepare Foundation for Asphaltic Shoulders	16.000 STA	_____.____	_____.____
0054	213.0100 Finishing Roadway (project) 01. 2290-24-70	1.000 EACH	_____.____	_____.____
0056	305.0110 Base Aggregate Dense 3/4-Inch	1,900.000 TON	_____.____	_____.____
0058	305.0120 Base Aggregate Dense 1 1/4-Inch	145.000 TON	_____.____	_____.____

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Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0060	390.0203 Base Patching Asphaltic	1,300.000 SY	_____.____	_____.____
0062	455.0605 Tack Coat	9,510.000 GAL	_____.____	_____.____
0064	460.0105.S HMA Percent Within Limits (PWL) Test Strip Volumetrics	1.000 EACH	_____.____	_____.____
0066	460.0110.S HMA Percent Within Limits (PWL) Test Strip Density	1.000 EACH	_____.____	_____.____
0068	460.2005 Incentive Density PWL HMA Pavement	7,600.000 DOL	1.00000	7,600.00
0070	460.2007 Incentive Density HMA Pavement Longitudinal Joints	12,720.000 DOL	1.00000	12,720.00
0072	460.2010 Incentive Air Voids HMA Pavement	14,070.000 DOL	1.00000	14,070.00
0074	460.6224 HMA Pavement 4 MT 58-28 S	14,070.000 TON	_____.____	_____.____
0076	465.0105 Asphaltic Surface	160.000 TON	_____.____	_____.____
0078	465.0315 Asphaltic Flumes	49.000 SY	_____.____	_____.____
0080	465.0425 Asphaltic Shoulder Rumble Strips 2-Lane Rural	20,450.000 LF	_____.____	_____.____
0082	465.0475 Asphalt Centerline Rumble Strips 2-Lane Rural	10,830.000 LF	_____.____	_____.____
0084	502.4204 Adhesive Anchors No. 4 Bar	82.000 EACH	_____.____	_____.____
0086	504.0100 Concrete Masonry Culverts	14.000 CY	_____.____	_____.____
0088	505.0400 Bar Steel Reinforcement HS Structures	2,120.000 LB	_____.____	_____.____

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Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0090	509.1500 Concrete Surface Repair	15.000 SF	_____.____	_____.____
0092	516.0500 Rubberized Membrane Waterproofing	4.000 SY	_____.____	_____.____
0094	516.0610.S Sheet Membrane Waterproofing for Buried Structures	46.000 SY	_____.____	_____.____
0096	520.8000 Concrete Collars for Pipe	1.000 EACH	_____.____	_____.____
0098	520.8700 Cleaning Culvert Pipes	2.000 EACH	_____.____	_____.____
0100	522.0130 Culvert Pipe Reinforced Concrete Class III 30-Inch	56.000 LF	_____.____	_____.____
0102	522.0136 Culvert Pipe Reinforced Concrete Class III 36-Inch	60.000 LF	_____.____	_____.____
0104	522.0142 Culvert Pipe Reinforced Concrete Class III 42-Inch	46.000 LF	_____.____	_____.____
0106	522.1030 Apron Endwalls for Culvert Pipe Reinforced Concrete 30-Inch	2.000 EACH	_____.____	_____.____
0108	522.1036 Apron Endwalls for Culvert Pipe Reinforced Concrete 36-Inch	2.000 EACH	_____.____	_____.____
0110	522.1042 Apron Endwalls for Culvert Pipe Reinforced Concrete 42-Inch	2.000 EACH	_____.____	_____.____
0112	522.2429 Culvert Pipe Reinforced Concrete Horizontal Elliptical Class HE-IV 29x45-Inch	46.000 LF	_____.____	_____.____
0114	522.2629 Apron Endwalls for Culvert Pipe Reinforced Concrete Horizontal Elliptical 29x45-Inch	2.000 EACH	_____.____	_____.____
0116	601.0411 Concrete Curb & Gutter 30-Inch Type D	201.000 LF	_____.____	_____.____

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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0118	601.0557 Concrete Curb & Gutter 6-Inch Sloped 36-Inch Type D	70.000 LF	_____.____	_____.____
0120	601.0600 Concrete Curb Pedestrian	22.000 LF	_____.____	_____.____
0122	602.0410 Concrete Sidewalk 5-Inch	1,660.000 SF	_____.____	_____.____
0124	602.0505 Curb Ramp Detectable Warning Field Yellow	96.000 SF	_____.____	_____.____
0126	602.0605 Curb Ramp Detectable Warning Field Radial Yellow	56.000 SF	_____.____	_____.____
0128	606.0200 Riprap Medium	83.000 CY	_____.____	_____.____
0130	606.0300 Riprap Heavy	80.000 CY	_____.____	_____.____
0132	608.0336 Storm Sewer Pipe Reinforced Concrete Class III 36-Inch	120.000 LF	_____.____	_____.____
0134	611.0530 Manhole Covers Type J	1.000 EACH	_____.____	_____.____
0136	611.0606 Inlet Covers Type B	1.000 EACH	_____.____	_____.____
0138	611.2005 Manholes 5-FT Diameter	1.000 EACH	_____.____	_____.____
0140	611.2007 Manholes 7-FT Diameter	1.000 EACH	_____.____	_____.____
0142	614.0010 Barrier System Grading Shaping Finishing	7.000 EACH	_____.____	_____.____
0144	614.0305 Steel Plate Beam Guard Class A	213.000 LF	_____.____	_____.____
0146	614.0397 Guardrail Mow Strip Emulsified Asphalt	16.000 SY	_____.____	_____.____

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Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0148	614.2300 MGS Guardrail 3	63.000 LF	_____.____	_____.____
0150	614.2500 MGS Thrie Beam Transition	40.000 LF	_____.____	_____.____
0152	614.2610 MGS Guardrail Terminal EAT	1.000 EACH	_____.____	_____.____
0154	614.8010 Anchor Post Assembly Top Mount	12.000 EACH	_____.____	_____.____
0156	618.0100 Maintenance And Repair of Haul Roads (project) 01. 2290-24-70	1.000 EACH	_____.____	_____.____
0158	619.1000 Mobilization	1.000 EACH	_____.____	_____.____
0160	620.0300 Concrete Median Sloped Nose	32.000 SF	_____.____	_____.____
0162	624.0100 Water	50.000 MGAL	_____.____	_____.____
0164	625.0100 Topsoil	1,000.000 SY	_____.____	_____.____
0166	625.0500 Salvaged Topsoil	5,508.000 SY	_____.____	_____.____
0168	628.1504 Silt Fence	2,164.000 LF	_____.____	_____.____
0170	628.1520 Silt Fence Maintenance	2,164.000 LF	_____.____	_____.____
0172	628.1530.S Silt Fence Heavy Duty	627.000 LF	_____.____	_____.____
0174	628.1535.S Silt Fence Heavy Duty Maintenance	627.000 LF	_____.____	_____.____
0176	628.2004 Erosion Mat Class I Type B	5,508.000 SY	_____.____	_____.____
0178	628.7010 Inlet Protection Type B	6.000 EACH	_____.____	_____.____

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Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0180	628.7504 Temporary Ditch Checks	228.000 LF	_____.____	_____.____
0182	628.7555 Culvert Pipe Checks	54.000 EACH	_____.____	_____.____
0184	628.7560 Tracking Pads	3.000 EACH	_____.____	_____.____
0186	629.0205 Fertilizer Type A	5.000 CWT	_____.____	_____.____
0188	630.0130 Seeding Mixture No. 30	104.000 LB	_____.____	_____.____
0190	630.0200 Seeding Temporary	156.000 LB	_____.____	_____.____
0192	630.0500 Seed Water	69.000 MGAL	_____.____	_____.____
0194	633.5200 Markers Culvert End	24.000 EACH	_____.____	_____.____
0196	634.0618 Posts Wood 4x6-Inch X 18-FT	38.000 EACH	_____.____	_____.____
0198	637.2210 Signs Type II Reflective H	293.870 SF	_____.____	_____.____
0200	637.2215 Signs Type II Reflective H Folding	82.060 SF	_____.____	_____.____
0202	637.2230 Signs Type II Reflective F	156.250 SF	_____.____	_____.____
0204	638.2102 Moving Signs Type II	16.000 EACH	_____.____	_____.____
0206	638.2602 Removing Signs Type II	45.000 EACH	_____.____	_____.____
0208	638.3000 Removing Small Sign Supports	35.000 EACH	_____.____	_____.____
0210	642.5001 Field Office Type B	1.000 EACH	_____.____	_____.____
0212	643.0300 Traffic Control Drums	1,540.000 DAY	_____.____	_____.____

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Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0214	643.0420 Traffic Control Barricades Type III	3,430.000 DAY	_____.____	_____.____
0216	643.0705 Traffic Control Warning Lights Type A	6,780.000 DAY	_____.____	_____.____
0218	643.0900 Traffic Control Signs	26,053.000 DAY	_____.____	_____.____
0220	643.0920 Traffic Control Covering Signs Type II	56.000 EACH	_____.____	_____.____
0222	643.1000 Traffic Control Signs Fixed Message	127.000 SF	_____.____	_____.____
0224	643.1050 Traffic Control Signs PCMS	28.000 DAY	_____.____	_____.____
0226	643.3105 Temporary Marking Line Paint 4-Inch	4,100.000 LF	_____.____	_____.____
0228	643.3150 Temporary Marking Line Removable Tape 4-Inch	3,840.000 LF	_____.____	_____.____
0230	643.3205 Temporary Marking Line Paint 8-Inch	670.000 LF	_____.____	_____.____
0232	643.3250 Temporary Marking Line Removable Tape 8-Inch	670.000 LF	_____.____	_____.____
0234	643.3505 Temporary Marking Arrow Paint	4.000 EACH	_____.____	_____.____
0236	643.3550 Temporary Marking Arrow Removable Tape	4.000 EACH	_____.____	_____.____
0238	643.3605 Temporary Marking Word Paint	3.000 EACH	_____.____	_____.____
0240	643.3650 Temporary Marking Word Removable Tape	3.000 EACH	_____.____	_____.____
0242	643.3770 Temporary Marking Raised Pavement Marker Type II	520.000 EACH	_____.____	_____.____

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Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0244	643.3805 Temporary Marking Stop Line Paint 18-Inch	570.000 LF	_____.____	_____.____
0246	643.3850 Temporary Marking Stop Line Removable Tape 18-Inch	570.000 LF	_____.____	_____.____
0248	643.5000 Traffic Control	1.000 EACH	_____.____	_____.____
0250	644.1430 Temporary Pedestrian Surface Plate	910.000 SF	_____.____	_____.____
0252	644.1605 Temporary Pedestrian Detectable Warning Field	64.000 SF	_____.____	_____.____
0254	644.1810 Temporary Pedestrian Barricade	130.000 LF	_____.____	_____.____
0256	645.0120 Geotextile Type HR	358.000 SY	_____.____	_____.____
0258	646.1020 Marking Line Epoxy 4-Inch	57,610.000 LF	_____.____	_____.____
0260	646.1040 Marking Line Grooved Wet Ref Epoxy 4-Inch	51,470.000 LF	_____.____	_____.____
0262	646.3020 Marking Line Epoxy 8-Inch	7,090.000 LF	_____.____	_____.____
0264	646.5020 Marking Arrow Epoxy	52.000 EACH	_____.____	_____.____
0266	646.5120 Marking Word Epoxy	16.000 EACH	_____.____	_____.____
0268	646.5520 Marking Outfall Epoxy	26.000 EACH	_____.____	_____.____
0270	646.6120 Marking Stop Line Epoxy 18-Inch	570.000 LF	_____.____	_____.____
0272	646.7120 Marking Diagonal Epoxy 12-Inch	2,684.000 LF	_____.____	_____.____

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Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0274	646.7420 Marking Crosswalk Epoxy Transverse Line 6-Inch	160.000 LF	_____.____	_____.____
0276	646.8120 Marking Curb Epoxy	50.000 LF	_____.____	_____.____
0278	646.8220 Marking Island Nose Epoxy	2.000 EACH	_____.____	_____.____
0280	648.0100 Locating No-Passing Zones	4.820 MI	_____.____	_____.____
0282	652.0225 Conduit Rigid Nonmetallic Schedule 40 2-Inch	2,520.000 LF	_____.____	_____.____
0284	652.0235 Conduit Rigid Nonmetallic Schedule 40 3-Inch	1,070.000 LF	_____.____	_____.____
0286	652.0605 Conduit Special 2-Inch	795.000 LF	_____.____	_____.____
0288	652.0615 Conduit Special 3-Inch	1,630.000 LF	_____.____	_____.____
0290	652.0800 Conduit Loop Detector	4,326.000 LF	_____.____	_____.____
0292	653.0135 Pull Boxes Steel 24x36-Inch	17.000 EACH	_____.____	_____.____
0294	653.0140 Pull Boxes Steel 24x42-Inch	26.000 EACH	_____.____	_____.____
0296	653.0905 Removing Pull Boxes	40.000 EACH	_____.____	_____.____
0298	654.0101 Concrete Bases Type 1	6.000 EACH	_____.____	_____.____
0300	654.0105 Concrete Bases Type 5	4.000 EACH	_____.____	_____.____
0302	654.0110 Concrete Bases Type 10	2.000 EACH	_____.____	_____.____
0304	654.0113 Concrete Bases Type 13	1.000 EACH	_____.____	_____.____

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Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0306	654.0120 Concrete Bases Type 10-Special	5.000 EACH	_____.____	_____.____
0308	654.0217 Concrete Control Cabinet Bases Type 9 Special	2.000 EACH	_____.____	_____.____
0310	655.0230 Cable Traffic Signal 5-14 AWG	745.000 LF	_____.____	_____.____
0312	655.0240 Cable Traffic Signal 7-14 AWG	547.000 LF	_____.____	_____.____
0314	655.0260 Cable Traffic Signal 12-14 AWG	3,245.000 LF	_____.____	_____.____
0316	655.0305 Cable Type UF 2-12 AWG Grounded	2,140.000 LF	_____.____	_____.____
0318	655.0515 Electrical Wire Traffic Signals 10 AWG	3,235.000 LF	_____.____	_____.____
0320	655.0610 Electrical Wire Lighting 12 AWG	1,476.000 LF	_____.____	_____.____
0322	655.0700 Loop Detector Lead In Cable	14,615.000 LF	_____.____	_____.____
0324	655.0800 Loop Detector Wire	14,862.000 LF	_____.____	_____.____
0326	655.0900 Traffic Signal EVP Detector Cable	1,800.000 LF	_____.____	_____.____
0328	656.0201 Electrical Service Meter Breaker Pedestal (location) 01. STH 38 & 6 Mile RD	1.000 EACH	_____.____	_____.____
0330	656.0201 Electrical Service Meter Breaker Pedestal (location) 02. STH 38 & 7 Mile RD	1.000 EACH	_____.____	_____.____
0332	657.0100 Pedestal Bases	6.000 EACH	_____.____	_____.____
0334	657.0255 Transformer Bases Breakaway 11 1/2-Inch Bolt Circle	4.000 EACH	_____.____	_____.____

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Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0336	657.0322 Poles Type 5-Aluminum	4.000 EACH	_____.____	_____.____
0338	657.0420 Traffic Signal Standards Aluminum 13-FT	2.000 EACH	_____.____	_____.____
0340	657.0425 Traffic Signal Standards Aluminum 15-FT	4.000 EACH	_____.____	_____.____
0342	657.0610 Luminaire Arms Single Member 4 1/2-Inch Clamp 6-FT	4.000 EACH	_____.____	_____.____
0344	658.0173 Traffic Signal Face 3S 12-Inch	24.000 EACH	_____.____	_____.____
0346	658.0174 Traffic Signal Face 4S 12-Inch	12.000 EACH	_____.____	_____.____
0348	658.5070 Signal Mounting Hardware (location) 01. STH 38 & 6 Mile RD	1.000 EACH	_____.____	_____.____
0350	658.5070 Signal Mounting Hardware (location) 02. STH 38 & 7 Mile RD	1.000 EACH	_____.____	_____.____
0352	659.1125 Luminaires Utility LED C	11.000 EACH	_____.____	_____.____
0354	659.5000.S Lamp, Ballast, LED, Switch Disposal by Contractor	50.000 EACH	_____.____	_____.____
0356	661.0201 Temporary Traffic Signals for Intersections (location) 01. STH 38 & 6 Mile Road	1.000 EACH	_____.____	_____.____
0358	661.0201 Temporary Traffic Signals for Intersections (location) 02. STH 38 & 7 Mile RD	1.000 EACH	_____.____	_____.____
0360	690.0150 Sawing Asphalt	1,280.000 LF	_____.____	_____.____
0362	690.0250 Sawing Concrete	1,508.000 LF	_____.____	_____.____

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Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0364	SPV.0035 Special 01. Stone Gabion Wall	23.000 CY	_____.____	_____.____
0366	SPV.0060 Special 01. Install Type 9 Special Pole	1.000 EACH	_____.____	_____.____
0368	SPV.0060 Special 02. Install Type 10 Pole	2.000 EACH	_____.____	_____.____
0370	SPV.0060 Special 03. Install Type 10 Special Pole	4.000 EACH	_____.____	_____.____
0372	SPV.0060 Special 04. Install Type 13 Pole	1.000 EACH	_____.____	_____.____
0374	SPV.0060 Special 05. Install Monotube Arms 25-ft	2.000 EACH	_____.____	_____.____
0376	SPV.0060 Special 06. Install Monotube Arms 40-ft Special	3.000 EACH	_____.____	_____.____
0378	SPV.0060 Special 07. Install Monotube Arms 45-ft Special	2.000 EACH	_____.____	_____.____
0380	SPV.0060 Special 08. Install Monotube Arms 50-ft	1.000 EACH	_____.____	_____.____
0382	SPV.0060 Special 09. Install Luminaire Arms Steel 15-ft	7.000 EACH	_____.____	_____.____
0384	SPV.0060 Special 10. Transport and Install State Furnished EVP Detector Heads, 6 Mile Rd	1.000 EACH	_____.____	_____.____
0386	SPV.0060 Special 11. Transport and Install State Furnished EVP Detector Heads, 7 Mile Rd	1.000 EACH	_____.____	_____.____
0388	SPV.0060 Special 12. Transport and Install State Furnished Traffic Signal Cabinet, 6 Mile Rd	1.000 EACH	_____.____	_____.____
0390	SPV.0060 Special 13. Transport and Install State Furnished Traffic Signal Cabinet, 7 Mile Rd	1.000 EACH	_____.____	_____.____

Proposal ID: 20230509012 Project(s): 2290-24-70

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
0392	SPV.0060 Special 14. Transport and Install State Furnished Radar Detection System, 6 Mile Rd	1.000 EACH	_____.____	_____.____
0394	SPV.0060 Special 15. Transport and Install State Furnished Radar Detection System, 7 Mile Rd	1.000 EACH	_____.____	_____.____
0396	SPV.0060 Special 16. Temporary Infrared EVP System, 6 Mile Rd	1.000 EACH	_____.____	_____.____
0398	SPV.0060 Special 17. Temporary Infrared EVP System, 7 Mile Rd	1.000 EACH	_____.____	_____.____
0400	SPV.0060 Special 18. Curb Ramp Grading, Shaping, and Finishing	6.000 EACH	_____.____	_____.____
0402	SPV.0060 Special 19. Salvage and Reinstall Steel Plate Beam Guard Energy Absorbing Terminal	3.000 EACH	_____.____	_____.____
0404	SPV.0060 Special 20. Utility Line Opening	10.000 EACH	_____.____	_____.____
0406	SPV.0060 Special 21. Transport Traffic Signal and Intersection Lighting Materials, 6 Mile Rd	1.000 EACH	_____.____	_____.____
0408	SPV.0060 Special 22. Transport Traffic Signal and Intersection Lighting Materials, 7 Mile Rd	1.000 EACH	_____.____	_____.____
0410	SPV.0060 Special 23. Debris Removal C-51-09	1.000 EACH	_____.____	_____.____
0412	SPV.0060 Special 24. Survey Project 2290-24-70	1.000 EACH	_____.____	_____.____
0414	SPV.0090 Special 01. Salvage and Reinstall Steel Plate Beam Guard	438.000 LF	_____.____	_____.____
0416	SPV.0090 Special 02. Salvage and Reinstall Steel Thrie Beam Structure Approach	42.000 LF	_____.____	_____.____

Proposal ID: 20230509012 Project(s): 2290-24-70

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
0418	SPV.0195	1,140.000		
	Special 01. Asphaltic Repair	TON	_____.____	_____.____
	Section: 0001		Total:	_____.____
			Total Bid:	_____.____

PLEASE ATTACH ADDENDA HERE

Wisconsin Department of Transportation

Division of Transportation Systems Development
Bureau of Project Development
4822 Madison Yards Way, 4th Floor South
Madison, WI 53705

Telephone: (608) 266-1631
Facsimile (FAX): (608) 266-8459

April 19, 2023

NOTICE TO ALL CONTRACTORS:

Letting Time Addendum #01

Letting of May 9, 2023

The Bid Submittal Time on the Highway Work Proposal for all proposals in the May 9, 2023 letting inadvertently show a time of 9:00 am. This addendum changes the time to 11:00 am.

The responsibility for notifying potential subcontractors and suppliers of these changes remains with the prime contractors.

Sincerely,

Mike Coleman
Proposal Development Specialist
Proposal Management Section

Wisconsin Department of Transportation

Division of Transportation Systems Development
Bureau of Project Development
4822 Madison Yards Way, 4th Floor South
Madison, WI 53705

Telephone: (608) 266-1631
Facsimile (FAX): (608) 266-8459

April 24, 2023

NOTICE TO ALL CONTRACTORS:

Proposal #12: 2290-24-70
Caledonia – Oak Creek
Linwood Rd to E Oakwood Rd
STH 38
Racine County

Letting of May 9, 2023

This is Addendum No. 01, which provides for the following:

Special Provisions:

Added Special Provisions	
Article No.	Description
51	Information to Bidders, WPDES Transportation Construction General Permit (TCGP) for Storm Water Discharges

Deleted Special Provisions	
Article No.	Description
9	Information to Bidders, WPDES General Construction Storm Water Discharge Permit

The responsibility for notifying potential subcontractors and suppliers of these changes remains with the prime contractor.

Sincerely,

Mike Coleman
Proposal Development Specialist
Proposal Management Section

ADDENDUM NO. 01

2290-24-70

April 24, 2023

Special Provisions

9. DELETED.

51. 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 Stephen Pales at (262) 548-5940. Post the permit certificate in a conspicuous place at the construction site.

END OF ADDENDUM

Wisconsin Department of Transportation

Division of Transportation Systems Development
Bureau of Project Development
4822 Madison Yards Way, 4th Floor South
Madison, WI 53705

Telephone: (608) 266-1631
Facsimile (FAX): (608) 266-8459

April 28, 2023

NOTICE TO ALL CONTRACTORS:

Proposal #12: 2290-24-70
Caledonia – Oak Creek
Linwood Rd to E Oakwood Rd
STH 38
Racine County

Letting of May 9, 2023

This is Addendum No. 02, which provides for the following:

Special Provisions:

Revised Special Provisions	
Article No.	Description
6	Utilities

Added Special Provisions	
Article No.	Description
52	Notice to Contractor – Additional Overhead/Underground Facilities

Plan Sheets:

Revised Plan Sheets	
Plan Sheet	Plan Sheet Title (brief description of changes to sheet)
38	Revised/clarified storm sewer information

The responsibility for notifying potential subcontractors and suppliers of these changes remains with the prime contractor.

Sincerely,

Mike Coleman

Proposal Development Specialist
Proposal Management Section

ADDENDUM NO. 02

2290-24-70

April 28, 2023

Special Provisions

6. Utilities.

Insert the following paragraph between paragraphs three and four at the beginning of the article:

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.

Replace the last paragraph of section titled **AT&T Local Network – Communication Line** *with the following:*

No conflict is anticipated but AT&T Wisconsin Local Network has underground facilities close to where riprap is being installed near Station 241+00. Arrange for a site watch to be present to mark the utility lines and monitor the work and provide advance notification to AT&T Local Network prior to beginning the riprap work.

Replace the last paragraph of section titled **AT&T Wisconsin – Communication Line** *with the following:*

No conflict is anticipated but AT&T Wisconsin has underground facilities in close proximity to the drainage structures on the east side of STH 38 that are being replaced near Station 459+00. Arrange for an observer to be on site when working to replace the drainage structures and provide advance notification to AT&T Wisconsin prior to beginning the drainage structure work.

Delete entire section titled **Caledonia Storm Sewer Utility Commission – Storm Sewer**.

Delete entire section titled **City of Oak Creek – Storm Water Utility**.

Delete entire section titled **City of Oak Creek – Street Lighting**.

Replace the last paragraph of section titled **Spectrum – Communication Line** *with the following:*

No conflict is anticipated but Spectrum has underground facilities close to where riprap is being installed near station 241+00 and station 423+36, LT. Arrange for a site watch to be present to mark the utility lines and monitor the work and provide advance notification to Spectrum prior to beginning the riprap work.

Replace the last paragraph of section titled **Sprint Communications CO LP – Communication Line** *with the following:*

No conflicts are anticipated. When excavating for and installing the riprap near Station 241+00, arrange for a site watch to be present to mark the utility lines and monitor the work and provide advance notification to Sprint Communications prior to beginning the riprap work.

Replace the 4th bullet point within the **TDS Metrocom LLC – Communication Line** *section of the article for proposed facility adjustments to be completed prior to construction with the following:*

- Remove from service/discontinue in place the existing utility line that runs from Station 458+04, 71' LT, to Station 457+98, 34' LT, to Station 465+00, 39' LT.

Replace the 1st bullet point within the **TDS Metrocom LLC – Communication Line** *section of the article for proposed facility adjustments to be completed during construction with the following:*

- Manhole to be removed at Station 457+98, 34' LT. Contractor to provide TDS Metrocom notification prior to starting work on the storm sewer crossing at Station 458+96. TDS Metrocom will remove the old manhole and restore the pavement concurrently with the storm sewer work. Removing the manhole and restoring the pavement is estimated to take five working days.

Insert the following paragraph after the **WE Energies – Electric** *proposed facility adjustment bullet points:*

WE Energies Electric has facilities within the construction limits. It is imperative that the highway contractor contact WE Energies if removing any electrical underground cables, to verify that they have been discontinued and carry no electrical current. The contractor must not assume that unmarked facilities have been discontinued. At no time is it acceptable to push, pull, cut, or drill an unmarked facility without explicit consent from WE Energies. The contractor must call the WE Energies 24-hour Dispatch lines to arrange for this verification. The WE Energies Electric Dispatch number is 1 (800) 662-4797.

Delete the existing **WE Energies – Gas** *proposed facility adjustment information and replace it with the following:*

Proposed facility adjustments/relocations to resolve conflicts and be completed prior to construction are as follows:

- Place new gas main along the west side of STH 38 from approximately station 458+57 to 459+35, 52' LT approximately 8' to 8.5' deep

Delete entire section titled **WisDOT – Street Lighting**.

Delete entire section titled **WisDOT – Traffic Signals**.

52. Notice to Contractor – Additional Overhead/Underground Facilities.

There are overhead/underground facilities located within the project limits. There are no facility adjustments anticipated for this project. Coordinate construction activities with a call to Digger's Hotline or a direct call to the owners of facilities in the area. Use caution to ensure the integrity of the facilities.
Known facilities within the project are as follows:

Caledonia Storm Sewer Utility Commission – Storm Sewer has underground facilities within the construction limits. The existing facilities are located as follows:

- Storm sewer in the northwest quadrant of the STH 38/Nicholson Road intersection

City of Oak Creek – Storm Water Utility has facilities within the construction limits. The existing facilities are located as follows:

- Storm sewer along the south side of Elm Road and a crossing of Elm Road along the east side of STH 38 from the median island between STH 38 and the Service Road to the southeast quadrant of the intersection.
- Storm sewer along the east side of STH 38 from Elm Road to approximately Station 461+70.
- Storm sewer along the west side of STH 38 from the southwest quadrant of Oakview Parkway to approximately Station 466+00.

City of Oak Creek – Street Lighting has facilities within the construction limits. The existing facilities are located as follows:

- Streetlights along the south side of Elm Road.
- Streetlights along the north and south sides of Oakview Parkway.

WisDOT – Street Lighting has underground and overhead facilities within the construction limits. The existing facilities are located as follows:

- At the STH 38/CTH G/River Road signalized intersection.
- At the STH 38/7 Mile Road signalized intersection.

The WisDOT street lighting at both intersections will be replaced as part of the project.

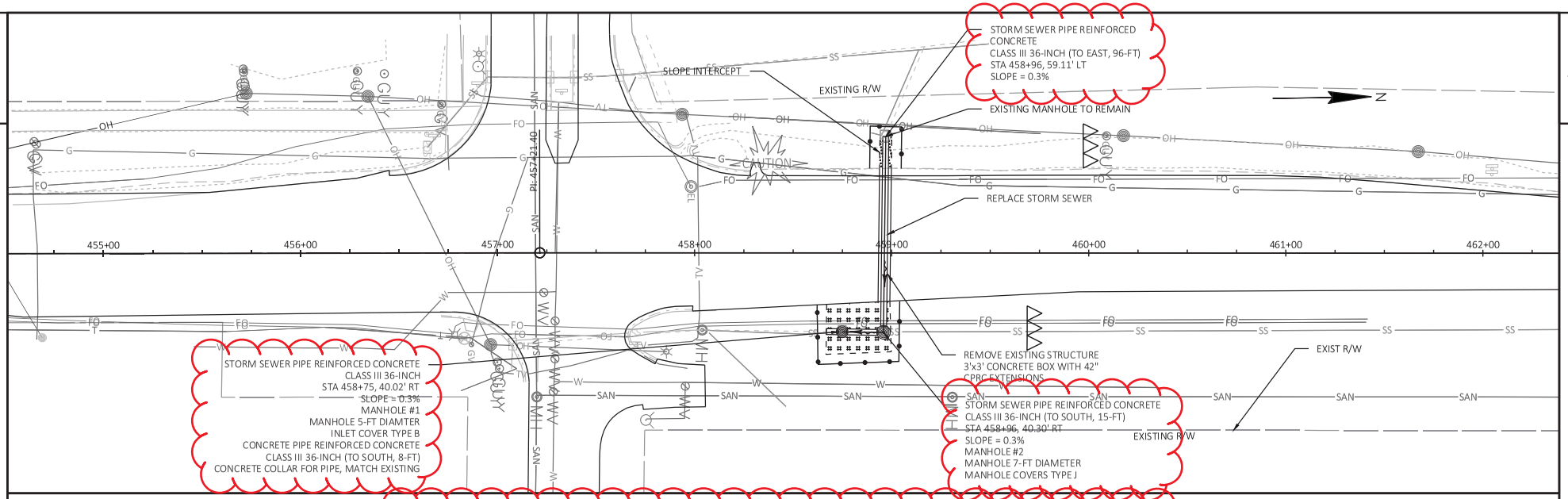
WisDOT – Traffic Signals has underground and overhead facilities within the construction limits. The existing facilities are located as follows:

- At the STH 38/CTH G/River Road signalized intersection.
- At the STH 38/7 Mile Road signalized intersection.

The WisDOT traffic signals at both intersections will be replaced as part of the project.

Plan Sheets
The following 8½ x 11-inch sheets are attached and made part of the plans for this proposal:
Revised: 38

END OF ADDENDUM



MANHOLE #	STATION	OFFSET	STRUCTURE TYPE	RIM ELEVATION	INFLOW INVERT	OUTFLOW INVERT	OUTFLOW PIPE LENGTH
1	458+75	40.02' RT	MANHOLE 5-FT DIAMETER	702.36	697.05	697.04	8'
2	458+96	40.30' RT	MANHOLE 7-FT DIAMETER	702.11	697.15	697.10	15'
EXISTING	458+96	59.11' LT	EXISTING	EXISTING	EXISTING	697.44	96'

LEGEND

- SILT FENCE
- SILT FENCE HEAVY DUTY
- TEMPORARY DITCH CHECK
- CULVERT PIPE CHECK
- DRAINAGE FLOW
- EROSION MAT CLASS 1 TYPE B
- RIPRAP

Addendum No. 02
ID 2290-24-70
Revised Sheet 38
April 28, 2023

PROJECT NO: 2290-24-70	HWY: STH 38	COUNTY: RACINE & MILWAUKEE	DRAINAGE/EROSION CONTROL	SHEET 38	E

FILE NAME : C:\USERS\ETHANHEROUX\ONEDRIVE - DAAR CORPORATION\DOCUMENTS-SE-DESIGN\2290-24-00_STH_38_RACINE\C3D\22902400\SHEETSPLAN\022001-EC.DWG
LAYOUT NAME - 03
PLOT DATE : 4/25/2023 3:18 PM
PLOT BY : ETHAN HEROUX
PLOT NAME :
PLOT SCALE : ##########