

HIGHWAY WORK PROPOSAL

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

Proposal Number: **015**

<u>COUNTY</u>	<u>STATE PROJECT</u>	<u>FEDERAL</u>	<u>PROJECT DESCRIPTION</u>	<u>HIGHWAY</u>
Door	4997-05-71	N/A	Maple - Oregon Bridge, Sturgeon Bay; Neenah Avenue - First Avenue	LOC STR

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: \$40,000.00 Payable to: Wisconsin Department of Transportation	Attach Proposal Guaranty on back of this PAGE.
Bid Submittal Date: January 14, 2020 Time (Local Time): 9:00 am	Firm Name, Address, City, State, Zip Code
Contract Completion Time June 19, 2020	SAMPLE NOT FOR BIDDING PURPOSES This contract is exempt from federal oversight.
Assigned Disadvantaged Business Enterprise Goal 0%	

This certifies that the undersigned bidder, duly sworn, is an authorized representative of the firm named above; that the bidder has examined and carefully prepared the bid from the plans, Highway Work Proposal, and all addenda, and has checked the same in detail before submitting this proposal or bid; and that the bidder or agents, officer, or employees have not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with this proposal bid.

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

Subscribed and sworn to before me this date _____

(Signature, Notary Public, State of Wisconsin)

(Bidder Signature)

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

(Print or Type Bidder Name)

(Date Commission Expires)

(Bidder Title)

Notary Seal

Type of Work: Diamond Grinding, Polymer Overlay, Pavement Marking, Structures B-15-19, B-15-20, B-15-23-0001, 0002, 0003	For Department Use Only
Notice of Award Dated	Date Guaranty Returned

**PLEASE ATTACH
PROPOSAL GUARANTY HERE**

Effective with November 2007 Letting

PROPOSAL REQUIREMENTS AND CONDITIONS

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

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

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

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

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

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

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

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

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

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

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

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

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

Effective with August 2015 Letting

BID PREPARATION

Preparing the Proposal Schedule of Items

A General

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

- (2) Bids submitted on a printout with accompanying diskette or CD ROM or paper bids submitted under a waiver of the electronic submittal requirements govern over bids submitted on the internet.

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

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

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

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

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

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

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

B Submitting Electronic Bids

B.1 On the Internet

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

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

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

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

Bidder Name

BN00

Proposals: 1, 12, 14, & 22

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

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

C Waiver of Electronic Submittal

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

PROPOSAL BID BOND

DT1303 1/2006

Wisconsin Department of Transportation

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

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

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

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

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

PRINCIPAL

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

(Signature and Title)

(Company Name)

(Signature and Title)

(Company Name)

(Signature and Title)

(Company Name)

(Signature and Title)

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

(Signature of Attorney-in-Fact)

NOTARY FOR PRINCIPAL

NOTARY FOR SURETY

(Date)

(Date)

State of Wisconsin)
) ss.
_____ County)

State of Wisconsin)
) ss.
_____ County)

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

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

(Signature, Notary Public, State of Wisconsin)

(Signature, Notary Public, State of Wisconsin)

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

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

(Date Commission Expires)

(Date Commission Expires)

Notary Seal

Notary Seal

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

CERTIFICATE OF ANNUAL BID BOND

DT1305 8/2003

Wisconsin Department of Transportation

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

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

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

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

(Signature of Authorized Contractor Representative)

(Date)

DECEMBER 2000

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

Instructions for Certification

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

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

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

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

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

Special Provisions

Table of Contents

Article	Description	Page #
1.	General.....	2
2.	Scope of Work.....	2
3.	Prosecution and Progress.....	2
4.	Traffic.	3
5.	Holiday Work Restrictions.....	4
6.	Utilities.....	4
7.	Construction Over or Adjacent to Navigable Waters.	4
8.	Notice to Contractor – Airport Operating Restrictions.....	4
9.	Environmental.	5
10.	Coordinate with Businesses.....	5
11.	Sawing Pavement Deck Preparation Areas, Item 509.0310.S.	5
12.	Concrete Masonry Deck Repair, Item 509.2100.S.	6
13.	Polymer Overlay, Item 509.5100.S.	7
14.	Traffic Control.....	11
15.	Concrete Masonry Lightweight Deck Repair, Item SPV.0035.01.	12
16.	Counterweight Calculations and Span Balancing, Item SPV.0105.01.	14
17.	Diamond Grinding Bascule Span, Item SPV.0180.01.	17

STSP'S Revised June 18, 2019

SPECIAL PROVISIONS

1. General.

Perform the work under this construction contract for Project 4997-05-71; Maple-Oregon Bridge, Sturgeon Bay; Neenah Avenue to First Avenue; Local Street; Door County, Wisconsin as the plans show and execute the work as specified in the State of Wisconsin, Department of Transportation, Standard Specifications for Highway and Structure Construction, 2020 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 (20190618)

2. Scope of Work.

The work under this contract shall consist of concrete deck repairs, polymer overlay, and pavement marking for Structures B-15-19 (City), B-15-23-0001, B-15-23-0003, and B-15-20 (City); concrete deck repairs, diamond grinding, polymer overlay, counterweight calculations, span balancing, and pavement marking for Structure B-15-23-0002; and all incidental items necessary to complete the work as shown on the plans and included in the proposal and contract.

104-005 (20090901)

3. Prosecution and Progress.

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

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

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

United States Coast Guard

The department has completed coordination with the United States Coast Guard (USCG) Cleveland, Ohio Division to determine acceptable dates in which the bascule span can remain inoperable, as outlined in the Traffic Article.

Coordinate with the United States Coast Guard (USCG) Cleveland, Ohio Division, 30 days prior to start date for written approval to have the bascule inoperable for an extended period of time. Weather delays will be coordinated with the USCG and engineer as needed. For deviations from approved dates, coordinate with the USCG three weeks before the intended start date. An approval letter from USCG must be received before work commences.

USCG Contact:

Lee D. Soule
Bridge Management Specialist
1240 East 9th Street
Cleveland, OH 44199
Phone: (216) 902-6085
Email: Lee.D.Soule@uscg.mil

Enhanced Liquidated Damages

Replace standard spec 108.11 paragraph (3) as follows:

The department will assess \$2,750.00 in daily liquidated damages. These liquidated damages reflect the cost of engineering, supervision, and a portion of road user costs.

Failure to Open Roadway Damages

The Maple-Oregon Bridge is permitted to be closed to roadway, bicycle, and pedestrian traffic between 6:00 PM Sunday and noon Friday during construction as needed. The bridge shall be reopened with proper travel surfaces free from construction debris by noon Friday of any given week.

The department will assess \$115 in hourly liquidated damages to reflect road users cost. If the contractor fails to complete the work necessary to reopen the bridge to traffic with proper travel surfaces free from construction debris by noon Friday, the department will assess the contractor \$115 Failure to Open Roadway Damages for each hour the road remains insufficient to open. An entire hour will be charged for any period of time within an hour the road remains closed.

4. Traffic.

The Maple-Oregon Bridge is permitted to be closed to roadway, bicycle, and pedestrian traffic between 6:00 PM Sunday and noon Friday during construction as needed. The bridge shall be reopened with proper travel surfaces free from construction debris by noon Friday of any given week.

This contract will permit boat traffic during construction but will require the bascule span to be inoperable at times due to construction activities. The extended inoperable period during Stage 1 must be completed within the restricted working hours aforementioned. During Stage 2A, the inoperable periods are permitted only during the overnight hours from 8:00 PM to 8:00 AM. During Stage 2B, no inoperable periods will be permitted.

Staging Details

Stage 1: For deck repair work, close bridge to roadway traffic for no more than five days within the stated closure restriction period. For deck repair work on bascule span only, concrete removal must occur on May 4. A two-hour notice will be given to the contractor during the hours of 8:00 AM and 8:00 PM for requested bridge openings. During the time period starting at noon on May 5 through midnight on May 8, one 72-hour period with no bridge openings will be permitted to allow for the required three-day concrete cure time.

Stage 2a: For polymer overlay work, close bridge to roadway traffic for no more than five days within the stated closure restriction period. For diamond grinding and polymer overlay work on the bascule leaf, three 12-hour periods with no bridge openings will be permitted as follows:

June 8 – Overnight 8:00 PM to 8:00 AM for grinding and balancing

June 9 – Overnight 8:00 PM to 8:00 AM for first epoxy pour

June 10 – Overnight 8:00 PM to 8:00 AM for second epoxy pour

Stage 2b: For any remaining work, close bridge to roadway traffic for no more than five days within the stated closure restriction period. Do not restrict bridge openings.

Any changes to the inoperable periods, proposed dates for polymer work, or other restrictions must be approved by the engineer.

Closure Notification

A detour route will not be in place during construction.

Provide advanced notification of construction operations and closures to local officials and authorities to facilitate early detection and clearance of incidents that may occur in the project area. Important local authority contacts are listed below:

- Door County Emergency Management
- Door County Sheriff
- City of Sturgeon Bay Police
- City Sturgeon Bay Fire Department
- City of Sturgeon Bay
- Local Marinas
- Bridge Operators

Portable Changeable Message Signs – Message Prior Approval

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

PCMS boards must be deployed 7 days before the closure of the Maple-Oregon Bridge.

ner-643-035 (20171213)

5. Holiday Work Restrictions.

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

- From noon Friday, May 22, 2020 to 6:00 AM Tuesday, May 26, 2020 for Memorial Day.

stp-107-005 (20181119)

6. Utilities.

This contract does not come under the provision of Administrative Rule Trans 220.

stp-107-066 (20080501)

Due to the nature of this work, utility conflicts were not identified or resolved during design. Notify the engineer of any potential utility conflicts within three business days prior to construction. Coordinate all utility relocations or adjustments necessary to accomplish the work of this project.

7. Construction Over or Adjacent to Navigable Waters.

The Sturgeon Bay Channel is classified as a federal navigable waterway under standard spec 107.19.

stp-107-060 (20171130)

8. Notice to Contractor – Airport Operating Restrictions

The Door County Cherryland Airport is located within 2 miles of the project.

Fill out the Federal Aviation Administration (FAA) Notice Criteria tool for all new structures (bridge, light pole, etc.) or equipment (crane, etc.) used during construction which will exceed a 50:1 slope within 10,000 feet of the nearest point to the nearest runway at the Door County Cherryland Airport.

<https://oeaaa.faa.gov/oeaaa/external/portal.jsp>

The Notice shall be filed with the FAA at least 45 days prior to the start of construction. Airspace evaluations are only valid for 18 months from the date of determination by the FAA.

Contact Joshua Cothran (608) 266-6812, WisDOT BOA's Airspace Safety Program Manager for assistance submitting forms.

9. Environmental.

Debris Control Measures

The Sturgeon Bay Channel is home to a wide variety of fish species and contains diverse spawning habitat. Take precautions to prevent the polymer overlay, aggregate, and any other construction materials from entering the waterway during construction.

Diamond grinding and deck cleaning prior to polymer overlay work shall include the use of a self-contained sweeper. All debris must be vacuumed or shoveled off the roadway and disposed of in a sealed container to prevent migrating to the waterway.

Inlet protection, as shown in the plans, is included both on and adjacent to the Maple-Oregon Bridge to collect excess debris.

10. Coordinate with Businesses

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

ner-105-005 (20180212)

11. Sawing Pavement Deck Preparation Areas, Item 509.0310.S.

A Description

This special provision describes sawing around deteriorated areas requiring deck repairs under the Preparation Decks bid items on decks receiving asphalt or polymer overlays and for deck repairs that will not receive an overlay.

B (Vacant)

C Construction

The department will sound and mark areas of deteriorated concrete that require deck preparation. The engineer may identify and mark additional areas as the work is being performed.

Wet cut a minimum of 1 inch deep and at least 2 inches outside of the marked areas. Bound each marked area by providing cuts aligned parallel and perpendicular to the deck centerline.

Remove sawing sludge after completing each area. Do not allow sludge or resulting residue to enter a live lane of traffic, storm sewer, stream, lake, reservoir, marsh, or wetland. Dispose of sludge at an acceptable material disposal site located off the project limits or, if the engineer allows, within the project limits.

D Measurement

The department will measure Sawing Pavement Deck Preparation Areas by the linear foot, acceptably completed, measured as the total linear feet of bounding cuts.

The department will not measure for payment over-cuts or cuts made beyond what is required to bound engineer-marked deterioration limits.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
509.0310.S	Sawing Pavement Deck Preparation Areas	LF

Payment is full compensation for making all saw cuts; and for debris disposal.

stp-509-070 (20180628)

12. Concrete Masonry Deck Repair, Item 509.2100.S.

A Description

This special provision describes providing concrete masonry on the sawed deck preparation areas of the concrete bridge deck and in full depth deck, curb, and joint repair areas. Conform to standard spec 502 and standard spec 509.

B Materials

B.1 Neat Cement

Furnish a neat cement bonding grout. Mix the neat cement in a water-cement ratio approximately equal to 5 gallons of water per 94 pounds of cement.

B.2 Concrete

Furnish grade C, C-FA, C-S, C-IS, C-IP, C-IT, or E concrete conforming to standard spec 501 for deck preparation, full-depth deck repair, curb repair and joint repair areas except as follows:

1. The contractor may increase slump of grade E concrete to 3 inches.
2. The contractor may use ready-mixed concrete.
3. Provide QMP for class II ancillary concrete as specified in standard spec 716.

C Construction

C.1 Neat Cement

Immediately before placing the concrete deck patching, coat the prepared surfaces with a neat cement mixture. Ensure the prepared concrete surfaces are moist without any standing water before coating with the neat cement mixture. Brush the neat cement mixture over the prepared concrete surfaces to ensure that all parts receive an even coating, and do not allow excess neat cement to collect in pockets. Apply the neat cement at a rate that ensures the cement does not dry out before being covered with the new concrete.

C.2 Placing Concrete

Place concrete conforming to standard spec 509. As determined by the engineer, consolidate smaller areas by internal vibration, strike them off, and finish the areas with hand floats to produce plane surfaces that conform to the grade and elevation of the adjoining surfaces. Give all deck patching areas a final hand float finish.

C.3 Curing Concrete

Cure the concrete masonry deck patching conforming to standard spec 502.2.6(1).

D Measurement

The department will measure the Concrete Masonry Deck Repair bid item by the cubic yard, acceptably completed.

The department will measure concrete used in deck preparation areas and in full depth deck, curb, and joint repair as part of the Concrete Masonry Deck Repair bid item.

The department will not measure wasted concrete.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
509.2100.S	Concrete Masonry Deck Repair	CY

Payment is full compensation for furnishing, hauling, preparing, placing, finishing, curing, and protecting all materials.

stp-509-060 (20170615)

13. Polymer Overlay, Item 509.5100.S.

A Description

This special provision describes providing two layers of a two-component polymer overlay system to the bridge decks the plans show.

B Materials

B.1 General

Furnish materials specifically designed for use over concrete bridge decks. Furnish polymer liquid binders from the department's approved product list.

B.2 Polymer Resin

Furnish a polymer resin base and hardener composed of two-component, 100 percent solids, 100 percent reactive, thermosetting compound with the following properties:

Property	Requirements	Test Method
Gel Time ^[1]	15 - 45 minutes @ 73° to 75° F	ASTM C881
Viscosity ^[1]	7 - 70 poises	ASTM D2393, Brookfield RVT, Spindle No. 3, 20 rpm
Shore D Hardness ^[2]	60-75	ASTM D2240
Absorption ^[2]	1% maximum at 24 hr	ASTM D570
Tensile Elongation ^[2]	30% - 70% @ 7 days	ASTM D638
Tensile Strength ^[2]	2000 to 5000 psi @ 7 days	ASTM D638
Chloride Permeability ^[2]	<100 coulombs @ 28 days	AASHTO T277

^[1] Uncured, mixed polymer binder

^[2] Cured, mixed polymer binder

Ensure that the polymer resin when mixed with aggregate has the following properties:

Property	Requirement ^[1]	Test Method
Minimum Compressive Strength	1,000 psi @ 8 hrs 5,000 psi @ 24 hrs	ASTM C579 Method B, Modified ^[2]
Thermal Compatibility	No Delaminations	ASTM C884
Minimum Pull-off Strength	250 psi @ 24 hrs	ASTM C1583

^[1] Based on samples cured or aged and tested at 75°F

^[2] Plastic inserts that will provide 2-inch by 2-inch cubes shall be placed in the oversized brass molds.

B.3 Aggregates

Furnish natural or synthetic aggregate that is non-polishing; clean; free of surface moisture; fractured or angular in shape; free from silt, clay, asphalt, or other organic materials; and conform to the following:

Aggregate Properties

Property	Requirement	Test Method
Moisture Content ^[1]	1/2 of the measured aggregate absorption, %	ASTM C566
Hardness	≥6.5	Mohs Scale
Fractured Faces	100% with at least 1 fractured face & 80% with at least 2 fractured faces of material retained on No.16	ASTM D5821
Absorption	≤1%	ASTM C128

^[1] Sampled and tested by the department before placement.

Gradation

Sieve Size	% Passing by Weight
No. 4	100
No. 8	30 – 75
No. 16	0 – 5
No. 30	0 – 1

B.4 Approval of Bridge Deck Polymer Overlay System

A minimum of 20 working days before application, submit product data sheets and specifications from the manufacturer, and a certified report of test or analysis from an independent laboratory to the engineer for approval. The department will sample and test the aggregates for gradation and moisture content before placement. If requested, supply the department with samples of the polymer for the purpose of acceptance testing.

B.4.1 Product Data Sheets and Specifications

Product data sheets and specifications from the manufacture consists of literature from the manufacturer showing general instructions, application recommendations/methods, product properties, general instructions, or any other applicable information.

B.4.2 Certified Report of Test or Analysis

Conform to the following:

Polymer Binder: Submit a certified report of test or analysis from an independent laboratory dated less than 3 years before the date of the project letting showing the polymer binder meets the requirements of section B.2.

Aggregates: Submit a certified report of test or analysis from an independent laboratory dated less than 6 months before the date of the project letting showing the aggregates meet the requirements of section B.3.

C Construction

C.1 General

Ensure that the overlay system is 1/4 inch thick or thicker.

Conform to the following:

Field Review: Conduct a field review of the existing deck to identify any possible surface preparation and material compatibility issues.

Pre-Installation Meeting: Conduct a pre-installation meeting with the manufacturer's representative and the engineer before construction. Discuss the field review findings, verification testing of the surface preparation and establish procedures for maintaining optimum working conditions and coordination of work. Furnish the engineer a copy of the recommended procedures and apply the overlay system according to the manufacturer's instructions. Supply for the engineer's use for the duration of the project, a Concrete Surface Profile (CSP) chip set of 10 from the International Concrete Repair Institute (ICRI).

Manufacturer's Representative: An experienced manufacturer's representative familiar with the overlay system installation procedures shall be present at all times during surface preparation and overlay placement to provide quality assurance that the work is being performed properly. This requirement may be reduced at the engineer's discretion.

Material Storage: Store and handle materials according to the manufacturer's recommendations. Store resin materials in their original containers in a dry area. Store all aggregates in a dry environment and protect aggregates from contaminants on the job site.

C.2 Deck Preparation

C.2.1 Deck Repair

Remove all asphaltic patches and unsound or disintegrated areas of the concrete decks as the plans show, or as the engineer directs. Work performed to repair the concrete deck will be paid for under other items. Ensure that products used for deck patching are compatible with the polymer overlay system.

NOTE: Some polymer systems require concrete patch material to be in place a minimum of 28-days before overlaying - contact polymer manufacturer before completing deck patching/repair.

C.2.2 Surface Preparation

Determine an acceptable shotblasting machine operation (size of shot, flow of shot, forward speed, and/or number of passes) that provides a surface profile meeting CSP 5 (medium-heavy shotblast) according to the ICRI Technical Guideline No. 310.2. If the engineer requires additional verification of the surface preparation, test the tensile bond strength according to ASTM C1593. The surface preparation will be considered acceptable if the tensile bond strength is greater than or equal to 250 psi or the failure area at a depth of 1/4 inches or more is greater than 50 percent of the test area. Continue adjustment of the shotblasting machine and necessary testing until the surface is acceptable to the engineer or a passing test result is obtained.

Prepare the entire deck using the final accepted adjustments to the shotblasting machine as determined above. Thoroughly blast clean with hand-held equipment any areas inaccessible by the shotblasting equipment. Do not perform surface preparation more than 24 hours before the application of the overlay system.

Protect drains, expansion joints, access hatches, or other appurtenances on the deck from damage by the shot and sand blasting operations and from materials adhering and entering. Tape or form all construction joints to provide a clean straight edge.

Before shot blasting, remove pavement markings within the treatment area using an approved mechanical or blasting method.

Prepare the vertical concrete surfaces adjacent to the deck a minimum of 2" above the overlay according to SSPC-SP 13 (free of contaminants, dust, and loose concrete) by sand blasting, using wire wheels, or other approved method.

Just before overlay placement, clean all dust, debris, and concrete fines from the prepared surfaces including the vertical surfaces with compressed air. When using compressed air, the air stream must be free of oil. Any grease, oil, or other foreign matter that rests on or has absorbed into the concrete shall be removed completely. If prepared surfaces (including the first layer of the polymer overlay) are exposed to rain or dew, lightly sandblast (brush/breeze blast) the exposed surfaces.

The engineer may consider alternate surface preparation methods per the overlay system manufacturer's recommendations. The engineer will approve the final surface profile and deck cleanliness before the contractor placing the polymer overlay.

C.2.3 Transitional Area

If the plans show, create a transitional area approaching transverse expansion joints and ends of the deck using an approved mechanical or blasting method. Remove 1/4 inch to 5/16 inch of concrete adjacent to the joint or end of deck and taper a distance of 3 feet.

If the plans show, create a transitional area on the approach pavement. Prep and place the first lift 3 feet beyond the end of the deck the same width as the deck. Prep and place the second lift 6 feet beyond the end of the deck the same width as the deck.

C.3 Overlay Application

Perform the handling and mixing of the polymer resin and hardening agent in a safe manner to achieve the desired results according to the manufacturer's instructions. Do not apply the overlay system if any of the following exists:

1. Ambient air temperature is below 50 F or above 100 F.
2. Deck temperature is below 50 F.
3. Moisture content in the deck exceeds 4.5 percent when measured by an electronic moisture meter or shows visible moisture after 2 hours when measured according to ASTM D4263.
4. Rain is forecasted during the minimum curing periods listed under C.5.
5. Materials component temperatures below 65 F or above 99 F.
6. Concrete age is less than 28 days unless approved by the engineer.
7. The deck temperature exceeds 100 F.
8. If the gel time is 10 minutes or less at the predicted high air temperature for the day.

After the deck has been shotblasted or during the overlay curing period, only necessary surface preparation and overlay application equipment will be allowed on the deck. Provide appropriate protective measures to prevent contamination from equipment allowed on the deck during preparation and application operations. Begin overlay placement as soon as possible after surface preparation operations.

The polymer overlay shall consist of a two-course application of polymer and aggregate. Each of the two courses shall consist of a layer of polymer covered with a layer of aggregate in sufficient quantity to completely cover the polymer. Apply the polymer and aggregate according to the manufacturer's requirements. Apply the overlay using equipment designed for this purpose. The application machine shall feature positive displacement volumetric metering and be capable of storing and mixing the polymer resins at the proper mix ratio. Disperse the aggregate using a method that provides a uniform, consistent coverage of aggregate and minimizes aggregate rolling or bouncing into final position. First course applications that do not receive enough aggregate before the polymer gels shall be removed and replaced. A second course applied with insufficient aggregate may be left in place, but will require additional applications before opening to traffic.

After completion of each course, cure the overlay according to the manufacturer's instructions. Follow the minimum cure times listed under C.5 or as prescribed by the manufacturer. Remove the excess aggregate from the surface treatment by sweeping, blowing, or vacuuming without tearing or damaging the surface; the material may be re-used if approved by the engineer and manufacturer. Apply all courses of the overlay system before opening the area to traffic. Do not allow equipment or traffic on the treated area until directed by the engineer.

After the first layer of coating has cured to the point where the aggregate cannot be pulled out, apply the second layer. Before applying the second layer, broom and blow off the first layer with compressed air to remove all loose excess aggregate.

Before opening to traffic, clean expansion joints and joint seals of all debris and polymer. A minimum of three days following opening to traffic, remove loosened aggregates from the deck, expansion joints, and approach pavement.

C.4 Application Rates

Apply the polymer overlay in two separate courses according to the manufacturer's instructions, but not less than the following rate of application.

Course	Minimum Polymer Rate ^[1] (GAL/100 SF)	Aggregate ^[2] (LBS/SY)
1	2.5	10+
2	5.0	14+

^[1] The minimum total applications rate is 7.5 GAL/100 SF.

^[2] Application of aggregate shall be of sufficient quantity to completely cover the polymer.

C.5 Minimum Curing Periods

As a minimum, cure the coating as follows:

Course	Average temperature of deck, polymer and aggregate components in degrees F							
	50-54	55-59	60-64	65-69	70-74	75-79	80-84	85-99
1	6 hrs.	5 hrs.	4 hrs.	3 hrs.	2.5 hrs	2 hrs	1.5 hrs.	1 hr.
2	8 hrs.	6.5 hrs.	6.5 hrs.	5 hrs.	4 hrs.	3 hrs.	3 hrs.	3 hrs.

If faster cure times are desired and achievable, submit to the engineer a certified test report from an independent laboratory showing the material is able to reach a compressive strength of 1000 psi as tested per ASTM C 579 Method B within the temperature ranges and cure times for which the product is proposed to be placed. Establish ambient air, material, and substrate temperatures from the manufacturer for field applications. Field applications will not be allowed below the documented temperatures.

C.6 Repair of Polymer Overlay

Repair all areas of unbonded, uncured, or damaged polymer overlay for no additional compensation. Submit repair procedures from the manufacturer to the engineer for approval. Absent a manufacturer's repair procedures and with the approval of the engineer, complete repairs according to the following: Saw cut the limits of the area to the top of the concrete; remove the overlay by scarifying, grinding, or other approved methods; shot blast or sand blast and air blast the concrete before placement of polymer overlay; and place the polymer overlay according to section C.3.

D Measurement

The department will measure Polymer Overlay by the square yard, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
509.5100.S	Polymer Overlay	SY

Payment is full compensation for preparing the surface; for tensile bond testing; for creating the transitional area; for providing the overlay; for cleanup; and for sweeping/vacuuming and disposing of excess materials.

The department will pay separately for Concrete Deck Repair.

stp-509-030 (20170615)

14. Traffic Control.

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

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

Provide 24 hours-a-day availability of equipment and forces to expeditiously restore lights, signs, or other traffic control devices that are damaged or disturbed. The cost to maintain and restore the above items shall be considered incidental to the item as bid and no additional payment will be made therefore.

Supply the name and telephone number of a local contact person for traffic control repair before starting work.

Have available at all times sufficient experienced personnel to promptly install, remove and reinstall the required traffic control devices to route traffic during the construction operations.

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

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

Cover existing signs which conflict with traffic control as the engineer directs.

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

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

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

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

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

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

ner-643-065 (20171213)

15. Concrete Masonry Lightweight Deck Repair, Item SPV.0035.01.

A Description

This special provision describes providing lightweight concrete masonry on the sawed deck preparation areas of the concrete bridge deck of the existing lightweight concrete portion of the bascule span, as shown on the plans. Conform to standard spec 501, 502 and 509, except as otherwise hereinafter stipulated.

B Materials

This work requires that the deck preparation on the movable portions of the bascule span only be filled with lightweight concrete masonry having a maximum plastic unit weight of 120 pounds per cubic foot. The lightweight concrete shall have a minimum compressive strength of 4,000 psi at 28 days. The contractor is responsible for the lightweight concrete mix design.

Submit the concrete mix design, including all required test data, to the engineer for approval.

Provide QMP for class I structure concrete as specified in standard spec 715.

B.1 Neat Cement

Furnish a neat cement bonding grout. Mix the neat cement in a water-cement ratio approximately equal to 5 gallons of water per 94 pounds of cement.

B.2 Lightweight Coarse Aggregate

Lightweight coarse aggregate shall conform to AASHTO M195. When tested according to AASHTO M104 using magnesium sulfate, the loss of lightweight aggregate in 5 cycles of the accelerated soundness test shall not exceed 8 percent. The drying shrinkage of concrete specimens prepared and tested conforming to section 8.4 of AASHTO M195, shall not exceed 0.07 percent. The resistance to degradation of the coarse aggregate, when tested conforming to AASHTO T96, shall not exceed a loss of 50% in 500 cycles.

The lightweight aggregate producer shall furnish test reports from an independent testing laboratory certifying that concrete made from the aggregate and containing approximately 6 percent air content shall have a minimum durability factor of 85 percent when tested conforming to AASHTO T161.

B.3 Composition of Concrete

Determine the proportions of cement, supplementary cementitious materials, fine aggregate, lightweight coarse aggregate and water and submit with the test result data to the engineer for approval. The unit weight of freshly mixed lightweight concrete measured conforming to AASHTO T121 shall not be greater than 120 and no less than 110 pounds per cubic foot. The water/cementitious materials ratio of the mix shall not exceed 0.40. Use a polycarboxylate high range water reducing admixture to achieve the workability required for placement of the concrete. The minimum cementitious materials content is 565 pounds per cubic yard. The mixture at the point of placement shall have a slump of 1" to 4" and air content of 7% +/-1%. The concrete shall have a minimum compressive strength of 4000 psi at an age of 28 days.

Use supplementary cementitious materials as needed to achieve low permeability concrete that meets the testing requirements specified below. Fly ash, if used, shall conform to AASHTO M295, and may be used as a partial replacement for cement up to 30% on a 1:1 ratio by weight. Ground granulated blast furnace slag, if used, shall conform to AASHTO M302 and may be used as a partial replacement for cement up to 30% on a 1:1 ratio by weight. Silica Fume, if used, shall conform to AASHTO M 307 and may be used as a partial replacement for cement up to 10% on a 1:1 ratio by weight. The combined weight of all supplementary

cementitious materials used in the mix shall be limited so that portland cement constitutes a minimum of 60% by weight of the total cementitious material.

Measure concrete permeability conforming to AASHTO T277 (Rapid Chloride Permeability Test). Permeability samples for T277 testing must be stripped of their molds and wet cured to an age of 7 days in a standard moist room or water tank. After 7 days, submerge the samples in water heated to 100°F until an age of 28 days. Upon completion of the curing process, obtain one sample from each cylinder and test conforming to AASHTO T277. The permeability test result shall not exceed 1500 coulombs.

C Construction

To prove the design meets the given criteria, provide the engineer with the mix design and all required test results at least 14 days prior to the anticipated pour.

Storing, handling, measuring and batching of concrete aggregates and cement shall be according to the requirements of standard spec 501 except as follows:

1. Stockpile all lightweight aggregate at the central batching plant for not less than 24 hours prior to use in the batches. Pre-wet the lightweight aggregate stockpiles using a sprinkler system as recommended by the lightweight aggregate manufacturer. At the end of the wetting period, allow the stockpiles to drain for a period of 12-15 hours immediately prior to use. Protect the stockpiles to prevent excessive evaporation of moisture after wetting.
2. Mix concrete according to the requirements of standard spec 501 and the recommendations of the lightweight aggregate manufacturer. Submit the concrete mixing procedure, including sequence of adding ingredients and time of mixing, for the engineer's review. Keep the consistency of the concrete mixture uniform and use the minimum quantity of water which will produce the desired workability. If the central or truck mixed concrete is furnished, mix all batches ten additional revolutions at mixing speed immediately prior to discharge from the hauling unit. Deliver central or truck mixed lightweight concrete to the site of the work and discharge completely within one hour after the beginning of the mixing operations.

Monitor air content using the volumetric method, conforming to AASHTO T196.

C.1 Neat Cement

Immediately before placing the concrete deck patching, coat the prepared surfaces with a neat cement mixture. Ensure the prepared concrete surfaces are moist without any standing water before coating with the neat cement mixture. Brush the neat cement mixture over the prepared concrete surfaces to ensure that all parts receive an even coating, and do not allow excess neat cement to collect in pockets. Apply the neat cement at a rate that ensures the cement does not dry out before being covered with the new concrete.

C.2 Placing Concrete

Place concrete conforming to standard spec 509 and as herein specified. As determined by the engineer, consolidate smaller areas by internal vibration, strike them off, and finish the areas with hand floats to produce plane surfaces that conform to the grade and elevation of the adjoining surfaces. Give all deck patching areas a final hand float finish.

Do not place lightweight concrete when the temperature of the concrete mixture is 90°F or greater. No placement of lightweight concrete will be allowed if weather forecast indicates the air temperatures of less than 40°F or more than 100°F will occur within 4 hours of the proposed placement time and 48 hours following the proposed placement time.

Place the concrete for the bascule span roadway deck while the steel framing of the span is in the down position, and supported, secured and restrained from any movement.

Protect the concrete from excessive moisture loss during placing, finishing and curing operations.

C.3 Curing Concrete

Cure the concrete masonry deck patching conforming to standard spec 502.2.6(1).

D Measurement

The department will measure the Concrete Masonry Lightweight Deck Repair bid item by the cubic yard, acceptably completed.

The department will measure concrete used in deck preparation areas of the existing lightweight concrete on the bascule span as part of the Concrete Masonry Lightweight Deck Repair bid item. Concrete used for deck repair on other parts of the bridge will be paid for under a separate bid item.

The department will not measure wasted concrete.

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	Concrete Masonry Lightweight Deck Repair	CY

Payment is full compensation for furnishing, hauling, preparing, placing, finishing, curing, and protecting all materials.

16. Counterweight Calculations and Span Balancing, Item SPV.0105.01.

A Description

This special provision describes preparing counterweight calculations for span-balance, balancing both bascule leaves, and balance-testing the leaves to ensure compliance with the design criteria listed on the plans and elsewhere herein. Included is all work required to provide the required balance condition for each bascule leaf throughout the project. This includes placing, removing and adjusting the location of balance blocks multiple times.

The work includes performing balance testing using the dynamic strain gauge procedure as described herein, the calculation and documentation of the span balance procedure and methods, measurement of the imbalance moment and determination of the location of the leaf center of gravity a minimum of twice as described below.

B Materials

Provide all necessary materials and equipment required to perform balance calculations and strain gauge testing as described below.

The need for additional balance blocks is not anticipated. In the event that additional counterweight is needed, the department will provide steel plate counterweight material.

C Construction

C.1 General

Perform all work according to the 2007 AASHTO Movable Highway Bridge Specifications, including interims.

Provide all necessary temporary shoring, supports and/or temporary balance material as required to ensure stability of the bascule leaves during the performing of all rehabilitation work on them. Coordinate work such that the bascule leaves are never in an unbalanced condition that may be detrimental in any way to the structure, electrical/mechanical components or the safety of the public and construction personnel.

The following is a description of the current balance condition of each bascule leaf and proposed construction approach:

The west leaf counterweight pockets are currently approximately half full of concrete counterweight blocks. The leaf has a tendency to drift open (it is counterweight heavy). After diamond grinding deck removal and polymer overlay work is completed, it is anticipated that some counterweight block removal will be required to achieve the desired balance condition.

The east leaf counterweight pockets are full or nearly full, and there are steel plates bolted to the front of the counterweight for additional counterbalance. The east leaf is slightly tip heavy when closed, and nearly balanced for the remaining angles of opening. After diamond grinding deck removal and polymer overlay work is completed, it is anticipated that some counterweight block removal will be required to achieve the desired balance condition.

C.2 Calculations

Prepare balance calculations prior to construction based on approved material tests. Submit calculations to the engineer for review. To permit timely and effective reviews of submitted balance calculations by the engineer, prepare them by grouping material and computing subtotals as directed by the engineer. A professional engineer licensed in the State of Wisconsin shall prepare the balance calculations.

Compute the quantity and location of concrete balance blocks to be added, removed and/or adjusted within the counterweight pockets based on the specified balance requirements and the weight and center of gravity of each bascule leaf. Base balance calculations on the actual weight of the approved polymer overlay system to be added to each leaf. Show the weights for new work on the calculations. Accurately compute the polymer overlay weight accounting for the component weights of epoxy and aggregate.

Make test batches of lightweight concrete and normal weight concrete to obtain accurate unit weights in advance of placing the concrete on the respective deck preparation areas of the bascule leaves. Incorporate those test unit weights into the counterweight calculations. Incorporate the distributions of leaf weight in the vertical, horizontal, and transverse directions.

Develop proposed summary balance tables and show them on the balance calculations. Develop summary tables for all phases of the balance and the proposed imbalances. Account for temporary balance material, if used, in the summary tables. Submit all summary tables and back-up materials for review by the engineer. At a minimum, provide calculations for the following two phases:

“Interim Balance Calculations” – Calculations showing the counterweight block adjustments required to maintain safe operation of the bascule leaf after diamond grinding is used to remove a portion of the existing bridge deck, and prior to placement of the polymer overlay.

“Final Balance Calculations” – Calculations showing the counterweight block adjustments required to maintain safe operation of the bascule leaf after polymer overlay work is complete and before initial measurement of span balance is performed.

Prepare a narrative of proposed construction phasing for the deck repairs, diamond grinding and application of polymer overlay to the bascule leaves. Include in the narrative a summary of the amount of bascule leaf imbalance during each proposed work phase.

Update the balance calculations and summary tables throughout construction and submit to the engineer periodically as required to meet the requirements in these special provisions and in the plans.

Review of the balance calculations, counterweight details, and quantity and location of balance material does not relieve the contractor of the requirement to make changes to the counterweights and add or remove additional balance blocks as required to balance each leaf. Submit all changes for approval.

C.3 Making Adjustments to Span Balance

The intended balance condition should result in a reduction of concrete adjustment blocks in each leaf. Store any concrete blocks removed from the counterweight pockets in a location in the bascule pier determined by the engineer.

If required, additional steel plates are available for pick-up at the Door County Highway Department in Sturgeon Bay. Contact Jim McDowell, WisDOT Maintenance at (920) 360-5792 a minimum of three business days prior to coordinate pick-up. Transport blocks from their current storage locations within the bridge and place them into the counterweight pockets. Base the actual number of blocks to be added, removed or relocated on span balance calculations and span balance testing.

C.4 Measurement of Span Balance

This item includes measurement of the imbalance moment and determination of the location of the leaf center of gravity a minimum of twice as follows:

1. Initial – Test the span balance after the polymer overlay is completed including removal of balance blocks based on submitted span balance computations, to determine the balance condition and to determine the required additional adjustments by adding or removing more balance blocks. Prior to performing initial balance testing, submit balance calculations and summary tables to the engineer for review. Subsequent to initial balance testing, compute the amount and location of weight adjustments required to achieve the final balance specified in the plans and as described herein and submit the computations to the engineer for review. After the engineer's review, make the adjustments.

2. Final – Test the span balance after balance block adjustments, to determine if the revised imbalance is within the limits specified on the plans and as described herein. Perform leaf operation with the span drive machinery for final balance testing. If the second balance testing indicates that the revised imbalance is not within acceptable limits, perform further balance block adjustments and balance measurements until the criteria specified on the plans and herein are met.

Measure the balance of each leaf of the movable span using the dynamic strain gauging technique. Furnish and install all equipment, materials, instruments, and labor necessary to determine the imbalance by dynamic strain gauging.

Employ the services of an established testing company experienced in dynamic strain gauge measurement of movable bridge balance, subject to approval of the engineer. To demonstrate such experience, identify a minimum of six movable bridges, including at least three bascule bridges, for which the company has provided complete and satisfactory dynamic strain gauge measurements and reporting. Make the measurements under the immediate direction of a professional engineer registered in the State of Wisconsin who has had hands-on-experience measuring movable span balance by the dynamic strain gauge procedure.

Furnish and install the required strain gauges, all cabling and transmission equipment, data acquisition equipment and strip chart recorders, and produce fully documented reports detailing the results of the measurements.

The following applies to the approved testing company: Submit the following items to the engineer for approval:

1. Description of experimental procedure including type and method of installation of strain gauge rosettes, method of transmission of low level signals, data acquisition equipment and/or strip chart recorders.
2. Layout of span drive machinery showing proposed location of strain gauges, amplifiers, cable or radio links, data acquisition equipment and all associated cabling.
3. Details of method of transmission of signals from shafting to data acquisition units.
4. Elementary wiring diagrams of interconnection of strain gauges, amplifiers, data acquisition equipment, and strip chart recorders.
5. Sample computations of shaft torque from measured strains, span imbalance, curve fitting and basis for friction correction.

Affix two foil resistance strain gauge rosettes to each of the main pinion shafts, according to the strain gauge manufacturer's installation instructions. Use 2-arm 90-degree rosettes mounted such that the grids are oriented at 45 degrees with the shaft axis and the two rosettes are affixed "back-to-back", spaced 180 degrees apart circumferentially. Connect the gauges such that any bending strains in the shafts will be canceled and torsional shearing strains will be measured on each pinion shaft. Sufficiently clean the areas of the shafts where the gauges are to be mounted to remove all contaminants. On each shaft, mount two rosettes at 180 degrees from each other. Connect the two gauges such that any direct shear forces in the shafts are neglected and true torsional shear is measured.

Connect the strain gauge leads on each shaft to a four-arm amplifier. Transmit signals from the gauges to the data acquisition equipment either through cable links or amplified and then through wireless transmitters.

Connect output leads from each channel of the amplifiers to either a computer-based data logger provided with a two-channel strain gauge module streaming the amplified data to disk at a minimum 1-kHz sample rate, or a five-channel minimum strip chart recorder with at least 250 mm wide chart paper. Provide an inclinometer to provide continuous leaf angle to either the data logging equipment or the strip chart recorder. Utilize step-wise adjustable chart speed and include a setting of at least 250 mm per minute. Use a recorder that is capable of recording data from at least 4 channels if it is equipped with a dedicated event marker or 5 channels if a channel is used to record events.

Record the strains in both shafts simultaneously versus span opening angle during opening and closing to a suitable scale. Record the readings for all shafts at the same strain scale and the chart speed, if a strip chart recorder is used. Make at least 3 opening/closing runs, when the wind speed is less than 5 miles/hour and the bridge deck is visibly dry. Release wind-up torque in the operating machinery prior to each run as verified by space between the faces of the engaged teeth of main pinion and gears.

Numerically convert the strains induced in the shafts to torque by applying fundamental stress-strain relationship calculations for each strain plot for both opening and closing. Use this data to give leaf imbalance versus opening angle, corrected for friction, at each pinion. Prepare plots of total span imbalance.

Submit a report documenting the results of the initial strain gauge measurements to the engineer. Separate reports are required for each leaf. Include the following in the reports:

1. Description of experimental procedure and equipment used.
2. Span drive diagram showing location at which strain gauges were attached and all applicable gear ratios.
3. Photocopies of a sample original strip chart for one complete run of each of the three sets in the case of strip chart recordings or data and chart files in Excel format if recorded by a data logger. Annotate with strain scales, angle of opening, significant ordinates, etc.
4. Description of relationships and sample calculations for obtaining shaft torque from strains, span imbalance from shaft torque, curve fitting and basis for friction correction.
5. Plots of the following parameters versus degree of opening during each opening/closing run and fitted balance curves corrected for friction:
 - Total imbalance in foot-pounds for span.
 - Frictional moment in foot-pounds for span.
6. Tabulation of imbalance moment at seated position for each leaf/run including the average value for each leaf.
7. The location of the leaf center of gravity.

After balance block adjustment, submit the final balance report, similar to the initial report, to the engineer. Include an introductory section giving the name of the bridge, the date of the measurements, weather conditions during measurements and any other information requested by the engineer.

C.4 Bascule Leaf Balance Acceptance Criteria

The final acceptable balance condition measured by the procedures described herein will be considered acceptable when both of the following conditions are met:

1. There is a downward reaction at the tip of each bascule leaf (tip heavy) when in the closed position of no less than 1,000 pounds and no greater than 2,000 pounds
2. The composite center of gravity of each bascule leaf including its counterweight is between negative 10 degrees and positive 25 degrees from a horizontal line extending from the center of pinions.

D Measurement

The department will measure Counterweight Calculations and Span Balancing for both bascule leaves together as single lump sum unit of work, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.01	Counterweight Calculations and Span Balancing	LS

Payment is full compensation for all analyses, testing, professional engineer services and all other balance work described herein or shown on the plans; transporting installing, removing and/or adjusting the location of balance blocks as many times as necessary to achieve final balance; and for furnishing all labor, tools, equipment, materials, and incidentals necessary to complete the contract work. Performed work will only be paid for after final balancing has been completed and accepted.

17. Diamond Grinding Bascule Span, Item SPV.0180.01.

A Description

This special provision describes diamond grinding the surface of the existing concrete deck on the movable portions of the bascule span in a longitudinal direction to the depths shown on the plan and as directed by the engineer. The purpose of diamond grinding is to remove a precise amount of concrete

weight before application of the polymer overlay so as to achieve a specific balance condition in the bascule spans.

B (Vacant)

C Construction

Diamond grind the surface area of the deck in a manner that results in 95 percent of any 3-foot x 100-foot section of deck area within a single lane having a grooved or corduroy-type appearance. The grooves shall be a maximum 1/16-inch from peak to bottom and shall be uniformly spaced a minimum of 50 blades per linear foot. The depth from top of existing deck to the bottom of removal shall be as indicated on the plan within a tolerance of (+/-)1/16-inch.

Remove all solid and liquid residues from grinding by vacuuming the roadway. Residue and water shall not be permitted to flow or be blown across lanes used by public traffic. Dispose of residue and water at an acceptable disposal site, except that residue from pavement in rural areas may be disposed of on the roadway beyond the shoulder edge, in a manner satisfactory to the engineer.

D Measurement

The department will measure Diamond Grinding by the square yard, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0180.01	Diamond Grinding Bascule Span	SY

Payment for Diamond Grinding is full compensation for diamond grinding and disposing of all waste materials.

ADDITIONAL SPECIAL PROVISION 4

Payment to First-Tier Subcontractors

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

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

Payment to Lower-Tier Subcontractors

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

Release of Routine Retainage

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

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

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

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

Additional Special Provision 6

ASP 6 - Modifications to the standard specifications

Make the following revisions to the standard specifications:

104.3 Contractor Notification

Replace the entire text with the following effective with the December 2019 letting:

104.3.1 General

- (1) Subsection 104.3 specifies the step-by-step communication process to be followed to expedite the resolution of potential contract revisions identified by the contractor. Both contractor actions and department responses are outlined. The contractor's non-compliance with the requirements of 104.3 may constitute a waiver of entitlement to a pay adjustment under 109.4 or a time extension under 108.10. The department and contractor can mutually agree to extend any time frame specified throughout 104.3.

104.3.2 Contractor Initial Oral Notification

- (1) If required by 104.2, or if the contractor believes that the department's action, the department's lack of action, or some other situation results in or necessitates a contract revision, the contractor must promptly provide oral notification to the project engineer. Upon notification, the project engineer will attempt to resolve the identified issue.

104.3.3 Contractor 5-Day Written Statement

- (1) If the project engineer has not responded or resolved the identified issue within 5 business days after receipt of initial notification, provide a contractor written statement to the project engineer in the following format:

Part 1 - Executive Summary (label page 1.1 through page 1.x)

Include a detailed, factual statement of the request for additional compensation and contract time. Include the date the issue was identified, the date initial notification was given to the project engineer, and the dates and specific locations of work involved.

Part 2 - Contractor's Basis of Entitlement (label page 2.1 through page 2.x)

Include references to relevant contract provisions and a narrative summarizing how the contract provisions support the request for a revision to the original contract.

Part 3 - Contractor's Request for Damages (label page 3.1 through page 3.x)

When requesting additional compensation, include an itemized list of costs with a narrative supporting the requested amount and explaining how the costs are tied to the requested contract revision.

When requesting additional contract time, include a copy of the schedule that was in effect when the issue occurred and a detailed narrative explaining how the issue impacted controlling items of work. Provide a time impact analysis utilizing base and updated schedules.

If the full extent of either compensation or time is not known at the date of submittal of the contractor 5-Day written statement, provide a brief statement as to why, and include estimated compensation and time.

Part 4 - Supporting Documentation (label page 4.1 through page 4.x)

Include copies of the following:

- A. Relevant excerpts from specifications, special provisions, plans, change orders, or other contract documents.
 - B. Communication on the issue, including: letters, e-mails, meeting minutes, etc.
 - C. Any other documentation to support or clarify the contractor's position, including: daily work records, cost summary sheets, weigh tickets, test results, sketches, etc.
- (2) With the submittal of the written statement, the contractor may also request a meeting with the region.

104.3.4 Region One-Day Written Acknowledgment

- (1) Within one business day after the contractor provides the 5-day written statement, the project engineer will provide a region one-day written acknowledgment to the contractor. The project engineer will continue to resolve the issue.

104.3.5 Region 5-Day Written Response

- (1) Within 5 business days after receiving the contractor 5-day written statement, the project engineer may request specific additional information to allow the project engineer to decide whether item 1 or 2 of 104.3.6(1) applies. The project engineer will state the information needed and date it is to be

received for further review. Submit additional information as an amendment to the contractor 5-day written statement.

104.3.6 Region Final Decision

- (1) Within 10 business days after receiving the contractor 5-day written statement or additional information requested in 104.3.5(1), whichever comes last, the region will consider all information and provide a region final decision in writing to the contractor with one or more of the following responses:
 1. The region will confirm that the contractor is entitled to a contract revision and a contract change order is necessary as specified in 104.2. The project engineer will give direction concerning the potential change.
 2. The region will deny that the contractor is entitled to a contract revision. The project engineer will provide a statement as to why the issue is not a change to the contract. At a minimum, the project engineer will respond to the contractor's issues and refer to the contract to show why the issues are not a change from the original contract.
 - (2) If the contractor does not agree with the region's decision the contractor may pursue the issue as a claim as specified in 105.13. Alternatively, if the contractor and department mutually agree, the department will get a third-party advisory opinion according to the department's dispute resolution procedures.
 - (3) If a third party reviews the issue, their recommendation is not binding on either party. The region has 10 business days after receipt of the third party's written recommendation to render a decision. If the department fails to respond in writing within those 10 business days or the contractor disagrees with the region's decision, the contractor may pursue the issue as a claim as specified in 105.13.
-

104.6.1.2.1 General

Replace paragraph one with the following effective with the December 2019 letting:

- (1) Conduct construction operations and provide facilities required to maintain the portion of the project open to the public in a condition that safely and adequately accommodates public traffic. Use barricades, signs, flaggers, and temporary barrier as specified in part VI, of the WMUTCD and ensure that the contractor's use of the right-of-way conforms to 107.9. Throughout the life of the contract, and as the engineer directs, conduct construction operations and provide facilities as follows:
 - Conduct flagging operations conforming to plan details and the department's flagging handbook.
 - Use drums, barricades, and temporary barrier to delineate and shield abrupt drop-offs and other hazards.
 - Furnish, erect, and maintain traffic control devices and facilities conforming to 643.
 - Furnish, erect, and maintain temporary pedestrian devices and facilities conforming to 644.
-

104.6.1.2.2 Flagging

Replace paragraph three with the following effective with the December 2019 letting:

- (3) Provide associated advanced warning signs that meet the retroreflective requirements of 637.2.2.2. Provide temporary portable rumble strips from the department's APL installed according to manufacturer's instructions and as specified in the flagging plan details. Provide guidance service through the worksite using pilot vehicles if required.

Replace paragraph five with the following effective with the December 2019 letting:

- (5) Flagging is incidental to the contract and includes costs for advance signing, temporary portable rumble strips, and pilot vehicle guidance service.

104.8 Rights in the Use of Materials Found on the Project

Replace paragraph two with the following effective with the December 2019 letting:

- (2) Do not excavate or remove material from within the right-of-way that is not within the vertical and horizontal excavation limits the plans show except as follows:
- If the contract does not identify potential source areas, obtain written authorization from the engineer to use those sources. Complete required environmental documentation and obtain necessary permits. The department will reduce pay by \$1.50 per cubic yard under the Material from Right-of-Way administrative item for material obtained from those areas.
 - If the contract identifies potential source areas that were evaluated and permitted in the original environmental document, do not begin excavating in those areas until the engineer allows in writing. Additional environmental documentation and environmental permits are not required. The department will not reduce pay for material obtained from those areas.

The department may suspend use of these sources if the contractor's operation affects the essential functions or characteristics of the project.

104.10.1 General

Replace paragraph one with the following effective with the December 2019 letting:

- (1) Subsection 104.10 specifies a 2-step process for contractors to follow in submitting a cost reduction incentive (CRI) for modifying the contract in order to reduce direct construction costs computed at contract bid prices. The initial submittal is referred to as a CRI concept and the second submittal is a CRI proposal. The contractor and the department will equally share all savings generated to the contract due to a CRI as specified in 104.10.4.2(1). The department encourages the contractor to submit CRI concepts for the following situations:
1. The contractor generates the original cost savings idea and formulates it into a concept.
 2. The department generates the original cost savings idea and obtains the contractor's assistance to formulate the idea into a concept.

Replace paragraph five with the following effective with the December 2019 letting:

- (5) The department will consider a CRI that changes but does not impair the essential functions or characteristics of the project. These functions or characteristics include, but are not limited to, appearance, service life, economy of operations, ease of maintenance, design, and safety of structures and pavements, construction phasing or procedures, or other contract requirements. The department will not consider a CRI that changes the following:
- Permanent pavement type.
 - Permanent structural cross section above the subgrade.
-

104.10.2 Submittal and Review of a CRI Concept

Replace paragraphs five and six with the following effective with the December 2019 letting:

- (5) The department may consider a CRI concept that addresses a potential change under 104.2.
- (6) The department will not implement a contractor-initiated CRI concept, or portion of that concept, without sharing the cost savings with the contractor as specified in 104.10.4.2.
- (7) The savings generated by the CRI must be sufficient to warrant its review and processing and offset the level of risk. The department will assess the risk of the CRI relative to departmental design policies and criteria for the project. The department may reject a CRI concept for the following reasons:
1. It requires excessive time or costs for the contractor to develop the CRI proposal.
 2. It requires excessive time or costs for review, evaluation, investigation, or implementation.
 3. It introduces an inappropriate level of risk.

104.10.4.2 Payment for the CRI Work

Replace paragraph one with the following effective with the December 2019 letting:

- (1) The department will pay for completed CRI work as specified for progress payments under 109.6. The department will pay for CRI's under the Cost Reduction Incentive administrative item. When all CRI costs are determined, the department will execute a contract change order that does the following:
 1. Adjusts the contract time, interim completion dates, or both.
 2. Pays the contractor for the unpaid balance of the CRI work.
 3. Pays the contractor 50 percent of the net savings resulting from the CRI, calculated as follows:

$$NS = CW - CRW - CC - DC$$

Where:

NS = Net Savings

CW = The cost of the work required by the original contract that is revised by the CRI. CW is computed at contract bid prices if applicable.

CRW = The cost of the revised work, computed at contract bid prices if applicable.

CC = The contractor's cost of developing the CRI proposal.

DC = The department's cost for investigating, evaluating, and implementing the CRI proposal.

105.13 Claims Process for Unresolved Changes

Replace the entire text with the following effective with the December 2019 letting:

105.13.1 General

- (1) Before submitting a claim, the department and contractor can mutually agree to have the department get a third-party advisory opinion as specified in 104.3.6.
- (2) The department and contractor can mutually agree to extend any time frame specified throughout 105.13 and can mutually agree to utilize an alternative dispute resolution method at any point before the department renders its final decision.
- (3) The department and contractor share costs related to referral to a dispute review board (DRB) as prescribed in the department's dispute resolution procedures.

105.13.2 Notice of Claim

- (1) If the contractor has followed the procedures for revising the contract specified in 104.2 and provided the notification specified in 104.3, but still disagrees with the region, the contractor may pursue the issue as a claim. File a notice of claim with the project engineer concerning the disagreement within 14 calendar days of receiving the region's decision under 104.3.6(1).
- (2) The project engineer may deny the applicable portion of a claim if the contractor does not do the following:
 1. File the notice of claim within 14 calendar days as specified in 105.13.2(1).
 2. Give the project engineer sufficient access to keep a record of the actual labor, materials, and equipment used to perform the claimed work.

- (3) Upon filing the notice of claim, maintain records as specified for force account statements in 109.4.5. Unless the project engineer issues a suspension, continue to perform the disputed work. The department will continue to make progress payments to the contractor as specified in 109.6.

105.13.3 Submission of Claim

- (1) Submit the claim to the project engineer as promptly as possible following the submission of the Notice of Claim, but not later than the end of the time allowed under 109.7 for the contractor to respond in writing to the engineer-issued semi-final estimate. If the contractor does not submit the claim within that response time, the department will deny the claim.
- (2) The department will not accept the submission of a claim until the resolution process in 104.3 has been completed and the contractor makes no further requests to submit updated information that may affect the region's final decision.

105.13.4 Content of Claim

- (1) The final contractor written statement under 104.3.3 is considered the content of the claim. If the contractor makes a request to submit updated information that may affect the region’s final decision under 104.3.6, submit the updated information as an amendment to the contractor written statement and continue the resolution process in 104.3 before submitting a claim.
- (2) The department may refer the claimant of a false claim to the appropriate authority for criminal prosecution. Certify the claim using the following form:

The undersigned is duly authorized to certify this claim on behalf of (the contractor).

(The contractor) certifies that this claim is made in good faith, that the supporting data are accurate and complete to the best of (the contractor's) knowledge and belief, and that the amount requested accurately reflects the contract adjustment for which (the contractor) believes that the department is liable.

(THE CONTRACTOR)

By: _____
(Name and Title)

Date of Execution: _____

105.13.5 Department Final Decision

- (1) The department will have up to 28 calendar days, from the contractor's submission of the claim, to perform a final review of the claim and conduct all meetings. The department may request, in writing, that the contractor submit additional information related to the claim. Submit that additional information, or notify the department in writing to base its decision on the information previously submitted. Either the contractor or region may request a meeting to present their views. Before the meeting, both parties will agree upon written ground rules for the meeting.
- (2) Upon completion of the 28 calendar days for the department’s review and meetings, the department will have up to 21 calendar days to render a written decision. The department will consider written and oral submissions from the contractor and region, and may consider other relevant information in the project records.
- (3) The department will provide the following in its final decision:
 - 1. A concise description of the claim.
 - 2. A clear, contractual basis for its decision that includes a reference to 104.2 on revisions to the contract and as appropriate, specific reference to language regarding the bid items in question.
 - 3. Other facts the department relies on to support its decision.
 - 4. A concise statement of the circumstances surrounding the claim and reasons for its decision. If the department rejects the claim in whole or in part, the department will explain why the claimed work is not a change to the contract work.
 - 5. The amount of money or other relief, if any, the department will grant the contractor.
- (4) If the contractor disagrees with the department's final decision, the contractor may initiate a legal action pursuant to state statutes.

106.3.4.2.2.2 Freeze-Thaw Soundness

Replace paragraph one with the following effective with the December 2019 letting:

- (1) Perform freeze-thaw soundness testing according to AASHTO T103 as modified in CMM 8-60.2. Provide freeze/thaw soundness test results based on the fraction retained on the No. 4 sieve as follows:
 - 1. Using virgin crushed stone aggregates produced from limestone/dolomite sources in one or more of the following counties or from out of state:

Brown	Columbia	Crawford	Dane	Dodge
Fond du Lac	Grant	Green	Green Lake	Iowa
Jefferson	Lafayette	Marinette	Oconto	Outagamie
Rock	Shawano	Walworth	Winnebago	
 - 2. Using gravel aggregates produced from pit sources in one or more of the following counties or from out of state:

Dodge	Washington	Waukesha		
-------	------------	----------	--	--

208.5 Payment

Replace paragraph three with the following effective with the December 2019 letting:

- (3) The department will adjust pay for material obtained from within the project right-of-way limits but outside project excavation limits, furnished under 208.2.2, as specified in 104.8.

301.2.3 Sampling and Testing

Replace paragraph one with the following effective with the December 2019 letting:

- (1) Department and contractor testing shall conform to the following:

Sampling ^[1]	AASHTO T2
Percent passing the 200 sieve.....	AASHTO T11
Gradation ^[1]	AASHTO T27
Gradation of extracted aggregate.....	AASHTO T30
Moisture content ^[1]	AASHTO T255
Liquid limit.....	AASHTO T89
Plasticity index.....	AASHTO T90
Wear.....	AASHTO T96
Sodium sulfate soundness (R-4, 5 cycles).....	AASHTO T104
Freeze/thaw soundness ^[1]	AASHTO T103
Lightweight Pieces in Aggregate.....	AASHTO T113
Fracture.....	ASTM D5821 as modified in CMM 8-60
Moisture/density ^[1]	AASHTO T99 and AASHTO T180
In-place density ^[1]	AASHTO T191
Asphaltic material extraction.....	CMM 8-36 WisDOT Test Method 1560

^[1] As modified in CMM 8-60.

301.2.4.5 Aggregate Base Physical Properties

Replace paragraph one with the following effective with the December 2019 letting:

(1) Furnish aggregates conforming to the following:

TABLE 301-2 AGGREGATE BASE PHYSICAL PROPERTIES

PROPERTY	CRUSHED STONE	CRUSHED GRAVEL	CRUSHED CONCRETE	RECLAIMED ASPHALT	REPROCESSED MATERIAL	BLENDED MATERIAL
Gradation AASHTO T27						
dense	305.2.2.1	305.2.2.1	305.2.2.1	305.2.2.2	305.2.2.1	305.2.2.1 ^[1]
open-graded	310.2	310.2	not allowed	not allowed	not allowed	not allowed
Wear AASHTO T96 loss by weight	<=50%	<=50%	note ^[2]	—	note ^[2]	note ^[3]
Sodium sulfate soundness AASHTO T104 loss by weight						
dense	<=18%	<=18%	—	—	—	note ^[3]
open-graded	<=12%	<=12%	not allowed	not allowed	not allowed	not allowed
Freeze/thaw soundness AASHTO T103 ^[6] loss by weight						
dense	<=18%	<=18%	note ^[2]	—	—	note ^[3]
open-graded	<=18%	<=18%	not allowed	not allowed	not allowed	not allowed
Liquid limit AASHTO T89	<=25	<=25	<=25	—	—	note ^[3]
Plasticity AASHTO T90	<=6 ^[4]	<=6 ^[4]	<=6 ^[4]	—	—	note ^[3]
Fracture ASTM D5821 ^[6] min one face by count						
dense	58%	58%	58%	—	note ^[5]	note ^[3]
open-graded	90%	90%	not allowed	not allowed	not allowed	not allowed

^[1] The final aggregate blend must conform to the specified gradation.

^[2] No requirement for material taken from within the project limits. For material supplied from a source outside the project limits:

- LA wear maximum of 50 percent loss, by weight.
- Freeze thaw maximum of 42 percent loss, by weight.

^[3] Required as specified for the individual component materials defined in columns 2 - 6 of the table before blending.

^[4] For base placed between old and new pavements, use crushed stone, crushed gravel, or crushed concrete with a plasticity index of 3 or less.

^[5] >=75 percent by count of non-asphalt coated particles.

^[6] as modified in CMM 8-60.

450.2.2 Aggregate Sampling and Testing

Replace paragraph one with the following effective with the December 2019 letting:

- (1) The department and the contractor will sample and test according to the following methods, except as revised with the engineer's approval:
- | | |
|--|-------------|
| Sampling aggregates..... | AASHTO T2 |
| Material finer than No. 200 sieve | AASHTO T11 |
| Sieve analysis of aggregates..... | AASHTO T27 |
| Mechanical analysis of extracted aggregate..... | AASHTO T30 |
| Sieve analysis of mineral filler | AASHTO T37 |
| Los Angeles abrasion of coarse aggregate | AASHTO T96 |
| Freeze-thaw soundness of coarse aggregate ^[1] | AASHTO T103 |
| Sodium sulfate soundness of aggregates (R-4, 5 cycles)..... | AASHTO T104 |
| Extraction of bitumen..... | AASHTO T164 |

^[1] As modified in CMM 8-60.2.

450.3.2.6.3 Compaction Roller Pattern Determined by Growth Curve

Add 450.3.2.6.3 as a new subsection effective with the December 2019 letting:

450.3.2.6.3 Compaction Roller Pattern Determined by Growth Curve

- (1) When specified in 460.3.3.1, compact asphaltic mixture using the roller pattern established during construction of a control strip. Use 2 or more rollers per paver if placing more than 165 tons per hour.
- (2) On the first day of production, construct a control strip under the direct observation of department personnel. After compacting the control strip with a minimum of 3 passes, mark the gauge outline and take a one-minute wet density measurement using a nuclear density gauge in back scatter mode at a single location. Take a density measurement at the same location after each subsequent pass. Continue compacting and testing until the increase in density is less than 1 pcf for 3 consecutive passes. Submit the final roller pattern to the engineer in writing. Once the roller pattern is established do not change the pattern or decrease the number, type, or weight of rollers without the engineer's written approval.
- (3) After establishing the roller pattern, and under the direct observation of the engineer, cut at least one 4-inch diameter or larger core from the control strip density gauge outline. Prepare cores and determine density according to AASHTO T166. Dry cores after testing. Fill core holes 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.

450.3.2.8 Jointing

Replace paragraph three with the following effective with the December 2019 letting:

- (3) Construct notched wedge longitudinal joints for mainline paving of HMA layers 1.75 inches or greater. Extend the wedge beyond the normal lane width as the plans show or as the engineer directs.

Replace paragraph five with the following effective with the December 2019 letting:

- (5) Construct the wedge for each layer using an engineer-approved strike-off device that will provide a uniform slope and will not restrict the main screed. Shape and compact the wedge with a weighted steel side roller wheel or vibratory plate compactor the same width as the wedge. Apply a tack coat to the wedge surface and both notches before placing the adjacent lane.
- (6) Clean longitudinal and transverse joints coated with dust and, if necessary, paint with hot asphaltic material, a cutback, or emulsified asphalt to ensure a tightly bonded, sealed joint.

455.2.5 Tack Coat

Replace paragraph one with the following effective with the December 2019 letting:

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

460.2.2.3 Aggregate Gradation Master Range

Replace paragraph one with the following effective with the December 2019 letting:

- (1) Ensure that the aggregate blend, including recycled material and mineral filler, conforms to the gradation requirements in table 460-1. The values listed are design limits; production values may exceed those limits.

TABLE 460-1 AGGREGATE GRADATION MASTER RANGE AND VMA REQUIREMENTS

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

^[1] 14.5 for LT and MT mixes.

^[2] 15.5 for LT and MT mixes.

460.2.7 HMA Mixture Design

Replace paragraph one with the following effective with the December 2019 letting:

- (1) For each HMA mixture type used under the contract, develop and submit an asphaltic mixture design according to CMM 8-66 and conforming to the requirements of table 460-1 and table 460-2. Ensure that SMA mixture designs adhere to AASHTO R 46 and AASHTO M 325 in addition to the required test procedures outlined in CMM 8-66 table 1 and CMM 8-66 table 2. Determine the specific gravity of fines or super fines used as a mineral filler or additional stabilizer in SMA designs according to AASHTO T 100. The values listed are design limits; production values may exceed those limits. The department will review mixture designs and report the results of that review to the designer according to CMM 8-66.

TABLE 460-2 MIXTURE REQUIREMENTS

Mixture type	LT	MT	HT	SMA
LA Wear (AASHTO T96)				
100 revolutions(max % loss)	13	13	13	13
500 revolutions(max % loss)	50	45	45	35
Soundness (AASHTO T104) (sodium sulfate, max % loss)	12	12	12	12
Freeze/Thaw (AASHTO T103 as modified in CMM 8-60.2) (specified counties, max % loss)	18	18	18	18
Fractured Faces (ASTM D5821 as modified in CMM 860) (one face/2 face, % by count)	65/___	75 / 60	98 / 90	100/90
Flat & Elongated (ASTM D4791) (max %, by weight)	5 (5:1 ratio)	5 (5:1 ratio)	5 (5:1 ratio)	20 (3:1 ratio)
Fine Aggregate Angularity (AASHTO T304, method A, min)	40 ^[1]	43 ^[1]	45	45
Sand Equivalency (AASHTO T176, min)	40	40 ^[2]	45	50
Clay Lumps and Friable Particle in Aggregate (AASHTO T112)	<= 1%	<= 1%	<= 1%	<= 1%
Plasticity Index of Material Added to Mix Design as Mineral Filler (AASHTO T89/90)	<= 4	<= 4	<= 4	<= 4
Gyratory Compaction				
Gyrations for Nini	6	7	8	7
Gyrations for Ndes	40	75	100	65
Gyrations for Nmax	60	115	160	100
Air Voids, %Va (%Gmm Ndes)	4.0 (96.0)	4.0 (96.0)	4.0 (96.0)	4.5 (95.5)
% Gmm Nini	<= 91.5 ^[3]	<= 89.0 ^[3]	<= 89.0	___
% Gmm Nmax	<= 98.0	<= 98.0	<= 98.0	<= 98.0
Dust to Binder Ratio ^[4] (% passing 0.075/Pbe)	0.6 - 1.2 ^[5]	0.6 - 1.2 ^[5]	0.6 - 1.2 ^[5]	1.2 - 2.0
Voids filled with Binder (VFB or VFA, %)	68 - 80 ^{[6] [8]}	65 - 75 ^{[6] [7] [9]}	65 - 75 ^{[6] [7] [9]}	70 - 80
Tensile Strength Ratio (TSR) (AASHTO T283) ^{[10] [11]}				
no antistripping additive	0.75 min	0.75 min	0.75 min	0.80 min
with antistripping additive	0.80 min	0.80 min	0.80 min	0.80 min
Draindown (AASHTO T305) (%)	___	___	___	<= 0.30
Minimum Effective Asphalt Content, Pbe (%)	___	___	___	5.5

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

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

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

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

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

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

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

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

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

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

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

460.2.8.2.1.3.1 Contracts with 5000 Tons of Mixture or Greater

Replace paragraph four with the following effective with the December 2019 letting:

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

Blended aggregate gradations:

Drum plants:

- Field extraction by ignition oven according to AASHTO T308 as modified in CMM 8-36.6.3.6, chemical extraction according to AASHTO T-164 method A or B; or automated extraction according to ASTM D8159 as modified in CMM 8-36.6.3.1. Gradation of resulting aggregate sample determined according to AASHTO T30.
- Belt samples, optional for virgin mixtures, obtained from stopped belt or from the belt discharge using an engineer-approved sampling device and performed according to AASHTO T11 and T27.

Batch plants:

- Field extraction by ignition oven according to AASHTO T308 as modified in CMM 8-36.6.3.6, chemical extraction according to AASHTO T-164 method A or B; or automated extraction according to ASTM D8159 as modified in CMM 8-36.6.3.1. Gradation of resulting aggregate sample determined according to AASHTO T30.

Asphalt content (AC) in percent:

AC by ignition oven according to AASHTO T308 (CMM 8-36.6.3.6), by chemical extraction according to AASHTO T-164 method A or B; or by automated extraction according to ASTM D8159 as modified in CMM 8-36.6.3.1. Gradation of resulting aggregate sample determined according to AASHTO T30.

Bulk specific gravity of the compacted mixture according to AASHTO T166.

Maximum specific gravity according to AASHTO T209.

Air voids (V_a) by calculation according to AASHTO T269.

VMA by calculation according to AASHTO R35.

460.2.8.2.1.4.2 Control Charts

Replace paragraph one with the following effective with the December 2019 letting:

- (1) Maintain standardized control charts at the laboratory. Record contractor test results on the charts the same day as testing. Record data on the standardized control charts as follows:
- Blended aggregate gradation tests in percent passing. Of the following, plot sieves required in table 460-1: 37.5-mm, 25.0-mm, 19.0-mm, 12.5-mm, 9.5-mm, 4.75-mm, 2.36-mm, 1.18-mm, 0.60-mm, and 0.075-mm.
 - Asphalt material content in percent.
 - Air voids in percent.
 - VMA in percent.
- (2) Plot both the individual test point and the running average of the last 4 data points on each chart. Show QC data in black with the running average in red. Draw the warning limits with a dashed green line and the JMF limits with a dashed red line. The contractor may use computer generated black-and-white printouts with a legend that clearly identifies the specified color-coded components.

460.2.8.2.1.5 Control Limits

Replace paragraph one with the following effective with the December 2019 letting:

- (1) Conform to the following control limits for the JMF and warning limits based on a running average of the last 4 data points:

ITEM	JMF LIMITS	WARNING LIMITS
Percent passing given sieve:		
37.5-mm	+/- 6.0	+/- 4.5
25.0-mm	+/- 6.0	+/- 4.5
19.0-mm	+/- 5.5	+/- 4.0
12.5-mm	+/- 5.5	+/- 4.0
9.5-mm	+/- 5.5	+/- 4.0
4.75-mm	+/- 5.0	+/- 4.0
2.36-mm	+/- 5.0	+/- 4.0
1.18-mm	+/- 4.0	+/- 3.0
0.60-mm	+/- 4.0	+/- 3.0
0.075-mm	+/- 2.0	+/- 1.5
Asphaltic content in percent	- 0.3	- 0.2
Air voids in percent ^[1]	+1.3/-1.0	+1.0/-0.7
VMA in percent ^[2]	- 0.5	- 0.2

^[1] For SMA, JMF limits are +/-1.3 and warning limits are +/-1.0.

^[2] VMA limits are based on requirements for each mix design nominal maximum aggregate size in table 460-1. For No. 6 (4.75mm) mixes, JMF limits are +/- 0.5 and warning limits are +/- 0.2.

460.3.2 Thickness

Replace paragraph one with the following effective with the December 2019 letting:

- (1) Provide the plan thickness for lower and upper layers limited as follows:

NOMINAL SIZE	MINIMUM LAYER THICKNESS (in inches)	MAX LOWER LAYER THICKNESS (in inches)	MAX UPPER LAYER THICKNESS (in inches)	MAX SINGLE LAYER THICKNESS ^[3] (in inches)
No. 1 (37.5 mm)	4.5	6	4.5	6
No. 2 (25.0 mm)	3.0	5	4	6
No. 3 (19.0 mm)	2.25	4	3	5
No. 4 (12.5 mm) ^[1]	1.75	3 ^[2]	2.5	4
No. 5 (9.5 mm) ^[1]	1.25	3 ^[2]	2	3
No. 6 (4.75 mm)	0.75	1.25	1.25	1.25

^[1] SMA mixtures use nominal size No. 4 (12.5 mm) or No. 5 (9.5 mm).

^[2] SMA mixtures with nominal sizes of No. 4 (12.5 mm) and No. 5 (9.5 mm) have no maximum lower layer thickness specified.

^[3] For use on cross-overs and shoulders.

- (2) Place leveling layers using No. 4 (12.5 mm), No. 5 (9.5 mm), or No. 6 (4.75 mm) mixtures. Leveling layers may be thinner than the minimum lower layer thickness for the mixture used.
- (3) Place wedging layers as the contract specifies or engineer directs. Wedging layers have no specified minimum or maximum thickness.

460.3.3.1 Minimum Required Density

Replace paragraph one with the following effective with the December 2019 letting:

- (1) Compact No. 6 mixtures in lower layers as specified in 450.3.2.6.2 and in upper layers as specified in 450.3.2.6.3. For other HMA mixtures, compact all layers to the density table 460-3 specifies.

TABLE 460-3 MINIMUM REQUIRED DENSITY^[1]

LOCATION	LAYER	PERCENT OF TARGET MAXIMUM DENSITY		
		MIXTURE TYPE		
		LT and MT	HT	SMA ^[5]
TRAFFIC LANES ^[2]	LOWER	93.0 ^[3]	93.0 ^[4]	—
	UPPER	93.0	93.0	93.0
SHOULDERS & APPURTENANCES	LOWER	91.0	91.0	—
	UPPER	92.0	92.0	92.0

^[1] The table values are for average lot density. If any individual density test result falls more than 3.0 percent below the minimum required target maximum density, the engineer will investigate the acceptability of that material according to CMM 8-15.11.

^[2] Includes side roads, crossovers, turn lanes, ramps, parking lanes, bike lanes, and park-and-ride lots as defined by the contract plans.

^[3] Minimum reduced by 2.0 percent for a lower layer constructed directly on crushed aggregate or recycled base courses.

^[4] Minimum reduced by 1.0 percent for a lower layer constructed directly on crushed aggregate or recycled base courses.

460.3.3.2 Pavement Density Determination

Replace paragraph three with the following effective with the December 2019 letting:

- (3) A lot is defined in CMM 8-15 and placed within a single layer for each location and target maximum density category indicated in table 460-3. The lot density is the average of all samples taken for that lot. The department determines the number of tests per lot according to CMM 8-15.

460.5.2.1 General

Replace paragraph six with the following effective with the December 2019 letting:

- (6) If during a QV dispute resolution investigation the department discovers unacceptable mixture defined by one or more of the following:
 - Va less than 2.5 or greater than 6.5 percent for SMA, or for other mixes, less than 1.5 or greater than 5.0 percent.
 - VMA more than 1.0 percent below the minimum or above the maximum specified in table 460-1.
 - AC more than 0.5 % below the JMF target.

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

501.2.5.5 Sampling and Testing

Replace paragraph one with the following effective with the December 2019 letting:

- (1) Sample and test aggregates for concrete according to the following:

Sampling aggregates ^[1]	AASHTO T2
Lightweight pieces in aggregate	AASHTO T113
Material finer than No. 200 sieve ^[1]	AASHTO T11
Unit weight of aggregate	AASHTO T19
Organic impurities in sands	AASHTO T21
Sieve analysis of aggregates	AASHTO T27
Effect of organic impurities in fine aggregate	AASHTO T71
Los Angeles abrasion of coarse aggregate	AASHTO T96
Alkali Silica Reactivity of Aggregates	ASTM C1260
Alkali Silica Reactivity of Combinations of Cementitious Materials and Aggregates	ASTM C1567
Freeze-thaw soundness of coarse aggregate ^[1]	AASHTO T103
Sodium sulfate soundness of coarse aggregates (R-4, 5 cycles)	AASHTO T104
Specific gravity and absorption of fine aggregate	AASHTO T84
Specific gravity and absorption of coarse aggregate ^[1]	AASHTO T85
Flat & elongated pieces based on a 3:1 ratio ^[1]	ASTM D4791
Sampling fresh concrete	AASHTO R60
Making and curing concrete compressive strength test specimens	AASHTO T23
Compressive strength of molded concrete cylinders	AASHTO T22

^[1] As modified in CMM 8-60.

505.2.2 Bar Steel Reinforcement

Replace paragraph one with the following effective with the December 2019 letting:

- (1) Conform to AASHTO M31, type S or type W.

505.2.3 High-Strength Bar Steel Reinforcement

Replace paragraph one with the following effective with the December 2019 letting:

- (1) Conform to AASHTO M31, grade 60, type S or type W.

505.2.4.1 General

Replace paragraph one with the following effective with the December 2019 letting:

- (1) Conform to AASHTO M31, grade 60, type S or type W. Ensure that the coating is applied in a CRSI certified epoxy coating plant. Bend bars that require bending before coating, unless the fabricator can bend the bar without damaging the coating.

505.2.6.1 General

Replace paragraph one with the following effective with the December 2019 letting:

- (1) For dowel bars and straight tie bars, there is no requirement for bend tests. Ensure that the bars are the specified diameter and length the plans show.

505.2.6.2.2 Solid Dowel Bars

Replace paragraph one with the following effective with the December 2019 letting:

- (1) Furnish coated bars conforming to AASHTO M31 grade 40 or 60. Alternatively the contractor may furnish dowel bars conforming to AASHTO M227 grade 70-80. Coat in a plant certified by the Concrete Reinforcing Steel Institute with a thermosetting epoxy conforming to AASHTO M254, type B.

625.3.2 Processing Topsoil or Salvaged Topsoil

Delete paragraph four effective with the December 2019 letting.

701.3.1 General

Replace the entire text with the following effective with the December 2019 letting:

- (1) Perform contract required QC tests for samples randomly located according to CMM 8-30. Use the test methods specified in table 701-1.

TABLE 701-1 TESTING AND CERTIFICATION STANDARDS

TEST	TEST STANDARD	MINIMUM REQUIRED CERTIFICATION (any one of the certifications listed for each test)
Random Sampling	CMM 8-30.9.2	Transportation Materials Sampling Technician (TMS) Aggregate Technician I (AGGTEC-I) AGGTEC-I Assistant Certified Technician (ACT-AGG) PCC Technician I (PCCTEC-I) PCCTEC-I Assistant Certified Technician (ACT-PCC) Grading Technician I (GRADINGTEC-I) Grading Assistant Certified Technician (ACT-GRADING)
Sampling Aggregates	AASHTO T2 ^{[1][4]}	TMS, AGGTEC-1, ACT-AGG
Percent passing the No. 200 sieve	AASHTO T11 ^[1]	AGGTEC-I, ACT-AGG
Fine and coarse aggregate gradation	AASHTO T27 ^[1]	
Aggregate moisture content	AASHTO T255 ^[1]	
Fractured faces	ASTM D5821 ^[1]	
Liquid limit	AASHTO T89	Aggregate Testing for Transportation Systems (ATTS) GRADINGTEC-I, or ACT-GRADING
Plasticity index	AASHTO T90 ^[3]	
Sampling freshly mixed concrete	AASHTO R60	PCCTEC-1 ACT-PCC
Air content of fresh concrete	AASHTO T152 ^[2]	
Air void system of fresh concrete	AASHTO TP118 ^[5]	
Concrete slump	AASHTO T119 ^[2]	
Concrete temperature	ASTM C1064	
Making and curing concrete cylinders	AASHTO T23	
Moist curing for concrete cylinders	AASHTO M201	
Concrete compressive strength	AASHTO T22	Concrete Strength Tester (CST) CST Assistant Certified Technician (ACT-CST)
Concrete flexural strength	AASHTO T97	
Profiling	—	PROFILER

^[1] As modified in CMM 8-60.

^[2] As modified in CMM 8-70.

^[3] A plasticity check, if required under individual QMP provisions, may be performed by an AGGTEC-I in addition to the certifications listed for liquid limit and plasticity index tests.

^[4] Plant personnel may operate equipment to obtain samples under the direct observation of a TMS or higher.

^[5] Consolidate tests by rodding only.

715.2.1 General

Replace paragraph five with the following effective with the December 2019 letting:

- (5) For new lab-qualified mixes, test the air void system of the proposed concrete mix. Include the SAM number as a part of the mix design submittal.

715.3.1.1 General

Replace paragraph two with the following effective with the December 2019 letting:

- (2) Test the air void system at least once per lot and enter the SAM number in the MRS for information only. SAM testing is not required for the following:
- For lots with less than 4 sublots.
 - High early strength (HES) concrete.
 - Special high early strength (SHES) concrete.
 - Concrete placed under the following bid items:
 - Concrete Pavement Approach Slab
 - Concrete Masonry Culverts
 - Concrete Masonry Retaining Walls
 - Steel Grid Floor Concrete Filled
 - Crash Cushions Permanent
 - Crash Cushions Permanent Low Maintenance
 - Crash Cushions Temporary

730.3.1 General

Replace paragraph three with the following effective with the December 2019 letting:

- (3) Stockpile tests^[1] can be used for multiple projects. If placement on a project does not begin within 120 calendar days after the date the stockpile sample was obtained, retest the stockpile before placement begins.

^[1] Replace the stockpile test with an in-place production test for concrete pavement recycled and processed on-site; test on the first day of production.

730.3.2 Contractor QC Testing

Replace paragraph four with the following effective with the December 2019 letting:

- (4) Submit test results to the engineer within one business day of obtaining the sample, except any aggregate classification with recycled asphalt may be submitted within two business days.

730.3.4.1 Contractor QC Testing

Replace the entire text with the following effective with the December 2019 letting:

- (1) For small quantity contracts with ≤ 500 tons, submit 2 production tests or 1 stockpile test. Production tests are valid for 3 years from the date the production sample was obtained. Begin placement within 3 years of the date sampled.
- (2) For small quantity contracts with ≤ 6000 tons and ≥ 500 tons, do the following:
1. Conduct one QC stockpile test before placement.
 2. Submit 2 production tests or conduct 1 loadout test instead of placement tests. Production tests are valid for 3 years from the date the production sample was obtained; the first day of placement must be within 3 years of the date sampled.
 3. If the actual quantity placed is more than 6000 tons, on the next day of placement perform one additional random QC test for each 3000 tons of overrun, or fraction thereof.

740.3.2 Contractor QC Testing

Replace paragraph three with the following effective with the December 2019 letting:

- (3) Field-locate the beginning and ending points for each profile run. Measure the profiles of each standard and partial segment. Define primary segments starting at a project terminus and running contiguously along the mainline to the other project terminus. Define segments one wheel path wide and distinguished by length as follows:
1. Standard segments are 500 feet long.
 2. Partial segments are less than 500 feet long.

Errata

614.3.6 Thrie Beam Structure Approach Retro Fits

Correct errata by deleting the galvanization reference already required under 614.3.1.

- (2) Install posts and drill holes into existing thrie beam conforming to 614.3.2.
-

628.3.7 Mobilizations for Erosion Control

Correct errata by clarifying that mobilizations for erosion control include proceeding with the work.

- (1) Move personnel, equipment, and materials to the project site and promptly proceed with construction of erosion control items at the stages the contract indicates or the engineer directs.

ADDITIONAL SPECIAL PROVISION 7

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

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

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

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

ADDITIONAL SPECIAL PROVISION 9

Electronic Certified Payroll or Labor Data Submittal

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

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

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

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

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

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

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

Non-discrimination Provisions

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

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

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

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

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

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

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

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

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

Pertinent Non-Discrimination Authorities:

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

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

Effective August 2015 letting

BUY AMERICA PROVISION

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

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

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

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



Proposal Schedule of Items

Proposal ID: 20200114015 Project(s): 4997-05-71

Federal ID(s): N/A

SECTION: 0001 Contract Items

Alt Set ID: Alt Mbr ID:

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0002	509.0301 Preparation Decks Type 1	181.000 SY	_____	_____
0004	509.0302 Preparation Decks Type 2	72.000 SY	_____	_____
0006	509.0310.S Sawing Pavement Deck Preparation Areas	1,809.000 LF	_____	_____
0008	509.2100.S Concrete Masonry Deck Repair	20.000 CY	_____	_____
0010	509.5100.S Polymer Overlay	6,031.000 SY	_____	_____
0012	619.1000 Mobilization	1.000 EACH	_____	_____
0014	628.1905 Mobilizations Erosion Control	2.000 EACH	_____	_____
0016	628.1910 Mobilizations Emergency Erosion Control	1.000 EACH	_____	_____
0018	628.7010 Inlet Protection Type B	10.000 EACH	_____	_____
0020	628.7015 Inlet Protection Type C	4.000 EACH	_____	_____
0022	643.0300 Traffic Control Drums	75.000 DAY	_____	_____
0024	643.0420 Traffic Control Barricades Type III	240.000 DAY	_____	_____
0026	643.0705 Traffic Control Warning Lights Type A	480.000 DAY	_____	_____
0028	643.0900 Traffic Control Signs	120.000 DAY	_____	_____
0030	643.1000 Traffic Control Signs Fixed Message	200.000 SF	_____	_____
0032	643.1050 Traffic Control Signs PCMS	28.000 DAY	_____	_____



Proposal Schedule of Items

Proposal ID: 20200114015 Project(s): 4997-05-71

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
0034	643.5000 Traffic Control	1.000 EACH	_____.	_____.
0036	646.1020 Marking Line Epoxy 4-Inch	5,709.000 LF	_____.	_____.
0038	646.3020 Marking Line Epoxy 8-Inch	45.000 LF	_____.	_____.
0040	646.5020 Marking Arrow Epoxy	1.000 EACH	_____.	_____.
0042	646.5220 Marking Symbol Epoxy	8.000 EACH	_____.	_____.
0044	646.6120 Marking Stop Line Epoxy 18-Inch	36.000 LF	_____.	_____.
0046	SPV.0035 Special 01. Concrete Masonry Lightweight Deck Repair	2.000 CY	_____.	_____.
0048	SPV.0105 Special 01. Counterweight Calculations and Span Balancing	LS	LUMP SUM	_____.
0050	SPV.0180 Special 01. Diamond Grinding Bascule Span	1,106.000 SY	_____.	_____.
Section: 0001			Total:	_____.
			Total Bid:	_____.

PLEASE ATTACH SCHEDULE OF ITEMS HERE