

HIGHWAY WORK PROPOSAL

Wisconsin Department of Transportation
DT1502 10/2010 s.66.29(7) Wis. Stats.

Proposal Number:

Ø 7

COUNTY	STATE PROJECT ID	FEDERAL PROJECT ID	PROJECT DESCRIPTION	HIGHWAY
Kenosha	3200-02-73	WISC 2016 308	Illinois State Line - Milwaukee Road Illinois State Line - STH 50	USH 45
Kenosha	3200-02-74		Illinois State Line - Milwaukee Road Illinois State Line - STH 50	USH 45 (Landscaping)

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

Proposal Guaranty Required, \$ 100,000.00 Payable to: Wisconsin Department of Transportation	Attach Proposal Guaranty on back of this PAGE.
Bid Submittal Due Date: September 13, 2016 Time (Local Time): 9:00 AM	Firm Name, Address, City, State, Zip Code
Contract Completion Time October 15, 2019	SAMPLE NOT FOR BIDDING PURPOSES
Assigned Disadvantaged Business Enterprise Goal 17 %	This contract is exempt from federal oversight.

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

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

Subscribed and sworn to before me this date _____

(Signature, Notary Public, State of Wisconsin)

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

(Date Commission Expires)

Notary Seal

(Bidder Signature)

(Print or Type Bidder Name)

(Bidder Title)

For Department Use Only

Type of Work Removing asphaltic surface milling, removing concrete pavement, excavation common, base aggregate dense, HMA pavement, concrete pavement, cross culvert pipes, storm sewer, concrete sidewalk, concrete curb and gutter, retaining walls, traffic signals, pavement marking, permanent signing, planting trees, traffic control, erosion control, and restoration.	
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:
<http://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 P.M. local time on the Thursday before the letting. Check the department's web site after 5:00 P.M. 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 P.M. 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:
<http://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, Room 601, 4802 Sheboygan Avenue, 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 ExpressTM web site.
 2. Use ExpediteTM software to enter a unit price for every item in the schedule of items.
 3. Submit the bid according to the requirements of ExpediteTM software and the Bid ExpressTM 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 ExpressTM web site reflecting the latest addenda posted on the department's web site at:
<http://wisconsindot.gov/Pages/doing-bus/contractors/hcci/bid-let.aspx>
Use ExpediteTM 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 ExpressTM web site to assure that the schedule of items is prepared properly.
- (2) Staple an 8 1/2 by 11 inch printout of the ExpediteTM 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 ExpediteTM 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 ExpediteTM 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 ExpediteTM generated schedule of items is not the same on each page.
 2. The check code printed on the printout of the ExpediteTM generated schedule of items is not the same as the check code for that proposal provided on the diskette or CD ROM.
 3. The diskette or CD ROM is not submitted at the time and place the department designates.

C Waiver of Electronic Submittal

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

PROPOSAL BID BOND

DT1303 1/2006

Wisconsin Department of Transportation

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

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

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

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

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

PRINCIPAL

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

(Signature and Title)

(Company Name)

(Signature and Title)

(Company Name)

(Signature and Title)

(Company Name)

(Signature and Title)

NOTARY FOR PRINCIPAL

(Date)

State of Wisconsin)
) ss.
_____ County)

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

(Signature, Notary Public, State of Wisconsin)

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

(Date Commission Expires)

Notary Seal

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

(Signature of Attorney-in-Fact)

NOTARY FOR SURETY

(Date)

State of Wisconsin)
) ss.
_____ County)

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

(Signature, Notary Public, State of Wisconsin)

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

(Date Commission Expires)

Notary Seal

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

CERTIFICATE OF ANNUAL BID BOND

DT1305 8/2003

Wisconsin Department of Transportation

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

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

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

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

(Signature of Authorized Contractor Representative)

(Date)

March 2010

LIST OF SUBCONTRACTORS

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

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

[illegible]

DECEMBER 2000

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

Instructions for Certification

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

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

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

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

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

Special Provisions

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SPECIAL PROVISIONS

1. General.

Perform the work under this construction contract for Project 3200-02-73, Illinois State Line - Milwaukee Road, Illinois State Line - STH 50, USH 45, Kenosha County, Wisconsin; and Project 3200-02-74, Illinois State Line - Milwaukee Road, Illinois State Line - STH 50, USH 45 (Landscaping), Kenosha 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, 2016 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 (20151210)

2. Referenced Construction Specifications.

Construct the work enumerated below conforming to the Village of Bristol Standards and Specifications for Development, latest revision. If there is a discrepancy or conflict between the referenced specification and the standard specifications regarding contract administration, part 1 of the standard specifications governs.

Conform to the referenced construction specifications for the following:

- Sanitary Manhole Chimney Seal, Item SPV.0060.08
- Adjusting Sanitary Sewer Manholes, Item SPV.0060.09
- Adjusting Water Valve Manhole, Item SPV.0060.11

105-002 (20130615)

3. Scope of Work.

3200-02-73

The work under this contract shall consist of clearing and grubbing, excavation common, removing pavement, excavation marsh, excavation of contaminated soils, milling, base aggregate dense, concrete pavement, HMA pavement, storm sewer systems, cross culvert pipes, traffic signals, permanent signing, retaining wall R-30-59, pavement marking and all incidental items necessary to complete the work as shown on the plans and included in the proposal and contract.

3200-02-74

The work under this contract shall consist of planting trees and all incidental items necessary to complete the work as shown on the plans and included in the proposal and contract.

104-005 (20090901)

4. 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.

Conduct weekly progress meetings at the field office. Attendance of the contractor's superintendent or representative, designated materials representative and subcontractor's representative for ongoing subcontract work or subcontract work expected to begin within the next three weeks is required. Provide and discuss the schedule and updates at the weekly progress meetings. At a minimum, but not limited to, include the following agenda items at the meeting:

- Review of the contractor's current and 3 week look ahead schedule and subcontractor's schedule.
- Utility coordination.
- Evaluation of progress to date.
- Outstanding Requests for Information (RFIs) or issues that may cause contract modifications.
- Shop drawing submittal and status.
- Materials submittal status.
- Materials sampling and testing activities and results.
- Full closure schedules.
- Impacts to bus routes, emergency services, postal services.
- Status of orders and deliveries.

Do not begin construction prior to March 15, 2017 without written consent from the engineer. If construction is allowed before March 15, 2017 by the engineer, the contractor is responsible to add soil stabilizer and any additional erosion control items as incidental to the contract.

Stage 1: Construct USH 45 from the south project limits to Station 246+00. The pond located in the northeast quadrant of the USH 45 and 84th Street intersection will be constructed in this stage. The pond shall be completed prior to starting Stage 2A. Note there is large quantity of contaminated soil that will be encountered.

Stage 1A: Construct the CTH WG/USH 45 intersection with a full closure. CTH WG shall be closed one time for up to 14 calendar days during this stage. Stage 1A shall be opened to east/west traffic prior to starting Stage 1B.

Stage 1B: Construct the CTH C/USH 45 intersection with a full closure. CTH C shall be closed one time for up to 14 calendar days during this stage. Stage 1A and Stage 1B construction shall not take place at the same time unless written permission from the construction engineer.

The CTH WG and CTH C intersections are to be open to east/west traffic for all Holidays as listed in the Holiday Work Restriction article of the special provisions.

Backfill and place Base Patching Concrete within 72 hours of backfill operation at all new culvert and storm sewer crossings of USH 45 south of Station 246+00.

During milling operations mill a 1 foot wide taper (incident to milling) at the centerline of USH 45 to eliminate the 4.75 inch milled drop off or an approved alternative from the construction engineer.

Complete construction operations for Stage 1, Stage 1A, and Stage 1B prior to Bristol Progress Days on July 7, 2017.

Stage 2A: Construct USH 45 from Station 246+00 to Station 269+00 starting on June 12, 2017 which is the first day the school is on recess for the summer. Remove the existing pavement and the Village of Bristol will have 14 days to relocate a section of watermain.

Construct the temporary driveway access from 84th Street to Diner 45 prior to removing the USH 45 pavement from Station 265+00 to the north project limits. Coordinate the temporary driveway access with the Diner 45 owner Glen Nelson, 262-945-7339.

In order to accommodate traffic for the annual Bristol Progress Days USH 45 from Station 246+00 to Station 257+00 is to be opened to local and through traffic from 12:01 AM Friday, July 7 to 6:00 AM Monday, July 10, 2017. Portable Changeable Message Signs will be used to inform the traffic. USH 45 is to have at a minimum an aggregate surface from Station 246+00 to Station 257+00 for the Bristol Progress Days. Maintain a minimum of 24' width. Grade the aggregate as directed by the engineer to provide a smooth aggregate surface for the duration of Bristol Progress Days event. Do not perform work on, nor haul materials of any kind along or across any portion of the highway carrying USH 45 traffic between CTH C and STH 50, entirely clear the traveled way and shoulders of such portions of the highway and local road of equipment, barricades, and any other material that might impede the free flow of traffic during the Bristol Progress Days event.

Stage 2B: Construct USH 45 from Station 269+00 to STH 50 after 6:00 AM Monday, July 10, 2017 which is the first day after the Bristol Progress Days event. Remove the

existing pavement and the Village of Bristol will have 14 days to relocate a section of watermain.

Concrete Pavement 8.5-Inch: Pave the 12 foot travel lane and 4 foot shoulder integral from Station 246+00 to Station 302+78 unless written permission from the construction engineer. Tie bars and longitudinal joint is required as shown in the typical sections. Maintain a 12 foot width traffic zone during construction.

Parcel 53 NH Management: Construction activities utilizing the Parcel 53 TLE shall be completed within 90 days from the first day entering the TLE to the completion of construction affecting this parcel. Construction shall utilize the TLE for only seven days (not concurrent) of the 90 days. The TLE allows for a maximum of the 4 parking stalls on the west side of the building to be impacted during construction activities. Access is to be maintained at all times through one of the two existing accesses or through the temporary access that is being constructed off of 84th Street. At no time shall the construction activities force the business to close for any period of time.

Notify the Village of Bristol Fire Department, Mr. Peter Parker, at (262) 857-2711 two weeks prior to the beginning of construction to discuss access during construction.

Notify Bristol School District #1 Administrator, Mr. Gale Ryczek, at (262) 857-2334 and Lenon Bus Company at 262-862-6086 two weeks prior to the beginning of construction to discuss school bus routes during construction.

Notify Lake County Division of Transportation, Tom Bennecke at (847) 377-7476 TBebbecje@lakecountyl.gov) and the Illinois DOT District Traffic Engineer, Cory Jucius at (847) 705-4470, a minimum two weeks prior to installing detour signing and fixed message signs. Provide name and telephone number of traffic control contractor.

Interim Completion Date

Complete Stages 1, 1A, and 1B construction prior to 12:01 AM July 7, 2017. Complete the final layer of HMA surface, shouldering, pavement marking, permanent signing, traffic signals, and restoration. Traffic signals at CTH WG and CTH C are to be completely operational and all pavement marking and permanent signing completed at CTH C and CTH WG prior to activating the traffic signals.

If the contractor fails to complete Stages 1, 1A, and 1B prior to 12:01 AM July 7, 2017, the department will assess the contractor \$1940.00 interim liquidated damages for each calendar day that this work remains incomplete after 12:01 AM July 7, 2017. An entire calendar day will be charged for any period of time within a calendar day that this work remains incomplete beyond 12:01 AM.

Complete Stages 1A, and 1B construction to a stage necessary to be opened to east/west traffic within 14 calendar days. Complete storm sewer, curb and gutter, and the final layer of HMA pavement. Traffic signals, permanent signing, pavement marking and restoration do not need to be completed within the 14 calendar day closure.

If the contractor fails to complete Stages 1A within the 14 calendar day full closure or Stage 1B within the 14 calendar day full closure, the department will assess the contractor \$1940.00 interim liquidated damages for each calendar day that this work remains incomplete after the 14 calendar days. An entire calendar day will be charged for any period of time within a calendar day that this work remains incomplete beyond 12:01 AM.

Complete Stage 2A to the stage necessary to be opened to traffic prior to 12:01 AM August 15, 2017. Complete the concrete pavement, curb and gutter, and concrete sidewalk. Restoration and incidental construction may be completed after the interim completion date.

If the contractor fails to complete Stages 2A to the stage necessary to be opened to traffic prior to 12:01 AM August 15, 2017, the department will assess the contractor \$1940.00 interim liquidated damages for each calendar day that this work remains incomplete after 12:01 AM August 15, 2017. An entire calendar day will be charged for any period of time within a calendar day that this work remains incomplete beyond 12:01 AM.

Complete Stage 2B to the stage necessary to be opened to traffic prior to 12:01 AM October 15, 2017. Complete the concrete pavement, curb and gutter, concrete sidewalk, pavement marking, and permanent signing. Restoration and incidental construction may be completed after the interim completion date.

If the contractor fails to complete Stages 2B to the stage necessary to be opened to traffic prior to 12:01 AM October 15, 2017, the department will assess the contractor \$1940.00 interim liquidated damages for each calendar day that this work remains incomplete after 12:01 AM October 15, 2017. An entire calendar day will be charged for any period of time within a calendar day that this work remains incomplete beyond 12:01 AM.

Complete Project 3200-02-73 and all tree plantings for the ID 3200-02-74 project prior to 12:01 AM November 15, 2017. Landscape planting surveillance and care cycles will be the only contract work remaining.

If the contractor fails to complete all contract work with the exception of the landscape planting surveillance and care cycles prior to 12:01 AM November 15, 2017, the department will assess the contractor \$1940.00 interim liquidated damages for each calendar day that this work remains incomplete after 12:01 AM November 15, 2017. An entire calendar day will be charged for any period of time within a calendar day that this work remains incomplete beyond 12:01 AM.

Northern Long-eared Bat (*Myotis septentrionalis*)

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

According to the final 4(d) rule issued for the NLEB, the department has determined that the proposed activity may affect, but will not result in prohibited take of the NLEB. The activity involves tree removal, but will not occur within 0.25 miles of a known hibernacula, nor will the activity remove a known maternity roost tree or any other tree within 150 feet of a known maternity roost tree.

If additional trees need to be removed, no Clearing shall occur without prior approval from the engineer, following coordination with the WisDOT REC. Additional tree removal beyond the area originally specified will require consultation with the United States Fish and Wildlife Service (USFWS) and may require a bat presence/absence survey. Notify the engineer if additional Clearing cannot be avoided to begin coordination with the WisDOT REC. The WisDOT REC will initiate consultation with the USFWS and determine if a survey is necessary.

Submit a schedule and description of Clearing operations with the ECIP 14 days prior to any Clearing operations. The department will determine, based on schedule and scope of work, what additional erosion control measures shall be implemented prior to the start of Clearing operations, and list those additional measures in the ECIP.

The Wisconsin DNR is not placing time of the year restriction on fish spawning instream disturbances of the stream crossings at Station 70+00, Station 135+00, and Station 146+50 (tributaries to the Dutch Canal). Bypass pumping or complete stream blockage cannot occur for greater than 72 hours.

5. Traffic.

Perform this work according to the requirements of standard spec 643, and as shown on the plans or as approved by the engineer, except as hereinafter modified.

General

Construct the project using the traffic control details shown in the plans and standard detail drawings. The construction staging detail shall include details for maintaining local access during construction. Preparing and submitting details will be considered incidental to the contract project. Any flagging operations that may be required to control traffic will be considered incidental to contract project.

WisDOT will provide a permit from Illinois DOT to install detour signs, traffic control signs, and fixed message signs in Illinois.

USH 45 is an oversize-overweight (OSOW) route. Fix message signs will be installed to alert OSOW vehicles of the closure. The WisDOT construction manager will update the Lane Closure System in advance to USH 45 closures. The WisDOT construction manager will complete the IDOT Road Restriction Information form (OPER 2410) and send to the DOT.ROADINFO@Illinois.gov. address no less than 21 days prior to the start of the USH 45 roadway closure.

Maintain emergency and local vehicular access at all times within the project limits unless otherwise noted in the plans. Notify the property occupants five days in advance of the driveway reconstruction to verify closure or staged driveway construction methods. Construct driveway approaches to commercial businesses in stages or provide temporary access such that access to commercial property is provided at all times during the life of the project. Temporary access may be constructed with base course at the contract unit price for Base Aggregate Dense 1¼-inch. Maintain at least one access to businesses at all times.

Maintain a 12 foot width traffic zone during construction during construction. Install the storm sewer and culvert construction operations south of Station 246+00 in halves to allow through traffic. Maintain pavements or base courses carrying traffic so that surface is free of ruts and potholes.

The 192nd Avenue, 106th Street, 196th Avenue South, and 196th Avenue North sideroads do not have alternate access. The only access is off of USH 45. Therefore there will be higher volumes of local traffic.

The 82nd Street crossing, access to 86th Street, and access to 79th Street shall be maintained at all times. The 79th Street roadway is a dead end and only has access to USH 45. The 86th Street intersection will be used by emergency vehicles to access USH 45 to the south. The 82nd Street intersection will be used as the main east west route for emergency and school traffic.

Provide a flagger if lane widths are reduced to less than 12-feet within staged construction as noted above.

Traffic Control

No operations shall proceed until all traffic control devices for such work are in the proper location.

Drums or barricades shall be used to delineate local traffic and protect hazards in the work zone, such as exposed manholes or drop-offs for vehicles and pedestrians. The use of such devices shall be incidental to the operation that creates the hazard.

Close USH 45 to through traffic during construction activities under this project with the following stages and detours:

Stage 1 USH 45 Closures and Detour from CTH WG to STH 50

USH 45 will be detoured and closed to through traffic for the duration of Stage 1 construction from CTH WG to Station 246+00 with the exception from Station 19+83 to CTH WG, the CTH WG intersection and CTH C intersection. USH 45 from Station 19+83 to CTH WG will be constructed open to traffic allowing access to through traffic for the east, west and south legs of the intersection except for the Stage 1A closure. The CTH C intersection will allow cross access for the duration of Stage 1 with the exception of the Stage 1B closure. USH 45 will remain open from Station 246+00 to the north project limits. A detour utilizing Ill 173, US 41, I 94 and STH 50 will be provided as shown in the plans.

Stage 1A CTH WG Closure and Detour

CTH WG will be detoured and closed to through traffic for the duration of Stage 1A construction within Stage 1 construction. A detour utilizing CTH V67, Ill 173, and CTH W15 will be provided as shown in the plans. The CTH WG detour and full closure shall be no more than 14 calendar days.

Stage 1B CTH C Closure and Detour

CTH C will be detoured and closed to through traffic for the duration of Stage 1B construction within Stage 1 construction. A detour utilizing IH 94, STH 50, and STH 83 will be provided as shown in the plans. The CTH C detour and full closure shall be no more than 14 calendar days.

Stage 2A USH 45 Closure and Detour from CTH C to Station 269+00

USH 45 will be detoured and closed to through traffic for the duration of Stage 2A construction. The Stage 1 detour will be utilized until July 7, 2017. A detour utilizing CTH C, IH 94 and STH 50 will be provided once Stage 1 construction is complete as shown in the plans.

Stage 2B USH 45 Closure and Detour from Station 269+00 to STH 50

USH 45 will be detoured and closed to through traffic for the duration of Stage 2B construction. A detour utilizing CTH C, I 94 and STH 50 will be provided as shown in the plans.

Wisconsin Lane Closure System Advance Notification

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

TABLE 108-1 CLOSURE TYPE AND REQUIRED MINIMUM ADVANCE NOTIFICATION

Closure type with height, weight, or width restrictions (available width, all lanes in one direction $\leq 16'$)	MINIMUM NOTIFICATION
Lane and shoulder closures	14 calendar days
Full roadway closures	14 calendar days
System and service ramp closures	14 calendar days
Full system and service ramp closures	14 calendar days
Detours	14 calendar days
Closure type without height, weight, or width restrictions (available width, all lanes in one direction $> 16'$)	MINIMUM NOTIFICATION
Lane and shoulder closures	3 business days
System and service ramp closures	3 business days
Modifying all closure types	3 business days

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

108-057 (20150630)

6. Holiday Work Restrictions.

Do not perform work on, nor haul materials of any kind along or across any portion of the highway carrying USH 45 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 26, 2017 to 6:00 AM Tuesday, May 30, 2017 for Memorial Day;
- From noon Monday, July 3, 2017 to 6:00 AM Wednesday, July 5, 2017 for Independence Day;
- From noon Friday, September 1, 2017 to 6:00 AM Tuesday, September 5, 2017 for Labor Day;
- From noon Wednesday, November 22 to 6:00 AM Monday, November 27, 2017 for Thanksgiving.

107-005 (20050502)

7. Timely Decision Making Manual.

Use the Timely Decision Making Manual (TDM) on this contract. Coordinate with the department to modify the various published tools as necessary to meet the particular project needs and determine how to implement those tools under the contract. Ensure the full participation of the contractor and its principal subcontractors throughout the term of the contract.

Forms and associated guidance are published in the TDM available at the department's Highway Construction Contract Information (HCCI) web site at:

Timely Decision Making Manual (TDM)

105-005 (20151210)

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

The department has obtained a U.S. Army Corps of Engineers Section 404 permit. Comply with the requirements of the permit in addition to requirements of the special provisions. A copy of the permit is available from the regional office by contacting Brian Pluemer at (262) 548-6721.

107-054 (20080901)

9. Information to Bidders, Potential Waste Site.

The contact below may have a potential waste site location the contractor may potentially use during construction:

1. Randy Kerkman, Village of Bristol Administrator, (262) 857-2368

10. Work By Others.

The Village of Bristol will be relocating two sections of watermain during construction. The watermain will be relocated after the contractor removes the existing USH 45 concrete pavement. Refer to Article 10 Utilities under Village of Bristol – Water Utility section for details on schedule and limits of watermain relocation.

11. Utilities.

This contract comes under the provision of Administrative Rule Trans 220. 107-065 (20080501)

Underground and overhead utility facilities are located within the project limits. Utility adjustments are required for this construction project as noted below. Coordinate construction activities with a call to Diggers Hotline or a direct call to the utilities that have facilities in the area as required per statutes. Use caution to ensure the integrity of underground facilities and maintain code clearances from overhead facilities at all times.

Contact each utility company listed in the plans, prior to preparing bids, to obtain current information on the status of existing and any new utility relocation work.

Additional detailed information regarding the location of relocated utility facilities available on the permits issued to the utility companies. These permits can be viewed at the Region Office during normal working hours. Contact the SE Region Utility Coordinator Laura Longley at (262) 548-6425.

There are underground and overhead utility facilities located within the project limits. There are known utility adjustments required for this construction project. The contractor shall coordinate his construction activities with a call to Digger's Hotline or a direct call to the utilities that have facilities in the area as required per statutes. The contractor shall use caution to insure the integrity of underground and overhead facilities.

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

Known utilities on the project are as follows:

Time Warner Cable has aerial facilities on WE Energies poles along USH 45 on the east side from CTH WG to 650' south of CTH Q; buried facilities along the east side of USH 45 from 650' south of CTH Q to 196th Avenue South; buried facilities along the east side of USH 45 from 196th Avenue North to 1500' north of 98th Street; aerial facilities on WE Energies poles on the east side of USH 45 from 1500' north of 98th Street to 170' south of CTH C; buried facilities along the east side of USH 45 from 170' south of CTH C to 230' north of CTH C; aerial facilities on WE Energies poles along the east side of USH 45 from 230' north of CTH C to 80th Street; aerial facilities on WE Energies poles along the west side of USH 45 from 80th Street to 350' north of 79th Street; aerial facilities on WE Energies poles along the east side of USH 45 from 350' north of 79th Street to the north project limits.

Time Warner Cable will install new underground cable crossing at Station 79+67. Existing underground cable will be discontinued and existing pedestals will remain.

Time Warner Cable will install new underground cable from Station 95+00 RT to Station 97+40 RT and the crossing at Station 97+40. Existing underground cable will be discontinued and existing pedestals will remain.

Existing underground cable from 97+40 RT to 100+00 RT, continuing east along the south side of CTH Q, and the pedestal at 100+00 RT to remain.

Time Warner Cable will install new underground cable from Station 100+00 RT to Station 108+90 RT. Existing underground cable will be discontinued and existing pedestals will remain.

The existing underground fiber optic cable from Station 95+50 RT to Station 126+50 RT will remain. The existing vault at Station 115+50 RT will be removed and a new vault will be installed.

Time Warner Cable will install a new vault at Station 126+50 RT and new underground cables and a new fiber optic cable from Station 126+50 RT to 141+80 RT. The existing pedestal at 134+90 RT will remain and a new pedestal will be installed at 137+80 RT.

Time Warner Cable will install new underground cable crossing USH 45 at Station 131+70 and CTH JS at Station 49+40, continuing west along the south side of CTH JS to Station 46+50 RT. The existing pedestal at USH Station 131+70 LT will remain and a new pedestal will be installed at CTH JS Station 49+40 RT.

Time Warner Cable will install new underground cable crossing USH 45 at Station 137+80 and from Station 137+80 LT to Station 142+40 LT. New pedestals will be installed at Stations 137+80 LT, 139+80 LT, and 142+40 LT.

All existing underground cables and fiber optic cables will be discontinued from Station 126+50 – 143+00.

The existing underground fiber optic cable from 196th Ave North Station 52+80 LT to Station 50+50 LT and continuing from USH Station 167+00 RT to Station 190+35 RT will remain in place. A new fault will be installed at Station 180+00 RT and the existing vault will be removed.

Time Warner Cable will install new underground cable from USH 45 Station 174+70 RT crossing USH 45 to the existing pedestal at 98th Street Station 48+80 RT and from USH 45 Station 174+70 RT to Station 180+00 RT. The existing underground cables and pedestals will be discontinued and removed. The existing underground cable from 180+00 RT to 190+35 RT will remain.

The underground cable along the east side of USH 45 from 170' south of CTH C to 230' north of CTH C will be discontinued and moved to aerial facilities on the We Energies poles at the intersection.

Time Warner Cable has underground cable crossing USH 45 at Station 288+22. Contractor is to use caution while excavating under the existing underground cable that is to remain in place.

Time Warner Cable has overhead facilities attached to We Energies owned poles within the project limits. These facilities will be transferred to new poles to be set by We Energies prior to construction.

Time Warner Cable plans to relocate their facilities prior to the USH 45 project construction.

The highway contractor must contact Time Warner Cable before removing or adjusting any coax or fiber optic facility to verify that the facility has been discontinued. The contractor must not assume that an unmarked facility has been discontinued.

Time Warner Cable Contact: Steve Cramer 414-277-4045 (steve.cramer@twcable.com).

We Energies (Electric) has aerial facilities along USH 45 on the east side from CTH WG to 650' south of CTH Q; buried facilities along the east side of USH 45 from 650' south of CTH Q to 196th Avenue North; buried facilities along the west side of USH 45 from 196th Avenue North to 1500' north of 98th Street; aerial facilities on the east side of USH 45 from 1500' north of 98th Street to 80th Street; aerial facilities along the west side of USH 45 from 80th Street to 350' north of 79th Street; aerial facilities along the east side of USH 45 from 350' north of 79th Street to the north project limits.

We Energies will be removing power poles prior to construction at the following locations:

USH 45:

- Station 35+47, 46' RT; Station 46+74, 43' RT; Station 49+43, 105' RT; Station 61+99, 42' RT; Station 62+00, 45' LT; Station 129+96, 91' LT; Station 134+33, 46' RT; Station 139+67, 47' LT; Station 142+29, 53' LT; Station 196+44, 41' RT; Station 199+63, 37' RT; Station 203+90, 47' RT; Station 250+72, 58' RT; Station 254+86, 44' LT; Station 255+99, 30' LT; Station 255+99, 30' RT; Station 257+58, 32' LT; Station 258+17, 25' RT; Station 260+08, 32' LT; Station 260+10, 26' RT; Station 261+19, 26' RT; Station 262+78, 27' RT; Station 264+01, 20' RT; Station 268+58, 19' LT; Station 269+79, 27' RT; Station 270+45, 34' LT; Station 270+74, 25' RT; Station 271+81, 23' LT; Station 272+80, 21' RT; Station 272+86, 81' LT; Station 277+15, 19' LT; Station 289+34, 43' LT; Station 290+70, 45' LT; Station 291+83, 33' LT

CTH WG:

- Station WG47+61, 29' LT; Station WG50+45, 26' LT; Station WG51+40, 22' RT; Station WG51+42, 20' LT; Station WG53+02, 20' LT; Station WG53+36, 20' LT

CTH C:

- Station C44+24, 40' LT; Station C45+88, 32' LT; Station C45+88, 32' LT; Station C47+85, 35' RT; Station C47+96, 28' LT; Station C47+97, 35' RT; Station C48+36, 35' RT; Station C48+74, 120' LT; Station C49+56, 38' RT

We Energies will be installing new poles prior to construction at the following locations:

USH 45:

- Station 46+72, 44' RT; Station 48+87, 85' RT; Station 49+50, 155' RT; Station 62+00, 70' LT; Station 129+99, 96' LT; Station 134+39, 50' RT; Station 139+98, 68' LT; Station 142+44, 63' LT; Station 196+46, 41' RT; Station 199+75, 4' RT; Station 254+86, 61' LT; Station 255+89, 42' LT; Station 255+94, 33' RT; Station 257+60, 31' LT; Station 258+23, 31' RT; Station 260+06, 31' LT; Station 260+11, 30' RT; Station 261+20, 30' RT; Station 262+78, 30' RT; Station 264+04, 32' RT; Station 268+36, 108' RT; Station 269+78, 31' RT; Station 270+51, 22' LT; Station 270+72, 30' RT; Station 271+81, 30' LT; Station 272+71, 22' RT; Station 272+84, 77' LT; Station 273+38, 73' LT; Station 277+14, 22' LT; Station 289+55, 43' LT; Station 290+74, 45' LT; Station 291+84, 36' LT

CTH WG:

- Station WG47+58, 31' LT; Station WG50+38, 52' LT; Station WG51+68, 44' LT; Station WG53+01, 36' LT; Station WG54+38, 31' RT; Station WG54+41, 22' LT

CTH C:

- Station C44+41, 48' LT; Station C46+39, 47' LT; Station C48+42, 43' RT; Station C48+66, 46' LT; Station C49+34, 46' RT

Work around poles **during construction** at new pole locations within the slope intercepts and at the following locations:

USH 45:

- Station 44+88, 44' RT; Station 48+34, 45' RT; Station 49+52, 46' RT; Station 61+99, 45' RT; Station 79+70, 51' RT; Station 205+92, 46' RT; Station 208+19, 48' RT; Station 214+34, 48' RT; Station 246+00, 51' RT; Station 248+41, 55' RT; Station 254+59, 58' RT; Station 262+80, 33' LT; Station 263+99, 166' RT; Station 264+03, 33' LT; Station 266+40, 34' RT; Station 266+58, 33' RT; Station 266+67, 39' LT; Station 267+34, 31' RT; Station 267+82, 31' LT; Station 267+87, 71' RT; Station 268+08, 21' LT; Station 268+68, 30' RT; Station 274+03, 21' RT; Station 275+44, 21' RT; Station 275+44, 30' LT; Station 276+82, 21' RT; Station 278+19, 22' RT; Station 279+32, 22' LT; Station 280+03, 30' LT; Station 280+96, 35' LT; Station 282+22, 34' LT; Station 284+04, 34' LT; Station 284+56, 32' RT; Station 285+81, 36' LT; Station 288+16, 42' LT; Station 290+94, 31' RT; Station 292+32, 32' RT; Station 292+84, 31' RT; Station 295+30, 63' RT; Station 304+51, 87' RT

CTH WG:

- Station WG49+00, 38' LT; Station WG53+02, 37' RT

CTH C:

- Station C42+44, 49' LT; Station C50+83, 51' RT; Station C55+09, 48' RT

We Energies will be removing junction boxes and transformers prior to construction at the following locations:

USH 45 Junction Boxes:

- Station 98+87, 46' RT; Station 134+63, 53' RT; Station 134+70, 53' RT; Station 134+77, 54' RT

USH 45 Transformers:

- Station 137+83, 49' LT; Station 139+67, 47' LT; Station 142+34, 49' LT

We Energies will be installing new junction boxes and transformers prior to construction at the following locations:

USH 45 Junction Boxes:

- Station 129+61, 65' LT; Station 134+46, 100' RT; Station 134+53, 92' RT; Station 134+59, 84' RT

USH 45 Transformers:

- Station 134+40, 108' RT; Station 137+83, 68' LT; Station 139+69, 68' LT; Station 142+32, 68' LT

Work around transformers **during construction** at the following locations:

USH 45:

- Station 79+51, 69' LT; Station 100+49, 78' RT; 265+64, 155' RT

CTH C:

- Station C47+22, 63' RT

We Energies will be installing new underground cable prior to construction at the following locations. Existing underground cables will be discontinued in place.

USH 45:

- Station 79+55, 50' LT to Station 79+57, 44' RT
- Station 97+61, 42' LT to Station 97+58, 31' LT
- Station 98+20, 47' RT to Station 98+87, 46' RT
- Station 127+00, 39' RT to Station 129+61, 68' RT
- Station 129+61, 68' RT to Station 129+61, 65' LT
- Station 129+61, 65' LT to Station 129+99, 96' LT
- Station 129+61, 65' LT to Station 130+45, 59' LT
- Station 129+61, 68' RT to Station 132+77, 63' RT
- Station 132+77, 63' RT to Station 134+17, 103' RT
- Station 134+17, 103' RT to Station 134+39, 50' RT
- Station 134+17 RT to Station 137+87, RT
- Station 137+75, 37' LT to Station 137+83, 68' LT
- Station 137+83, 68' LT to Station 142+32, 68' LT
- Station 153+12, 33' RT to Station 153+42, 33' RT
- Station 174+81, 39' LT to Station 175+11, 37' LT
- Station 265+48, 45' LT to Station 266+60, 46' LT
- Station 288+18, 44' LT to Station 288+19, 44' RT
- Station 288+10, 44' RT to Station 288+51, 45' RT
- Station 289+59, 43' RT TO Station 289+59, 56' RT

CTH C:

- Station C55+09, 48' RT to Station C54+39, 49' RT
- Station C54+39, 49' RT to Station C54+35, 77' LT

We Energies plans to relocate its facilities prior to the start of road construction with the exception of required coordination listed as follows. Provide 14 day notification to WE Energies with one work day for completion of work.

- Buried cable to be raised and moved during culvert installation. Cable at Station 153+37, 33 right to be raised to 766 elevation and moved to Station 153+37, 30 right.
- If more extensive EBS work is found to be required during road construction, the road contractor shall inform We Energies of the change in plans.

We Energies will trim all trees near and under power lines for safe removal by road contractor with 20 working day notification from road contractor.

It is imperative that the highway contractor contact We Energies before removing any gas facilities or electrical underground cables, to verify that they have been discontinued and carry no natural gas or electrical current. The contractor must not assume that unmarked facilities have been discontinued. At no time is it acceptable to push, pull, cut or drill an unmarked facility without explicit consent from We Energies. Contractor must call the We Energies 24 hour Dispatch lines to arrange for this verification. We Energies Electric Dispatch, (800) 662-4797, We Energies Gas Dispatch, (800) 261-5325.

From Station 246+00 to Station 302+78 We Energies there is less than 3 feet of clearance between the back of curb. Work around these poles.

We Energies (Electric) Contact: Pam Rakauskas, (262) 763-1007, pamela.rakauskas@we-energies.com.

We Energies (Gas) has buried main along west side of USH 45 from CTH WG to CTH JS; buried main along east side of USH 45 from CTH JS to 196th Avenue South; buried main along east side of 196th Avenue to USH 45; buried main along east side of USH 45 from 196th Avenue North to 86th Street; 2" main along east side of USH 45 from 86th Street to 84th Place; 2" main along west side of USH 45 from 84th Place to Station 292+00; 4" main along west side of USH 45 from 86th Street to Station 292+00; 4" main along east side of USH 45 from Station 292+00 to north project limits. Multiple lateral crossings not marked on plan for entire length of project.

We Energies will be retiring existing facilities at the following locations:

- 3" p.e. Station 22+40 to 77+00 37' – 40' LT
- 4" steel Station 78+00 to 100+64, 35' LT and 4" st angles from 32' to 54' LT from Station 100+64 to 101+10
- 4" st Station 101+10 to 129+37 steel main varies from 40' to 50' LT.
- 4" st crossing USH 45 at Station 129+37. 4" st from Station 129+37 to 138+00. Main varies from 44' to 50' LT
- 4" st from Station 138+00 to 142+16 from 42' to 131' RT (Main parallels the right of way) down 196th Ave.
- 1" p.e. from Station 50+39 to 52+00, 17' LT.
- 2" p.e. main on CTH JS crossing JS at Station 48+67, discontinuing main from 48+67 to 49+55, 21' RT.
- 2" p.e. main on 122 ave from Station 48+60 to 49+50, 20' LT.
- 4" st main on CTH V Station 51+77 to 52+54, located about 28' LT.
- 3" p.e. main on 121st street from Station 49+00 to 49+66, 18' RT.
- 3" p.e. main crossing USH 45 at Station 49+44 from 34' LT to 73' RT (USH 45 Stationing)
- 3" p.e. main on 128th street from Station 45+17 to 49+13, approximately 30' RT.
- 2" p.e. main crossing USH 45 at Station 22+11, discontinuing 2" p.e. main from Station 49+13 to 52+00. Main varies from, 27' to 16' LT east of the crossing.

- 4" st on 196th Ave north, Station 50+34 to 51+87 14' LT.
- 4" st on USH 45, Station 167+00 to 200+00, 34' – 36' RT.
- 4" st on USH 45, Station 200+00 to 203+60 50' – 70' RT.
- 4" st on USH 45, Station 203+60 to 250+16, 34' – 58' RT.
- 2" st on USH 45, from Station 250+16 to 256+35. 2" crosses USH 45 at Station 256+35, then it is 19' – 20' LT to Station 276+00.
- 2" st on USH 45 from Station 276+00 to 291+75, 14' – 18' LT.
- 4" st crossing USH 45 at Station 250+77, 4" st from Station 250+77 to 254+00 , 53' RT.
- 4" st along USH 45 from Station 254+00 to 255+47, main varies from 54' to 27' RT.
- 4" st from Station 255+47 along USH 45 to 258+50 , 26' LT , then from Station 258+50 to 268+00, 28' LT.
- 4" st along USH 45 from Station 268+00 to 277+75, 21' LT, then from Station 277+75 to 292+76 main is approximately 34' RT.
- 4" st crosses USH 45 at Station 292+76.
- On 79th Street, 2" p.e. from Station 50+34 to 51+10, 33' RT.
- On 80th Street, 2" p.e. crossing USH 45, at Station 279+80, from 32' LT to 110' LT of USH 45 stationing, 28' RT of the transit line of 80th Street.
- On 82nd Street, 2" steel, 28' LT from Station 48+68 to 49+80.
- On 83rd Street , 2" st crossing USH 45 at Station 268+50, and 2" steel from 50+30 to 51+20 approximately 28' LT.
- 84th Place, 2" steel crosses USH 45 at Station 256+35 and 2" steel from 20' LT to 143' RT of the USH 45 Stationing, 16' LT of 84th Place stationing.
- On CTH AH, 4" p.e. Station 48+80 to 49+50, 28' RT.
- On 86th Street, 2" steel Station 50+55 to 51+50, 27' RT.
- 6" steel crossing USH 45 at Station 202+17.
- 2" p.e. crossing USH 45 at Station 175+35. Main will be retired from 90' LT to 32' RT (USH 45 stationing) on 98th Street.

We Energies plans to relocate its facilities prior to the start of road construction and will be installing main at the following locations:

- 4" p.e. gas main 37' LT along 128th St from Station 45+25 to 48+87. Directional bore 6' deep underneath wetland from Station 45+20 to 46+65, as well as underneath trees from Station 47+33 to 48+60. 4" p.e. main will follow the vision corner, crossing USH 45 at approximate Station 22+40. 4" p.e main will continue east down Stateline Road following the vision corner from 100' to 44' LT, to Station 51+35.
- 4" p.e. main on USH 45, 38' to 40' RT from Station 22+40 to 56+00. No manholes required at alignment changes or tees.
- 4" p.e.main on 121st from Station 49+00 crossing USH 45 at Station 48+81 to Station 50+39. Main will be approximately 20' RT on 121st Street. 4" p.e. main on CTH CJ from Station 50+39 to Station 50+72. Main will be 22' LT.
- 4" p.e. main from Station 56+00 to 66+00 will parallel the right-of-way at approximately 7' west of the east, which is 40' to 66' RT.

- 4" p.e. main from Station 66+00 to 71+00 main will vary from 62' to 89' RT as the right-of-way changes.
- 4" p.e. main will be installed 7' west of the east right-of-way from Station 71+00 to 100+60, which is approximately 58'-60' RT. Alignment will move inward 18' to a total of 25' from right-of-way beginning at Station 73+25 to 74+50 to avoid trees, and will return to original alignment once trees are circumvented. Additionally, directional bore at Station 91+63 to avoid tree.
- 4" p.e. main crossing USH 45 at Station 78+11, and tie into the existing main on CTH V at approximate Station 51+90.
- 4" p.e. main crossing USH 45 at Station 100+60. 4" p.e. main will continue north up USH 45, 28' to 30' LT from Station 100+60 to 120+00. Directional bore maintaining 1.5' clearance underneath 42" RCCP.
- 4" p.e. main from Station 120+00 to 125+00 gas will be between 29' and 32' LT. With a 2" p.e. main tie in at Station 120+97 37' LT. 2" p.e. will be installed from Station 48+60 to 49+65.
- 4" p.e. main installed from 27' LT to 44' LT from Station 125+00 to 133+00.
- 2" p.e. main installed on CTH JS from Station 48+67 to 49+74. Main will be installed from 21' to 57' LT.
- 4" p.e. main installed from Station 133+00 to 136+00, 43' to 62' LT. Directional bore maintaining 1.5' clearance underneath 72" RCCP.
- 2" p.e. main installed on 106th Street from 45' LT (USH 45 transit line) to Station 52+00 on 106th street. Main will be 36' RT. Directional bore maintaining 1.5' clearance underneath 19"x30" CPRCHE.
- 4" p.e. installed from Station 136+00 to 142+16 main will be installed 63' LT, and will cross USH 45 at this station and tie into the existing main.
- Tying into the existing main on 196th Ave at Station 51+85 13' LT and installing 4" p.e. main 3' west of the east right-of-way from USH 45 Station 166+65 to 176+05. 4" p.e. main will cross USH 45 at this station. 2" p.e. main will be tied in at 176+05, 25' LT and follow the north vision corner 13' to 16' south of the right-of-way of 98th Street and tie into the existing 2" p.e. main at Station 49+10, 17' LT.
- 4" p.e. main installed 25' LT from Station 176+05 to 197+00. From Station 197+00 to 200+81 main will vary from 27' to 39' LT.
- 4" p.e. main will cross USH 45 at Station 200+81 and parallel the southeast vision corner at a distance of 20' off the right-of-way, and tie into the existing main on CTH C at Station 50+82, 31.5' RT.
- 6" p.e. main installed from Station 200+78, 49' LT. Main will parallel the southwest vision 3' to 7' off the right-of-way and cross 93rd Street at Station 49+18. At Station 203+25 the 6" p.e. will follow the northwest vision corner approximately 5' off the right-of-way. 6" p.e. main will tie into the proposed 6" p.e. main on USH 45 at Station 202+27, 80' LT and be installed 45' LT of 93rd Street from Station 48+95 to 49+18.
- 6" p.e. installed 47' to 57' LT from Station 203+50 to 217+00. From 217+00 to 250+78 6" p.e. main will be installed 57' LT. Directional bore a minimum of 6' below bottom of marsh from Station 204+50 to 207+00 and Station 212+50 to 217+00. Gas main crosses marsh between Station 204+54, 55' LT to 206+15, 55' LT and Station 213+02, 47' LT to 216+44, 57' LT.

- 6" p.e. main will cross USH 45 at Station 250+78 maintaining 1.5' clearance from proposed 24" storm sewer, 6' RT. With 2" main being installed east on 86th Street 37' LT, from 50+56 to 51+45. 2" p.e. main will cross 86th Street at Station 51+45 and tie into the existing 2" steel main 26' RT. 6" p.e. main will be installed 57' RT from 250+78 to 253+80.
- 6" p.e. main will vary from 30' to 57' RT from Station 253+80 to 258+00, maintaining 1.5' clearance from proposed 18" storm sewer at Station 255+95, 40' RT. From Station 258+00 to 281+00 6" p.e. will be installed 3' west of the east right-of-way (30' – 37' RT). Maintain 1.5' clearance from proposed 24" storm sewer at Station 264+38, 30' RT. Maintain 1.5' clearance from proposed 24"X38" storm sewer at Station 266+46, 23' RT. Maintain 1.5' clearance from proposed 24" storm sewer at Station 266+66, 23' RT.
- 6" p.e. main 34' to 37' RT from Station 281+00 to 292+50. 6" p.e. main 34' to 50' RT from Station 281+00 to 292+50. Maintain 1.5' clearance from 12" underdrain at Station 286+60, 36' RT. Maintain 1.5' clearance from proposed 24" storm sewer at Station 286+86, 36' RT. From Station 292+50 to 296+90 main will be approximately 3' west of the east right-of-way (44' to 82' RT) Tee joint at Station 288+70, USH 45, 30' RT doesn't require a manhole. A valve may be used, but will not be placed in the roadway.
- 4" p.e. main crossing USH 45 at Station 254+40, maintaining 1.5' clearance from proposed 24" storm sewer and 15" storm sewer. Main will run west down 85th Street at a slight angle from 52' RT to 122' LT. We will tie into the existing main at 85th street Station 48+70, 24' RT.
- 2" p.e. main installed on 83rd Street from Station 50+30 to 51+16. Main will be approximately 26' LT.
- 2" p.e. main crossing USH 45. Main will be installed on 82nd Street from Station 48+60 to 50+32 approximately 25' LT.
- 2" p.e. main installed on 80th Street from Station 50+36 to 51+13, 22' LT.
- 2" p.e. main installed on 79th street from Station 50+34 to 51+00, 38' RT.

We Energies to make adjustments to depth and location of all laterals as necessary prior to construction.

It is imperative that the highway contractor contact We Energies before removing any gas facilities or electrical underground cables, to verify that they have been discontinued and carry no natural gas or electrical current. The contractor must not assume that unmarked facilities have been discontinued. At no time is it acceptable to push, pull, cut or drill an unmarked facility without explicit consent from We Energies. Contractor must call the We Energies 24 hour Dispatch lines to arrange for this verification. We Energies Electric Dispatch, (800) 662-4797. We Energies Gas Dispatch, (800) 261-5325.

We Energies (Gas Operations) Contact: Chris DeGrave, (262) 886-7018, chris.degrave@we-energies.com.

WisDOT Signals WisDOT has existing signals at the intersection of USH 45 and CTH WG and at the intersection of USH 45 and CTH C. These existing signals will be removed and replaced as part of this project. Monotube poles will be installed at both these intersections. The highway contractor shall complete this work as participating items.

WisDOT Signals Contact: Signal Operation Unit (414) 750-2605, elizabeth.lloyd-weis@dot.wi.gov or Electrical Field Unit (414) 266-1170.

WisDOT Lighting WisDOT has existing lighting facilities at the intersection of USH 45 and CTH WG and at the intersection of USH 45 and CTH C. These existing lighting facilities will be removed and replaced as part of this project. Luminaires are powered from the signal control cabinets. The contractor shall complete this work as participating items.

WisDOT Lighting Contact: Mr. Eric Perea, (262) 574-5422, eric.perea@dot.wi.gov

ATC (Electric) Aerial facilities along the east side of USH 45 from Station 116+00 to 196th Avenue South; Aerial facilities along west side of USH 45 from 196th Avenue South to 1300' south of CTH C.

Location and Conflict	Resolution
<ul style="list-style-type: none">Station 101+28 61' RT, Station 134+30 70' RT, Station 141+48 65' RT, Station 174+78 53' LT. Existing pole base within limits of ditch grading.	<ul style="list-style-type: none">Contractor to work around poles during construction.

ATC has 138kV transmission facilities overhead within the project limits. Maintain a safe working clearance to the conductors at all times based on the latest OSHA requirements.

ATC Contact: Mr. Tony Marciniak, (262) 506-6814, amarciniak@atcllc.com.

Midwest Fiber Networks (Fiber Optic) has buried facility along east side of USH 45 from 200' south of CTH V to CTH C; buried facility along the east side of USH 45 from CTH C to 600' south of 86th Street; aerial facility along the east side of USH 45 from 600' south of 86th Street to 80th Street; aerial facility along west side of USH 45 from 80th Street to 280' north of 79th Street; aerial facility along east side of USH 45 from 280' north of 79th Street to north project limits.

Midwest Fiber Networks will be lowering the existing underground facility at the following locations:

USH 45:

- Station 90+46 RT, Station 96+50-97+60 RT, Station 135+50-136+00 RT, Station 146+00 RT, Station 165+78 RT, and Station 202+60 RT

CTH C:

- Station 50+83, Station 53+50-54+00 RT, and Station 56+70-57+25 RT

Midwest Fiber Networks will be relocating the existing underground facility at the following locations:

USH 45:

- Station 181+30-183+00 RT, Station 192+75-193+42 RT, Station 196+00-199+40 RT, Station 200+25-201+00 RT, Station 202+19 RT, Station 203+25-205+35 RT, and Station 228+08-240+50 RT

Midwest Fiber Networks will adjust the hand hole elevations to final grade at the following locations:

USH 45:

- Station 75+65 RT, Station 143+05 RT, Station 166+21 RT

CTH C:

- Station 50+75 RT

Midwest Fiber Networks plans to relocate their facilities prior to the USH 45 project construction.

Midwest Fiber Networks has aerial facilities attached to We Energies owned poles from Station 255+99 – Station 291+82. Midwest Fiber Networks will transfer existing cables to the relocated poles prior to construction in association with We Energies utility work.

Midwest Fiber Networks Contact: Mr. Richard Trgovec, (414) 672-5612, rtrgovec@midwestfibernetworks.com.

Frontier Communications has both aerial and underground facilities within the project limits. Frontier Communications existing underground facilities run along the west side of USH 45 from CTH WG to approximately 350' south of CTH C and along the east side of USH 45 from approximately 900' south of 86th Street to 86th Street. The existing aerial facilities attached to We Energies owned poles run along the east side of USH 45 from 86th Street to 80th Street. The aerial facilities then cross USH 45 and continue along the west side of USH 45 to the north project limits.

Frontier will relocate its aerial facilities that are attached to We Energies owned poles from Station 250+71 to Station 267+82 after We Energies has completed their pole relocations prior to construction.

Frontier will install new underground facilities along the north side of CTH WG (128th Street) – crossing USH 45, along the west side of USH 45 from Station 22+00 to Station 24+75 and from Station 40+50 to Station 62+00. The facility will cross USH 45 at Station 49+50 and continue east along the north side of CTH CJ. The facility will continue west along the north

side of 119th St. The existing underground cables and pedestals will be discontinued and removed.

Frontier will install new underground facilities along the west side of USH 45 from Station 70+50 to Station 84+10 and Station 121+10 to Station 144+00, with underground facilities running west along the north side of CTH V, 192nd Ave, and CTH JS. The existing underground cables and pedestals will be discontinued and removed.

Frontier will adjust the pedestal on CTH C Station 48+00 RT to final grade. Additional pedestals in conflict will be replaced prior to construction.

Frontier will install new underground facilities along the east side of USH 45 from Station 241+10 to Station 250+75.

Frontier plans to relocate their facilities prior to the USH 45 project construction.

Frontier Contact: Ed Stieber, (608) 837-1410 (office), (262) 325-7048 (cell), edward.o.stieber@ftr.com.

Village of Bristol - Water Utility has buried facilities along west side of USH 45 from 86th Street to north project limits (Station 250+50 LT to Station 302+80 LT).

The Village of Bristol will be relocating watermain and hydrants **during construction** under separate contract and in coordination with the highway construction project. The contractor is to remove the existing USH 45 pavement during Stage 2A from Station 256+50 to Station 260+25 prior to June 19, 2017. The Village of Bristol will relocate watermain from Station 256+50 to Station 260+25 from June 19, 2017 to June 30, 2017 after the existing pavement is removed. The contractor is to remove the existing USH 45 pavement during Stage 2B from Station 269+29 to Station 271+25 prior to July 17, 2017. The Village of Bristol will relocate watermain from Station 269+29 to Station 271+25 from July 17, 2017 to July 31, 2017 after the existing pavement is removed. The Village of Bristol will reconstruct a valve box manhole at Station 255+84 and from Station 256+49 to Station 291+36 will adjust 4 hydrants and install 3 new hydrants at the same time as the watermain relocation. The Village of Bristol anticipates 27 working days to complete this work.

The Village of Bristol will require that the contractor make final adjustments to water valve boxes and auxiliary valves **during construction** as non-participating work. See roadway plans for bid items and locations associated with this work.

The highway contractor must provide the Village of Bristol 2 weeks notice when the project site will be ready for the utility relocation work to begin.

Village of Bristol Contact: Mr. Randall Kerkman, (262) 857-2368, bristoladmin@wi.rr.com.

Village of Bristol - Sanitary Sewer Utility has buried facility along east side of USH 45 from Station 192+00 to 80th Street; buried facility along east side of USH 45 from Station 284+50 to north project limits.

The Village of Bristol will be reconstructing 16 sanitary sewer manholes from Station 205+68 to Station 296+30 **during construction** under separate contract and in coordination with the highway construction project. The Village of Bristol anticipates 27 working days to complete this work.

The Village of Bristol will require that the contractor make final adjustments to sanitary manholes during construction as non-participating work. See roadway plans for bid items and locations associated with this work.

The highway contractor must provide the Village of Bristol two weeks' notice when the project site will be ready for the utility relocation work to begin.

Village of Bristol Contact: Randall Kerkman, (262) 857-2368, bristoladmin@wi.rr.com.

12. Municipality Acceptance of Sanitary Sewer and Water Main Construction.

Both the department and Village of Bristol personnel will inspect construction of sanitary sewer and water main under this contract. However, construction staking, testing, and acceptance of the sanitary sewer and water main construction will be by the Village of Bristol.

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13. Erosion Control.

Add the following to standard spec 107.20:

Do not implement the contractor's Erosion Control Implementation Plan (ECIP) until the ECIP has been granted approval from the department. Provide the ECIP 14 days prior to the pre-construction conference. Provide 1 copy of the ECIP to the department and 1 copy of the ECIP to the WDNR Liaison:

Craig Webster
141 NW Barstow Street
Waukesha, WI 53188
(262) 574-2141
Craig.Webster@wi.gov

Do not implement the ECIP until department approval, and perform all work according to the approved ECIP.

Prepare and submit an ECIP for the project including borrow sites, material disposal sites, dust control, and each dewatering (mechanical pumping) operation according to Chapter TRANS 401, Wisconsin Administrative Code, and standard spec 107.20 requirements. The ECIP shall supplement information shown on the plans and not reproduce it. The ECIP shall identify how to implement the project's erosion control plan. Prepare the ECIP submittal according to WisDOT Construction & Materials Manual (CMM), Chapter 6-45, Erosion Control and provide information enumerated in department worksheet, WS1073. ECIP shall demonstrate timely and diligently staged operations, continuing all construction operations methodically from the initial removals and topsoil stripping operations through the subsequent grading, paving, and re-application of top soil to minimize the period of exposure to possible erosion.

Revise the ECIP as directed by the engineer to comply with the U.S. Army Corps of Engineers 404 permit.

Pursue operations in a timely and diligent manner, continuing all construction operations methodically from the initial topsoil stripping operation through the subsequent grading and re-topsoiling to minimize the period of exposure to possible erosion.

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

Do not place any fills in waterways or wetlands for work pads.

Re-topsoil graded areas, as designated by the engineer, immediately after grading is completed within those areas. Landscape all topsoiled areas as the plan shows or as directed by the engineer within five calendar days after placement of topsoil. If graded areas are left not completed and exposed for more than 14 days, seed those areas with temporary seed.

Erosion control BMP's shown on the plans are at suggested locations. The actual locations will be determined by the contractor's ECIP and by the engineer.

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

If dewatering is required, refer to the article Maintaining Temporary Drainage (Station), Item SPV.0105.01 through SPV.0105.04, and SPV.0105.18.

14. Coordination with Businesses and Residents.

The department will arrange and conduct a meeting between the contractor, the department, affected residents, local officials and business people to discuss the project schedule of operations including vehicular and pedestrian access during construction operations. Hold the first meeting at least one week prior to the start of work under this contract and hold one meeting per month thereafter. The department will arrange for a suitable location for the

meeting(s) that provides reasonable accommodation for public involvement. The department will prepare and coordinate publication of the meeting notices and mailings for the meeting(s). The contractor shall schedule the meeting(s) with at least 2 weeks' prior notice to the engineer to allow for these notifications.

15. Clearing and Grubbing.

The business owner in the northwest corner of CTH WG and USH 45, Dave Ceisel, has stated he would be interested in trees that are cleared from the project for firewood use.

Meet with the engineer and the following property owners after trees are marked for removal, but prior to any trees being felled. Contact property owners to notify them at least 48 hours prior to the removal. Owners would like to reclaim the wood when the trees are felled. If wood from these felled trees is not removed within 48 hours, remove the wood from the felled trees.

1. Dave Ceisel at 12712 Bristol Road
2. Wasyl Mirutenko at 9801 Bristol Road
3. Norman Anderson at 8444 Bristol Road
4. Steve Bohr at 8227 Bristol Road

16. Clearing and Grubbing, Emerald Ash Borer.

This applies to projects in the emerald ash borer (EAB) quarantined zones to include Fond du Lac, Kenosha, Milwaukee, Ozaukee, Racine, Sheboygan, Washington and Waukesha counties.

Supplement standard spec 201.3 with the following:

The emerald ash borer (EAB) has resulted in a quarantine of ash trees (*Fraxinus sp.*) by the Wisconsin Department of Agriculture, Trade, and Consumer Protection (DATCP) and the Wisconsin Department of Natural Resources (DNR).

Ash trees species attacked by emerald ash borer include the following:

- Green ash (*F. pennsylvanica*) is found throughout the state, but is most common in southern Wisconsin. It may form pure stands or grow in association with black ash, red maple, swamp white oak, and elm. It grows as an associate in upland hardwood stands, but is most common in and around stream banks, floodplains, and swamps.
- Black ash (*F. nigra*) is distributed over the entire state but is most frequently found in northern Wisconsin. It is most common in swamps, but is also found in other wet forest types.
- Blue ash (*F. quadrangulata*) is a threatened species that is currently found only at a few sites in Waukesha County. The species is at the edge of its range in Wisconsin, but is common in states farther south. The species is not of commercial importance. Blue ash twigs are 4-sided.

- White ash (*F. americana*) tends to occur primarily in upland forests, often with sugar maple (*Acer saccharum*).

The quarantine of ash trees includes all horticultural cultivars of the species listed above.

Note that blue ash twigs are 4-sided. All other Wisconsin ash trees have round stems. Also, Mountain ash (*Sorbus americana* and *S. decora*) is not a true ash and is not susceptible to EAB infestation.

The contractor shall be responsible for hiring a certified arborist to identify all ash trees that will be cleared and grubbed for the project. In addition, prior to scheduled clearing and grubbing activities, the arborist shall mark all ash trees with florescent lime flagging tied around the trunk perimeter.

Follow and obey the following Wisconsin Department of Agriculture, Trade, and Consumer Protection order:

ATCP 21.17 Emerald ash borer; import controls and quarantine.

Importing or Moving Regulated Items from Infested Areas; Prohibition. Except as provided in subparagraph (3), no person may do any of the following:

(a) Import a regulated item under sub. (2) into this state if that item originates from an emerald ash borer regulated area identified in 7CFR 301.53-3.

(b) Move any regulated item under sub. (2) out of an emerald ash borer regulated area that is identified in 7CFR 301.53-3 and located in this state.

Note: the United States Department of Agriculture-Animal and Plant Health Inspection Service (USDA-APHIS) periodically updates the list of regulated areas in 7CFR 301.53-3. subsection (1) applies to new regulated areas as those areas are identified in the CFR.

Regulated Items. The following are regulated items for purposes of subparagraph (1):

- The emerald ash borer, *Agrilus planipennis* Fairmaire in any living stage.
- Ash trees.
- Ash limbs, branches, and roots.
- Ash logs, slabs or untreated lumber with bark attached.
- Cut firewood of all non-coniferous species.
- Ash chips and ash bark fragments (both composted and uncomposted) larger than one inch in diameter.
- Any other item or substance that may be designated as a regulated item if a DATCP pest control official determines that it presents a risk of spreading emerald ash borer and notifies the person in possession of the item or substance that it is subject to the restrictions of the regulations.

Regulatory Considerations

The quarantine means that ash wood products may not be transported out of the quarantined area.

Clearing and grubbing includes all ash trees that are to be removed from within the project footprint. If ash trees are identified within clearing and grubbing limits of the project, the following measures are required for the disposal:

Chipped Ash Trees

May be left on site if used as landscape mulch within the project limits. If used as mulch on site, chips may not be applied at a depth greater than standard mulch applications as this will impede germination of seeded areas.

With the written permission of the engineer, chipped material may be buried on site within the airport property as directed by the engineer according to standard spec 201.3(14).

Maybe buried on adjacent properties to projects within the quarantined zone with prior approval of the engineer according to standard spec 201.3 (15).

May be trucked to a licensed landfill within the quarantined zone with the engineer's approval according to standard spec 201.3(15).

Burning chips is optional if in compliance with standard spec 201.3.

Chips must be disposed of immediately if not used for project mulching and may not be stockpiled and left on site for potential transport by others. Chips may be stockpiled temporarily if they will be used for project mulching and are not readily accessible to the public.

Chipper equipment must be cleaned following post-chipping activities to ensure no spread of wood chip debris into non-quarantined counties.

Ash logs, Branches, and Roots

May be buried without chipping within the existing right-of-way or on adjacent properties according to standard spec 201.3 (14)(15).

May be trucked to a licensed landfill within the quarantined zone with the engineer's approval according to standard spec 201.3 (15).

Burning is optional if in compliance with standard spec 201.3.

Ash logs, branches, and roots must be disposed of immediately and may not be stockpiled.

All additional costs will be incidental to clearing and grubbing items.

Do not bury or use mulch in an area that will be disturbed again during later phases of the project.

Anyone moving firewood or ash products from the state or these counties is subject to state and federal fines up to \$1,000.00. All fines are the responsibility of the contractor.

Obtain updated quarantine information at the DNR Firewood Information Line at (800) 303-WOOD.

Furnishing and Planting Plant Materials

Ash trees may be obtained from inside or outside the quarantine area and planted within the quarantined area. Ash trees from within the quarantine area may not be transported and planted into the non-quarantined area.

Updates for Compliance

Each year, as a service, the Wisconsin department of agriculture, trade and consumer protection distributes an updated federal CFR listing to nursery license holders and other affected persons in this state. More frequent updates, if any, are available on the Department of Agriculture, Trade, and Consumer Protection (DATCP) website at www.datcp.state.wi.us. subsection (1) applies to new regulated areas as those areas are identified in the CFR, regardless of whether affected persons receive update notices from the DATCP. Persons may request update notices by calling (608) 224-4573, by visiting the DATCP website, or by writing to the following address:

Wisconsin Department of Agriculture, Trade and Consumer Protection
Division of Agricultural Resource Management
P.O. Box 8911
Madison WI
53708-8911

Regulated Items

More frequent updates, if any, are available on the DATCP website at www.datcp.state.wi.us. subsection (1) applies to new regulated areas as those areas are identified in the CFR, regardless of whether affected persons receive update notices from DATCP. Persons may request update notices by calling (608) 224-4573, by visiting the DATCP website, or by writing to the above address.

17. Removing Partial Small Pipe Culverts, Item 204.9060.S.01.

A Description

This special provision describes Removing Partial Small Pipe Culverts according to the pertinent provisions of standard spec 204 and as hereinafter provided.

B (Vacant)

C (Vacant)

Remove the existing apron endwalls if any and up to four sections at one or both ends of the existing culvert pipe reinforced concrete or section of the existing culvert pipe reinforced concrete as shown in the plans or as directed by the engineer. If only a portion of a section

of the existing culvert pipe reinforced concrete shall be removed, then a smooth clean cut sawing perpendicular to the existing pipe is required. Avoid damaging or moving the existing culvert pipe to be remained. Repair any damages to the existing culvert pipe and reset the pipe to its true position prior to the installation of the proposed pipe extension and concrete collar.

D Measurement

The department will measure Removing Partial Small Pipe Culverts as each individual unit, acceptably completed. If a single individual existing pipe requires the removal at both ends, the department will measure Removing Partial Small Pipe Culverts as one per each pipe.

E Payment

Add the following to standard spec 204.5:

ITEM NUMBER	DESCRIPTION	UNIT
204.9060.S.01	Removing Partial Small Pipe Culverts	EACH

Payment is full compensation for furnishing all excavating, sawing, removing and disposing of the existing apron endwalls for culvert pipe, sections of the culvert pipe, or portion of a section of the existing culvert pipe; for repairing and setting the existing pipe to be remained in place in its true position. Culvert pipe concrete collar, culvert pipe reinforced concrete, and apron endwalls for culvert pipe reinforced concrete will be measured and paid for under the pertinent items provided in the contract.

204-025 (20150630)

18. Removing Partial Pipe Underdrain 12-Inch, Item 204.9090.S.02.

A Description

This special provision describes Removing Partial Pipe Underdrain 12-Inch according to the pertinent provisions of standard spec 204 and as hereinafter provided.

B (Vacant)

C Construction

Remove the existing PVC pipe or pipe underdrain 12-inch or a section of the existing PVC pipe or pipe underdrain as shown in the plans or as directed by the engineer. If only a portion of a section of the existing pipe shall be removed, then a smooth clean cut sawing perpendicular to the existing pipe is required. Avoid damaging or moving the existing pipe to be remained. Repair any damages to the existing PVC pipe or pipe underdrain and re-set the pipe to its true position prior to the installation of the proposed pipe extension and concrete collar.

D Measurement

The department will measure Removing Partial Pipe Underdrain 12-Inch by the linear foot, acceptably removed.

E Payment

Supplement standard spec 204.5 to include the following:

ITEM NUMBER	DESCRIPTION	UNIT
204.9090.S.02	Removing Partial Pipe Underdrain 12-Inch	LF

Payment is full compensation for furnishing all excavating, sawing, removing and disposing of the existing PVC pipe or pipe underdrain or portion of the existing pipe; for repairing and setting the existing pipe to be remained in place in its true position; and for furnishing all labor, tools, equipment, and incidentals necessary to complete the contract work. Culvert pipe concrete collar will be measured and paid for under the pertinent items provided in the contract.

204-025 (20150630)

19. Removing Old Structure STA 69+92, Item 203.0200.01; STA 135+35, Item 203.0200.02; STA 135+48, Item 203.0200.03; STA 146+31, Item 203.0200.04; STA 214+03, Item 203.0200.S.05.

Add the following to standard spec 203.3:

Remove 2, 3, or 4 sections from each end of the existing culvert pipe reinforced concrete 72-inch and existing culvert pipe reinforced concrete 60-inch as shown in the plans or as directed by the engineer. Avoid damaging or moving the existing pipe to be remained. Repair any damages to the culvert pipe reinforced concrete and re-set the pipe to its true position prior to the installation of the proposed pipe extension and concrete collars for pipe.

20. Excavation, Hauling, and Disposal of Petroleum Contaminated Soil, Item 205.0501.S.

A Description

A.1 General

This special provision describes excavating, loading, hauling, and disposing of petroleum contaminated soil at a DNR approved bioremediation facility. The closest DNR approved bioremediation facility are:

Waste Management's Pheasant Run Recycling and Disposal Facility (RDF)
19414 60th Street
Bristol, Wisconsin
(262) 857-7956

Republic Services, Inc. Kestrel Hawk Landfill
1989 Oakes Road
Racine, WI 53406
(262) 215-1774

Perform this work according to standard spec 205 and with pertinent parts of Chapters NR 700-754 of the Wisconsin Administrative Code, as supplemented herein. Per NR 718.07, a solid waste collection and transportation service-operating license is required under NR 502.06 for each vehicle used to transport contaminated soil.

A.2 Notice to the Contractor – Contaminated Soil Location(s)

The department completed testing for soil and groundwater contamination for locations within this project where excavation is required. Testing indicated that petroleum-contaminated soil is present at the following location(s) as shown on the plans:

- § Station 263+10 to 264+80 from 20 feet left of reference line to 65 feet right of reference line, from approximately 0 to 10 feet below grade. Soil excavated from this area will require off-site bioremediation. The estimated volume of contaminated soil to be excavated at this location is 872 cubic yards (approximately 1,485 tons using a conversion factor of 1.7 tons per cubic yard). Ground water is not expected to be encountered at this location.
- § Station 263+10 to 264+45 from 20 feet left of reference line to project limits left, from approximately 0 to 5 feet below grade. Soil excavated from this area will require off-site bioremediation. The estimated volume of contaminated soil to be excavated at this location is 8 cubic yards (approximately 15 tons using a conversion factor of 1.7 tons per cubic yard). Ground water is not expected to be encountered at this location.
- § Station 47+85 to 48+25 from the CTH C reference line to project limits right, from approximately 1 to 6 feet below grade. Soil excavated from this area will require off-site bioremediation. The estimated volume of contaminated soil to be excavated at this location is 25 cubic yards (approximately 45 tons using a conversion factor of 1.7 tons per cubic yard). Ground water is not expected to be encountered at this location.
- § Station 199+40 to 200+50 from project limits left to reference line, from approximately 5 to 10 feet below grade. Soil excavated from this area will require off-site bioremediation. The estimated volume of contaminated soil to be excavated at this location is 7 cubic yards (approximately 12 tons using a conversion factor of 1.7 tons per cubic yard).

If contaminated soils are encountered elsewhere on the project, terminate excavation activities in the area and notify the engineer. If dewatering is required at the above locations, conduct the dewatering according to Section C below.

For further information regarding previous investigation and remediation activities at these sites contact:

Name:	Andrew Malsom
Address:	141 NW Barstow Street, PO Box 798, Waukesha, WI 53187-0798
Phone:	(262) 548-6705
Fax:	(262) 548-6891
E-mail:	andrew.malsom@dot.wi.gov

A.3 Coordination

Coordinate work under this contract with the environment consultant:

Consultant: TRC Environmental Corporation
Address: 150 N. Patrick Blvd. Ste. 180, Brookfield, WI 53045
Contact: Tyler Stapel, P.E.
Phone: (262) 901-2142 office, (262) 825-2045 cell
Fax: (262) 879-1220
E-mail: wstapel@trcsolutions.com

The role of the environmental consultant will be limited to:

1. Determining the location and limits of contaminated soil to be excavated based on soil analytical results from previous investigations, visual observations, and field screening of soil that is excavated;
2. Identifying contaminated soils to be hauled to the bioremediation facility;
3. Documenting that activities associated with management of contaminated soil are in conformance with the contaminated soil management methods for this project as specified herein; and
4. Obtaining the necessary approvals for disposal of contaminated soil from the bioremediation facility.

Provide at least a 14-calendar day notice of the preconstruction conference date to the environmental consultant. At the preconstruction conference, provide a schedule for all excavation activities in the areas of contamination to the environmental consultant. Also notify the environmental consultant at least three calendar days prior to commencement of excavation activities in each of the contaminated areas.

Coordinate with the environmental consultant to ensure that the environmental consultant is present during excavation activities in the contaminated areas. Perform excavation work in each of the contaminated areas on a continuous basis until excavation work is completed.

Identify the DNR approved bioremediation facility that will be used for disposal of contaminated soils, and provide this information to the environmental consultant no later than 30 calendar days prior to commencement of excavation activities in the contaminated areas or at the preconstruction conference, whichever comes first. The environmental consultant will be responsible for obtaining the necessary approvals for disposal of contaminated soils from the bioremediation facility. Do not transport contaminated soil offsite without prior approval from the environmental consultant.

A.4 Health and Safety Requirements

Add the following to standard spec 107.1:

During excavation activities, expect to encounter soil contaminated with gasoline, diesel fuel, fuel oil, or other petroleum related products. Site workers taking part in activities that will result in the reasonable probability of exposure to safety and health hazards associated with hazardous materials shall have completed health and safety training that meets the Occupational Safety and Health Administration (OSHA) requirements for

Hazardous Waste Operations and Emergency Response (HAZWOPER), as provided in 29 CFR 1910.120.

Prepare a site-specific Health and Safety Plan, and develop, delineate and enforce the health and safety exclusion zones for each contaminated site location as required by 29 CFR 1910.120. Submit the site-specific health and safety plan and written documentation of up-to-date OSHA training to the engineer prior to the start of work.

B (Vacant)

C Construction

Add the following to standard spec 205.3:

Control operations in the contaminated areas to minimize the quantity of contaminated soil excavated.

The environmental consultant will periodically evaluate soil excavated from the contaminated areas to determine if the soil will require offsite bioremediation. The environmental consultant will evaluate excavated soil based on field screening results, visual observations, and soil analytical results from previous environmental investigations. Assist the environmental consultant in collecting soil samples for evaluation using excavation equipment. The sampling frequency shall be a maximum of one sample for every 20 cubic yards excavated.

Directly load and haul soils designated by the environmental consultant for offsite bioremediation to the DNR approved bioremediation facility. Use loading and hauling practices that are appropriate to prevent any spills or releases of petroleum-contaminated soils or residues. Prior to transport, sufficiently dewater soils designated for off-site bioremediation so as not to contain free liquids.

If dewatering is required in areas of known contamination, water generated from dewatering activities will likely contain petroleum and metals. Such water may, with approval of a local sewerage district, be discharged to the sanitary sewer or publicly owned treatment works (POTW) as follows:

1. Meet all applicable requirements of the POTW including the control of suspended solids. Perform all necessary monitoring to document compliance with POTW's requirements. Furnish, install, operate, maintain, disassemble, and remove treatment equipment necessary to comply with the POTW's requirements.
2. Ensure continuous dewatering and excavation safety at all times. Provide, operate, and maintain adequate pumping equipment and drainage and disposal facilities.

Notify the engineer of any dewatering activities, and obtain any permits necessary to discharge water. Provide copies of such permits to the engineer. Meet any requirements and pay any costs for obtaining and complying with such permit use. Follow all applicable legislative statutes, judiciary decisions, and regulations of the State of Wisconsin.

Costs associated with excavation dewatering in the contaminated area are considered incidental to this pay item. The Wisconsin Department of Transportation will be the generator of regulated solid waste from this construction project.

D Measurement

The department will measure Excavation, Hauling, and Disposal of Petroleum Contaminated Soil in tons of contaminated soil, accepted by the bioremediation facility as documented by weight tickets generated by the bioremediation facility.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
205.0501.S	Excavation, Hauling, and Disposal of Petroleum Contaminated Soil	Ton

Payment is full compensation for excavating, segregating, loading, hauling, and treatment via bioremediation of contaminated soil; obtaining solid waste collection and transportation service operating licenses; assisting in the collection soil samples for field evaluation; and dewatering of soils prior to transport, if necessary.

21. Dense Graded Base.

Add the following to standard spec 305.2.1:

- (2) Where the contract specifies or allows 1 1/4-inch base, do not place crushed concrete, reclaimed asphalt, reprocessed material or blended materials below virgin aggregate materials unless the contract specifies or the engineer allows in writing.

22. QMP Base Aggregate.

A Description

A.1 General

- (1) This special provision describes contractor quality control (QC) sampling and testing for base aggregates, documenting those test results, and documenting related production and placement process changes. This special provision also describes department quality verification (QV), independent assurance (IA), and dispute resolution.
- (2) Conform to standard spec 301, standard spec 305, and standard spec 310 as modified here in this special provision. Apply this special provision to material placed under all of the Base Aggregate Dense and Base Aggregate Open Graded bid items, except do not apply this special provision to material classified as reclaimed asphaltic pavement placed under the Base Aggregate Dense bid items.
- (3) Do not apply this special provision to material placed under the Aggregate Detours, Salvaged Asphaltic Pavement Base, Breaker Run, Select Crushed, Pit Run, Subbase, or Riprap bid items.

- (4) Provide and maintain a quality control program, defined as all activities related to and documentation of the following:
 1. Production and placement control and inspection.
 2. Material sampling and testing.
- (5) Chapter 8 of the department's construction and materials manual (CMM) provides additional detailed guidance for QMP work and describes required sampling and testing procedures. The contractor may obtain the CMM from the department's web site at: <http://wisconsindot.gov/Pages/doing-bus/eng-consultants/cnslt-rsrcs/rdwy/default.aspx>

A.2 Contractor Testing for Small Quantities

- (1) The department defines a small quantity, for each individual Base Aggregate bid item, as a plan quantity of 9000 tons or less of material as shown in the schedule of items under that bid item.
- (2) The requirements under this special provision apply equally to a small quantity for an individual bid item except as follows:
 1. The contractor need not submit a full quality control plan but shall provide an organizational chart to the engineer including names, telephone numbers, and current certifications of all persons involved in the quality control program for material under affected bid items.
 2. Divide the aggregate into uniformly sized sublots for testing as follows:

Plan Quantity	Minimum Required Testing
≤ 1500 tons	One test from production, load-out, or placement at the contractor's option ^[1]
> 1500 tons and ≤ 6000 tons	Two tests of the same type, either from production, load-out, or placement at the contractor's option ^[1]
> 6000 tons and ≤ 9000 tons	Three placement tests ^{[2] [3]}

- ^[1] If using production tests for acceptance, submit test results to the engineer for review prior to incorporating the material into the work. Production test results are valid for a period of 3 years.
- ^[2] For 3-inch material, obtain samples at load-out.
- ^[3] If the actual quantity overruns 9000 tons, create overrun sublots to test at a rate of one additional placement test for each 3000 tons, or fraction of 3000 tons, of overrun.
3. No control charts are required. Submit aggregate load-out and placement test results to the engineer within one business day of obtaining the sample. Assure that all properties are within the limits specified for each test.
4. Department verification testing is optional for quantities of 6000 tons or less.
- (3) Material represented by a subplot with any property outside the specification limits is nonconforming. The department may reject material or otherwise determine the final disposition of nonconforming material as specified in standard spec 106.5.

B Materials

B.1 Quality Control Plan

- (1) Submit a comprehensive written quality control plan to the engineer at or before the pre-construction meeting. Do not place base before the engineer reviews and comments on the plan. Construct the project as that plan provides.
- (2) Do not change the quality control plan without the engineer's review. Update the plan with changes as they become effective. Provide a current copy of the plan to the engineer and post in each of the contractor's laboratories as changes are adopted. Ensure that the plan provides the following elements:
 1. An organizational chart with names, telephone numbers, current certifications and/or titles, and roles and responsibilities of QC personnel.
 2. The process used to disseminate QC information and corrective action efforts to the appropriate persons. Include a list of recipients, the communication means that will be used, and action time frames.
 3. A list of source and processing locations, section and quarter descriptions, for all aggregate materials requiring QC testing.
 4. Test results for wear, sodium sulfate soundness, freeze/thaw soundness, and plasticity index of all aggregates requiring QC testing. Obtain this information from the region materials unit or from the engineer.
 5. Descriptions of stockpiling and hauling methods.
 6. Locations of the QC laboratory, retained sample storage, and where control charts and other documentation is posted.
 7. An outline for resolving a process control problem. Include responsible personnel, required documentation, and appropriate communication steps.

B.2 Personnel

- (1) Have personnel certified under the department's highway technician certification program (HTCP) perform sampling, testing, and documentation as follows:

Required Certification Level:	Sampling or Testing Roles:
Aggregate Technician IPP Aggregate Sampling Technician Aggregate Assistant Certified Technician (ACT-AGG)	Aggregate Sampling ^[1]
Aggregate Technician IPP Aggregate Assistant Certified Technician (ACT-AGG)	Aggregate Gradation Testing, Aggregate Fractured Particle Testing, Aggregate Liquid Limit and Plasticity Index Testing

^[1] Plant personnel under the direct observation of an aggregate technician certified at level one or higher may operate equipment to obtain samples.

- (2) A certified technician must coordinate and take responsibility for the work an ACT performs. Have a certified technician ensure that all sampling and testing is performed correctly, analyze test results, and post resulting data. No more than one ACT can work under a single certified technician.

B.3 Laboratory

- (1) Perform QC testing at a department-qualified laboratory. Obtain information on the Wisconsin laboratory qualification program from:

Materials Management Section

3502 Kinsman Blvd.

Madison, WI 53704

Telephone: (608) 246-5388

<http://wisconsin.dot.gov/Pages/doing-business/eng-consultants/cnslt-rsrcs/tools/appr-prod/qual-labs.aspx>

B.4 Quality Control Documentation

B.4.1 General

- (1) Submit base aggregate placement documentation to the engineer within 10 business days after completing base placement. Ensure that the submittal is complete, neatly organized, and includes applicable project records and control charts.

B.4.2 Records

- (1) Document all placement observations, inspection records, and control adjustments daily in a permanent field record. Also include all test results in the project records. Provide test results to the engineer within 6 hours after obtaining a sample. For 3-inch base, extend this 6-hour limit to 24 hours. Post or distribute tabulated results using a method mutually agreeable to the engineer and contractor.

B.4.3 Control Charts

- (1) Plot gradation and fracture on the appropriate control chart as soon as test results are available. Format control charts according to CMM 8.30. Include the project number on base placement control charts. Maintain separate control charts for each base aggregate size, source or classification, and type.
- (2) Provide control charts to the engineer within 6 hours after obtaining a sample. For 3-inch base, extend this 6-hour limit to 24 hours. Post or distribute charts using a method mutually agreeable to the engineer and contractor. Update control charts daily to include the following:
 1. Contractor individual QC tests.
 2. Department QV tests.
 3. Department IA tests.
 4. Four-point running average of the QC tests.
- (3) Except as specified under B.8.2.1 for nonconforming QV tests, include only QC tests in the running average. The contractor may plot process control or informational tests on control charts, but do not include these tests, conforming QV tests, or IA tests in the running average.

B.5 Contractor Testing

- (1) Test gradation, fracture, liquid limit and plasticity index during placement for each base aggregate size, source or classification, and type.
- (2) Test gradation once per 3000 tons of material placed. Determine random sample locations and provide those sample locations to the engineer. Obtain samples after the material has been bladed, mixed, and shaped but before compacting; except collect 3-inch samples from the stockpile at load-out. Do not sample from material used to maintain local traffic or from areas of temporary base that will not have an overlying pavement. On days when placing only material used to maintain local traffic or only temporary base that will not have an overlying pavement, no placement testing is required.
- (3) Split each contractor QC sample and identify it according to CMM 8.30. Retain the split for 7 calendar days in a dry, protected location. If requested for department comparison testing, deliver the split to the engineer within one business day.
- (4) The engineer may require additional sampling and testing to evaluate suspect material or the technician's sampling and testing procedures.
- (5) Test fracture for each gradation test until the fracture running average is above the lower warning limit. Subsequently, the contractor may reduce the frequency to one test per 10 gradation tests if the fracture running average remains above the warning limit.
- (6) Test the liquid limit and plasticity index for the first gradation test. Subsequently, test the liquid limit and plasticity index a minimum of once per 10 gradation tests.

B.6 Test Methods

B.6.1 Gradation

- (1) Test gradation using a washed analysis conforming to the following as modified in CMM 8.60:
Gradation..... AASHTO T 27
Material finer than the No. 200 sieve..... AASHTO T 11
- (2) For 3-inch base, if 3 consecutive running average points for the percent passing the No. 200 sieve are 8.5 percent or less, the contractor may use an unwashed analysis. Wash at least one sample out of 10. If a single running average for the percent passing the No. 200 sieve exceeds 8.5 percent, resume washed analyses until 3 consecutive running average points are again 8.5 percent passing or less.
- (3) Maintain a separate control chart for each sieve size specified in standard spec 305 or standard spec 310 for each base aggregate size, source or classification, and type. Set control and warning limits based on the standard specification gradation limits as follows:

1. Control limits are at the upper and lower specification limits.
2. There are no upper warning limits for sieves allowing 100 percent passing and no lower control limits for sieves allowing 0 percent passing.
3. Dense graded warning limits, except for the No. 200 sieve, are 2 percent within the upper and lower control limits. Warning limits for the No. 200 sieve are set 0.5 percent within the upper and lower control limits.
4. Open graded warning limits for the 1-inch, 3/8-inch, and No. 4 sieves are 2 percent within the upper and lower control limits. Upper warning limits for the No. 10, No. 40, and No. 200 sieves are 1 percent inside the upper control limit.

B.6.2 Fracture

- (1) Test fracture conforming to CMM 8.60. The engineer will waive fractured particle testing on quarried stone.
- (2) Maintain a separate fracture control chart for each base aggregate size, source or classification, and type. Set the lower control limit at the contract specification limit, either specified in another special provision or in table 301-2 of standard spec 301.2.4.5. Set the lower warning limit 2 percent above the lower control limit. There are no upper limits.

B.6.3 Liquid Limit and Plasticity

- (1) Test the liquid limit and plasticity according to AASHTO T 89 and T 90.
- (2) Ensure the material conforms to the limits specified in standard spec table 301-2.

B.7 Corrective Action

B.7.1 General

- (1) Consider corrective action when the running average trends toward a warning limit. Take corrective action if an individual test exceeds the contract specification limit. Document all corrective actions both in the project records and on the appropriate control chart.

B.7.2 Placement Corrective Action

- (1) Do not blend additional material on the roadbed to correct gradation problems.
- (2) Notify the engineer whenever the running average exceeds a warning limit. When two consecutive running averages exceed a warning limit, the engineer and contractor will discuss appropriate corrective action. Perform the engineer's recommended corrective action and increase the testing frequency as follows:
 1. For gradation, increase the QC testing frequency to at least one randomly sampled test per 1000 tons placed.
 2. For fracture, increase the QC testing frequency to at least one test per gradation test.
- (3) If corrective action improves the property in question such that the running average after 4 additional tests is within the warning limits, the contractor may return to the testing frequency specified in B.5.3. If corrective action does not improve the property in

question such that the running average after 4 additional individual tests is still in the warning band, repeat the steps outlined above starting with engineer notification.

- (4) If the running average exceeds a control limit, material starting from the first running average exceeding the control limit and ending at the first subsequent running average inside the control limit is nonconforming and subject to pay reduction.
- (5) For individual test results significantly outside the control limits, notify the engineer, stop placing base, and suspend other activities that may affect the area in question. The engineer and contractor will jointly review data, data reduction, and data analysis; evaluate sampling and testing procedures; and perform additional testing as required to determine the extent of potentially unacceptable material. The engineer may direct the contractor to remove and replace that material. Individual test results are significantly outside the control limits if meeting one or more of the following criteria:
 1. A gradation control limit for the No. 200 sieve is exceeded by more than 3.0 percent.
 2. A gradation control limit for any sieve, except the No. 200, is exceeded by more than 5.0 percent.
 3. The fracture control limit is exceeded by more than 10.0 percent.

B.8 Department Testing

B.8.1 General

- (1) The department will conduct verification testing to validate the quality of the product and independent assurance testing to evaluate the sampling and testing. The department will provide the contractor with a listing of names and telephone numbers of all QV and IA personnel for the project, and provide test results to the contractor within two business days after the department obtains the sample.

B.8.2 Verification Testing

B.8.2.1 General

- (1) The department will have an HTCP technician, or ACT working under a certified technician, perform QV sampling and testing. Department verification testing personnel must meet the same certification level requirements specified in B.2 for contractor testing personnel for each test result being verified. The department will notify the contractor before sampling so the contractor can observe QV sampling.
- (2) The department will conduct QV tests of each base aggregate size, source or classification, and type during placement conforming to the following:
 1. One non-random test on the first day of placement.
 2. At least one random test per 30,000 tons, or fraction of 30,000 tons, placed.
- (3) The department will sample randomly, at locations independent of the contractor's QC work, collecting one sample at each QV location. The department will collect QV samples after the material has been bladed, mixed, and shaped but before compacting; except, for 3-inch aggregates, the department will collect samples from the stockpile at load-out. The department will split each sample, test half for QV, and retain half.

- (4) The department will conduct QV tests in a separate laboratory and with separate equipment from the contractor's QC tests. The department will use the same methods specified for QC testing.
- (5) The department will assess QV results by comparing to the appropriate specification limits. If QV test results conform to the specification, the department will take no further action. If QV test results are nonconforming, add the QV to the QC test results as if it were an additional QC test.

B.8.3 Independent Assurance

- (1) Independence assurance is unbiased testing the department performs to evaluate the department's QV and the contractor's QC sampling and testing including personnel qualifications, procedures, and equipment. The department will perform an IA review according to the department's independent assurance program. That review may include one or more of the following:
 1. Split sample testing.
 2. Proficiency sample testing.
 3. Witnessing sampling and testing.
 4. Test equipment calibration checks.
 5. Reviewing required worksheets and control charts.
 6. Requesting that testing personnel perform additional sampling and testing.
- (2) If the department identifies a deficiency, and after further investigation confirms it, correct that deficiency. If the contractor does not correct or fails to cooperate in resolving identified deficiencies, the engineer may suspend placement until action is taken. Resolve disputes as specified in B.9.

B.9 Dispute Resolution

- (1) The engineer and contractor should make every effort to avoid conflict. If a dispute between some aspect of the contractor's and the engineer's testing program does occur, seek a solution mutually agreeable to the project personnel. The department and contractor may review the data, examine data reduction and analysis methods, evaluate sampling and testing procedures, and perform additional testing. Use ASTM E 178 to evaluate potential statistically outlying data.
- (2) Production test results, and results from other process control testing, may be considered when resolving a dispute.
- (3) If the project personnel cannot resolve a dispute, and the dispute affects payment or could result in incorporating non-conforming product, the department will use third party testing to resolve the dispute. The department's central office laboratory, or a mutually agreed on independent testing laboratory, will provide this testing. The engineer and contractor will abide by the results of the third party tests. The party in error will pay service charges incurred for testing by an independent laboratory. The department may use third party test results to evaluate the quality of questionable materials and determine the appropriate payment. The department may reject material

or otherwise determine the final disposition of nonconforming material as specified in standard spec 106.5.

C (Vacant)

D (Vacant)

E Payment

- (1) Costs for all sampling, testing, and documentation required under this special provision are incidental to this work. If the contractor fails to perform the work required under this special provision, the department may reduce the contractor's pay. The department will administer pay reduction under the non-performance of QMP administrative item.
- (2) For material represented by a running average exceeding a control limit, the department will reduce pay by 10 percent of the contract price for the affected Base Aggregate bid items listed in subsection A. The department will administer pay reduction under the Nonconforming QMP Base Aggregate Gradation or Nonconforming QMP Base Aggregate Fracture Administrative items. The department will determine the quantity of nonconforming material as specified in B.7.2.

301-010 (20151210)

23. QMP HMA Pavement Nuclear Density.

A Description

Replace standard spec 460.3.3.2 (1) and standard spec 460.3.3.2 (4) with the following:

- (1) This special provision describes density testing of in-place HMA pavement with the use of nuclear density gauges. Conform to standard spec 460 as modified in this special provision.
- (2) Provide and maintain a quality control program defined as all activities and documentation of the following:
 1. Selection of test sites.
 2. Testing.
 3. Necessary adjustments in the process.
 4. Process control inspection.
- (3) Chapter 8 of the department's construction and materials manual (CMM) provides additional detailed guidance for QMP work and describes required procedures. Obtain the CMM from the department's web site at:
<http://roadwaystandards.dot.wi.gov/standards/cmm/index.htm>
- (4) The department's Materials Reporting System (MRS) software allows contractors to submit data to the department electronically, estimate pay adjustments, and print selected reports. Qualified personnel may obtain MRS software from the department's web site at:

<http://www.atwoodsystems.com/mrs>

B Materials

B.1 Personnel

- (1) Perform HMA pavement density (QC, QV) testing using a HTCP certified nuclear technician I, or a nuclear assistant certified technician (ACT-NUC) working under a certified technician.
- (2) If an ACT is performing sampling or testing, a certified technician must coordinate and take responsibility for the work an ACT performs. Have a certified technician ensure that all sampling and testing is performed correctly, analyze test results, and post resulting data. No more than one ACT can work under a single certified technician.

B.2 Testing

- (1) Conform to ASTM D2950 and CMM 8.15 for density testing and gauge monitoring methods. Perform nuclear gauge measurements using gamma radiation in the backscatter position. Perform each test for 4 minutes of nuclear gauge count time.

B.3 Equipment

B.3.1 General

- (1) Furnish nuclear gauges from the department's approved product list at <http://www.dot.wisconsin.gov/business/engrserv/approvedprod.htm>.
- (2) Have the gauge calibrated by the manufacturer or an approved calibration service within 12 months of its use on the project. Retain a copy of the manufacturer's calibration certificate with the gauge.
- (3) Prior to each construction season, and following any calibration of the gauge, the contractor must perform calibration verification for each gauge using the reference blocks located in the department's central office materials laboratory. To obtain information or schedule a time to perform calibration verification, contact the department's Radiation Safety Officer at:
Materials Management Section
3502 Kinsman Blvd.
Madison, Wisconsin 53704
Telephone: (608) 243-5998

B.3.2 Correlation of Nuclear Gauges

B.3.2.1 Correlation of QC and QV Nuclear Gauges

- (1) Select a representative section of the compacted pavement prior to or on the first day of paving for the correlation process. The section does not have to be the same mix design.
- (2) Correlate the 2 or more gauges used for density measurement (QC, QV). The QC and QV gauge operators will perform the correlation on 5 test sites jointly located. Record each density measurement of each test site for the QC, QV and back up gauges.

- (3) Calculate the average of the difference in density of the 5 test sites between the QC and QV gauges. Locate an additional 5 test sites if the average difference exceeds 1.0 lb/ft³. Measure and record the density on the 5 additional test sites for each gauge.
- (4) Calculate the average of the difference in density of the 10 test sites between the QC and QV gauges. Replace one or both gauges if the average difference of the 10 tests exceeds 1.0 lb/ft³ and repeat correlation process from B.3.2.1 (2).
- (5) Furnish one of the QC gauges passing the allowable correlation tolerances to perform density testing on the project.

B.3.2.2 Correlation Monitoring

- (1) After performing the gauge correlation specified in B.3.2.1, establish a project reference site approved by the department. Clearly mark a flat surface of concrete or asphalt or other material that will not be disturbed during the duration of the project. Perform correlation monitoring of the QC, QV, and all back-up gauges at the project reference site.
- (2) Conduct an initial 10 density tests with each gauge on the project reference site and calculate the average value for each gauge to establish the gauge's reference value. Use the gauge's reference value as a control to monitor the calibration of the gauge for the duration of the project.
- (3) Check each gauge on the project reference site a minimum of one test per day if paving on the project. Calculate the difference between the gauge's daily test result and its reference value. Investigate if a daily test result is not within 1.5 lb/ft³ of its reference value. Conduct 5 additional tests at the reference site once the cause of deviation is corrected. Calculate and record the average of the 5 additional tests. Remove the gauge from the project if the 5-test average is not within 1.5 lb/ft³ of its reference value established in B.3.2.2(2).
- (4) Maintain the reference site test data for each gauge at an agreed location.

B.4 Quality Control Testing and Documentation

B.4.1 Lot and Sublot Requirements

B.4.1.1 Mainline Traffic Lanes, Shoulders, and Appurtenances

- (1) A lot consists of the tonnage placed each day for each layer and target density specified in standard spec 460.3.3.1. A lot may include partial sublots.
- (2) Divide the roadway into sublots. A sublot is 1500 lane feet for each layer and target density.
- (3) A sublot may include HMA placed on more than one day of paving. Test sublots at the pre-determined random locations regardless of when the HMA is placed. No additional testing is required for partial sublots at the beginning or end of a day's paving.

- (4) If a resulting partial quantity at the end of the project is less than 750 lane feet, include that partial quantity with the last full subplot of the lane. If a resulting partial quantity at the end of the project is 750 lane feet or more, create a separate subplot for that partial quantity.
- (5) Randomly select test locations for each subplot as specified in CMM 8.15 prior to paving and provide a copy to the engineer. Locate and mark QC density test sites when performing the tests. Perform density tests prior to opening the roadway to traffic.
- (6) Use Table 1 to determine the number of tests required at each station, depending on the width of the lane being tested. When more than one test is required at a station, offset the tests 10 feet longitudinally from one another to form a diagonal testing row across the lane.

Lane Width	No. of Tests	Transverse Location
5 ft or less	1	Random
Greater than 5 ft to 9 ft	2	Random within 2 equal widths
Greater than 9 ft	3	Random within 3 equal widths

Table 1

B.4.1.2 Side Roads, Crossovers, Turn Lanes, Ramps, and Roundabouts

- (1) A lot represents a combination of the total daily tonnage for each layer and target density.
- (2) Each side road, crossover, turn lane, ramp, and roundabout must contain at least one subplot for each layer.
- (3) If a side road, crossover, turn lane, or ramp is 1500 feet or longer, determine sublots and random test locations as specified in B.4.1.1.
- (4) If a side road, crossover, turn lane, or ramp is less than 1500 feet long, determine sublots using a maximum of 750 tons per subplot and perform the number of random tests as specified in Table 2.

Side Roads, Turn Lanes, Crossovers, Ramps, Roundabouts: Sublot/Layer tonnage	Minimum Number of Tests Required
25 to 100 tons	1
101 to 250 tons	3
251 to 500 tons	5
501 to 750 tons	7

Table 2

B.4.2 Pavement Density Determination

B.4.2.1 Mainline Traffic Lanes and Appurtenances

- (1) Calculate the average subplot densities using the individual test results in each subplot.
- (2) If all subplot averages are no more than one percent below the target density, calculate the daily lot density by averaging the results of each random QC test taken on that day's material.

- (3) If any subplot average is more than one percent below the target density, do not include the individual test results from that subplot when computing the lot average density and remove that subplot's tonnage from the daily quantity for incentive. The tonnage from any such subplot is subject to disincentive pay according to standard spec 460.5.2.2.

B.4.2.2 Mainline Shoulders

B.4.2.2.1 Width Greater Than 5 Feet

- (1) Determine the pavement density as specified in B.4.2.1.

B.4.2.2.2 Width of 5 Feet or Less

- (1) If all subplot test results are no more than 3.0 percent below the minimum target density, calculate the daily lot density by averaging all individual test results for the day.
- (2) If a subplot test result is more than 3.0 percent below the target density, the engineer may require the unacceptable material to be removed and replaced with acceptable material or allow the nonconforming material to remain in place with a 50 percent pay reduction. Determine the limits of the unacceptable material according to B.4.3.

B.4.2.3 Side Roads, Crossovers, Turn Lanes, Ramps, and Roundabouts

- (1) Determine the pavement density as specified in B.4.2.1.

B.4.2.4 Documentation

- (1) Document QC density test data as specified in CMM 8.15. Provide the engineer with the data for each lot within 24 hours of completing the QC testing for the lot.

B.4.3 Corrective Action

- (1) Notify the engineer immediately when an individual test is more than 3.0 percent below the specified minimum in standard spec 460.3.3.1. Investigate and determine the cause of the unacceptable test result.
- (2) The engineer may require unacceptable material specified in B.4.3(1) to be removed and replaced with acceptable material or allow the nonconforming material to remain in place with a 50 percent pay reduction. Determine limits of the unacceptable area by measuring density of the layer at 50-foot increments both ahead and behind the point of unacceptable density and at the same offset as the original test site. Continue testing at 50-foot increments until a point of acceptable density is found as specified in standard spec 460.5.2.2(1). Removal and replacement of material may be required if extended testing is in a previously accepted subplot. Testing in a previously accepted subplot will not be used to recalculate a new lot density.
- (3) Compute unacceptable pavement area using the product of the longitudinal limits of the unacceptable density and the full subplot width within the traffic lanes or shoulders.
- (4) Retesting and acceptance of replaced pavement will be according to standard spec 105.3.

- (5) Tests indicating density more than 3.0 percent below the specified minimum, and further tests taken to determine the limits of unacceptable area, are excluded from the computations of the subplot and lot densities.
- (6) If 2 consecutive subplot averages within the same paving pass and same target density are more than one percent below the specified target density, notify the engineer and take necessary corrective action. Document the locations of such sublots and the corrective action that was taken.

B.5 Department Testing

B.5.1 Verification Testing

- (1) The department will have a HTCP certified technician, or ACT working under a certified technician, perform verification testing. The department will test randomly at locations independent of the contractor's QC work. The department will perform verification testing at a minimum frequency of 10 percent of the sublots and a minimum of one subplot per mix design. The sublots selected will be within the active work zone. The contractor will supply the necessary traffic control for the department's testing activities.
- (2) The QV tester will test each selected subplot using the same testing requirements and frequencies as the QC tester.
- (3) If the verification subplot average is not more than one percent below the specified minimum target density, use the QC tests for acceptance.
- (4) If the verification subplot average is more than one percent below the specified target density, compare the QC and QV subplot averages. If the QV subplot average is within 1.0 lb/ft³ of the QC subplot average, use the QC tests for acceptance.
- (5) If the first QV/QC subplot average comparison shows a difference of more than 1.0 lb/ft³ each tester will perform an additional set of tests within that subplot. Combine the additional tests with the original set of tests to compute a new subplot average for each tester. If the new QV and QC subplot averages compare to within 1.0 lb/ft³, use the original QC tests for acceptance.
- (6) If the QV and QC subplot averages differ by more than 1.0 lb/ft³ after a second set of tests, resolve the difference with dispute resolution specified in B.6. The engineer will notify the contractor immediately when density deficiencies or testing precision exceeding the allowable differences are observed.

B.5.2 Independent Assurance Testing

- (1) Independent assurance is unbiased testing the department performs to evaluate the department's verification and the contractor's QC sampling and testing including personnel qualifications, procedures, and equipment. The department will perform the independent assurance review according to the department's independent assurance program.

B.6 Dispute Resolution

- (1) The testers may perform investigation in the work zone by analyzing the testing, calculation, and documentation procedures. The testers may perform gauge correlation according to B.3.2.1.
- (2) The testers may use correlation monitoring according to B.3.2.2 to determine if one of the gauges is out of tolerance. If a gauge is found to be out of tolerance with its reference value, remove the gauge from the project and use the other gauge's test results for acceptance.
- (3) If the testing discrepancy cannot be identified, the contractor may elect to accept the QV subplot density test results or retesting of the subplot in dispute within 48 hours of paving. Traffic control costs will be split between the department and the contractor.
- (4) If investigation finds that both gauges are in error, the contractor and engineer will reach a decision on resolution through mutual agreement.

B.7 Acceptance

- (1) The department will not accept QMP HMA Pavement Nuclear Density if a non-correlated gauge is used for contractor QC tests.

C (Vacant)

D (Vacant)

E Payment

E.1 QMP Testing

- (1) Costs for all sampling, testing, and documentation required under this special provision are incidental to the work. If the contractor fails to perform the work required under this special provision, the department may reduce the contractor's pay. The department will administer pay reduction under the Non-performance of QMP administrative item.

E.2 Disincentive for HMA Pavement Density

- (1) The department will administer density disincentives according to standard spec 460.5.2.2.

E.3 Incentive for HMA Pavement Density

- (1) Delete standard spec 460.5.2.3.
- (2) If the lot density is greater than the minimum specified in standard spec table 460-3 and all individual air voids test results for that mixture are within +1.0 percent or -0.5 percent of the design target in standard spec table 460-2, the department will adjust pay for that lot as follows:

Percent Lot Density Above Minimum	Pay Adjustment Per Ton
From -0.4 to 1.0 inclusive	\$0
From 1.1 to 1.8 inclusive	\$0.40
More than 1.8	\$0.80

- (3) The department will adjust pay under the Incentive Density HMA Pavement bid item. Adjustment under this item is not limited, either up or down, to the bid amount shown on the schedule of items.
 - (4) If a traffic lane meets the requirements for disincentive, the department will not pay incentive on the integrally paved shoulder.
 - (5) Submit density results to the department electronically using the MRS software. The department will validate all contractor data before determining pay adjustments.
- 460-020 (20100709)

24. Railing Pipe, Item 513.2050.S.

A Description

This special provision describes furnishing and installing a pipe railing system for pedestrians as shown on the plans, and according to the applicable provisions of standard spec 513 and as hereinafter provided.

B (Vacant)

C Construction

Weld the posts and rails together.

D Measurement

The department will measure Railing Pipe in length by the linear foot along the top rail.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
513.2050.S	Railing Pipe	LF

Payment is full compensation for furnishing all materials; installing all materials; and painting.

513-005 (20030820)

25. Riprap Medium, Item 606.0200.

Add the following to standard spec 606.3:

Place riprap within 24 hours after the apron endwall has been installed.

26. Pipe Grates, Item 611.9800.S.

A Description

This special provision describes furnishing and installing pipe grates on the ends of pipes as shown in the plans, and as hereinafter provided.

B Materials

Furnish steel conforming to the requirements of standard spec 506.2.2.1. Furnish steel pipe conforming to the requirements of standard spec 506.2.3.6.

Furnish pipe grates galvanized according to ASTM A123.

Furnish angles and brackets galvanized according to ASTM A123.

Furnish required hardware galvanized according to ASTM A153.

C Construction

Repair pipes, rods, angles and brackets on which the galvanized coating has been damaged according to the requirements of AASHTO M36M.

D Measurement

The department will measure Pipe Grates in units of work, where one unit is one grate, completed and accepted.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
611.9800.S	Pipe Grates	Each

Payment is full compensation for furnishing and installing all materials; and for drilling and connecting grates to pipes.

611-010 (20030820)

27. Stone or Rock Ditch Checks, Item 628.7515.S.

A Description

This special provision describes furnishing and installing stone or rock ditch checks as shown on the plans or as directed by the engineer, or both, and as hereinafter provided.

B Materials

Provide materials conforming to size requirements for size no. 2 coarse aggregate for concrete masonry or riprap according to the standard spec 501.2.5.4.4. Railroad ballast or breaker run stone conforming to the following applicable gradations may also be used:

Railroad Ballast	
Sieve Size	Percent by Weight Passing
2 Inch	100
1 Inch	20 – 55
3/8 Inch	0 -5

Breaker Run Stone	
Sieve Size	Percent by Weight Passing
5 Inch	100
1½ Inch	0 – 50
3/8 Inch	0 - 5

Incorporate stone or rock in the ditch checks that is hard, sound, and durable, and meets the approval of the engineer.

C Construction

Place stone or rock ditch checks immediately after shaping of the ditches or slopes is completed. Place stone or rock ditch checks at right angles to the direction of flow and construct to the dimensions and according to the details shown in the plans.

Remove sediment from behind the stone or rock ditch checks when it has accumulated to one half of the original height of the dam.

D Measurement

The department will measure Stone or Rock Ditch Checks in volume by the cubic yard of material incorporated in the work.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
628.7515.S	Stone or Rock Ditch Checks	CY

Payment is full compensation for furnishing, producing, crushing, loading, hauling, placing, and shaping and maintaining Stone or Rock Ditch Check.

The quantity of sediment removed shall be multiplied by a factor of ten and paid for as Marsh Excavation.

628-050 (20151210)

28. Landscape Planting Surveillance and Care Cycles.

If the care specialist fails to perform any of the required care cycles as specified in standard spec 632.3.19.1, the department will assess daily damages in the amount of \$800.00 to cover the cost of performing the work with other forces. The department will assess these damages

for each day the requirements of the care cycle remain incomplete, except when the engineer extends the required time period.
632-005 (20070510)

29. Furnishing and Planting Plant Materials.

This special provision describes furnishing and planting plant materials according to the pertinent requirements of standard spec 632 and as hereinafter provided.

Plant Materials

All plants shall be grown within the states of Wisconsin, Minnesota, Michigan, Iowa, or the parts of Illinois, Indiana or Ohio located within Zone 5 of the "Plant Hardiness Zone Map" produced by the United States Department of Agriculture, Miscellaneous Publication No. 1475, issued January, 1990, unless otherwise approved by the engineer.

Add the following to standard spec 632.2.2.8 (1) Plant Approval:

The contractor shall furnish to Craig Weber, WDNR 262-574-2141, and Randy Kerkman, Village Administrator, (262) 857-2368, a written list of the sources from which the contractor proposes to obtain plant materials. Furnish this list to the Craig Webster and Randy Kerkman within 15 days of the award of the contract.

Add the following to standard spec 632.3.7 Planting:

Provide a Wisconsin certified arborist to oversee planting and inspection of the tree.

Add the following to standard spec 632.3.19.1 General:

Provide a Wisconsin certified arborist to oversee the care cycles for the trees.

Add the following to standard spec 632.5.1 General:

The cost of the arborist is incidental to the contract.

Mulch

Submit color and material samples of mulch for approval by the Village of Bristol prior to placement.

30. Traffic Control.

Add the following to standard spec 643.3.1:

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

Provide the Wisconsin State Patrol, Illinois State Patrol, Kenosha County Sheriff's Department, Lake County Sheriff's Department, Village of Bristol Police Department, and

the engineer a current telephone number with which the contractor or his representative can be contacted during non-working hours in the event a safety hazard develops.

Do not park or store equipment, contractor's and personal vehicles or construction materials within the clear zone as designated in the plans on any roadway carrying traffic during working and non-working hours except at locations and periods of time approved by the engineer.

Do not permit construction or personnel equipment or vehicles to directly cross the live traffic lanes of the freeway. Yield to all through traffic at all locations. Equip all vehicles or equipment operating in the live traffic lanes with a hazard identification beam (flashing yellow signal light) that is visible from 360 degrees. Operate the flashing yellow beam only when merging or exiting live traffic lanes or when parked or operating on shoulders. Do not park personal vehicles within the access control limits of the freeway. Do not cross live freeway traffic lanes with equipment or vehicles

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

Replace standard spec 643.3.1(6) with the following:

Provide 24-hour a day availability of equipment, forces and materials to promptly restore barricades, lights, or other traffic control devices that are damaged or disturbed. Restore any barricade, light, or other traffic control so that the device is not out of service for more than two hours.

31. Pavement Marking Grooved Wet Reflective Contrast Tape 4-Inch, Item 646.0841.S.

A Description

This special provision describes furnishing, grooving and installing preformed wet reflective pavement marking contrast tape for grooved applications as shown on the plans, according to standard spec 646, and as hereinafter provided.

B Materials

Furnish wet reflective pavement marking contrast tape and adhesive material, per manufacturer's recommendation if required, from the department's approved products list.

Furnish a copy of the manufacturer's recommendations to the engineer before preparing the pavement marking grooves.

C Construction

C.1 General

For quality assurance, provide the engineer and the region's Marking Section evidence of manufacturer training in the proper placement and installation of pavement marking contrast tape.

Plane the grooved lines according to details in the plan and per manufacturer's recommendations. Use grooving equipment with a free-floating, independent cutting head. Plane a minimum number of passes to create a grooved surface per manufacturer's recommendations.

C.2 Groove Depth

Cut the groove to a depth of 120 mils \pm 10 mils from the pavement surface or, if tined, from the high point of the tined surface. To measure the depth, the contractor may use a depth plate placed in the groove and a straightedge placed across the plate and groove, or the contractor may use a straightedge placed perpendicular to the groove. The department may periodically check groove depths.

C.3 Groove Width – Longitudinal Markings

Cut the groove one-inch wider than the width of the tape.

C.4 Groove Position

Position the groove edge according to plan details. Groove a minimum of 4 inches, but not greater than, 12 inches from both ends of the tape segment. Achieve straight alignment with the grooving equipment.

C.5 Groove Cleaning

C.5.1 Concrete

Cooling the cutting head with water may be necessary for some applications and equipment. If cooling water is necessary, flush the groove immediately with high-pressure water after cutting to remove any build-up of cement dust and water slurry. If this is not done, the slurry may harden in the groove.

If water is used in the grooving process, allow the groove to dry a minimum of 24 hours after groove cleaning, and prior to pavement marking application. The groove surface shall be clean and dry before applying the adhesive, and the pavement marking tape. Use a high-pressure air blower with at least 185 ft³/min air flow and 120 psi air pressure to clean the groove; use of the air blower does not decrease the amount of time required for the groove to dry.

C.5.2 New Asphalt

Groove pavement five or more days after paving.

Use a high-pressure air blower with at least 185 ft³/min air flow and 90 psi air pressure to clean the groove.

C.5.3 Existing Asphalt

Check for structural integrity in supporting grooving operations. If the structural integrity of the asphalt pavement is inadequate to support grooving operations, immediately notify the engineer.

Use a high-pressure air blower with at least 185 ft³/min air flow and 90 psi air pressure to clean the groove.

C.6 Tape Application

Apply the tape when both the air and surface temperature are 40 degrees F and rising.

Apply tape in the groove as per manufacturer's recommendations. If manufacturer's recommendations require surface preparation adhesive

- 1) For the Southeast Region and the ozone non-attainment Northeast Region counties of Sheboygan, Manitowoc, and Kewaunee:
 - Apply SPA-60 during May 1 to September 30, both dates inclusive due to Volatile Organic Compound Limitations..
 - Apply P-50 during October 1 to April 30, both dates inclusive. –
- 2) For the remainder counties:
 - Apply either adhesive.

Refer to the manufacturer's instructions for determining when the surface preparation adhesive is set.

Tamp the wet reflective pavement marking contrast tape with a tamper cart roller, with a minimum of a 200-lb load, cut to fit the groove. Tamp a minimum of three complete cycles (6 passes) with grooved modified tamper roller cart.

D Measurement

The department will measure Pavement Marking Grooved Wet Reflective Contrast Tape (Width) for grooved applications in length by the linear foot of tape placed according to the contract and accepted.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
646.0841.S	Pavement Marking Grooved Wet Reflective Contrast Tape 4-Inch	LF

Payment is full compensation for cleaning and preparing the pavement surface; furnishing and installing the material; and for removing temporary pavement marking, if necessary.
646-022 (20120615)

32. Pavement Marking Grooved Wet Reflective Tape 4-Inch, Item 646.0881.S.

A Description

This special provision describes furnishing, grooving and installing preformed wet reflective pavement marking tape for grooved applications as shown on the plans, according to standard spec 646, and as hereinafter provided.

B Materials

Furnish grooved wet reflective pavement marking tape and adhesive material per manufacturer's recommendations, if required, from the department's approved products list.

Furnish a copy of the manufacturer's recommendations to the engineer before preparing the pavement marking grooves.

C Construction

C.1 General

For quality assurance, provide the engineer and the region's Marking Section evidence of manufacturer training in the proper placement and installation of pavement marking tape.

Plane the grooved lines according to details in the plan and per manufacturer's recommendations. Use grooving equipment with a free-floating, independent cutting head. Plane a minimum number of passes to create a grooved surface per manufacturer's recommendations.

C.2 Groove Depth

Cut the groove to a depth of 120 mils \pm 10 mils from the pavement surface or, if tined, from the high point of the tined surface. To measure the depth, the contractor may use a depth plate placed in the groove and a straightedge placed across the plate and groove, or the contractor may use a straightedge placed perpendicular to the groove. The department may periodically check groove depths.

C.3 Groove Width – Longitudinal Markings

Cut the groove one-inch wider than the width of the tape.

C.4 Groove Position

Position the groove edge according to plan details. Groove a minimum of 4 inches, but not greater than, 12 inches from both ends of the tape segment. Achieve straight alignment with the grooving equipment.

C.5 Groove Cleaning

C.5.1 Concrete

Cooling the cutting head with water may be necessary for some applications and equipment. If cooling water is necessary, flush the groove immediately with high-pressure water after cutting to remove any build-up of cement dust and water slurry. If this is not done, the slurry may harden in the groove.

If water is used in the grooving process, allow the groove to dry a minimum of 24 hours after groove cleaning, and prior to pavement marking application. The groove surface shall be clean and dry before applying the adhesive, and pavement marking tape. Use a high-pressure air blower with at least 185 ft³/min air flow and 120 psi air pressure to clean the groove; use of the air blower does not decrease the amount of time required for the groove to dry.

C.5.2 New Asphalt

Groove pavement five or more days after paving.

Use a high-pressure air blower with at least 185 ft³/min air flow and 120 psi air pressure to clean the groove.

C.5.3 Existing Asphalt

Check for structural integrity in supporting grooving operations. If the structural integrity of the asphalt pavement is inadequate to support grooving operations, immediately notify the engineer.

Use a high-pressure air blower with at least 185 ft³/min air flow and 120 psi air pressure to clean the groove.

C.6 Tape Application

Apply the wet reflective pavement marking tape when both the air and surface temperature are 40 degrees F and rising.

Apply tape in the groove as per manufacturer's recommendations. If manufacturer's recommendations require surface preparation adhesive

- 1) For the Southeast Region and the ozone non-attainment Northeast Region counties of Sheboygan, Manitowoc, and Kewaunee:
 - Apply SPA-60 during May 1 to September 30, both dates inclusive due to Volatile Organic Compound Limitations.
 - Apply P-50 during October 1 to April 30, both dates inclusive.
- 2) For the remainder counties:
 - Apply either adhesive.

Refer to the manufacturer's instructions for determining when the surface preparation adhesive is set.

Tamp the wet reflective pavement marking tape with a tamper cart roller, with a minimum of a 200-lb load, cut to fit the groove. Tamp a minimum of three complete cycles (6 passes) with grooved modified tamper roller cart.

D Measurement

The department will measure Pavement Marking Grooved Wet Reflective Tape (Width) for grooved applications in length by the linear foot of tape placed according to the contract and accepted.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
646.0881.S	Pavement Marking Grooved Wet Reflective Tape 4-Inch	LF

Payment is full compensation for cleaning and preparing the pavement surface; furnishing and installing the material; and for removing temporary pavement marking, if necessary.
646-018 (20120615)

33. Locating No-Passing Zones, Item 648.0100.

For this project, the spotting sight distance in areas with a 55 mph posted speed limit is 0.16 miles (845 feet).
648-005 (20060512)

34. General Requirements for Electrical Work.

Replace standard spec 651.3.3 (3) with the following:

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

35. Electrical Wiring.

Replace standard spec 655.3.10 with the following:

- (1) Under the Traffic Signal EVP Detector Cable bid item, provide the EVP cable and mount department furnished brackets. The department will determine the exact location to ensure that the installation does not create a sight obstruction.
- (2) Ensure that the cable runs continuously without splicing from the pull box closest to the cabinet including the specified extra cable. Do not splice EVP cable from the detector assembly to the controller terminations. Provide 10 feet of extra cable at the mounting bracket 2.5 feet extending out of the mounting bracket. Provide 10 feet of extra cable in each pull box plus an additional 20 feet at the nearest pull box to signal base where the EVP detector head is mounted.

(3) Mark each end of the lead as noted on the plan sheet. For a cabinet that is not operating the signal, the contractor will terminate the ends and install the discriminators and card rack in the cabinet. If the cabinet is operating the signal, the cabinet wiring will be done by the department.

(4) Notify the engineer upon completion of the installation at each intersection.

Replace standard spec 655.5 (11) with the following:

(11) Payment for Loop Detector Wire is full compensation for furnishing and installing loop detector wire; for making necessary connections to the lead in cable; and for measuring the loop inductance and ground resistance.

Replace standard spec 655.5 (12) with the following:

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

36. Meter Breaker Pedestal Service, USH 45 and CTH WG, Item 656.0200.01; USH 45and CTH C, Item 656.0200.02.

Add the following to standard spec 656.2.3:

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

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

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

Add the following to standard spec 656.5:

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

37. Traffic Signal Faces, 658.0110 and 658.0115.

Add the following to standard spec 658.3.2:

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

38. Backfill Slurry, Item SPV.0035.01.

A Description

Furnish and place slurry backfill according to the pertinent requirements of standard spec 209 except as hereinafter modified and as shown on the plans.

B Materials

Use aggregates that conform to standard spec 501 for Grade A Concrete. Weigh aggregates at a batch plant suitable for batching concrete masonry. Mix and deliver to the project site using a truck mixer. Add enough water to enable the mixture to flow readily.

C Construction

Prior to placement of slurry backfill, provide for positive drainage of the area to be backfilled. Discharge from the truck in a manner to prevent segregation. Completely fill excavation in a single operation. Consolidation or compaction effort will not be required. Allow twelve hours to elapse before paving over the backfill.

D Measurement

The department will measure Backfill Slurry in volume by the cubic yard of material placed and accepted. Such volume will be computed from dimensions of the area to be backfilled as shown in the construction details. In irregular or inaccessible areas, the engineer may allow volume to be determined by other approximate methods.

E Payment

The department will pay for measured quantities at the contract unit price according to standard spec 209.5 under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0035.01	Backfill Slurry	CY

Payment is full compensation for providing positive drainage of area backfilled and for furnishing and placing slurry.

39. Concrete Masonry Endwalls Special, Item SPV.0035.02.

Construct the concrete masonry endwalls according to standard spec 504 and according to the plan details.

40. Manholes 9-FT Diameter, Item SPV.0060.01.

Construct the manholes according to standard spec 611 and according to the plan details.

41. Construction Staking Curb Ramps, Item SPV.0060.02.

A Description

Perform the work according to the applicable provisions of standard spec 650.3.8.

B (Vacant)

C Construction

Set additional construction stakes as necessary to establish location and grade of the curb ramps including points of change in alignment and grade according to the plans.

D Measurement

The department will measure Construction Staking Curb Ramps by each individual unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.02	Construction Staking Curb Ramps	EACH

Payment for Construction Staking Curb Ramps bid item is full compensation for locating and setting all construction stakes; for relocating and resetting damaged or missing construction stakes.

42. Pavement Marking Grooved Preformed Thermoplastic Arrows Type 1, Item SPV.0060.03; Arrows Type 2, Item SPV.0060.04; Arrows Type 3, Item SPV.0060.05; Words, Item SPV.0060.06; Crosswalk 6-Inch, Item SPV.0090.07; Stop Bars 18-Inch, Item SPV.0090.08.

A Description

This special provision describes grooving the pavement surface, and furnishing and installing preformed thermoplastic pavement marking as shown on the plans, according to standard spec 647, and as hereinafter provided.

B Materials

Furnish 125 mils preformed thermoplastic pavement marking from the department's approved products list. If required, furnish sealant material recommended by the manufacturer.

C Construction

C.1 General

For quality assurance, provide the engineer and the region's Marking Section evidence of manufacturer training in the proper placement and installation of preformed thermoplastic pavement marking.

Plane the grooved lines according to the plan details. Use grooving equipment with a free-floating, independent cutting or grinding head. Plane a minimum number of passes to create a smooth groove.

C.2 Groove Depth

Cut the groove to a depth of 120 mils \pm 10 mils deep from the pavement surface or, if tined, from the high point of the tined surface. Measure depth using a straightedge placed perpendicular to the groove. The department may periodically check groove depths.

C.3 Groove Width – Linear Markings

Cut the groove 1-inch wider than the width of the thermoplastic.

C.4 Groove Position

Position the groove edge according to the plan details.

C.4.1 Linear Marking

Groove at a minimum of 4-inches, but not greater than, 12-inches from both ends of the line segment. Achieve straight alignment with the grooving equipment.

C.4.2 Special Marking

Groove at a minimum of 4-inches from the perimeter of the special marking. Groove separate areas for Word Items.

C.5 Groove Cleaning

C.5.1 Concrete

Cooling the cutting head with water may be necessary for some applications and equipment. If cooling water is necessary, flush the groove immediately with water after cutting to remove any build-up of cement dust and water slurry. If this is not done, the slurry may harden in the groove.

If water is used in the grooving process, allow the groove to dry a minimum of 24 hours after groove cleaning, after removal of excess water, and prior to pavement marking application. Clean and dry the groove for proper application of the sealant, and placement of the pavement marking. Use a high-pressure air blower with at least 185 ft³/min air flow and 90 psi air pressure to clean the groove; use of the air blower does not decrease the amount of time required for the groove to dry.

C.5.2 Asphalt

Use a high-pressure air blower with at least 185 ft³/min air flow and 90 psi air pressure to clean the groove.

Check for structural integrity in supporting grooving operations. If the structural integrity of the asphalt pavement is inadequate to support grooving operations, immediately notify the engineer.

C.6 Preformed Thermoplastic Application

Preheat the surface if necessary based on manufacturer's recommendation.

Apply preformed thermoplastic in the groove as per manufacturer's recommendations. If manufacturer's recommendations require a sealant, apply a sealant lower than 91g/l VOC during the following period of time due to Volatile Organic Compound Limitations:

May 1 to September 30, both dates inclusive – the Southeast Region and the ozone non-attainment Northeast Region counties of Sheboygan, Manitowoc, and Kewaunee.

Use any sealant in the remainder counties and for the remainder of the year. The sealant must be wet.

D Measurement

The department will measure Pavement Marking Grooved Preformed Thermoplastic (Type) by each unit, acceptably placed, or in length by the linear foot of tape placed according to the contract and accepted.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.03	Pavement Marking Grooved Preformed Thermoplastic Arrows Type 1	EACH
SPV.0060.04	Pavement Marking Grooved Preformed Thermoplastic Arrows Type 2	EACH
SPV.0060.05	Pavement Marking Grooved Preformed Thermoplastic Arrows Type 3	EACH
SPV.0060.06	Pavement Marking Grooved Preformed Thermoplastic Words	EACH
SPV.0090.07	Pavement Marking Grooved Preformed Thermoplastic Crosswalk 6-Inch	LF
SPV.0090.08	Pavement Marking Grooved Preformed Thermoplastic Stop Bar 18-Inch	LF

Payment is full compensation for cleaning and preparing the pavement surface, and for furnishing and installing the material.

43. Section Corner Monuments Special, Item SPV.0060.07.

A Description

Coordinate with Southeastern Wisconsin Regional Planning Commission (SEWRPC) for the perpetuation and replacement of a section corner (Public Land Survey System- PLSS) monument.

B Materials

SEWRPC will provide a pre-cast concrete monument or brass disk to be used to mark the PLSS corner.

Furnish base aggregate dense materials that conform to standard spec 305 and concrete, asphalt, topsoil or other materials depending on the surface surrounding the corner.

C Construction

SEWRPC will perpetuate existing section corner monument. The contractor is responsible to coordinate with SEWRPC and the WisDOT Project Manager throughout the perpetuation and replacement process. The engineer will contact SEWRPC at (262) 953-4295 at least two weeks before starting construction operations or the preconstruction meeting to allow for section corner monument perpetuation.

Contractor must excavate and completely remove the existing monument. Contractor is responsible for providing a backfilled 3 to 4 foot deep hole where existing monument was removed. Contractor is responsible to coordinate the materials and methodology to complete the construction of the surface surrounding the monument. This may include but is not limited to a 2' x 2' "box out" or 24" diameter core hole in concrete, asphalt pavement/paving rings, coring to facilitate poured in place monuments, topsoil, seed and mulching or other materials or methodologies as agreed to by the contractor and SEWRPC.

Contractor must contact the engineer and SEWRPC (John Washburn); at least two weeks prior to work near any section corner monument.

Contact Information:

Attn: John Washburn
Southeastern Wisconsin Regional Planning Commission
W239 N1812 Rockwood Drive
P.O. Box 1607
Waukesha, WI 53187-1607
Phone (262) 953-4295
Fax (262) 547-1103
E-mail: jwashburn@sewrpc.org

D Measurement

The department will measure Section Corner Monuments Special by each individual unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.07	Section Corner Monuments Special	Each

Payment is full compensation for furnishing all excavating; removal of existing monument, for placing and compacting backfill material; for disposing of surplus materials; for concrete or asphalt material, finishing of roadway or other surfaces, and for furnishing all coordination with SEWRPC.

621-SER1 (20080714)

44. Sanitary Manhole Chimney Seal, Item SPV.0060.08.**A Description**

The work under this item describes removing the exiting chimney seal and providing and installing a new chimney seal with adequate length to accommodate any change to the manhole chimney, including needed overlap to properly seal to casting and manhole section according to Village of Bristol Standards and Specifications for Development, latest revision and as hereinafter provided.

B Materials

Manholes outside of paved areas shall have external chimney seals. Manholes within paved areas shall have internal chimney seals. The seal shall manufactured by Cretex Specialty Prodcuts, or equal, and be made of a rubber type product, with a minimum thickness of 3/16 inches, a minimum unstretched width of 8 inches and be extruded or molded from a high grade rubber compound conforming to the applicable requirements of ASTM C923. The bands used for compressing the sleeve against the manhole shall be fabricated from stainless steel conforming to ASTM A240, Type 304, for sheet and ASTM A479, Type 304, for rods. Any screws, bolts, or nuts used on these bands shall be stainless steel conforming to ASTM F593 and F594, Type 304. The internal seal or its appurtenances shall not extend far enough into the manhole opening to restrict entry into or exit from the manhole.

All material for Village of Bristol sewer facilities must meet Bristol Standards and Specifications for Development, latest revision. A copy of these specifications can be obtained at Bristol Municipal Building.

Randy Kerkman
19801 83rd Street
Bristol, WI 53104
Phone: (262) 857-2368

C Construction

Remove existing chimney seal and install new chimney seal after any adjustments required to the manhole casting have been completed.

D Measurement

The department will measure Sanitary Manhole Chimney Seal as each individual manhole, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.08	Sanitary Manhole Chimney Seal	Each

Payment is full compensation for furnishing all materials, labor, tools, equipment, and incidentals necessary for the installation of each chimney seal.

45. Adjusting Sanitary Sewer Manholes, Item SPV.0060.09.**A Description**

The work under this item describes adjusting a sanitary manhole casting to an elevation as determined by the engineer and conforms to the Village of Bristol Standards and Specifications for Development, latest revision, and as hereinafter provided. Precast concrete rings shall be provided or removed as needed. This item applies to those structures that must be lowered less than 6 inches or raised less than 10 inches.

B Materials

Precast concrete adjusting rings for standard manholes shall have an inside diameter of 26 inches, be not less than 2 inches nor more than 6 inches high, and shall have a wall thickness of 6 inches unless otherwise specified. The rings shall contain a minimum of one No. 2 reinforcing rod centered within the ring.

All material for Village of Bristol sewer facilities must meet Bristol Standards and Specifications for Development, latest revision. A copy of these specifications can be obtained at Bristol Municipal Building.

Randy Kerkman
19801 83rd Street
Bristol, WI 53104
Phone: (262) 857-2368

C Construction

Adjust all manholes to proposed elevations at locations shown on the plans.

D Measurement

The department will measure Adjusting Sanitary Sewer Manhole as each individual manhole, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.09	Adjusting Sanitary Sewer Manhole	Each

Payment is full compensation for furnishing all materials (including adjusting rings and masonry), excavation, dewatering, backfill, compaction, disposal of surplus materials, cleaning out and restoring the structure, labor, tools, equipment, and incidentals necessary for the adjustment of each structure.

46. Adjusting Water Valve Box, Item SPV.0060.10.

A Description

This special provision describes adjusting, protecting, and maintaining accessibility, for the duration of the project, to water valve boxes located within the project limits.

B (Vacant)

C Construction

Adjust all water valve boxes to proposed elevations at locations shown on the plans. Valve boxes shall be adjusted by turning the box. The box shall be seated on the adjusting threads to prevent future settlement. The box shall be adjusted to conform to the finished grade and shall be plumb to allow valve operation. The Village of Bristol Department of Public Works shall be contacted by the contractor to check operation of the valve after box adjustment and prior to paving.

Throughout the duration of the project, the contractor must ensure that the water valve boxes are adequately located and identified by blue paint, and that at all times, all water appurtenances remain accessible for operation by Village forces. Exercise caution working adjacent to water facilities to avoid damage and ensure accessibility.

D Measurement

The department will measure Adjusting Water Valve Box as each individual unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.10	Adjusting Water Valve Box	Each

Payment is full compensation for furnishing all excavation, backfilling, disposal of surplus materials, water box clean-out, and for furnishing all labor, tools, equipment, and incidentals necessary to complete the work.

Upon completion of the contract, the Department of Public Works will inspect all water facilities to ensure the water boxes are clean, properly aligned, and accessible. The contractor shall be responsible to make identified repairs and adjustments, and if any repairs

or adjustments are made by the Department of Public Works, the cost will be charged to the contractor.

47. Adjusting Water Valve Manhole, Item SPV.0060.11.

A Description

The work under this item describes adjusting a water valve manhole casting to an elevation as determined by the engineer and conforms to the Village of Bristol Standards and Specifications for Development, latest revision, and as hereinafter provided. Precast concrete rings shall be provided or removed as needed. This item applies to those structures that must be lowered less than 6 inches or raised less than 10 inches.

B Materials

Precast concrete adjusting rings for standard manholes shall have an inside diameter of 26 inches, be not less than 2 inches nor more than 6 inches high, and shall have a wall thickness of 6 inches unless otherwise specified. The rings shall contain a minimum of one No. 2 reinforcing rod centered within the ring.

All material for Village of Bristol sewer facilities must meet Bristol Standards and Specifications for Development, latest revision. A copy of these specifications can be obtained at Bristol Municipal Building.

Randy Kerkman
19801 83rd Street
Bristol, WI 53104
Phone: (262) 857-2368

C Construction

Adjust all manholes to proposed elevations at locations shown on the plans.

D Measurement

The department will measure Adjusting Water Valve Manhole as each individual manhole, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.11	Adjusting Water Valve Manhole	Each

Payment is full compensation for furnishing all materials (including adjusting rings and masonry), excavation, dewatering, backfill, compaction, disposal of surplus materials, cleaning out and restoring the structure, labor, tools, equipment, and incidentals necessary for the adjustment of each structure.

48. Heavy Duty Silt Fence 3-FT, Item SPV.0090.01; Heavy Duty Silt Fence 5-FT, Item SPV.0090.02.

A Description

Furnish, install, and remove heavy duty silt fence as shown on the plans or as directed by the engineer before construction activities begin. Remove the silt fence only after construction activities have been completed. Remove trapped silt prior to removing the fence as directed by the engineer. Use Heavy Duty Silt Fence 3-FT in wetland areas with up to 6 inches of standing water and use Heavy Duty Silt Fence 5-FT in wetland areas with 6 inches or more standing water.

B Materials

Furnish heavy duty silt fence consisting of a composite of woven wire fabric, posts, geotextile fabric, and fasteners to be assembled by the contractor. Woven wire fabric shall be a standard field fence type a minimum of 3 feet high for Heavy Duty Silt Fence 3-Ft and minimum of 5 feet high for Heavy Duty Silt Fence 5-FT with a maximum mesh spacing of 6 inches and minimum 14½-gage wire.

Posts shall be metal with a minimum length of 6 feet, 3 inches for Heavy Duty Silt Fence 3-FT and 8 feet, 3 inches for Heavy Duty Silt Fence 5-FT. Metal posts shall be “studded tee” or “U” type with a minimum weight of 1.3 lb/ft.

The geotextile fabric shall be non-woven with properties as specified in 628.2.6.1.

C Construction

Install heavy duty silt fence as shown on the plans. Spacing of ties and anchors shall be adequate to resist current flow.

D Measurement

The department will measure Heavy Duty Silt Fence (Height) by the linear foot, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.01	Heavy Duty Silt Fence 3-FT	LF
SPV.0090.02	Heavy Duty Silt Fence 5-FT	LF

Payment is full compensation for furnishing, installing, maintaining, and removing fence.

49. Pavement Marking Grooved Preformed Plastic Contrast Tape 4-Inch, Item SPV.0090.03; 8-Inch, Item SPV.0090.05.

A Description

This special provision describes furnishing, grooving, and installing contrast preformed plastic pavement marking tape as shown on the plans, according to standard spec 646, and as hereinafter provided.

B Materials

Furnish grooved contrast preformed plastic pavement marking tape and adhesive material, if required, from the department's approved products list.

Furnish a copy of the manufacturer's recommendations to the engineer before preparing the pavement marking grooves.

C Construction

C.1 General

For quality assurance, provide the engineer and the region's Marking Section evidence of manufacturer training in the proper placement and installation of pavement marking tape.

Plane the grooved lines according to details in the plan. Use grooving equipment with a free-floating, independent cutting or grinding head. Plane a minimum number of passes to create a smooth groove.

C.2 Groove Depth

Cut the groove to a depth of 120 mils \pm 10 mils from the pavement surface or, if tined, from the high point of the tined surface. Measure depth using a straightedge placed perpendicular to the groove. The department may periodically check groove depths.

C.3 Groove Width – Longitudinal Markings

Cut the groove one-inch wider than the width of the tape.

C.4 Groove Position

Position the groove edge according to plan details. Groove a minimum of 4 inches, but not greater than, 12 inches from both ends of the tape segment. Achieve straight alignment with the grooving equipment.

C.5 Groove Cleaning

C.5.1 Concrete

Cooling the cutting head with water may be necessary for some applications and equipment. If cooling water is necessary, flush the groove immediately with water after cutting to remove any build-up of cement dust and water slurry. If this is not done, the slurry may harden in the groove.

If water is used in the grooving process, allow the groove to dry a minimum of 24 hours after groove cleaning, after removal of excess water, and prior to pavement marking application. Clean and dry the groove for proper application of the adhesive, and placement of the pavement marking. Use a high-pressure air blower with at least 185 ft³/min air flow and 90 psi air pressure to clean the groove; use of the air blower does not decrease the amount of time required for the groove to dry.

C.5.2 New Asphalt

Groove pavement 5 or more days after paving.

If opening to traffic an asphalt lane that is not grooved, place temporary pavement marking. For asphalt lanes not open to traffic, temporary pavement marking is not required.

Use a high-pressure air blower with at least 185 ft³/min air flow and 90 psi air pressure to clean the groove.

C.5.3 Existing Asphalt

Check for structural integrity in supporting grooving operations. If the structural integrity of the asphalt pavement is inadequate to support grooving operations, immediately notify the engineer.

Use a high-pressure air blower with at least 185 ft³/min air flow and 90 psi air pressure to clean the groove.

C.6 Tape Application

Apply the tape when both the air and surface temperature are 40 degrees F and rising.

Apply the tape in the groove as per manufacturer's recommendations. If manufacturer's recommendations require surface preparation adhesive, apply an adhesive with lower than 91g/l VOC during the following period of time due to Volatile Organic Compound Limitations:

May 1 to September 30, both dates inclusive – the Southeast Region and the ozone non-attainment Northeast Region counties of Sheboygan, Manitowoc, and Kewaunee.

Use any adhesive from the preformed plastic approved products list in the remainder counties and for the remainder of the year.

The adhesive must be dry (feels tacky but is no longer in liquid form) and have a matte finish rather than a glossy wet appearance.

Tamp the contrast pavement marking tape with a tamper cart roller cut to fit the groove. Tamp three complete cycles with grooved modified equipment.

D Measurement

The department will measure Pavement Marking Grooved Preformed Plastic Contrast Tape (Width) in length by the linear foot of tape, placed according to the contract and accepted.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.03	Pavement Marking Grooved Preformed Plastic Contrast Tape 4-Inch	LF
SPV.0090.05	Pavement Marking Grooved Preformed Plastic Contrast Tape 8-Inch	LF

Payment is full compensation for cleaning and preparing the pavement surface; furnishing and installing the material; furnishing, placing, and removing temporary pavement marking, if necessary.

50. Pavement Marking Grooved Preformed Plastic Tape 4-Inch, Item SPV.0090.04; 8-Inch, Item SPV.0090.06.

A Description

This special provision describes furnishing, grooving, and installing preformed plastic pavement marking tape as shown on the plans, according to standard spec 646, and as hereinafter provided.

B Materials

Furnish grooved preformed plastic pavement marking tape and adhesive material, if required, from the department's approved products list.

Furnish a copy of the manufacturer's recommendations to the engineer before preparing the pavement marking grooves.

C Construction

C.1 General

For quality assurance, provide the engineer and the region's Marking Section evidence of manufacturer training in the proper placement and installation of pavement marking tape.

Plane the grooved lines according to details in the plan. Use grooving equipment with a free-floating, independent cutting or grinding head. Plane a minimum number of passes to create a smooth groove.

C.2 Groove Depth

Cut the groove to a depth of 120 mils \pm 10 mils from the pavement surface or, if tined, from the high point of the tined surface. Measure depth using a straightedge placed perpendicular to the groove. The department may periodically check groove depths.

C.3 Groove Width – Longitudinal Markings

Cut the groove one-inch wider than the width of the tape.

C.4 Groove Position

Position the groove edge according to plan details. Groove a minimum of 4 inches, but not greater than, 12 inches from both ends of the tape segment. Achieve straight alignment with the grooving equipment.

C.5 Groove Cleaning

C.5.1 Concrete

Cooling the cutting head with water may be necessary for some applications and equipment. If cooling water is necessary, flush the groove immediately with water after cutting to remove any build-up of cement dust and water slurry. If this is not done, the slurry may harden in the groove.

If water is used in the grooving process, allow the groove to dry a minimum of 24 hours after groove cleaning, after removal of excess water, and prior to pavement marking application. Clean and dry the groove for proper application of the adhesive, and placement of the pavement marking. Use a high-pressure air blower with at least 185 ft³/min air flow and 90 psi air pressure to clean the groove; use of the air blower does not decrease the amount of time required for the groove to dry.

C.5.2 New Asphalt

Groove pavement 5 or more days after paving.

If opening to traffic an asphalt lane that is not grooved, place temporary pavement marking. For asphalt lanes not open to traffic, temporary pavement marking is not required.

Use a high-pressure air blower with at least 185 ft³/min air flow and 90 psi air pressure to clean the groove.

C.5.3 Existing Asphalt

Check for structural integrity in supporting grooving operations. If the structural integrity of the asphalt pavement is inadequate to support grooving operations, immediately notify the engineer.

Use a high-pressure air blower with at least 185 ft³/min air flow and 90 psi air pressure to clean the groove.

C.6 Tape Application

Apply the tape when both the air and surface temperature are 40 degrees F and rising.

Apply tape in the groove as per manufacturer's recommendations. If manufacturer's recommendations require surface preparation adhesive, apply an adhesive with lower than 91g/l VOC during the following period of time due to Volatile Organic Compound Limitations:

May 1 to September 30, both dates inclusive – the Southeast Region and the ozone non-attainment Northeast Region counties of Sheboygan, Manitowoc, and Kewaunee.

Use any adhesive from the preformed plastic approved products list in the remainder counties and for the remainder of the year.

The adhesive must be dry (feels tacky but is no longer in liquid form) and have a matte finish rather than a glossy wet appearance.

Tamp the pavement marking tape with a tamper cart roller cut to fit the groove. Tamp three complete cycles with grooved modified equipment.

D Measurement

The department will measure Pavement Marking Grooved Preformed Plastic Tape (Width) in length by the linear foot of tape, placed according to the contract and accepted.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.04	Pavement Marking Grooved Preformed Plastic Tape 4-Inch	LF
SPV.0090.06	Pavement Marking Grooved Preformed Plastic Tape 8-Inch	LF

Payment is full compensation for cleaning and preparing the pavement surface; furnishing and installing the material; furnishing, placing, and removing temporary pavement marking, if necessary.

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51. Concrete Curb Pedestrian 12-Inch, Item SPV.0090.09.

Construct the concrete curb according to standard spec 601 and according to the plan details.

52. Sawing Tree Roots, Item SPV.0090.10.

A Description

This special provision describes sawing tree roots in areas where road or sidewalk excavation could damage the integrity of the roots and the health of the tree.

B (Vacant)

C Construction

Roots shall be cut vertically and cleanly using a suitable saw to a minimum depth of 1 foot and a minimum of 1 foot outside of the excavation area where the tree is in close proximity or as directed by the engineer. Close proximity is defined as one half of the tree drip line.

D Measurement

The department will measure Sawing Tree Roots by the linear foot, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.10	Sawing Tree Roots	LF

Payment is full compensation for furnishing all labor, tools, equipment materials and incidentals necessary to complete the work according to the contract.

53. Joint and Crack Repair, Item SPV.0090.11.**A Description**

This special provision describes removing any loose or spalled concrete and asphaltic patching, cleaning the joints or cracks, and filling with asphaltic material as shown on the plans and as hereinafter provided.

B (Vacant)**C Construction**

The contractor shall use a concrete cutting wheel that is capable of removing any loose or spalled concrete and asphaltic patching in one or two passes of the machine.

D Measurement

The department will measure Joint and Crack Repair by the linear foot of longitudinal and transversal joints and cracks, acceptably repaired.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.11	Joint and Crack Repair	LF

Payment is full compensation for removing and disposing of all loose or spalled concrete and asphaltic patching; for cleaning all joints and cracks; and for filling the joints and cracks.

Asphaltic material used to fill the joints and cracks will be paid at the contract unit price under the appropriate bid item.

54. Split Rail Wood Fence Two Rails, Item SPV.0090.12.**A Description**

This special provision describes furnishing and installing cedar wood split rail fencing, with two rails, at locations shown on the plans or as designated by the engineer.

B Materials

All fencing shall be constructed of cedar posts and cedar split rails. The fencing materials shall be as commonly obtained from most landscape contractors.

C Construction

All posts shall be spaced at 10 foot intervals and set in and backfilled with earth and be a set minimum of 30 inches below finished grade. Spacing between rails and between the ground and lowest rail shall be 12 inches.

D Measurement

The department will measure Split Rail Wood Fence Two Rails in length by linear foot, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.12	Split Rail Wood Fence Two Rails	LF

Payment is full compensation for furnishing and installing fence and posts; and for furnishing all maintenance necessary to keep the fence and posts in satisfactory condition.

55. Maintaining Temporary Drainage STA 70+00, Item SPV.0105.01; STA 135+00, Item SPV.0105.02; STA 146+50, Item SPV.0105.03; STA 213+79, Item SPV.0105.04; STA 47+39 CTH C, Item SPV.0105.18.

A Description

This special provision describes maintaining drainage during construction operations at existing Structures C-30-28, C-30-29, C-30-30, 60" cross culvert pipe at Station 213+79 and at Station 47+39 CTH C as shown on the plans and according to the pertinent requirements of the standard specifications and as hereinafter provided.

B Material

Provide materials according to standard spec 520 and 628.

C Construction

Maintain drainage at and through worksite during construction according to standard spec 205, 520, and 628.

C.1 Design Requirements

It is the responsibility of the contractor to submit a design for maintaining temporary drainage during construction with the Erosion Control Implementation Plan (ECIP) documentation for approval by the department and the DNR.

An example of a potential method to maintain temporary drainage is provided in the plans. The contractor is not required to use this detail and shall be responsible for designing a temporary drainage system using the design criteria below. The contractor shall be responsible for determining sand bag placement, polyethylene sheeting, and pump size.

The design must withstand a 2-year storm event, using the design criteria shown in the plans.

Pumps may be required to drain the surface, pipe, and structure discharges during construction. Costs for furnishing, operating, and maintaining the pumps is considered incidental to the project.

Pumping clean water from the upstream to the downstream, bypassing the worksite, as the sole means of maintaining drainage is permitted.

C.2 Dewatering

Do not allow any excavation for; structures, utilities, grading, maintaining drainage that requires dewatering (mechanical pumping) of water containing sediments (sand, silt, and clay particles) to leave the work site or discharge to a storm water conveyance system without sediment removal treatment. Prior to each dewatering operation, submit to the department a separate ECIP amendment describing in words and pictorial format an appropriate best management practice for sediment removal, according to WisDNR Storm Water Construction Technical Standard, Code 1061, Dewatering. Include reasoning, location, and schedule duration proposed for each operation. Per Code 1061, include all selection criteria: site assessment, dewatering practice selection, calculations, plans, specifications, operations, maintenance, and location of proposed treated water discharge. Provide a stabilized discharge area. If directing discharge towards or into an inlet structure, provide additional inlet protection for back-up protection.

C.3 Dewatering (Mechanical Pumping) for Bypass Water (sediment-free) Operations

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

C.4 Dewatering (Mechanical Pumping) for treatment Water (sediment-laden) Operations

If dewatering operations require pumping of water containing sediments (sand, silt, and clay particles), the discharge will not be allowed to leave the work site or discharge to a storm water conveyance system without sediment removal treatment. During dewatering operations, sediment laden water shall be pumped into an adequate sediment basin, approved by the engineer, in an upland area prior to discharge into a wetland or waterway.

C.5 Dewatering / Bypass Pumping Backup Equipment

Provide an additional dewatering pump and generator to remain on site for use as a backup in case either the primary pump or generator is not in good working condition.

Provide the engineer with 24-hour contact information for an individual who is responsible for operating the pumps.

A representative of the contractor shall be at the construction site during rain events in order to monitor temporary drainage during rain events. Contact the engineer immediately if temporary drainage measures are damaged or are insufficient to handle the volume of water.

D Measurement

The department will measure Maintaining Temporary Drainage as a single complete 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	Maintaining Temporary Drainage STA 70+00	LS
SPV.0105.02	Maintaining Temporary Drainage STA 135+00	LS
SPV.0105.03	Maintaining Temporary Drainage STA 146+50	LS
SPV.0105.04	Maintaining Temporary Drainage STA 213+79	LS
SPV.0105.18	Maintaining Temporary Drainage STA 47+39 CTH C	LS

Payment is full compensation for any common excavation needed for temporary pipe installation; for furnishing all pumping and dewatering operations; for furnishing all materials including (but not limited to) temporary culvert pipes, cofferdams, piling steel sheet temporary, polyethylene sheeting, and rock bags; for placement, replacement, and any moving of materials.

The table shown in the miscellaneous quantities section of the plan set is for information only and lists possible items and quantities needed to satisfy this special provision. Actual items and quantities used may vary. No contract modifications will be issued for this variation.

56. Removing Flashing Beacon and Pole, Item SPV.0105.05.

A Description

Work under this item shall consist of removing flashing beacon and pole and footing. The sign on the structure is paid for under a separate pay item, i.e Removing signs type II. See signing plans for location. This is the pole and beacon for the fire station warning sign located on USH 45 Southbound near 82nd street.

B (Vacant)

C Construction

Remove flashing beacon and pole and concrete footing, backfill the resulting holes, and dispose of all materials outside of the right-of-way according to standard spec 204.3 and 638.3. Concrete footing shall be removed to 2' below the existing ground. The reinforcement shall be cut off flush with the top of the concrete. The footing shall be then covered with topsoil and seeded. This is all incidental to Removing flashing beacon and pole. Contact WE Energies to disconnect the power prior to removal. Beacon and pole are property of the city by permit and are no longer required. Turn over the beacon and pole to the city.

D Measurement

The department will measure Removing Flashing Beacon and Pole as a single lump sum unit of work, in place and accepted.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.05	Removing Flashing Beacon and Pole	LS

Payment in full compensation for disassembling, removing, including concrete footings, backfilling, and disposal of all materials.

57. Install State Furnished Traffic Signal Cabinet, USH 45 and CTH WG, Item SPV.0105.06; USH 45 and CTH C, Item SPV.0105.07.

A Description

This special provision describes the installing of the state furnished Traffic Signal Cabinet for traffic signals.

B Materials

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

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

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

C Construction

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

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

D Measurement

The department will measure Install State Furnished Traffic Signal Cabinet USH 45 and CTH WG, USH 45 and CTH C, as a single lump sum unit of work in place and accepted.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.06	Install State Furnished Traffic Signal Cabinet USH 45 and CTH WG	LS
SPV.0105.07	Install State Furnished Traffic Signal Cabinet USH 45 and CTH C	LS

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

58. Transport Traffic Signal and Lighting Materials, USH 45 and CTH WG, Item SPV.0105.08; USH 45 and CTH C, Item SPV.0105.09.

A Description

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

B Materials

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

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

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

C Construction

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

D Measurement

The department will measure Transport Traffic Signal and Lighting Materials, USH 45 and CTH WG, USH 45 and CTH C, as a single lump sum unit of work, in place and accepted.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.08	Transport Traffic Signal and Lighting Materials USH 45 and CTH WG	LS
SPV.0105.09	Transport Traffic Signal and Lighting Materials USH 45 and CTH C	LS

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

59. Remove Loop Detector Wire and Lead-in Cable, USH 45 and CTH WG, Item SPV.0105.10; USH 45 and CTH C, Item SPV.0105.11.

A Description

This special provision describes removing loop detector wire and lead-in cable at the USH 45 and CTH WG, USH 45 and CTH C. Removal will be according to standard spec 204, as shown in the plans, and as hereinafter provided.

B (Vacant)**C Construction**

Notify the department's Electrical Field Unit at (414) 266-1170 at least five working days prior to the removal of the loop detector wire and lead-in cable.

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

D Measurement

The department will measure Remove Loop Detector Wire and Lead-in Cable as a single lump sum unit of work for each intersection, 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.0105.10	Remove Loop Detector Wire and Lead in Cable, USH 45 and CTH WG	LS
SPV.0105.11	Remove Loop Detector Wire and Lead in Cable, USH 45 and CTH C	LS

Payment is full compensation for removing, scrapping, and disposing of material and incidentals necessary to complete the contract work.

60. Remove Traffic Signals, USH 45 and CTH WG, Item SPV.0105.12; USH 45 and CTH C, Item SPV.0105.13.

A Description

This special provision describes removing existing traffic signals at the intersection of USH 45 and CTH WG and USH 45 and CTH C according to the pertinent provisions of standard spec 204 and as hereinafter provided. Specific removal items are noted in the plans.

B (Vacant)

C Construction

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

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

The department assumes that all equipment is in good condition and in working order prior to the contractor's removal operation. Prior to removal, inspect and provide a list of any damaged or non-working traffic signal equipment to the engineer. Any equipment not identified as damaged or not working, prior to removal, will be replaced by the contractor at no cost to the department.

Remove all standards and poles per plan from their concrete footings and disassemble out of traffic. Remove the transformer bases from each pole. Remove the signal heads, mast arms, luminaires, wiring/cabling, and traffic signal mounting devices from each signal standard, arm or pole. Ensure that all access hand hole doors and all associated hardware remain intact. Dispose of the underground signal cable, internal wires and street lighting cable off the state right-of-way. Deliver the remaining materials to the West Allis Electrical Service Facility at 935 South 60th Street, West Allis, Milwaukee County. Contact the department's Electrical Field Unit at (414) 266-1170 at least five working days prior to delivery to make arrangements.

Department forces will remove the signal cabinet from the footing. The signal cabinet and associated signal cabinet equipment will be removed from the site by department forces and will remain the property of the department.

D Measurement

The department will measure Remove Traffic Signals (Location) as a single lump sum unit of work for each intersection, 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.0105.12	Remove Traffic Signals USH 45 and CTH WG	LS
SPV.0105.13	Remove Traffic Signals USH 45 and CTH C	LS

Payment is full compensation for removing, disassembling traffic signals, scrapping of some materials, disposing of scrap material, for delivering the requested materials to the department, and incidentals necessary to complete the contract work.

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61. EVP Detector Head Installation, USH 45 and CTH WG, Item SPV.0105.14; USH 45 and CTH C, Item SPV.0105.15.

A Description

This special provision describes the transporting and installing of department furnished emergency vehicle preemption (EVP) detector heads and EVP detector head mounting brackets at USH 45 and CTH WG and USH 45 and CTH C.

B Materials

Use materials furnished by the department including: Emergency vehicle preemption (EVP) detector heads and EVP detector head mounting brackets.

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

C Construction

Install the EVP detector heads and EVP detector head mounting brackets as shown on the plans. The department will determine the exact location to ensure that the installation does not create a sight obstruction. The department will terminate the EVP cable ends and install the discriminators and card rack in the cabinet.

Notify the department's Electrical shop at (414) 266-1170 upon completion of the installation of the emergency vehicle preemption (EVP) detector heads and EVP detector head mounting brackets.

D Measurement

The department will measure (EVP) Detector Head Installation (Location) as a single lump sum unit of work in place and accepted.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.14	EVP Detector Head Installation, USH 45 and CTH WG	LS
SPV.0105.15	EVP Detector Head Installation, USH 45 and CTH C	LS

Payment is full compensation for transporting and installing of department furnished emergency vehicle preemption (EVP) detector heads and EVP detector head mounting brackets.

62. Transport and Install State Furnished Radar Detection System, USH 45 and CTH WG, Item SPV.0105.16.

A Description

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

B Materials

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

C Construction

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

Mark each end of the lead in the traffic signal cabinet and each cable in the monotube handhole to indicate the equipment label (i.e. RA1, RA2, etc.).

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

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

D Measurement

The department will measure Transport and Install State Furnished Radar Detection System as a single lump sum unit of work for each intersection, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.16	Transport and Install State Furnished Radar Detection System USH 45 and CTH WG	LS

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

63. Concrete Pavement Joints Layout, Item SPV.0105.17.**A Description**

This special provision describes providing a concrete pavement or concrete base joint layout design for intersections and marking the location of all joints in the field.

B (Vacant)**C Construction**

Plan and locate all points necessary to establish the horizontal position of the transverse and longitudinal joints in the concrete to prevent uncontrolled cracking. Submit a joint layout design to the engineer before paving each intersection. Mark the location of all concrete joints in the field. Follow the plan details for joints in concrete making adjustments as required to fit field conditions.

D Measurement

The department will measure Concrete Pavement Joints Layout as a single lump sum unit of work for all joint layout designs and marking, acceptably completed under the contract.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.17	Concrete Pavement Joints Layout	LS

Payment is full compensation for providing the intersection joint layout designs and marking all joints in the field.

64. Wall Modular Block Gravity LRFD, Item SPV.0165.01.**A Description**

This special provision describes designing, furnishing materials and erecting a permanent earth retention system according to the lines, dimension, elevations and details as shown on the plans and provided in the contract. The design life of the wall and all wall components shall be 75 years minimum.

B Materials

B.1 Proprietary Wall Systems

The supplied wall system must be from the department's approved list of Modular Block Gravity Wall systems (Modular Block Gravity Walls). Proprietary wall systems must conform to the requirements of this specification and be pre-approved for use by the department's Bureau of Structures. The name of the pre-approved proprietary wall system selected shall be furnished to the engineer within 25 days after the award of contract. The location of the plant manufacturing the facing units shall be furnished to the engineer at least 14 days prior to the project delivery.

The department maintains a list of pre-approved Modular Block Gravity Wall systems. To be eligible for use on this project, a system must have been pre-approved by the Bureau of Structures and added to that list prior to the bid opening date. To receive pre-approval, the retaining wall system must comply with all pertinent requirements of this provision and be prepared according to the requirements of Chapter 14 of the department's LRFD Bridge Manual. Information and assistance with the pre-approval process can be obtained by contacting the Bureau of Structures, Structures Maintenance Section in Room 601 of the Hill Farms State Transportation Building in Madison or by calling (608) 266-8494.

B.2 Design Requirements

It is the responsibility of the contractor to submit a design and supporting documentation as required by this special provision, for review and acceptance by the department, to show the proposed wall design is in compliance with the design specifications. The submittal shall include the following items for review: detailed plans and shop drawings, complete design calculations, explanatory notes, supporting materials, and specifications. The detailed plans and shop drawings shall include all details, dimensions, quantities and cross-sections necessary to construct the walls. Submit electronically to the engineer and Bureau of Structures for review and acceptance. Submit no later than 60 days from the date of notification to proceed with the project and a minimum of 30 days prior to the date proposed to begin wall construction.

The plans and shop drawings shall be prepared on reproducible sheets 11 inch x 17 inch, including borders. Each sheet shall have a title block in the lower right corner. The title block shall include the project identification number and structure number. Design calculations and notes shall be on 8 ½ inch x 11 inch sheets, and shall contain the project identification number, name or designation of the wall, date of preparation, initials of designer and checker, and page number at the top of the page. All plans, shop drawings, and calculations shall be signed, sealed and dated by a professional engineer licensed in the State of Wisconsin.

The design of the Modular Block Gravity Wall shall be in compliance with the *AASHTO LRFD Bridge Design Specifications 6th Edition 2012*, (AASHTO LRFD) with latest interim specifications for Mechanically Stabilized Earth Walls, WisDOT's current *Standard Specifications for Highway and Structure Construction* (standard spec), Chapter 14 of the WisDOT LRFD Bridge Manual and standard engineering design procedures as determined

by the department. Loads, load combinations, load and resistance factors shall be as specified in AASHTO LRFD Section 11. The associated resistance factors shall be defined according to Table 11.5.7-1 LRFD.

Design and construct the walls according to the lines, grades, heights and dimensions shown on the plans, as herein specified, and as directed by the engineer.

Walls shall be designed for a minimum live load surcharge of 100 psf according to Chapter 14 of the WisDOT LRFD Bridge Manual or as shown on the plans.

A maximum value of the angle of internal friction of the wall backfill material used for design shall be assumed to be 30 degrees without a certified report of tests. If a certified report of tests yields an angle of internal friction greater than 30 degrees, the larger test value may be used for design, up to a maximum value of 36 degrees.

An external stability check at critical wall stations showing Capacity Demand Ratio (CDR) for sliding, eccentricity, and bearing checks is provided by the department and are provided on the wall plans.

The design of the Modular Block Gravity Wall by the contractor shall consider the internal and compound stability of the wall mass according to AASHTO LRFD 11.10.6. Internal stability shall also be considered at each block level. Calculations for factored stresses and resistances shall be based upon assumed conditions at the end of the design life. The width of the modular block from front face to back face of the wall shall be included in the design computations and shown on the wall shop drawings. Compound stability shall be computed for the applicable strength limits. Sample analyses and hand calculations shall be submitted to verify the output of any software program used. The design calculations and notes shall clearly indicate the Capacity to Demand Ratios (CDR) for all internal and external stabilities as defined in AASHTO LRFD.

Facing units shall be designed according to AASHTO LRFD 11.10.2.3.

The minimum embedment of the wall shall be 1 foot 6 inches, or as given on the contract plan. Step the leveling pad to follow the general slope of the ground line. Frost depth shall not be considered in designing the wall for depth of leveling pad. Additional embedment may be detailed by the contractor, but will not be measured for payment.

The leveling pad shall be as wide as the proposed blocks plus 6-inches, with 6-inches of the leveling pad extending beyond the front face of the blocks.

Wall facing units shall be installed on concrete leveling pads or base aggregate leveling pad. The bottom row of blocks shall be horizontal and 100% of the block surface shall bear on the leveling pad.

The concrete leveling pad shall be as wide as the proposed blocks plus six inches, with six inches of the leveling pad extending beyond the front face of the blocks. The minimum thickness of the leveling pad shall be 6-inches. A concrete leveling pad is required for the following scenarios:

- a. When the wall height measured from the top of the leveling pad to the top of the wall exceeds 5 feet at any point along the entire wall length.
- b. A structure number has been assigned (such as R-XX-XXX), regardless of wall height.

A base aggregate leveling pad shall be used when a concrete leveling pad is not required. The base aggregate leveling pad shall be as wide as the blocks plus 12 inches, and the modular blocks shall be centered on the leveling pad. The minimum thickness of the leveling pad shall be 12-inches after compaction. The leveling pad shall be made from base aggregate dense 1¼-inch in conformance with standard spec 305.

B.3 Wall System Components

Materials furnished for wall system components under this contract shall conform to the requirements of this specification. All certifications related to material and components of the wall systems specified in this subsection shall be submitted to the engineer.

B.3.1 Wall Facing

Wall facing units shall consist of precast modular concrete blocks. All units shall incorporate a mechanism or devices that develop a mechanical connection between vertical block layers. Units that are cracked, chipped, or have other imperfections according to ASTM C1372, or have excessive efflorescence shall not be used within the wall. A single block type and style shall be used throughout each wall. The color and surface texture of the block shall be as given on the plan or chosen by the engineer.

The top course of facing units shall be a solid precast concrete unit designed to be compatible with the remainder of the wall unless a cast-in-place concrete cap is shown on the plans. The finishing course shall be bonded to the underlying facing units with a durable, high strength, flexible adhesive compound compatible with the block material. A formed cast-in-place concrete cap may also be used to finish the wall. A cap of this type shall be designed to have texture, color, and appearance that complement the remainder of the wall. The vertical dimension of the cap shall not be less than 3½ inches. Expansion joints shall be placed in the cap to correspond with each 24 inch change in vertical wall height and at maximum spacing of 10 feet.

Block dimensions may vary no more than ±1/8 inch from the standard values published by the manufacturer according to ASTM C1372. Blocks must have a minimum depth (front face to back face) of 8 inches. The minimum front face thickness of blocks shall be 4 inches measured perpendicular from the front face to inside voids greater than 4 square inches. The minimum allowed thickness of any other portions of the block is 1¾ inches. The front face of the blocks shall conform to plan requirements for color, texture, or patterns.

Cementitious materials and aggregates for modular blocks shall conform to the requirements of ASTM C1372 Section 4.1 and 4.2. Modular blocks shall meet the following requirements.

Test	Method	Requirement
Compressive Strength (psi)	ASTM C140	5000 min.
Water Absorption (%)	ASTM C140	6 max.
Freeze-Thaw Loss (%) 40 cycles, 5 of 5 samples 50 cycles, 4 of 5 samples	ASTM C1262 ^[1]	1.0 max. ^[2] 1.5 max. ^[2]

[1] Test shall be run using a 3% saline solution.

[2] Test results that meet either of the listed requirements for Freeze-Thaw Loss are acceptable.

All blocks shall be certified as to strength, absorption, and freeze-thaw requirements unless, due to contract changes after letting, certified blocks are not available when required. At the time of delivery of certified blocks, furnish the engineer a certified test report from a department-approved independent testing laboratory for each lot of modular blocks. The certified test report shall clearly identify the firm conducting the sampling and testing, the type of block, the date sampled, the name of the person who conducted the sampling, the represented lot, the number of blocks in the lot, and the specific test results for each of the stated requirements of this specification. The tests should have been conducted not more than 18 months prior to delivery. A lot shall not exceed 5000 blocks or fraction thereof produced in day. The certified test results will represent all blocks within the lot. Each pallet of blocks delivered shall bear lot identification information. Block lots that do not meet the requirements of this specification or blocks without supporting certified test reports will be rejected and shall be removed from the project at no expense to the department.

A department-approved independent testing laboratory shall control and conduct all modular block sampling and testing for certification. Prior to sampling, the manufacturer's representative shall identify all pallets of modular blocks contained in each lot. All pallets of blocks within the lot shall be numbered and marked to facilitate random sample selection. The representative of the independent testing laboratory shall identify five pallets of blocks by random numbers and shall then select one block from each of these pallets. Solid blocks used as a finishing or top course shall not be selected. The selected blocks shall remain under the control of the person who conducted the sampling until shipped or delivered to the testing laboratory. All pallets of blocks within a lot shall be strapped or wrapped to secure the contents and tagged or marked for identification. The engineer will reject any pallet of blocks delivered to the project without intact security measures. At no expense to the department, the contractor shall remove all rejected blocks from the project.

The department may conduct testing of certified or non-certified modular blocks lots delivered to the project. The department will not conduct freeze-thaw testing on blocks less than 45 days old. If a random sample of five blocks of any lot tested by the department fails to meet any of the requirements of this specification (nonconforming), the contractor shall remove from the project site all blocks from the failed lot not installed in the finished work at no cost to the department, unless the engineer allows otherwise. Nonconforming blocks installed in the finished work will be considered approved by the department as stated in

standard spec 106.5(2) and any adjustment to the contract price will not exceed the price of the blocks charged by the supplier.

Wall facing units may consist of precast modular concrete blocks produced by a wet cast process. The concrete blocks shall have a minimum strength of 4000 psi at 28 days. The concrete for the blocks shall be air entrained, with an air content of 6% +/- 1.5%. All materials for the concrete mixture for the blocks shall meet the requirements of standard spec 501. Wall facing units produced by a wet cast process need not be certified as to absorption and freeze-thaw requirements.

B.3.2 Backfill

Furnish and place backfill for Modular Block Gravity Walls as shown on the plans and as hereinafter provided.

Wall Backfill, Type A, shall comply with the requirements for Coarse Aggregate No. 1 as given in standard spec 501.2.5.4.4. All backfill placed within a zone from the top of the leveling pad to the top of the final layer of wall facing units and within 1 foot behind the back face of the wall shall be Wall Backfill, Type A. This includes all material used to fill openings in the wall facing units.

Backfill placed between retained soil and Type A backfill shall comply with the requirements for Grade 1 Granular Backfill as contained in standard spec 209.2.2. Wall Backfill, Type A, may be used as retained backfill.

B.3.3 Miscellaneous

If plans show sections of cast in place concrete cap or coping, use poured concrete Grade A, A-FA, A-S, A-T, A-IS, A-IP or A-IT concrete conforming to standard spec 501 as modified in standard spec 716. Provide QMP for cast in place cap and coping concrete as specified in standard spec 716, Class II Concrete.

Use a wall leveling pad that consists of poured concrete, Grade A, A-FA, A-S, A-T, A-IS, A-IP, or A-IT concrete conforming to standard spec 501 as modified in standard spec 716. Provide QMP for leveling pad concrete as specified in standard spec 716, Class III Concrete.

If pins are used to align modular block facing units, they shall consist of a non-degrading polymer, or hot dipping galvanized steel and be made for the express use with the modular block units supplied, to develop mechanical interlock between facing unit block layers. Connecting pins shall be capable of holding the wall in the proper position during backfilling. Furnish documentation that establishes and substantiates the design life of such devices.

C Construction

C.1 Excavation and Backfill

Excavation and preparation of the foundation for the Modular Block Gravity Wall and the leveling pad shall be according to standard spec 206. At the end of each working day, provide good temporary drainage such that the backfill shall not become contaminated with

run-off soil or water if it should rain. Do not stockpile or store materials or large equipment within 10 feet of the back of the wall.

Place backfill materials in the areas as indicated on the plans and as detailed in this specification. Backfill lifts shall be no more than 8-inches in depth. Backfilling shall closely follow erection of each course of wall facing units.

Conduct backfilling operations in such a manner as to prevent damage or misalignment of the wall facing units or other wall components. At no expense to the department, correct any such damage or misalignment as directed by the engineer. A field representative of the wall supplier shall be available during wall construction to provide technical assistance to the contractor and the engineer.

Do not operate tracked or wheeled equipment on the backfill within 3 feet from the back face of modular blocks. The engineer may order the removal of any large or heavy equipment that may cause damage or misalignment of the wall facing units.

C.2 Compaction

Compact wall backfill Type A with at least three passes of lightweight manually operated compaction equipment acceptable to the engineer.

Ensure adequate moisture is present in the backfill during placement and compaction to prevent segregation and to help achieve compaction.

Compaction of backfill within 3 feet of the back face of the wall should be accomplished using lightweight compaction devices. Use of heavy compaction equipment or vehicles should be avoided within 3 feet of the modular blocks.

C.3 Wall Components

Erect wall facing units and other associated elements according to the wall manufacturer's construction guide and to the lines, elevations, batter, and tolerances as shown on the plans. Center the initial layer of facing units on the leveling pad; then level them and properly align them. Fill formed voids or openings in the facing units with wall backfill, Type A. Remove all debris on the top of each layer of facing units, before placing the next layer of facing units.

Install all pins, rods, clips, or other devices used to develop mechanical interlock between facing unit layers according to the manufacturer's directions.

C.4 Geotechnical Information

Geotechnical data to be used in the design of the wall is given on the wall plan. After completing wall excavation, notify the department and allow the Regional Soils Engineer two working days to review the foundation.

D Measurement

The department will measure Wall Modular Block Gravity LRFD by the square foot, acceptably completed, measured as the vertical area within the pay limits the contract plans show. Unless the engineer directs in writing, a change to the limits indicated on the contract plan, wall area constructed above or below these limits will not be measured for payment.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0165.01	Wall Modular Block Gravity LRFD	SF

Payment is full compensation for supplying a design and shop drawings; preparing the site, including all necessary excavation and disposal of materials; supplying all necessary wall components to produce a functional wall system including cap, copings and leveling pad; constructing the retaining system including drainage system; providing backfill, backfilling, compacting, developing/completing/documenting the quality management program, and for performing compaction testing.

Parapets, railings, and other items above the wall cap or coping will be paid for separately. Vehicle barrier and its support will be paid separately.

Any required topsoil, fertilizer, seeding or sodding and mulch will be paid for at the contract unit price of topsoil, fertilizer, seeding or sodding and mulch, respectively.
(20150824)

65. Wall Modular Block Mechanically Stabilized Earth LRFD/QMP, Item SPV.0165.02.

A Description

This special provision describes designing, furnishing materials and erecting a permanent earth retention system according to the lines, dimension, elevations and details as shown on the plans and provided in the contract. The design life of the wall and all wall components shall be 75 years minimum.

This special provision describes the quality management program (QMP) for Mechanically Stabilized Earth (MSE) walls. A quality management program is defined as all activities, including process control, inspection, sampling and testing, and necessary adjustments in the process that are related to the construction of the MSE wall, which meets all the requirements of this provision.

This special provision describes contractor quality control (QC) sampling and testing for backfill density testing, documenting those results, and documenting related production and placement process changes. This special provision also describes department quality verification (QV), independent assurance (IA), and dispute resolution.

Chapter 8 of the department's construction and materials manual (CMM) provides additional detailed guidance for QMP work and describes sampling and testing procedures. The contractor may obtain the CMM from the department's web site at:

<http://roadwaystandards.dot.wi.gov/standards/cmm/index.htm>

B Materials

B.1 Proprietary Wall Systems

The supplied wall system must be from the department's approved list of Modular Block Mechanically Stabilized Earth Wall systems (Modular Block MSE Walls). Proprietary wall systems must conform to the requirements of this specification and be pre-approved for use by the department's Bureau of Structures. The name of the pre-approved proprietary wall system selected shall be furnished to the engineer within 25 days after the award of contract. The location of the plant manufacturing the facing units shall be furnished to the engineer at least 14 days prior to the project delivery.

The department maintains a list of pre-approved Modular Block MSE Wall systems. To be eligible for use on this project, a system must have been pre-approved by the department's Bureau of Structures and added to that list prior to the bid opening date. To receive pre-approval, the retaining wall system must comply with all pertinent requirements of this provision and be prepared according to the requirements of Chapter 14 of the department's LRFD Bridge Manual. Information and assistance with the pre-approval process can be obtained by contacting the Bureau of Structures, Structures Maintenance Section in Room 601 of the Hill Farms State Transportation Building in Madison or by calling (608) 266-8494.

B.2 Design Requirements

It is the responsibility of the contractor to submit a design and supporting documentation as required by this special provision, for review and acceptance by the department, to show the proposed wall design is in compliance with the design specifications. The submittal shall include the following items for review: detailed plans and shop drawings, complete design calculations, explanatory notes, supporting materials, and specifications. The detailed plans and shop drawings shall include all details, dimensions, quantities and cross-sections necessary to construct the walls. Submit electronically to the engineer and Bureau of Structures for review and acceptance. Submit no later than 60 days from the date of notification to proceed with the project and a minimum of 30 days prior to the date proposed to begin wall construction.

The plans and shop drawings shall be prepared on reproducible sheets 11 inch x 17 inch, including borders. Each sheet shall have a title block in the lower right corner. The title block shall include the project identification number and structure number. Design calculations and notes shall be on 8 ½ inch x 11 inch sheets, and shall contain the project identification number, name or designation of the wall, date of preparation, initials of designer and checker, and page number at the top of the page. All plans, shop drawings, and calculations shall be signed, sealed and dated by a professional engineer licensed in the State of Wisconsin.

The design of the Modular Block MSE Wall shall be in compliance with the *AASHTO LRFD Bridge Design Specifications 6th Edition 2012*, (AASHTO LRFD) with latest interim specifications for Mechanically Stabilized Earth Walls, WisDOT's current *Standard Specifications for Highway and Structure Construction* (standard spec), Chapter 14 of the WisDOT LRFD Bridge Manual and standard engineering design procedures as determined by the department. Loads, load combinations, load and resistance factors shall be as specified in AASHTO LRFD Section 11. The associated resistance factors shall be defined according to Table 11.5.7-1 LRFD.

Design and construct the walls according to the lines, grades, heights and dimensions shown on the plans, as herein specified, and as directed by the engineer.

Walls parallel to supporting highway traffic shall be designed for the effects of highway surcharge loading equivalent of 2 feet soil surcharge weight or 240 psf. The design shall also consider the traffic barrier impact where applicable. Walls that do not carry highway traffic shall be designed for a live load surcharge of 100 psf according to Chapter 14 of the WisDOT LRFD Bridge Manual or as stated on the plans.

A maximum value of the angle of internal friction of the wall backfill material used for design shall be assumed to be 30 degrees without a certified report of tests. If a certified report of tests yields an angle of internal friction greater than 30 degrees, the larger test value may be used for design, up to a maximum value of 36 degrees.

An external stability check at critical wall stations showing Capacity Demand Ratio (CDR) for sliding, eccentricity, and bearing checks is provided by the department and are provided on the wall plans.

The design of the Modular Block MSE Wall by the contractor shall consider the internal and compound stability of the wall mass according to AASHTO LRFD 11.10.6. The internal stability shall include soil reinforcement pullout, soil reinforcement rupture, and wall facing-reinforcement connection failure at each soil reinforcement level. The design shall be performed using the Simplified Method or Coherent Gravity Method. Calculations for factored stresses and resistances shall be based upon assumed conditions at the end of the design life. Compound stability shall be computed for the applicable strength limits. Sample analyses and hand calculations shall be submitted to verify the output of any software program used. The design calculations and notes shall clearly indicate the Capacity to Demand Ratios (CDR) for all internal and external stabilities as defined in AASHTO LRFD.

Facing units shall be designed according to AASHTO LRFD 11.10.2.3.

The minimum length of soil reinforcement measured from the back face of the wall shall be equal to 0.7 of the wall height, or as shown on the plan. In no case shall this length be less than 6.0 feet. The soil reinforcement length shall be the same from the bottom to the top of the wall. All soil reinforcement layers shall be connected to facings. The soil reinforcement shall extend a minimum of 3.0 feet beyond the theoretical failure plane in all cases. The maximum vertical spacing of soil reinforcement layers shall be two times the block depth

(front face to back face) or 32 inches, whichever is less. The first (bottom) layer of reinforcement shall be placed no further than 12 inches above the top of the leveling pad or the height of the block, but at least one block height above the leveling pad. The last (top) layer of soil reinforcement shall be no further than 21 inches below the top of the uppermost block.

All soil reinforcement required for the reinforced soil zone shall be connected to the wall facing.

Soil reinforcement shall be fabricated or designed to avoid piling, drainage structures or other obstacles in the fill without field modifications. Unless approved by the Bureau of Structures cutting or altering of the basic structural section of either the strip or grid at the site is prohibited, a minimum clearance of 3" shall be maintained between any obstruction and reinforcement, and splicing reinforcement is not allowed.

The minimum embedment of the MSE wall shall be 1 foot 6 inches, or as given on the contract plan. Step the leveling pad to follow the general slope of the ground line. Frost depth shall not be considered in designing the wall for depth of leveling pad. Additional embedment may be detailed by the contractor, but will not be measured for payment.

Wall facing units shall be installed on concrete leveling pads. The leveling pad shall be as wide as the proposed blocks or a minimum of 12 inches, whichever is greater. The minimum thickness of the leveling pad shall be 6-inches. The bottom row of blocks shall be horizontal and 100% of the block surface shall bear on the leveling pad.

For walls that are less than or equal to 5 feet in height and do not have a wall number assigned to them, a compacted 1 foot deep by 2 foot wide leveling pad made from base aggregate dense 1¼-inch in conformance with standard spec 305 may be used.

B.3 Wall System Components

Materials furnished for wall system components under this contract shall conform to the requirements of this specification. All certifications related to material and components of the wall systems specified in this subsection shall be submitted to the engineer.

B.3.1 Wall Facing

Wall facing shall consist of precast modular concrete blocks. All units shall incorporate a mechanism or devices that develop a mechanical connection between vertical block layers. Units that are cracked, chipped, or have other imperfections according to ASTM C1372, or have excessive efflorescence shall not be used within the wall. A single block type and style shall be used throughout each wall. The color and surface texture of the block shall be as given on the plan or chosen by the engineer.

The top course of facing units shall be a solid precast concrete unit designed to be compatible with the remainder of the wall unless a cast-in-place concrete cap is shown on the plans. The finishing course shall be bonded to the underlying facing units with a durable, high strength, flexible adhesive compound compatible with the block material. A formed cast-in-place

concrete cap may also be used to finish the wall. A cap of this type shall be designed to have texture, color, and appearance that complement the remainder of the wall. The vertical dimension of the cap shall not be less than 3½ inches. Expansion joints shall be placed in the cap to correspond with each 24 inch change in vertical wall height and at maximum spacing of 10 feet. Concrete for all cast-in-place caps shall be Grade A and shall conform to the requirements of standard spec 501.

Block dimensions may vary no more than ±1/8 inch from the standard values published by the manufacturer according to ASTM C1372. Blocks must have a minimum depth (front face to back face) of 12 inches. The minimum front face thickness of blocks shall be 4 inches measured perpendicular from the front face to inside voids greater than 4 square inches. The minimum allowed thickness of any other portions of the block is 1¾ inches. The front face of the blocks shall conform to plan requirements for color, texture, or patterns.

Cementitious materials and aggregates for modular blocks shall conform to the requirements of ASTM C1372 Section 4.1 and 4.2. Modular blocks shall meet the following requirements.

Test	Method	Requirement
Compressive Strength (psi)	ASTM C140	5000 min.
Water Absorption (%)	ASTM C140	6 max.
Freeze-Thaw Loss (%) 40 cycles, 5 of 5 samples 50 cycles, 4 of 5 samples	ASTM C1262 ^[1]	1.0 max. ^[2] 1.5 max. ^[2]

[1] Test shall be run using a 3% saline solution.

[2] Test results that meet either of the listed requirements for Freeze-Thaw Loss are acceptable.

All blocks shall be certified as to strength, absorption, and freeze-thaw requirements unless, due to contract changes after letting, certified blocks are not available when required. At the time of delivery of certified blocks, furnish the engineer a certified test report from a department-approved independent testing laboratory for each lot of modular blocks. The certified test report shall clearly identify the firm conducting the sampling and testing, the type of block, the date sampled, the name of the person who conducted the sampling, the represented lot, the number of blocks in the lot, and the specific test results for each of the stated requirements of this specification. The tests should have been conducted not more than 18 months prior to delivery. A lot shall not exceed 5000 blocks or fraction thereof produced in day. The certified test results will represent all blocks within the lot. Each pallet of blocks delivered shall bear lot identification information. Block lots that do not meet the requirements of this specification or blocks without supporting certified test reports will be rejected and shall be removed from the project at no expense to the department. A department-approved independent testing laboratory shall control and conduct all modular block sampling and testing for certification. Prior to sampling, the manufacturer's representative shall identify all pallets of modular blocks contained in each lot. All pallets of blocks within the lot shall be numbered and marked to facilitate random sample selection.

The representative of the independent testing laboratory shall identify five pallets of blocks by random numbers and shall then select one block from each of these pallets. Solid blocks used as a finishing or top course shall not be selected. The selected blocks shall remain under

the control of the person who conducted the sampling until shipped or delivered to the testing laboratory. All pallets of blocks within a lot shall be strapped or wrapped to secure the contents and tagged or marked for identification. The engineer will reject any pallet of blocks delivered to the project without intact security measures. At no expense to the department, the contractor shall remove all rejected blocks from the project.

The department may conduct testing of certified or non-certified modular blocks lots delivered to the project. The department will not conduct freeze-thaw testing on blocks less than 45 days old. If a random sample of five blocks of any lot tested by the department fails to meet any of the requirements of this specification (nonconforming), the contractor shall remove from the project site all blocks from the failed lot not installed in the finished work at no cost to the department, unless the engineer allows otherwise. Nonconforming blocks installed in the finished work will be considered approved by the department as stated in standard spec 106.5(2) and any adjustment to the contract price will not exceed the price of the blocks charged by the supplier.

Wall facing units may consist of precast modular concrete blocks produced by a wet cast process. The concrete blocks shall have a minimum strength of 4000 psi at 28 days. The concrete for the blocks shall be air entrained, with an air content of 6% +/- 1.5%. All materials for the concrete mixture for the blocks shall meet the requirements standard spec 501. Wall facing units produced by a wet cast process need not be certified as to absorption and freeze-thaw requirements.

B.3.2 Backfill

Furnish and place backfill for Modular Block MSE Walls as shown on the plans and as hereinafter provided.

Wall Backfill, Type A, shall comply with the requirements for Coarse Aggregate No. 1 as given in standard spec 501.2.5.4.4. All backfill placed within a zone from the top of the leveling pad to the top of the final layer of wall facing units and within 1 foot behind the back face of the wall shall be Wall Backfill, Type A. This includes all material used to fill openings in the wall facing units.

Wall Backfill, Type B, shall be placed in a zone extending horizontally from 1 foot behind the back face of the wall to 1 foot beyond the end of the reinforcement and extending vertically from the top of the leveling pad to a minimum of 3 inches above the final reinforcement layer.

Use natural sand or a mixture of sand with gravel, crushed gravel or crushed stone. Do not use foundry sand, bottom ash, blast furnace slag, crushed/recycled concrete, crushed/milled asphaltic concrete or other potentially corrosive material.

Provide material conforming to the following gradation requirements as per AASHTO T27.

Sieve Size	% by Weight Passing
1 inch	100
No. 40	0 - 60
No. 200	0 - 15

The material shall have a liquid limit not greater than 25, as per AASHTO T89, and a plasticity index not greater than 6, as per AASHTO T90. Provide the percent by weight, passing the #4 sieve.

In addition, backfill material Type A and Type B shall meet the following requirements.

Test	Method	Value
pH	AASHTO T-289	4.5-9.0
Sulfate content ^[1]	AASHTO T-290	200 ppm max.
Chloride content ^[1]	AASHTO T-291	100 ppm max.
Electrical Resistivity	AASHTO T-288	3000 ohm-cm min.
Organic Content ^[1]	AASHTO T-267	1.0% max.
Angle of Internal Friction	AASHTO T-236*	30 degrees min. (At 95.0% of maximum density and optimum moisture, per AASHTO T99, or as modified by C.1)

[1] Requirement does not apply to walls with non-metallic reinforcement.

*If the amount of P-4 material is greater than 60%, use AASHTO 236 with a standard-size shear box. Test results of this method may allow the use of larger angles of internal friction, up to the maximum allowed by this specification.

If the amount of P-4 material is less than or equal to 60%, two options are available to determine the angle of internal friction. The first method is to perform a fractured faces count, per ASTM 5821, on the R-4 material. If more than 90% of the material is fractured on one face and more than 50% is fractured on two faces, the material meets the specifications and the angle of internal friction can be assumed to be 30 degrees. The second method allows testing all P-1" material, as per AASHTO T-236, with a large shear box. Test results of this second method may allow the use of larger angles of internal friction, up to the maximum allowed by this specification.

Prior to placement of the backfill, obtain and furnish to the engineer a certified report of test results that the backfill material complies with the requirements of this specification. Specify the method used to determine the angle of internal friction. This certified report of test shall be less than 6 months old. Tests will be performed by a certified independent laboratory. In addition, when backfill characteristics and/or sources change, provide a certified report of tests for the new backfill material. Additional certified report of tests (except Angle of Internal Friction test), are also required. These additional backfill tests may be completed at the time of material production or material placement, with concurrence of the engineer. If

this additional testing is completed at the time of material production, complete testing for every 2000 cubic yards of backfill or portion thereof. If this additional testing is completed at the time of material placement, complete testing for every 2000 cubic yards of backfill, or portion thereof, used per wall. All certified report of test results shall be less than 6 months old and performed by a certified independent laboratory.

B.3.3 Soil Reinforcement

B.3.3.1 Geogrids

Geogrid supplied as reinforcing members shall be manufactured from long chain polymers limited to polypropylene, high-density polyethylene, polyaramid, and polyester. Geogrids shall form a uniform rectangular grid of bonded, formed, or fused polymer tensile strands crossing with a nominal right angle orientation. The minimum grid aperture shall be 0.5 inch. The geogrid shall maintain dimension stability during handling, placing, and installation. The geogrid shall be insect, rodent, mildew, and rot resistant. The geogrid shall be furnished in a protective wrapping that shall prevent exposure to ultraviolet radiation and damage from shipping or handling. The geogrid shall be kept dry until installed. Each roll shall be clearly marked to identify the material contained.

The wall supplier shall provide the nominal long-term design strength (T_{al}) and nominal long-term connection strength, T_{alc} as discussed below.

Nominal Long-Term Design Strength (T_{al})

The wall supplier shall supply the nominal long-term design strength (T_{al}) used in the design for each reinforcement layer and shall be determined by dividing the Ultimate Tensile Strength (T_{ult}) by the factors RF_{ID} , RF_{CR} , RF_D .

Hence,

$$T_{al} = \frac{T_{ult}}{RF_{ID} \times RF_{CR} \times RF_D}$$

where:

- | | |
|-------------|---|
| T_{ult} = | Ultimate tensile strength of the reinforcement determined from wide width tensile tests (ASTM D6637) for geogrids based on the minimum average roll value (MARV) for the product. |
| RF_{ID} = | Strength reduction factor to account for installation damage to the reinforcement. In no case shall RF_{ID} be less than 1.1. |
| RF_{CR} = | Strength reduction factor to prevent long-term creep rupture of the reinforcement. In no case shall RF_{CR} be less than 1.2. |
| RF_D = | Strength reduction factor to prevent rupture of the reinforcement due to chemical and biological degradation. In no case shall RF_D be less than 1.1. |

Values for RF_{ID} , RF_{CR} , and RF_D shall be determined from product specific test results. Guidelines for determining RF_{ID} , RF_{CR} , and RF_D from product specific data are provided in FHWA Publication No. FHWA-NHI-10-024 and FHWA-NHI-10-025 “Design and Construction of Mechanically Stabilized Earth Walls and Reinforced Soil Slopes”.

Nominal Long-term Connection Strength T_{ac}

The nominal long term connection strength, T_{ac} , shall be based on laboratory geogrid connection tests between wall facing and geogrids. T_{ac} shall be as given below

$$T_{ac} = \frac{T_{ult} * CR_{cr}}{RF_D}$$

where:

- T_{ac} = Nominal long-term reinforcement facing connection strength per unit reinforcement width at a specified confining pressure.
- T_{ult} = Ultimate tensile strength of the reinforcement for geogrids defined as the minimum average roll value (MARV) for the product.
- CR_{cr} = Long term connection strength reduction factor to account for reduced ultimate strength resulting from connection.
- RF_D = Strength reduction factor to prevent rupture of the reinforcement due to chemical and biological degradation.

T_{ac} shall be developed from the tests conducted by an independent laboratory on the same facing blocks and geogrids as proposed for the wall and shall cover a range of overburden pressures comparable to those anticipated in the proposed wall. The connection strength reduction factor CR_{cr} shall be determined according to long-term connection test as described in Appendix B of FHWA Publication No. FHWA-NHI 10-025 “Design and Construction of Mechanically Stabilized Earth Walls and Reinforced Soil Slopes”. CR_{cr} may also be obtained from the short term connection test meeting the requirements of NCMA test method SRWU-1 in Simac et al 1993 or ASTM D4884.

The contractor shall provide a manufacturer’s certificate that the T_{ult} (MARV) of the supplied geogrid has been determined according to ASTM D4595 or ASTM D6637 as appropriate. Contractor shall also provide block to block and block to reinforcement connection test reports prepared and certified by an independent laboratory. Also provide calculations according to AASHTO LRFD, and using the results of laboratory tests, that the block-geogrid connections shall be capable of resisting 100% of the maximum tension load in the soil reinforcements at any level within the wall, for the design life of the wall system.

B.3.3.2 Galvanized Metal Reinforcement

In lieu of polymeric geogrid earth reinforcement, galvanized metal reinforcement may be used. Design and materials shall be according to Section 11.10.6.4.2 of the current AASHTO LRFD Specifications. The design life of steel soil reinforcements shall also comply with AASHTO LRFD. Steel soil reinforcement shall be prefabricated into single or multiple elements before galvanizing.

B.3.4 Miscellaneous

For cast in place concrete cap or coping, use poured concrete Grade A, A-FA, A-S, A-T, A-IS, A-IP or A-IT concrete conforming to standard spec 501 as modified in standard spec 716. Provide QMP for cast in place cap and coping concrete as specified in standard spec 716, Class II Concrete.

Use a wall leveling pad that consists of poured concrete, Grade A, A-FA, A-S, A-T, A-IS, A-IP, or A-IT concrete conforming to standard spec 501 as modified in standard spec 716. Provide QMP for leveling pad concrete as specified in standard spec 716, Class III Concrete.

If pins are used to align modular block facing units, they shall consist of a non-degrading polymer, or hot dipping galvanized steel and be made for the express use with the modular block units supplied, to develop mechanical interlock between facing unit block layers. Connecting pins shall be capable of holding the geogrid in the proper position during backfilling. Furnish documentation that establishes and substantiates the design life of such devices.

C Construction

C.1 Excavation and Backfill

Excavation and preparation of the foundation for the MSE wall and the leveling pad shall be according to standard spec 206. The volume of excavation covered is limited to the width of the reinforced mass and to the depth of the leveling pad unless shown or noted otherwise on the plan. At the end of each working day, provide good temporary drainage such that the backfill shall not become contaminated with run-off soil or water if it should rain. Do not stockpile or store materials or large equipment within 10 feet of the back of the wall.

Place backfill materials in the areas as indicated on the plans and as detailed in this specification. Backfill lifts shall be no more than 8-inches in depth. Backfilling shall closely follow erection of each course of wall facing units.

Conduct backfilling operations in such a manner as to prevent damage or misalignment of the wall facing units, soil reinforcement, or other wall components. At no expense to the department, correct any such damage or misalignment as directed by the engineer. A field representative of the wall supplier shall be available during wall construction to provide technical assistance to the contractor and the engineer.

Place and compact the MSE backfill to the level of the next higher layer of MSE reinforcement before placing the MSE reinforcement or connecting it to the wall facing. The MSE reinforcement shall lay horizontally on top of the most recently placed and compacted layer of MSE backfill.

Do not operate tracked or wheeled equipment on the backfill within 3 feet from the back face of modular blocks. The engineer may order the removal of any large or heavy equipment that may cause damage or misalignment of the wall facing units.

C.2 Compaction

Compact wall backfill Type A with at least three passes of lightweight manually operated compaction equipment acceptable to the engineer.

Compact all backfill Type B as specified in standard spec 207.3.6. Compact the backfill Type B to 95.0% of maximum dry density as determined by AASHTO T-99 (modified to compute densities to the nearest 0.1 pcf), or as modified as follows. If the gradation of the granular backfill is such that the P-200 material is less than 7% and the P-40 is less than 30%, a one-point Proctor test can be conducted in place of the 5-point Proctor. To complete this one-point test, compact the sample at a moisture content of 6%, then compute the actual (as-tested) sample moisture after completion of the test. Use Method B or D, and perform this test without removing oversize particles and without correction for coarse particles, as per AASHTO T224. The one-point as-tested moisture content represents the optimum moisture, and the measured one-point density represents the maximum wet density of the material. From these values, the maximum dry density can be computed.

Ensure adequate moisture is present in the backfill during placement and compaction to prevent segregation and to help achieve compaction.

Compaction of backfill within 3 feet of the back face of the wall should be accomplished using lightweight compaction devices. Use of heavy compaction equipment or vehicles should be avoided within 3 feet of the modular blocks.

A minimum of 6 inches of backfill shall be placed over the MSE reinforcement prior to working above the reinforcement.

C.3 Wall Components

C.3.1 General

Erect wall facing units and other associated elements according to the wall manufacturer's construction guide and to the lines, elevations, batter, and tolerances as shown on the plans. Center the initial layer of facing units on the leveling pad; then level them and properly align them. Fill formed voids or openings in the facing units with wall backfill, Type A. Remove all debris on the top of each layer of facing units, before placing the next layer of facing units.

Install all pins, rods, clips, or other devices used to develop mechanical interlock between facing unit layers according to the manufacturer's directions.

The MSE reinforcement shall lay horizontally on the top of the most recently placed and compacted layer of MSE backfill. Bending of MSE reinforcement that result in a kink in the reinforcement shall not be allowed. If skewing of the reinforcement is required due to obstructions in the reinforced fill, the maximum skew angle shall not exceed 15 degrees from the normal position unless a greater angle is shown on the plans. The adequacy of the skewed reinforcement in such a case shall be addressed by supporting calculations.

C.3.2 Soil Reinforcement

C.3.2.1 Geogrid Layers

Place soil reinforcement at the positions and to the lengths as indicated on the accepted shop drawings. Take care that backfill placement over the positioned soil reinforcement elements does not cause damage or misalignment of these elements. Correct any such damage or misalignment as directed by the engineer. Do not operate wheeled or tracked equipment directly on the soil reinforcement. A minimum cover of 6 inches is required before such operation is allowed.

Place and anchor geogrid material between wall unit layers in the same manner as used to determine the Geogrid Block-to-Connection Strength. Place the grid material so that the machine direction of the grid is perpendicular to the wall face. Each grid layer shall be continuous throughout the lengths indicated on the plans. Join grid strips with straps, rings, hooks or other mechanical devices to prevent movement during backfilling operations. Prior to placing backfill on the grid, pull the grid taut and hold in position with pins, stakes or other methods approved by the engineer.

C.3.2.2 Steel Layers

Place the steel reinforcement full width in one piece as shown on the plans. No splicing will be allowed. Maintain elements in position during backfilling.

C.4 Quality Management Program

C.4.1 Quality Control Plan

Submit a comprehensive written quality control plan to the engineer at or before the pre-construction meeting. Do not perform MSE wall construction work before the engineer reviews and accepts the plan. Construct the project as the plan provides.

Do not change the quality control plan without the engineer's review and acceptance. Update the plan with changes as they become effective. Provide a current copy of the plan to the engineer and post in the contractor's laboratory as changes are adopted. Ensure that the plan provides the following elements:

1. An organizational chart with names, telephone numbers, current certifications and/or titles, and roles and responsibilities of QC personnel.
2. The process used to disseminate QC information and corrective action efforts to the appropriate persons. Include a list of recipients, the communication process that will be used, and action time frames.

3. A list of source locations, section and quarter descriptions, for all aggregate materials requiring QC testing.
4. Descriptions of stockpiling and hauling methods.
5. An outline for resolving a process control problem. Include responsible personnel, required documentation, and appropriate communication steps.
6. Location of the QC laboratory, retained sample storage, and other documentation.
7. A summary of the locations and calculated quantities to be tested under this provision.
8. A proposed sequencing plan of wall construction operations and random test locations.

C.4.2 Quality Control Personnel

Perform the quality control sampling, testing, and documentation required under this provision using HTCP certified technicians. Have a HTCP Grading Technician I (GRADINGTEC-I); or Assistant Certified Technician, Grading (ACT-GRADING); or Aggregate Technician I (AGGTEC-I); or Assistant Certified Technician, Aggregate (ACT-AGG) present at the each grading site during all wall backfill placement, compaction, and nuclear testing activities. Have a HTCP Nuclear Density Technician I (NUCDENSITYTEC-I) or Assistant Certified Technician, Nuclear Density (ACT-NUC) perform field density and field moisture content testing.

If an Assistant Certified Technician (ACT) is performing sampling or testing, a certified technician must coordinate and take responsibility for the work an ACT performs. Have a certified technician ensure that all sampling and testing is performed correctly, analyze test results, and post resulting data. No more than one ACT can work under a single certified technician.

C.4.3 Equipment

Furnish the necessary equipment and supplies for performing quality control testing. Ensure that all testing equipment conforms to the equipment specifications applicable to the required testing methods. The engineer may inspect the measuring and testing devices to confirm both calibration and condition. Calibrate all testing equipment according to the CMM and maintain a calibration record at the laboratory.

Furnish nuclear gauges from the department's approved product list at <http://www.atwoodsystems.com/materials>. Ensure that the gauge manufacturer or an approved calibration service calibrates the gauge the same calendar year it is used on the project. Retain a copy of the calibration certificate with the gauge.

Conform to ASTM D 6938 and CMM 8.15 for density testing and gauge monitoring methods. Perform nuclear gauge measurements using gamma radiation in the backscatter or direct transmission position. Perform each test for 4 minutes of nuclear gauge count time.

Split each Proctor sample and identify so as to provide comparison with the department's test results. Unless the engineer directs otherwise, retain the QC split samples for 14 calendar days and promptly deliver the department's split samples to the department

C.4.4 Documentation

- (1) Document all observations, inspection records, and process adjustments daily. Submit test results to the department's project materials coordinator on the same day they become available.
- (2) Use forms provided in CMM chapter 8. Note other information in a permanent field record and as a part of process control documentation enumerated in the contractor's quality control plan. Enter data into the applicable materials reporting system (MRS) software within 5 business days after results are available.
- (3) Submit final testing records and other documentation to the engineer electronically within 10 business days after all contract-required information becomes available. The engineer may allow submission of scanned copies of hand-written documentation.

C.4.5 Quality Control (QC) Testing

Perform compaction testing on the backfill. Conform to CMM 8.15 for testing and gauge monitoring methods. Conduct testing at a minimum frequency of 1 test per 150 cubic yards of backfill, or major portion thereof in each lift. A minimum of one test for every lift is required. Deliver documentation of all compaction testing results to the engineer at the time of testing.

Perform 1 gradation test every 750 cubic yards of fill and one 5-point Proctor test (or as modified in C.2) every 2,250 cubic yards of fill. Provide the region split samples of both within 72 hours of sampling, at the region laboratory. Test sites shall be selected using ASTM Method D3665. Provide Proctor test results to the engineer within 48 hours of sampling. Provide gradation test results to the engineer within 24 hours of sampling.

C.4.6 Department Testing

C.4.6.1 General

- (1) The department will conduct verification testing to validate the quality of the product and independent assurance testing to evaluate the sampling and testing. The department will provide the contractor with a listing of names and telephone numbers of all QV and IA personnel for the project, and provide test results to the contractor within two business days after the department obtains the sample.

C.4.6.2 Quality Verification (QV) Testing

- (1) The department will have an HTCP technician, or ACT working under a certified technician, perform QV sampling and testing. Department verification testing personnel must meet the same certification level requirements specified in C.4.2 for contractor testing personnel for each test result being verified. The department will notify the contractor before sampling so the contractor can observe QV sampling.
- (2) The department will conduct QV tests at the minimum frequency of 30% of the required contractor density, Proctor and gradation tests.

- (3) The department will locate density tests and gradation samples randomly, at locations independent of the contractor's QC work. The department will split each Proctor and gradation QV sample, testing half for QV, and retaining the remaining half for 10 business days.
- (4) The department will conduct QV Proctor and gradation tests in a separate laboratory and with separate equipment from the contractor's QC tests. The department will use the same methods specified for QC testing.
- (5) The department will assess QV results by comparing to the appropriate specification limits. If QV test results conform to this special provision, the department will take no further action. If density QV test results are nonconforming, the area shall be reworked until the density requirements of this special provision are met. If the gradation test results are nonconforming, standard spec 106.5 will apply. Differing QC and QV nuclear density values of more than 1.5 pcf will be investigated and resolved. QV density tests will be based on the appropriate QC Proctor test results, unless the QV and QC Proctor result difference is greater than 3.0 pcf. Differing QC and QV Proctor values of more than 3.0 pcf will be investigated and resolved.

C.4.6.3 Independent Assurance (IA)

- (1) Independent assurance is unbiased testing the department performs to evaluate the department's QV and the contractor's QC sampling and testing, including personnel qualifications, procedures, and equipment. The department will perform an IA review according to the department's independent assurance program. That review may include one or more of the following:
 1. Split sample testing.
 2. Proficiency sample testing.
 3. Witnessing sampling and testing.
 4. Test equipment calibration checks.
 5. Reviewing required worksheets and control charts.
 6. Requesting that testing personnel perform additional sampling and testing.
- (2) If the department identifies a deficiency, and after further investigation confirms it, correct that deficiency. If the contractor does not correct or fails to cooperate in resolving identified deficiencies, the engineer may suspend placement until action is taken. Resolve disputes as specified in C.4.6.4.

C.4.6.4 Dispute Resolution

- (1) The engineer and contractor should make every effort to avoid conflict. If a dispute between some aspect of the contractor's and the engineer's testing program does occur, seek a solution mutually agreeable to the project personnel. The department and contractor may review the data, examine data reduction and analysis methods, evaluate sampling and testing procedures, and perform additional testing. Use ASTM E 178 to evaluate potential statistically outlying data.

- (2) Production test results, and results from other process control testing, may be considered when resolving a dispute.
- (3) If the project personnel cannot resolve a dispute, and the dispute affects payment or could result in incorporating non-conforming product or work, the department will use third party testing to resolve the dispute. The department's central office laboratory, or a mutually agreed on independent testing laboratory, will provide this testing. The engineer and contractor will abide by the results of the third party tests. The party in error will pay service charges incurred for testing by an independent laboratory. The department may use third party test results to evaluate the quality of questionable materials and determine the appropriate payment. The department may reject material or otherwise determine the final disposition of nonconforming material as specified in standard spec 106.5.

C.5 Geotechnical Information

Geotechnical data to be used in the design of the wall is given on the wall plan. After completing wall excavation of the entire reinforced soil zone, notify the department and allow the Regional Soils Engineer two working days to review the foundation.

D Measurement

The department will measure Wall Modular Block Mechanically Stabilized Earth LRFD/QMP by the square foot acceptably completed, measured as the vertical area within the pay limits the contract plans show. Unless the engineer directs in writing, a change to the limits indicated on the contract plan, wall area constructed above or below these limits will not be measured for payment.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0165.02	Wall Modular Block Mechanically Stabilized Earth LRFD/QMP	SF

Payment is full compensation for supplying a design and shop drawings; preparing the site, including all necessary excavation and disposal of materials; supplying all necessary wall components to produce a functional wall system including cap, copings and leveling pad; constructing the retaining system including drainage system; providing backfill, backfilling, compacting, developing/completing/documenting the quality management program, and for performing compaction testing.

Parapets, railings, and other items above the wall cap or coping will be paid for separately. Vehicle barrier and its support will be paid separately.

Any required topsoil, fertilizer, seeding or sodding and mulch will be paid for at the contract unit price of topsoil, fertilizer, seeding or sodding and mulch, respectively.

(20150824)

66. Proof-Rolling Existing Subbase, Item SPV.0170.01.

A Description

This special provision describes the testing of the stability of the compacted subgrade by rolling with a tri-axle dump truck.

B Materials

Fully load a tri-axle dump truck, or other engineer-approved equipment, to within 3 tons of the vehicle legal load limit and provide a minimum gross vehicle weight of 30 tons. Uniformly inflate all tires to the pressure recommended by the manufacturer for the applicable wheel load.

C Construction

Completely compact and shape the subgrade to approximate grade. Test roll at a normal walking speed under the direction of the engineer or his representative.

Roll the road subgrade across the width of the entire roadway. Make multiple passes throughout the length of the test area. Center each pass on a proposed lane or shoulder.

Excavation and backfill are paid for under other bid items.

Repair and consolidate any soft or yielding areas or depressions evidenced under the action of the test rolling to withstand retesting. Excavate any unstable material from the road bed and replace with selected materials, including breaker run. Correct any yielding areas discovered during the test rolling operations prior to paving. Perform corrective work as directed by the engineer and according to the standard specifications.

D Measurement

The department will measure Proof-Rolling Existing Subbase by the station along the roadway centerline or reference line, 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.0170.01	Proof-Rolling Existing Subbase	STA

Payment is full compensation for performing the Proof Rolling and for retesting as determined by the engineer.

67. Coarse Aggregate Mix for Stream Bed, Item SPV.0195.01.

Work under this item shall be done according to standard spec 606, modified as follows.

A Description

Furnish and place the coarse aggregate mix at the locations shown on the plans, or as directed by the engineer.

B Materials

Coarse aggregate mix material furnished and used in this work shall be natural, rounded, uncrushed coarse aggregate. The mix shall consist of roughly 75% number 2 stone and 25% 3/8-inch pea gravel, thoroughly mixed. The mix must be approved by the engineer prior to installation.

C Construction

Thoroughly compact the coarse aggregate mix as construction progresses. The finished surface shall present an even, tight surface. Place the coarse aggregate mix within 24 hours after the apron endwall has been installed.

D Measurement

The department will measure Coarse Aggregate Mix for Stream Bed by the tons in place and completed work, and the quantity thereof to be paid for shall be the summation of tons of such Coarse Aggregate Mix incorporated in the work, acceptably completed according to the contract. Only accepted work will be measured for payment and the computation of the quantity thereof will be based on the volume within the limiting dimensions designated on the plans, in the contract, or as established by the engineer.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0195.01	Coarse Aggregate Mix for Stream Bed	TON

Payment is full compensation for preparing stream bed, furnishing and placing coarse aggregate mix.

68. Asphaltic Millings for Driveways, Item SPV.0195.02.**A Description**

This special provision describes furnishing, placing, and compacting asphaltic millings on driveways at the locations shown on the plans, or as directed by the engineer.

B Materials

Furnish asphaltic millings that are according to the size requirements of standard spec 330.3.

C Construction

Place asphaltic millings as shown on the plans or as directed by the engineer. Grade, shape, and compact asphaltic millings according to the requirements of standard spec 330.3.

D Measurement

The department will measure Asphaltic Millings for Driveways by the ton, acceptably completed.

E Payment

This item, measured as provided above, will be paid for at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0195.02	Asphaltic Millings for Driveways	TON

Payment is full compensation for furnishing, placing, grading, and compacting Asphaltic Millings for Driveways.

69. HMA Pavement 3 MT 58-28 S 3.0% Va Regression, Item SPV.0195.03; HMA Pavement 4 MT 58-28 S 3.0% Va Regression, Item SPV.0195.04.

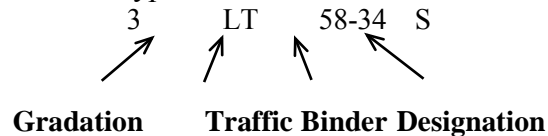
A Description

This special provision describes providing HMA pavement including the binder under a combined bid item along with air void regression as described here within.

Define gradations, traffic levels, and asphaltic binder designation levels as follows:

<u>GRADATIONS</u> (NMAAS)		<u>TRAFFIC VOLUME</u>		<u>DESIGNATION LEVEL</u>	
1	37.5 mm	LT	Low	S	Standard
2	25.0 mm	MT	Medium	H	Heavy
3	19.0 mm	HT	High	V	Very Heavy
4	12.5 mm			E	Extremely Heavy
5	9.5 mm				
6	4.75 mm				

Construct HMA pavement of the type the bid item indicates encoded as follows:



Conform to standard spec 460 as modified in this special provision.

B Materials

Add the following to standard spec 460.2:

Design mixtures conforming to tables 460-1 and 460-2 to 4.0% air voids to establish the aggregate structure.

Determine the target JMF Asphalt Binder content for production from the mix design data corresponding to 3.0% air voids (97% Gmm) target at Ndes. The air voids at the design number of gyrations, (Ndes) shall be achieved by the addition of liquid asphalt meeting the contract specifications.

Production shall conform to VMA and Dust to Binder Ratio requirements of table 460-1 and 460-2.

Replace standard spec table 460-1 with the following to change the footnotes to refer to LT and MT mixes instead of E-0.3 and E-3 mixes:

TABLE 460-1 AGGREGATE GRADATION MASTER RANGE AND VMA REQUIREMENTS

SIEVE	PERCENTS PASSING DESIGNATED SIEVES						
	NOMINAL SIZE						
	37.5 mm (#1)	25.0 mm (#2)	19.0 mm (#3)	12.5 mm (#4)	9.5 mm (#5)	SMA 12.5 mm (#4)	SMA 9.5 mm (#5)
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	58 - 72	90 - 100
4.75-mm	_____	_____	_____	_____	90 max	25 - 35	35 - 45
2.36-mm	15 – 41	19 - 45	23 - 49	28 - 58	20 - 65	15 - 25	18 - 28
75-µm	0 – 6.0	1.0 - 7.0	2.0 - 8.0	2.0 - 10.0	2.0 - 10.0	8.0 - 12.0	10.0 - 14.0
% MINIMUM VMA	11.0	12.0	13.0	14.0 ^[1]	15.0 ^[2]	16.0	17.0

^[1] 14.5 for LT and MT mixes

^[2] 15.5 for LT and MT mixes

Replace standard spec table 460-2 with the following to switch from E mixes to LT, MT, and HT mixes; and change the tensile strength ratio requirements to 0.75 without antistripping additive and 0.80 with antistripping additive:

TABLE 460-2 MIXTURE REQUIREMENTS

Mixture type	LT	MT	HT	SMA
ESALs x 10 ⁶ (20 yr design life)	<2.0	2 - <8	>8	> 5 mil
LA Wear (AASHTO T96)				
100 revolutions(max % loss)	13	13	13	13
500 revolutions(max % loss)	50	45	45	40
Soundness (AASHTO T104) (sodium sulfate, max % loss)	12	12	12	12
Freeze/Thaw (AASHTO T103) (specified counties, max % loss)	18	18	18	18
Fractured Faces (ASTM 5821) (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)

Mixture type	LT	MT	HT	SMA
Fine Aggregate Angularity (AASHTO T304, method A, min)	40	43	45	45
Sand Equivalency (AASHTO T176, min)	40	40	45	50
Gyratory Compaction				
Gyrations for Nini	6	7	8	8
Gyrations for Ndes	40	75	100	65
Gyrations for Nmax	60	115	160	160
Air Voids, %Va (%Gmm Ndes)	4.0 (96.0)	4.0 (96.0)	4.0 (96.0)	4.0 (96.0)
% Gmm Nini	<= 91.5 ^[1]	<= 89.0 ^[1]	<= 89.0	—
% Gmm Nmax	<= 98.0	<= 98.0	<= 98.0	—
Dust to Binder Ratio ^[2] (% passing 0.075/Pbe)	0.6 - 1.2	0.6 - 1.2	0.6 - 1.2	1.2 - 2.0
Voids filled with Binder (VFB or VFA, %)	68 - 80 ^{[4] [5]}	65 - 75 ^{[3] [4]}	65 - 75 ^{[3] [4]}	70 - 80
Tensile Strength Ratio (TSR) (ASTM 4867)				
no antistripping additive	0.75	0.75	0.75	0.75
with antistripping additive	0.80	0.80	0.80	0.80
Draindown at Production Temperature (%)	—	—	—	0.30

^[1] The percent maximum density at initial compaction is only a guideline.

^[2] For a gradation that passes below the boundaries of the caution zone (ref. AASHTO MP3), the dust to binder ratio limits are 0.6 - 1.6.

^[3] For #5 (9.5mm) and #4 (12.5 mm) nominal maximum size mixtures, the specified VFB range is 70 - 76%.

^[4] For #2 (25.0mm) nominal maximum size mixes, the specified VFB lower limit is 67%.

^[5] For #1 (37.5mm) nominal maximum size mixes, the specified VFB lower limit is 67%.

Replace standard spec 460.2.8.2.1.7 paragraph six with the following to base payment adjustment on the combined bid item unit price:

[6] The department will reduce payment for nonconforming QMP HMA mixtures, starting from the stop point to the point when the running average is back inside the warning limits, as follows:

ITEM	PAYMENT FOR MIXTURE ^[1] ^[2]	
	PRODUCED WITHIN WARNING BANDS	PRODUCED OUTSIDE JMF LIMITS
Gradation	90%	75%
Asphalt Content	85%	75%
Air Voids	70%	50%
VMA	90%	75%

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

^[2] Payment is in percent of the contract unit price for the HMA Pavement bid item. The department will reduce pay based on the nonconforming property with lowest percent pay. The department will administer pay reduction under the Nonconforming QMP HMA Mixture administrative item.

Replace standard spec 465.2 with the following:

(1) Under the Asphaltic Surface, Asphaltic Surface Detours, and Asphaltic Surface Patching bid items; submit a mix design. Furnish asphaltic mixture meeting the requirements specified for either type LT or MT mix under 460.2; except the engineer will not require the contractor to conform to the quality management program specified under 460.2.8.

(2) Under the other 465 bid items, the contractor need not submit a mix design. Furnish aggregates mixed with a type AC asphaltic material. Use coarse and fine mineral aggregates uniformly coated and mixed with the asphaltic material in an engineer-approved mixing plant. The contractor may include reclaimed asphaltic pavement materials in the mixture.

C Construction

Replace standard spec table 460-3 with the following to switch from E mixes to LT, MT, and HT mixes and to increase field density requirements by 1.5% when operating under this HMA Pavement 3.0% Va Regression SPV:

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	_____
SIDE ROADS, CROSSOVERS, TURN LANES, & RAMPS	LOWER	93.0 ^[3]	93.0 ^[4]	_____
	UPPER	93.0	93.0	_____
SHOULDERS & APPURTENANCES	LOWER	91.0	91.0	_____
	UPPER	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 may investigate the acceptability of that material.
- [2] Includes parking lanes as determined by the engineer.
- [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.
- [5] The minimum required densities for SMA mixtures are determined according to CMM 8-15.

Delete standard spec 460.2.8.2.1.5(1) and replace with the following:

- (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
2.36-mm	+/- 5.0	+/- 4.0
75-µm	+/- 2.0	+/- 1.5
Asphaltic content in percent	- 0.3	- 0.2
Air voids in percent	+ 1.3/-1.0	+ 1.0/-0.7
VMA in percent ^[1]	- 0.5	- 0.2

^[1] VMA limits based on minimum requirement for mix design nominal maximum aggregate size in [table 460-1](#).

Delete standard spec 460.2.8.3.1.6(1) and replace with the following:

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

D Measurement

The department will measure HMA Pavement (type) 3.0% Va Regression conforming to standard spec 460.4.

E Payment

Add the following to standard spec 460.5 to switch from E mixes to LT, MT, and HT mixes; to combine the pavement and binder bid items; and to specify a pay reduction for pavement placed with nonconforming binder:

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0195.03	HMA Pavement 3 MT 58-28 S 3.0% Va Regression	TON
SPV.0195.04	HMA Pavement 4 MT 58-28 S 3.0% Va Regression	TON

Payment is full compensation for providing HMA Pavement including asphaltic binder.

In addition to any pay adjustment under standard spec 460.2.8.2.1.7(6), the department will adjust pay for nonconforming binder under the Nonconforming QMP Asphaltic Material administrative item. The department will deduct 25 percent of the contract unit price of the HMA Pavement bid item per ton of pavement placed with nonconforming PG binder the engineer allows to remain in place.

Delete standard spec 460.5.2.3(1) and replace with the following:

(1) If the lot density is greater than the minimum specified in table 460-3 and all individual air voids test results for that mixture placed during the same day are within 2.5 - 4.0 percent, the department will adjust pay for that lot as follows:

INCENTIVE PAY ADJUSTMENT FOR HMA PAVEMENT DENSITY

PERCENT LOT DENSITY ABOVE SPECIFIED MINIMUM	PAY ADJUSTMENT PER TON ^[1]
From -0.4 to 1.0 inclusive	\$0
From 1.1 to 1.8 inclusive	\$0.40
More than 1.8	\$0.80

^[1] The department will prorate the pay adjustment for a partial lot.

APPENDIX A: Test Procedures for HMA Pavement 3% Va Regression SPV

Delete CMM 8-15.10.1 Target maximum Density and replace with the following:

For pavement density determination, the target value in lb/ft³ (PCF) is established using the mixture maximum specific gravity (G_{mm}). For the first day of a paving mixture design, the target maximum density will be the G_{mm} value corresponding to 3.0% air voids on the mix design multiplied by 62.24 lb/ft³ (PCF). The target maximum density for all other days will be the four G_{mm} test running average value from the end of the previous days' production multiplied by 62.24 lb/ft³ (PCF). If four tests have not been completed by the end of the first day, the average of the completed G_{mm} test values multiplied by 62.24 lb/ft³ (PCF) will be used until a running average of 4 is established.

The following data must be recorded for each test on the worksheet for MRS entry

- Density standard and moisture standard
- Density count, moisture counts or contact and air gap counts
- Total wet density or bulk density
- % Compaction
- Manufacturer name and serial number
- Operators name
- Mix design number (WisDOT 250 ID) and daily Target max density target number ($G_{mm} \times 62.24 \text{ lb/ft}^3$)

Delete CMM 8-15.15.2.1 Examples of Computing Incentive/Disincentive for Density and replace with the following:

Example 1 (nominal tonnage lots):

HMA Pavement, Type 4 HT 58-34 S Lot 2R

Total HMA Tonnage for Project: 20,000 Tons

% Density of Target Maximum (G_{mm}) = 90.4%

Required % Density of the G_{mm} = 93.0%

Lot Tonnage = 750

Contract Price per Ton = \$26.50

From Table 460-3 of this SPV.0195 and 460.5.2.2:

- Amount below Specified Minimum (Table 460-3 of this SPV) = $93.0 - 90.4 = 2.6$
- Payment Factor (SS 460.5.2.2) = 70% (30% Credit to the Department)
- Credit to the Department (HMA Mix) = $30\% \times \$26.50/\text{Ton} \times 750 \text{ Tons} = \$5,962.50$

If this were the only failing lot on the project, the final quantities on the estimate would be as shown in Table 3.

Example 2 (nominal tonnage lots):

HMA Pavement, Type 4 HT 58-34 S Lot 3R

% Density of Target Maximum (G_{mm}) = 94.6%

Required % Density of the G_{mm} = 93.0%

Lot Tonnage = 750

Air Voids for day = 2.9-3.2%

Payment Factor = 94.6 – 93.0 (Table 460-3)= 1.6

Adjusted Unit Price = \$0.40/Ton x 750 Tons (SS 460.5.2.3(1) of this SPV)= \$300

If this is the only lot with a higher density than required on the project, the final quantities on the estimate would be as shown in Table 3 below:

Table 3 Estimate for Pay Adjustment for Incentive/Disincentive Density

Bid Item	Description	Unit	Cost/Unit	Total Quantity	Total
460.7244	HMA Type 4 HT 58-34 S	TON	\$26.50	20,000	\$530,000.00
460.2000	Incentive Density HMA Pavement	DOL	\$1.00	300.00	\$300.00
804.2005	Disincentive Density HMA Pavement	DOL	\$1.00	-(5,962.5)	-\$5,962.50

Project Information for Examples 3 and 4 (daily tonnage lots & linear sublots):

A project begins at station 56+78 and ends at station 234+25. It is a 2-lane roadway with a shoulder on each side. The traffic lanes are 12 feet wide and the shoulders are 3 feet wide. Shown in the figure below is the eastbound traffic lane and shoulder for the length of the project. The contractor will be paving the shoulder integrally with the traffic lane. The pavement is a 2-inch overlay and the same HMA mix type is used on the entire project. The HMA mixture includes 5.5% asphaltic material. The bid price for the HMA pavement item is \$41.75 per ton. The specified target density for the traffic lane is 93.0%. The target density for the shoulder is 92.0%.

Day 1:

The contractor begins paving at station 56+78 and ends the day at station 102+97, a total length of 4,619 feet. A quantity of 677 tons was placed on the eastbound traffic lane, and 169 tons was placed on the integral shoulder.

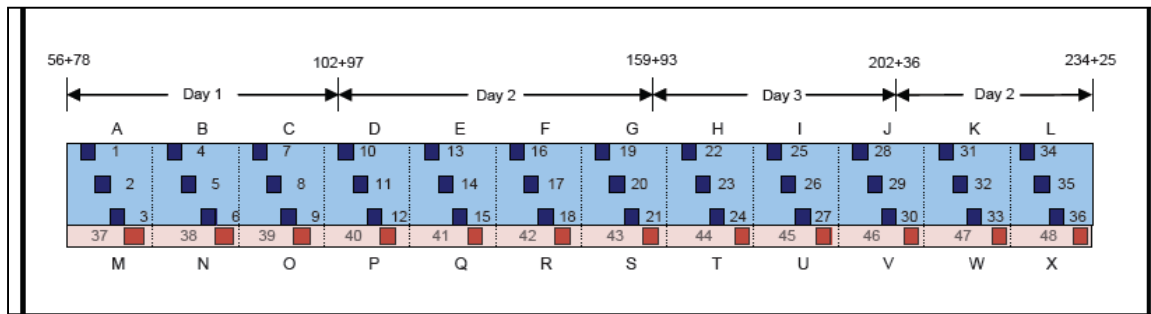
Day 2:

The contractor begins paving at station 102+97. Due to traffic staging requirements, the contractor stops paving at station 159+93, 5,696 feet, and begins paving again at station 202+36. They end the day at the end of the project, station 234+25, 3,189 additional feet. A quantity of 1303 tons was paved on the eastbound traffic lane, and 326 tons was placed on the integral shoulder.

Day 3:

The contractor begins paving at station 159+93 and ends the day at station 202+36, 4,243 feet. A total of 622 tons was placed on the eastbound traffic lane, and 156 tons was placed on the integral shoulder.

Figure 6 Linear Sublot Example Project



Example 3 (daily tonnage lot & linear sublots):

Use the example project information and the following test results from day 1. All of the day's air voids tests were acceptable. (Density Calculated off the PCF value, subplot is the average of the density %)

Sublot ID	Test ID	% Density	Sublot Avg % Density
A 56+78 to 71+78	1	93.8	94.1
	2	94.2	
	3	94.4	
B 71+78 to 86+78	4	94.1	94.5
	5	94.7	
	6	94.6	
C 86+78 to 101+78	7	93.6	94.1
	8	94.5	
	9	94.3	
M	37	93.2	93.2
N	38	94.2	94.2
O	39	93.0	93.0

1. Compute the average density for each traffic lane subplot and each shoulder subplot.

SOLUTION: See the results in the table above.

2. Compute the density incentive or disincentive for the day's paving.

SOLUTION:

- Traffic Lane:

The specified target density for the traffic lane is 93.0%. All of the subplot averages were no more than one percent below the target density, so all of the day's traffic lane test results are used to compute the daily lot density and the lot incentive pay.

- Lot density = $(93.8 + 94.2 + 94.4 + 94.1 + 94.7 + 94.6 + 93.6 + 94.5 + 94.3) / 9 \text{ tests} = 94.2\%$

According to 460.5.2.3(1) of this SPV, this lot density is eligible for incentive pay of \$0.40 per ton. 677 tons of HMA was placed on the traffic lane on day 1, therefore the contractor receives \$270.80 density incentive for the day 1 traffic lane lot. This is for all of subplot A, B & C and the 119' in subplot D that did not reach the random number.

- Shoulder:

The minimum required density is 92.0%. All of the subplot averages were acceptable, so all of the day's shoulder tests are used to compute the shoulder lot density. The average of all the shoulder tests is 93.5%. According to the specification, this lot density is eligible for incentive pay of \$0.40 per ton. 169 tons of HMA was placed on the shoulder on day 1, therefore the contractor receives \$67.60 density incentive for the day 1 shoulder lot.

Example 4 (daily tonnage lot & linear sublots):

Use the example project information and the following test results from day 3. All of the day's air voids tests were acceptable.

Sublot ID	Test ID	% Density	Sublot Avg % Density
H 161+78 to 176+78	22	91.8	91.8
	23	91.9	
	24	91.7	
I 176+78 to 191+78	25	95.1	94.9
	26	94.8	
	27	94.9	
J 191+78 to 202+36	28	92.0	91.9
	29	91.8	
	30	91.9	
T	44	91.9	91.9
U	45	94.4	94.4
V	46	92.1	92.1

Compute the density incentive or disincentive for the day's paving.

SOLUTION:

1. Traffic Lane:

According to the specification, a minimum density of 93.0% is required for the traffic lane. When verifying whether or not the subplot densities meet the requirements, it is found that subplot H and subplot J have average densities that are more than one percent below the required minimum. According to the specification, the quantity of HMA pavement placed this day in each of these sublots is subject to disincentive, and the day's test results within these sublots are not included when computing the incentive for the remainder of the lot.

2. Sublot H:

Day 3 began inside the limits of subplot G, at station 159+93, but beyond its random test location. The tests for subplot G represent material placed on day 2. The tests in subplot H represent the day 3 material from station 159+93 to 176+78, a total length of 1685 feet long (185' from subplot G, paved on day 3, and 1500' in subplot H) by 12 feet wide.

Quantity represented by tests in subplot H =

$$\frac{(1685' \times 12')}{(9 \text{ sf/sy})} \times \frac{(2 \text{ in.} \times 110 \text{ lb/sy/in})}{(2000 \text{ lb/ton})} = 247 \text{ tons}$$

According to the disincentive pay table in the specification, the quantities are subject to a pay factor equal to 95 percent of the contract price. This is equivalent to a 5 percent pay reduction.

Disincentive Density HMA Pavement = 247 tons x (\$41.75/ton x 0.05) = -\$515.61

3. Sublot I:

Quantity represented by tests in subplot I =

$$\frac{(1500' \times 12')}{(9 \text{ sf/sy})} \times \frac{(2 \text{ in.} \times 110 \text{ lb/sy/in})}{(2000 \text{ lb/ton})} = 220 \text{ tons}$$

According to the incentive pay table, 220 tons of the HMA pavement item are eligible for an incentive of \$0.80 per ton, or a total of \$176.00.

4. Sublot J:

Day 3 ended within the limits of subplot J, beyond its random test location. The day 3 quantity placed within subplot J, from station 191+78 to 202+36, at length of 1,058 feet, is represented by its tests. The day 2 quantity placed toward the end of subplot J is represented by the tests taken on day 2 within subplot K.

Quantity represented by tests in subplot J=

$$\frac{(1058' \times 12')}{(9 \text{ sf/sy})} \times \frac{(2 \text{ in.} \times 110 \text{ lb/sy/in})}{(2000 \text{ lb/ton})} = 155 \text{ tons}$$

According to the disincentive pay table in the specification, the quantities are subject to a pay factor equal to 95 percent of the contract price. This is equivalent to a 5 percent pay reduction.

Disincentive Density HMA Pavement = 155 tons x (\$41.75/ton x 0.05) = -\$323.56

5. Shoulder:

All of the day 3 shoulder sublots have acceptable density values, so we use all of the results to compute the day's shoulder lot density.

Day 3 shoulder lot density = $(91.9 + 94.4 + 92.1) / 3 \text{ tests} = 92.8\%$

The lot density of 92.8% is not more than 1.0% above the required minimum of 92.0%, therefore the day 3 shoulder pavement does not receive any density incentive.

Day 3 Incentive/Disincentive Summary:

Incentive Density HMA Pavement (Lot I) = \$176.00

Disincentive Density HMA Pavement (Lot H) = -\$515.61

Disincentive Density HMA Pavement (Lot J) = -\$323.56

Delete CMM 8-36.6.1 QC Tests and replace with the following:

QC testing must be completed, and data posted, on the day the sample was taken or as approved by the engineer.

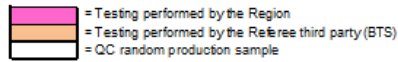
For administration of projects requiring only one, two, or three single tests per mix design, apply the following tolerances table for mixture evaluation:

- $V_a = 2.0 - 5.0\%$
- $VMA = - 1.3$ from required minimums for Table 460-1 as revised in STSP 460-025
- $AC =$ within -0.1 of $JMF P_b$ after regression

Delete CMM 8-36 Figure 8 HMA Verification Dispute Resolution Scenarios and replace with the following:

HMA Verification Dispute Resolution Scenario Examples

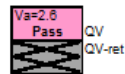
NOTE: The following diagrams (A-H) represent standard scenarios. Specific project detail and troubleshooting activities may present cause for adjustment to this guidance



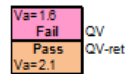
Test Values	Tolerance between QC & QC-ret	Category
Gmm	0.00-0.015	=WBL
Gmm	0.016-0.020	=JMFL
Gmm	> 0.020	> JMFL
Gmb	0.00-0.020	=WBL
Gmb	0.021-0.025	=JMFL
Gmb	> 0.025	> JMFL

Example A

A1 QV (3-2+)



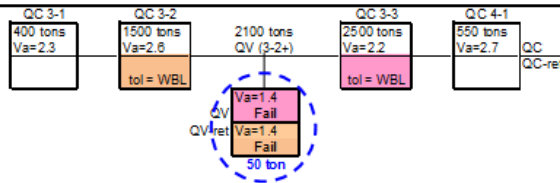
A2 QV (3-2+)



END RESULT

- A** No Adjustment (NA) QMP Controls
 *The Referee third party (BTS) test results determine the Pass/Fail status of the QV sample once it has gone into Dispute Resolution

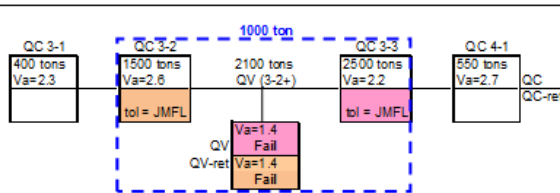
Example B



END RESULT

- B** Isolated Area: Localized Problem
 Backward and forward comparison results meet WBL tolerances
 Standard Tons
 (50 ton @ 50% pay)

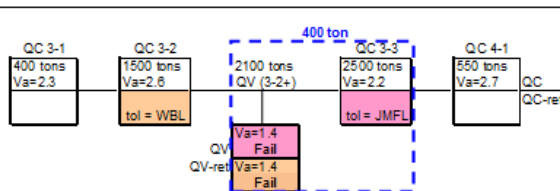
Example C



END RESULT

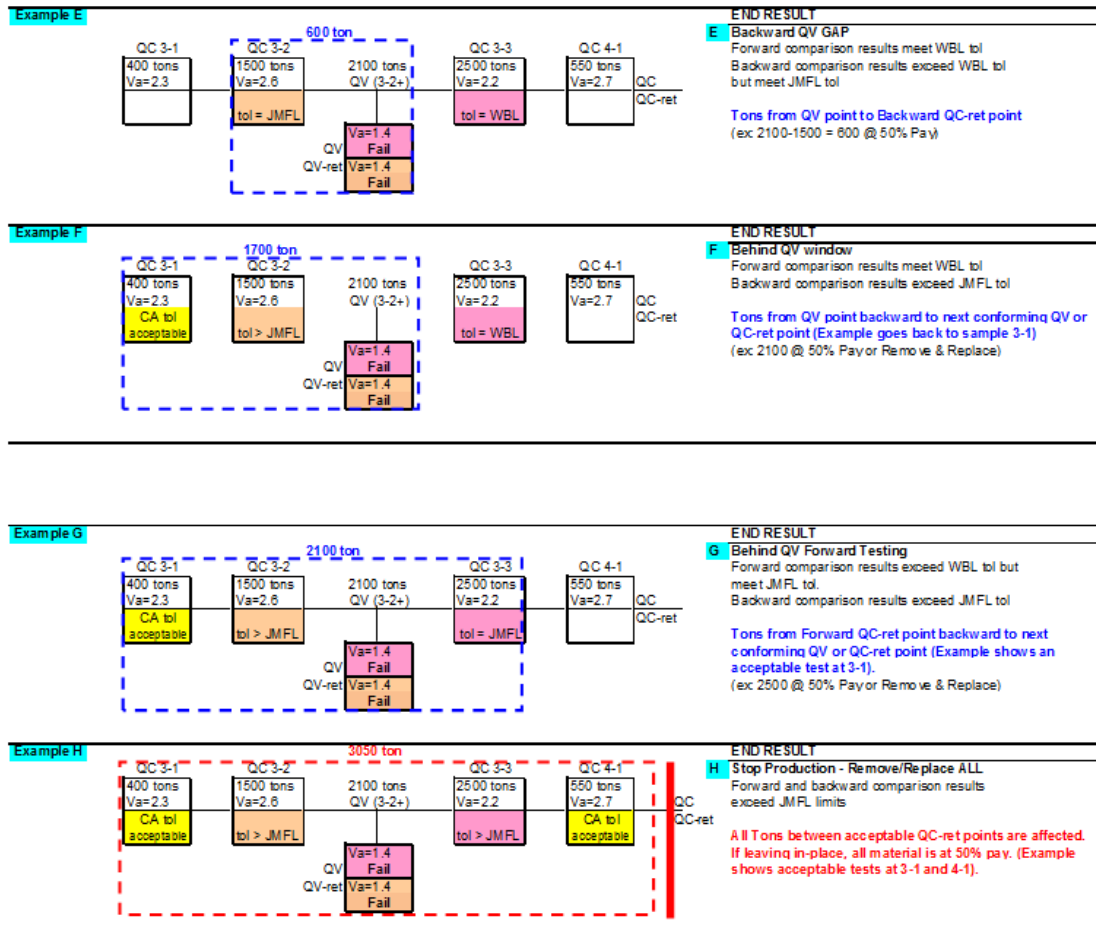
- C** Full QV Window
 Backward and forward comparison results exceed WBL tol but are within JMFL tol
 Tonnes each side of QV point are affected between Forward and Backward QC-ret points
 (ex: 2500-1500 = 1000 ton @ 50% pay)

Example D



END RESULT

- D** Forward QV GAP
 Backward comparison results meet WBL tol
 Forward comparison results exceed WBL tol but meet JMFL tol
 Tons from QV point to Forward QC-ret point
 (ex: 2500-2100 = 400 @ 50% Pay)



Delete CMM 8-66.2.2(3) and replace with the following:

3. Determine trial asphalt binder contents (estimated by experience or by calculation based on aggregate properties of trial blends).
 - Compact gyratory specimens using a minimum of 3 asphalt binder contents (0.5% increments) and covering a range to include the estimated optimum design binder content as well as 3.0% air voids. Use N_{des} for compaction effort.
 - Compare trial binder content results. The design binder content (by either graphing or interpolating the trial data results) is determined as that meeting requirements stated in [standard spec 460](#). The department will determine the optimum binder content corresponding to 3.0% air voids by linear regression of the trial gyratory specimens.

**ADDITIONAL SPECIAL PROVISION 1 (ASP 1)
FOR TRANSPORTATION ALLIANCE FOR NEW SOLUTIONS (TrANS)
PROGRAM EMPLOYMENT PLACEMENTS AND APPRENTICESHIPS**

The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), Section 5204(e) – Surface Transportation Workforce Development Training and Education, provides for 100 percent Federal funding if the core program funds are used for training, education, or workforce development purposes, including “pipeline” activities. The core programs includes: Congestion Mitigation and Air Quality Improvement (CMAQ) Program, Highway Bridge Program (HBP), Interstate Maintenance (IM), National Highway System (NHS), and Surface Transportation Program (STP). These workforce development activities cover surface transportation workers, including OJT/SS programs for women and minorities as authorized in 23 U.S.C. §140(b).

TrANS is an employment program originally established in 1995 in Southeastern Wisconsin. Currently TrANS has expanded to include TrANS program locations to serve contractors in Southeast (Milwaukee and surrounding counties), Southcentral (Dane County and surrounding counties including Rock County), and most Northeastern Wisconsin counties from locations in Keshena, Rhinelander and surrounding far Northern areas. TrANS attempts to meet contractor’s needs in other geographic locations as possible. It is an industry driven plan of services to address the outreach, preparation, placement and retention of women, minorities and non-minorities as laborers and apprentices in the highway skilled trades. These candidate preparation and contractor coordination services are provided by community based organizations. For a list of the TrANS Coordinators contact the Disadvantaged Business Enterprise Office at (414) 438-4583 in Milwaukee or (608) 266-6961 in Madison. These services are provided to you at no cost.

I. BASIC CONCEPTS

Training reimbursements to employing contractors for new placements, rehires or promotions to apprentice of TrANS Program graduates will be made as follows:

- 1) **On-the-Job Training, Item ASP.1T0G, ASP 1 Graduate.** At the rate of \$5.00 per hour on federal aid projects when TrANS graduates are initially hired, or seasonally rehired, as unskilled laborers or the equivalent.

Eligibility and Duration: To the employing contractor, for up to 2000 hours from the point of initial hire as a TrANS program placement.

Contract Goal: To maintain the intent of the Equal Employment Opportunity program, it is a goal that 6 (number) TrANS Graduate(s) be utilized on this contract.

- 2) **On-the-Job Training, Item ASP.1T0A, ASP 1 Apprentice.** At the rate of \$5.00 per hour on federal aid projects at the point when an employee who came out of the TrANS Program is subsequently entered into an apprenticeship contract in an underutilized skilled trade (this will include the Skilled Laborer Apprenticeship when that standard is implemented).

Eligibility and Duration: To the employing contractor, for the length of time the TrANS graduate is in apprentice status.

Contract Goal: To maintain the intent of the Equal Employment Opportunity program, it is a goal that 3 (number) TrANS Apprentice(s) be utilized on this contract.

- 3) The maximum duration of reimbursement is two years as a TrANS graduate plus time in apprentice status.
- 4) If a TrANS program is not available in the contractor's area and another training program is utilized, payment of On-the-Job Training hours may be approved by the Wisconsin Department of Transportation (WisDOT) if the training program meets the established acceptance criteria. Only On-the-Job Training Hours accumulated after WisDOT approval will be reimbursed as specified under Items ASP.1T0G and ASP.1T0A. For more information, contact the Disadvantaged Business Enterprise Office at the phone numbers listed above.
- 5) WisDOT reserves the right to deny payments under items ASP.1T0G and ASP.1T0A if the contractor either fails to provide training or there is evidence of a lack of good faith in meeting the requirements of this training special provision.

I. RATIONALE AND SPECIAL NOTE

The \$5.00 per hour now being paid for TrANS placements is intended to cover the duration of two years to allow for reaching entry-level laborer status. An additional incentive, the \$5.00 rate, would promote movement into the underutilized skilled trades' apprenticeships and applies until the individual completes their apprenticeship. These incentives benefit TrANS candidates by giving them a better opportunity to enter a skilled trade; benefits contractors who will be assisted in meeting their EEO profiles and goals; and benefits the public who will see the program reinforce larger public-private employment reform in Wisconsin. The pool of TrANS graduates was created for the purpose of addressing underutilization in the skilled trades, an objective that is further reinforced by a parallel retention pilot program, known as the Companywide Reporting. *Whether or not reimbursement is involved, the WisDOT reassures contractors who are in the Companywide Program that TrANS placements still contribute toward fulfilling the new hire goal of 50% women and minorities.* Based on data administered by United States Department of Labor (US DOL), the highway skilled trades remain underutilized for women statewide (less than 6.9%); and for minorities in all counties (% varies by county).

NOTE: *Unless using other advancement strategies, contractors are encouraged to use some or all of this monetary incentive to offset the cut in hourly wages an individual may incur when entering an apprenticeship if the full general laborer hourly rate has been previously paid. No special accounting measures are required.*

II. IMPLEMENTATION

The implementation of ASP 1 is intended to cover only the amount of time it takes for underutilization to be resolved across the trades. This will be measured annually at the county and/or state levels using data administered by WisDWD in relation to goals set by the USDOL-

OFCCP. With appropriate state and federal approvals, we may also do some measurement at the company level.

It is the contractor's responsibility to note on their Certified Payrolls if their employee is a TrANS graduate or a TrANS apprentice. The District EEO Coordinators utilize the information on the Certified Payrolls to track the hours accumulated by TrANS Graduates and TrANS apprentices on WisDOT contracts. Payment under this ASP 1 is made based on the hours recorded off of the Certified Payrolls. Tracking may eventually include improved linkages with the WisDWD apprentice database, information from company and committee level sources.

TrANS is nondiscriminatory by regulation, and is a tool for optional use by contractors to address the underutilization of women and minorities as laborers and apprentices in our industry's skilled trades.

IV. TRANS TRAINING

As part of the contractor's equal employment opportunity affirmative action program, training shall be provided to employees enrolled in apprenticeship and on-the-job training programs as follows:

The contractor shall provide on-the-job training aimed at developing full journey workers in the type of trade or job classifications involved. In the event the contractor subcontracts a portion of the contract work, the contractor shall determine how many, if any, of the trainees are to be trained by the subcontractor provided, however, that the contractor shall retain the primary responsibility for meeting the training requirements imposed by this special provision. The contractor shall also insure that this training special provision is made applicable to such subcontract.

Training and upgrading of minorities and women toward journey workers status is a primary objective of this training special provision. Accordingly, the contractor shall make every effort to enroll minority trainees and women (e.g., by conducting systematic and direct recruitment through public and private sources likely to yield minority trainees and women trainees); to the extent such persons are available within a reasonable area of recruitment. The contractor will be given an opportunity and will be responsible for demonstrating the steps that they have taken in pursuance thereof, prior to determination as to whether the contractor is in compliance with this training special provision. This training commitment is not intended, and shall not be used, to discriminate against any applicant for training, whether a member of a minority group or not.

No employee shall be employed as a trainee in any classification in which they have successfully completed a training course leading to journey workers status or in which they have been employed as a journey worker. The contractor should satisfy this requirement by including appropriate questions in the employee application or by other suitable means. Regardless of the method used, the contractor's records should document the findings in each case.

V. APPRENTICESHIP TRAINING

The Federal Highway Administration's (FHWA) policy is to require full use of all available training and skill improvement opportunities to assure increased participation of minority groups, disadvantaged persons and women in all phases of the highway construction industry. The FHWA On-the-Job Training (OJT) Program requires the State transportation agencies (STAs) to establish apprenticeships and training programs targeted to move women, minorities, and disadvantaged individuals into journey-level positions to ensure that a competent workforce is available to meet highway construction hiring needs, and to address the historical under-representation of members of these groups in highway construction skilled crafts.

The OJT Supportive Services (OJT/SS) Program was established in Title 23 Code of Federal Regulations (CFR), Part 230) to supplement the OJT program and support STA training programs by providing services to highway construction contractors and assistance to highway construction apprentices and trainees. The primary objectives of OJT/SS are:

- (1) To increase the overall effectiveness of the State highway agencies' approved training programs.
- (2) To seek other ways to increase the training opportunities for women, minorities, and disadvantaged individuals.

The STAs are responsible for establishing procedures, subject to the availability of Surface Transportation and Bridge Funds under 23 U.S.C. §140(b) (Nondiscrimination), for the provision of supportive services with respect to training programs approved under 23 CFR, Part 230(a) (Equal Employment Opportunity on Federal and Federal-aid Construction Contracts – including Supportive Services).

The contractor and subcontractor shall maintain records to demonstrate compliance with these apprenticeship requirements. Reasonable exemptions and modifications to and from any or all of these requirements will be determined by the Wisconsin Department of Transportation-Civil Rights Office. A request for an exemption or modification, with justification, shall be made in writing, addressed to WisDOT Civil Rights Office, 4802 Sheboygan Avenue, P.O. Box 7965, Rm. 451, Madison, WI 53707.

ADDITIONAL SPECIAL PROVISION 3 DISADVANTAGED BUSINESS ENTERPRISE PROGRAM

1. Description

General

- a. The disadvantaged business enterprise (DBE) requirements of 49 CFR Part 26 apply to this contract. The department's DBE goal is shown on the cover of the bidding proposal. The contractor can meet the specified contract DBE goal by procuring services or materials from a DBE or by subcontracting work to a DBE. The department calculates the DBE participation as the dollar value of DBE participation included in the bid expressed as a percentage of the total contract bid amount.
- b. Under the contract, the contractor agrees to provide the assistance to participating DBE's in the following areas:
 - i. Produce accurate and complete quotes.
 - ii. Understand highway plans applicable to their work.
 - iii. Understand specifications and contract requirements applicable to their work.
 - iv. Understand contracting reporting requirements.
- c. The department encourages the contractor to assist and develop DBE firms to become fully knowledgeable contractors to successfully perform on its contracts.
- d. For information on the disadvantaged business program, visit the department's Civil Rights and Compliance Section website at:

<http://wisconsin.gov/Pages/doing-bus/civil-rights/dbe/default.aspx>

2. Definitions

- a. Interpret these terms, used throughout this additional special provision, as follows:
 - i. **Bid Percentage:** The DBE percentage indicated in the bidding proposal at the time of bid.
 - ii. **DBE:** A disadvantaged business enterprise (DBE) certified as a DBE by the department and included on the department's list of certified DBE's who are determined to be ready, willing and able.
 - iii. **DBE goal:** The amount of DBE participation expected in the contract as shown on the cover of the Highway Work Proposal.
 - iv. **Discretionary Goal:** A contractor assigned DBE goal, typically abbreviated as "Disc" on the cover of the Highway Work Proposal, which is enforced as committed.
 - v. **Manufacturer:** A firm that operates or maintains a factory or establishment that produces, on the premises, the materials, supplies, articles, or equipment required under the contract.
 - vi. **Supplier:** A firm that owns, operates, or maintains a store, warehouse, or other establishment in which the materials, supplies, articles or equipment required under the contract are bought, kept in stock, and regularly sold or leased to the public.
 - vii. **Voluntary Achievement:** The amount of DBE participation achieved and reported in the contract in excess of the assigned goal.

3. DBE Percentage Required at Bid Submission

Indicate the bid percentage (i.e. 0% through 100%) of DBE participation on the completed bidding proposal, including projects with discretionary goals. For electronic submittals, show the percentage in the miscellaneous data folder, Item 3, DBE Percent. For paper submittals, show the percentage on the sheet included after the schedule of items. By submission of the bid, the bidder contractually

commits to DBE participation at or above the bid percentage, or certifies that they have utilized comprehensive good faith efforts to solicit and utilize DBE firms to meet the DBE participation requirements of this contract proposal, and that the bid percentage is reflective of these good faith efforts. If the bidder does not indicate the bid percentage of DBE participation on the completed bidding proposal, the department will consider the bid irregular and may reject the bid.

4. Department's DBE Evaluation Process

a. Documentation Submittal

Within 10 business days after the notification of contract award, the contractor is to identify, by name, the DBE firms whose utilization is intended to satisfy this provision, the items of work of the DBE subcontract or supply agreement and the dollar value of those items of work by completing the Commitment to Subcontract to DBE Form [DT1506] and all necessary attachment A forms, as well as, Good Faith Waiver Form [DT1202] and supporting documentation as necessary. If the contractor fails to furnish the required forms within the specified time, the department may cancel the award. Delay in fulfilling this requirement is not a cause for extension of the contract time and shall not be used as a tool to delay execution.

i. Bidder Meets DBE Goal

If the bidder indicates that the contract DBE goal is met, after award and before execution, the department will evaluate the Commitment to Subcontract to DBE Form DT1506 and attachment A(s) to verify the actual DBE percentage achieved. If the DBE commitment is verified, the contract is eligible for execution with respect to the DBE commitment.

ii. Bidder Does Not Meet DBE Goal

- (1) If the bidder indicates a bid percentage on the Commitment to Subcontract to DBE Form [DT1506] that does not meet the contract DBE goal, the bidder must submit a Good Faith Waiver Form [DT1202] and supporting documentation. After award and before execution, the department will evaluate the bidder's DBE commitment and consider the bidder's good faith waiver request.
- (2) The department will review the bidder's good faith waiver request and notify the bidder of one of the following:
 - a. If the department grants a good faith waiver, the bid is eligible for contract execution with respect to DBE commitment.
 - b. If the department rejects the good faith waiver request, the department may declare the bid ineligible for execution. The department will provide a written explanation of why the good faith waiver request was rejected. The bidder may appeal the department's rejection as allowed under 7 a. & b.

5. Department's Criteria for Good Faith Effort

The Code of Federal Regulations {CFR}, 49 CFR Part 26-Appendix A, is the guiding regulation concerning good faith efforts. However, the federal regulations do not define "good faith" but states that bidder must actively and aggressively attempt to meet the goal. The federal regulations are general and do not include every factor or effort that can be considered. As a result, each state must establish its own processes and consider the factors established in its own process when making a determination of good faith.

- a. The department will only grant a good faith waiver if the bidder has made the effort, given the relevant circumstances under the contract that a bidder actively and aggressively seeking to meet the goal would make. The department will evaluate the bidder's good faith effort to determine whether a good faith waiver will be granted. The bidder must demonstrate, on the DT1202 that they

have aggressively solicited DBE participation in an attempt to meet the contract DBE goal and attaining the stated DBE goal is not feasible.

- b. The department, in conjunction with industry stakeholders, has developed the following guidance for contractor good faith effort. The guidance and the attached appendices provide a framework for the actions required by all parties in the processing and evaluation of bidder's total efforts to achieve the project specific DBE goal prior to the bid letting date.
- c. Prime Contractors should:
 - i. Document all efforts and decisions made toward achieving the DBE goal on the contract. The bidder should use the Civil Rights & Compliance System [CRCS] and related WisDOT-approved DBE outreach tools, including the Bid Express Small Business Network, to foster DBE participation on all applicable contracts.
 - ii. Request quotes by identifying potential items to subcontract and solicit. Prime contractors are strongly encouraged to include in their initial contacts a single page including a detailed list of items for which they are accepting quotes, by project, within a letting. *See attached sample entitled "Sample Contractor Solicitation Letter" in Appendix A.* Prime contractors should also indicate a willingness to accept quotes in areas they are planning to perform themselves, **as required by federal rules**. In some cases, it might be appropriate to use DBE's to do work in a prime contractor's area of specialization.
 - (1) Solicit quotes through all reasonable and available means from certified DBE firms who match 'possible items to subcontract' and send copies to DBESS office, highlighting areas in which you are seeking quotes. Email is acceptable.
 - (2) SBN is the preferred outreach tool. <https://www.bidx.com/wi/main> Other acceptable means include postal mail, email, fax, phone call.
 - a. Primes must ask DBE firms for a response in their solicitations. See *Sample Contractors Solicitation Letter* in Appendix. This letter can be included as an attachment to the SBN sub-quote request.
 - b. Solicit quotes at least 10 calendar days prior to the letting date {ideally two Fridays before the letting} to allow DBE firms sufficient time to respond. Prime contractors should contact DBE firms early, asking them if they need help in putting together a quote, or helping to arrange for equipment needs, or solve other problems.
 - (3) Second solicitation should take place within 5 days
 - a. An email solicitation is highly recommended for this second solicitation
 - (4) Upon request, provide interested DBE firms with adequate information about plans, specifications and the requirements of the contract by letter, information session, email, phone call and/or referral.
 - (5) When potential exists, advise interested DBE firms on how to obtain bonding, line of credit or insurance as may be requested.
 - (6) Document DBE firm's interest in quoting by taking appropriate steps to follow up initial solicitation with:
 - a. Email to all prospective DBE firms in relevant work areas
 - b. Phone call log to DBE firms who express interest via written response or call.
 - c. Fax/letter confirmation
 - d. Copy of the DBE quotes
 - e. Signed copy of Bid Express SBN Record of Subcontractor Outreach Effort.

- d. Evaluate DBE quotes as documentation is critical if the prime does not utilize the DBE firm's quote for any reason.
- i. Evaluate DBE firm's capability to perform 'possible items to subcontract' using legitimate reasons, including but not limited to, **a discussion with the DBE firm** regarding its capabilities prior to the bid letting. If lack of capacity is your reason for not utilizing the DBE quote, you are required to contact the DBE directly regarding their ability to perform the work indicated in the UCP directory as their work area [NAICS code]; only the work area and/or NAICS code listed in the UCP directory will be counted for DBE credit. Documentation of the conversation is required.
 - ii. In striving to meet a DBE conscious contract goal, prime contractors are expected to use DBE quotes that are responsive and reasonable. This includes DBE quotes that are not the low quote.
 - iii. **Special Circumstance:** Evaluation of DBE quotes with tied bid items. "Tied quotes are the condition in which a subcontractor submits quotes including multiple areas of expertise across multiple work areas noting that the items and price are tied. Typically this type of quoting represents a cost saving to the prime but is not clearly stated as a discount; tied quotes are usually presented as 'all or none' quote to the prime." When non-DBE subcontractors submit tied bid items in their quotes to the prime, the DBE firms' quote may seem not competitive. In such a case, the following steps are taken in comparing the relevant quotes. These are qualitative examples.
 - (1) Compare bid items common to both quotes, noting the reasonableness in the price comparison.
 - (2) Review quotes from other firms for the bid items not quoted by the DBE firm to see if combining both can provide the same competitive advantage that the tied bid items offered.
- e. After notification of contract award, submit '**Commitment to Subcontract**' form within the time period specified in the contract.
- i. Provide the following information along with department form DT1202:
 - (1) The names, addresses, e-mail addresses, telephone numbers of DBE's contacted. The dates of both initial and follow-up contact. A printed copy of SBN solicitation is acceptable.
 - (2) A description of information provided to the DBE's regarding the plans, specifications, and estimated quantities for portions of the work to be performed by that DBE.
 - (3) Photocopies or electronic copies of all written solicitations to DBE's.
 - (4) Documentation of each quote received from a DBE and, if rejected, the reason for that rejection.
 - (5) Bidder attendance at any pre-solicitation or pre-bid meetings the department held to inform DBE's of participation opportunities available on the project.
- f. The department's DBE Support Services Office is available by phone, email or in writing to request assistance in meeting the DBE goal:

DBE Support Services Office
6150 Fond du Lac Ave.
Milwaukee, WI 53218
Phone: 414-438-4583 / 608-266-6961
Fax: 414-438-5392
E-mail: DOTDBESupportServices@dot.wi.gov

6. Bidder's Appeal Process

- a. A bidder can appeal the department's decision to deny the bidder's good faith waiver request. The bidder must provide written documentation refuting the specific reasons for rejection as stated in the department's rejection notice. The bidder may meet in person with the department if so requested. Failure to appeal within 7 calendar days after receiving the department's written notice of rejection of a good faith waiver request under constitutes a forfeiture of the bidder's right of appeal. If the bidder does not appeal, the department may declare the bid ineligible for execution.
- b. The department will appoint a representative, who did not participate in the original determination, to assess the bidder's appeal. The department will issue a written decision within 7 calendar days after the bidder presents all written and oral testimony. In that written decision, the department will explain the basis for finding that the bidder did or did not meet the contract DBE goal or make an adequate good faith effort to meet the contract DBE goal. The department's decision is final. If the department finds that the bidder did not meet the contract DBE goal or did not make adequate efforts to meet the DBE goal, the department may declare the bid ineligible for execution.

7. Department's Criteria for DBE Participation

Department's DBE List

- a. The department maintains a DBE list on the department's website
<http://wisconsindot.gov/Documents/doing-bus/civil-rights/dbe/ucp-directory.xlsx>
- b. The DBE office is also available to assist at 414-438-4583 or 608-266-6961.

8. Counting DBE Participation

Assessing DBE Work

- a. The department will only count the DBE usage towards the contract DBE goal if the DBE firm is certified as a DBE by one of the unified certification program agencies. If a firm becomes DBE certified before entering into a subcontract, the department may consider that DBE usage towards the contract goal. The department only counts the value of the work a DBE actually performs towards the DBE goal. The department assesses the DBE work as follows:
- b. The department counts work performed by the DBE's own resources. The department includes the cost of materials and supplies the DBE obtains for the work. The department also includes the cost of equipment the DBE leases for the work. The department will not include the cost of materials, supplies, or equipment the DBE purchases or leases from the prime contractor or its affiliate, except the department will count non-project specific leases the DBE has in place before the work is advertised.
- c. The department counts fees and commissions the DBE charges for providing a bona fide professional, technical, consultant, or managerial services. The department also counts fees and commissions the DBE charges for providing bonds or insurance. The department will only count costs the engineer deems reasonable based on experience or prevailing market rates.
- d. If a DBE subcontracts work, the department counts the value of the subcontracted work only if the DBE's subcontractor is also a DBE.
- e. The contractor shall maintain records and may be required to furnish periodic reports documenting its performance under this item.
- f. It is the prime contractor's responsibility to determine the DBE's ability to perform the work with the use of the UCP directory.

9. Commercially Useful Function

- a. The department counts expenditures of a DBE toward the DBE goal only if the DBE is performing a commercially useful function on that contract.
- b. A DBE is performing a commercially useful function if the following conditions are met:
- c. For contract work, the DBE is responsible for executing a distinct portion of the contract work and it is carrying out its responsibilities by actually performing, managing, and supervising that work.
- d. For materials and supplies, the DBE is responsible for negotiating price, determining quality and quantity, ordering, and paying for those materials and supplies.

10. Trucking

All bidders are expected to adhere to the department's current trucking policy posted on the HCCI website

<http://wisconsindot.gov/Documents/doing-bus/civil-rights/dbe/trucking-utilization-policy.pdf>

11. Manufacturers and Suppliers

The department counts material and supplies a DBE provides under the contract. The department will give full credit toward the DBE goal if the DBE is a manufacturer of those materials or supplies. The department will give 60 percent credit toward the DBE goal if the DBE is merely a supplier of those materials or supplies. It is the bidder's responsibility to find out if the DBE is considered a supplier or a manufacturer before listing them on Commitment to Subcontract to DBE form DT1506.

12. DBE Prime

If the prime contractor is a DBE, the department will only count the work the contractor performs with its own forces, the work DBE subcontractors perform, and the work DBE suppliers or manufacturers perform.

13. Joint Venture

If a DBE performs as a participant in a joint venture, the department will only count that portion of the total dollar value of the contract equal to that portion of the work that the DBE performs with its own forces.

14. Mentor Protégé

- a. If a DBE performs as a participant in a mentor protégé agreement, the department will credit the portion of the work performed by the DBE protégé firm
- b. On every other project that the mentor protégé team identifies itself on.
- c. For no more than one half of the total contracted DBE goal on any WisDOT project.

15. DBE Replacement

In the event a Prime Contractor needs to replace a DBE firm originally listed on the approved DBE Commitment Form DT1506, the Prime Contractor must comply with the department's DBE Replacement Policy located on the DBE page on the following web site:

<http://wisconsindot.gov/Documents/doing-bus/civil-rights/dbe/policy-statement.pdf>

16. Changes to the approved DBE Commitment Form DT1506

If there are any changes to the approved Commitment to Subcontract to DBE Form DT1506, the prime contractor must submit a revised DBE Commitment Form DT1506 and relevant attachment A(s) to the DBE Programs Office within 5 business days.

17. Contract Modifications

When additional opportunity is available by contract modifications, the Prime Contractor shall utilize DBE Subcontractors that were committed to equal work items, in the original contract.

18. Payment

Costs for conforming to this Additional Special Provision (ASP) and any associated DBE requirements are incidental to the contract.

APPENDIX A
Sample Contractor Solicitation Letter Page 1
This sample is provided as a guide not a requirement

GFW SAMPLE MEMORANDUM

TO: DBE FIRMS
FROM: POTENTIAL PRIME CONTRACTOR OR MAJOR SUBCONTRACTOR
SUBJECT: REQUEST FOR DBE QUOTES
LET DATE & TIME
DATE: MONTH DAY YEAR
CC: DBE OFFICE ENGINEER

Our company is considering bidding on the projects indicated on the next page, as a prime and/or a subcontractor for the Wisconsin Department of Transportation Month- date -year Letting. Page 2 lists the projects and work items that we may subcontract for this letting. We are interested in obtaining subcontractor quotes for these projects and work categories. Also note that we are willing to accept quotes in areas we may be planning to perform ourselves as required by federal rules.

Please review page 2, respond whether you plan to quote, highlight the projects and work items you are interested in performing and return it via fax or email within 3 days. Plans, specifications and addenda are available through WisDOT at the DBE Support Services office or at the Highway Construction Contract Information (HCCI) site at <http://roadwaystandards.dot.wi.gov/hcci/>

Your quote should include all of the costs required to complete the items you propose to perform including labor, equipment, material, and related bonding or insurance. The quote should note items that you are DBE certified to perform, tied items, and any special terms. Page 2, with the indicated projects and items you plan to quote, should be used as a cover sheet for your quote.

Please make every effort to have your quotes into our office by time deadline the prior to the letting date. **Make sure the correct letting date, project ID and proposal number, unit price and extension are included in your quote.** We prefer quotes be sent via SBN but prime's alternative's are acceptable. Our office hours are include hours and days. Please call our office as soon as possible prior to the letting if you need information/clarification to prepare your quote at contact number.

If you wish to discuss or evaluate your quote in more detail, contact us after the contract is awarded. Status of the contract can be checked at WisDOT's HCCI site at <http://roadwaystandards.dot.wi.gov/hcci/>

All questions should be directed to:

Project Manager, John Doe,
Phone: (000) 123-4567
Email: Joe@joetheplumber.com
Fax: (000) 123- 4657

Sample Contractor Solicitation Letter Page 2

This sample is provided as a guide not a requirement

REQUEST FOR QUOTATION

Prime's Name: _____

Letting Date: _____

Project ID: _____

Please check all that apply

- ☐ Yes, we will be quoting on the projects and items listed below
- ☐ No, we are not interested in quoting on the letting or its items referenced below
- ☐ Please take our name off your monthly DBE contact list
- ☐ We have questions about quoting this letting. Please have some one contact me at this number

Prime Contractor 's Contact Person

Phone: _____
Fax: _____
Email: _____

DBE Contractor Contact Person

Phone: _____
Fax: _____
Email: _____

Please circle the jobs and items you will be quoting below

Proposal No.	1	2	3	4	5	6	7
County							

WORK DESCRIPTION:

Clear and Grub	X		X	X		X	X
Dump Truck Hauling	X		X	X		X	X
Curb & Gutter/Sidewalk, Etc.	X		X	X		X	X
Erosion Control Items	X		X	X		X	X
Signs and Posts/Markers	X		X	X		X	X
Traffic Control		X	X	X		X	X
Electrical Work/Traffic Signals		X	X	X		X	
Pavement Marking		X	X	X	X	X	X
Sawing Pavement		X	X	X	X	X	X
QMP, Base	X	X		X	X	X	X
Pipe Underdrain	X			X			
Beam Guard				X	X	X	X
Concrete Staining							X
Trees/Shrubs	X						X

Again please make every effort to have your quotes into our office by time deadline prior to the letting date.

We prefer quotes be sent via SBN but prime's preferred alternative's are acceptable.

If there are further questions please direct them to the prime contractor's contact person at phone number.

APPENDIX B BEST PRACTICES FOR PRIME CONTRACTOR & DBE SUBCONTRACTOR GOOD FAITH EFFORT

This list is not a set of requirements; it is a list of potential strategies

Primes

- Prime contractor open houses inviting DBE firms to see the bid “war room” or providing technical assistance
- Participate in speed networking and mosaic exercises as arranged by DBE office
- Host information sessions not directly associated with a bid letting;
- Participate in a formal mentor protégé or joint venture with a DBE firm
- Participate in WisDOT advisory committees i.e. TRANSAC, or Mega Project committee meetings
- Facilitate a small group DBE ‘training session’ Clarifying how your firm prepares for bid letting, evaluates subcontractors, preferred qualifications and communication methods
- Encourage subcontractors to solicit and highlight DBE participation in their quotes to you
- Quality of communication, not quantity creates the best results. Contractors should do as thorough a job as possible in communicating with DBE firms before the bid and provide any assistance requested to assure best possible bid.

DBE

- DBE firms should contact primes as soon as possible with questions regarding their quotes or bid; seven days prior is optimal.
- Continually check for contract addendums on the HCCI website through the Thursday prior to letting to stay abreast of changes.
- Review the status of contracts on the HCCI website reviewing the ‘apparent low bidder’ list, and bid tabs at a minimum.
- Prepare a portfolio or list of related projects and prime and supplier references; be sure to note transportation-related projects of similar size and scope, firm expertise and staffing.
- Participate in DBE office assessment programs
- Participate on advisory and mega-project committees
- Sign up to receive the DBE Contracting Update
- Consider membership in relevant industry or contractor organizations
- Active participation is a must. Quote as many projects as you can reasonably work on; quoting the primes and bidding as a prime with the department are the only ways to get work.

APPENDIX C

Types of Efforts considered in determining GFE

This list represents concepts being assessed; analysis requires additional steps

1. Whether the contractor attended any pre-solicitation or pre-bid meetings that were scheduled by WisDOT to inform DBEs of contracting and subcontracting opportunities;
2. Whether the contractor provided written notice to a reasonable number of specific DBEs that their interest in the contract was being solicited, in sufficient time to allow the DBEs to participate effectively;
3. Whether the contractor followed up initial solicitations of interest by contacting DBEs to determine if the DBEs were interested; returned the phone calls of interested DBE firms.
4. Whether the contractor selected portions of the work to be performed by DBEs in order to increase the likelihood of meeting the DBE goal;
5. Whether the contractor provided interested DBEs with adequate information about the plans, specifications and requirements of the contract;
6. Whether the contractor negotiated in good faith with interested DBEs, not rejected DBEs as unqualified without sound reasons based on a thorough investigation of their capabilities;
7. Whether the contractor made efforts to assist interested DBEs in being more competitive.
8. Whether the contractor effectively used the services of available minority community organizations: minority contractors groups, local, state, and Federal minority business assistance offices, and other organizations that provide assistance to small businesses and DBE firms.
9. Whether Prime used CRCS to identify DBE who specialize in relevant work areas.
10. Whether the contractor used available resources including contacting the DBE office, using WisDOT's website
11. Whether the contractor returned calls of firms expressing interest in a timely manner.

APPENDIX D
Good Faith Effort Evaluation Guidance
Excerpt from Appendix A of 49 CFR Part 26

APPENDIX A TO PART 26 -- GUIDANCE CONCERNING GOOD FAITH EFFORTS

- I. When, as a recipient, you establish a contract goal on a DOT assisted contract, a bidder must, in order to be responsible and/or responsive, make good faith efforts to meet the goal. The bidder can meet this requirement in either of two ways. First, the bidder can meet the goal, documenting commitments for participation by DBE firms sufficient for this purpose. Second, even if it doesn't meet the goal, the bidder can document adequate good faith efforts. This means that the bidder must show that it took all necessary and reasonable steps to achieve a DBE goal or other requirement of this part which, by their scope, intensity, and appropriateness to the objective, could reasonably be expected to obtain sufficient DBE participation, even if they were not fully successful.
- II. In any situation in which you have established a contract goal, part 26 requires you to use the good faith efforts mechanism of this part. As a recipient, it is up to you to make a fair and reasonable judgment whether a bidder that did not meet the goal made adequate good faith efforts. It is important for you to consider the quality, quantity, and intensity of the different kinds of efforts that the bidder has made. The efforts employed by the bidder should be those that one could reasonably expect a bidder to take if the bidder were actively and aggressively trying to obtain DBE participation sufficient to meet the DBE contract goal. Mere pro forma efforts are not good faith efforts to meet the DBE contract requirements. We emphasize, however, that your determination concerning the sufficiency of the firm's good faith efforts is a judgment call: meeting quantitative formulas is not required.
- III. The Department also strongly cautions you against requiring that a bidder meet a contract goal (i.e., obtain a specified amount of DBE participation) in order to be awarded a contract, even though the bidder makes an adequate good faith efforts showing. This rule specifically prohibits you from ignoring bona fide good faith efforts.
- IV. The following is a list of types of actions which you should consider as part of the bidder's good faith efforts to obtain DBE participation. It is not intended to be a mandatory checklist, nor is it intended to be exclusive or exhaustive. Other factors or types of efforts may be relevant in appropriate cases.
 - A. Soliciting through all reasonable and available means (e.g. attendance at pre-bid meetings, advertising and/or written notices) the interest of all certified DBEs who have the capability to perform the work of the contract. The bidder must solicit this interest within sufficient time to allow the DBEs to respond to the solicitation. The bidder must determine with certainty if the DBEs are interested by taking appropriate steps to follow up initial solicitations.
 - B. Selecting portions of the work to be performed by DBEs in order to increase the likelihood that the DBE goals will be achieved. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate DBE participation, even when the prime contractor might otherwise prefer to perform these work items with its own forces.
 - C. Providing interested DBEs with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation.

- D.
 - (1) Negotiating in good faith with interested DBEs. It is the bidder's responsibility to make a portion of the work available to DBE subcontractors and suppliers and to select those portions of the work or material needs consistent with the available DBE subcontractors and suppliers, so as to facilitate DBE participation. Evidence of such negotiation includes the names, addresses, and telephone numbers of DBEs that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional agreements could not be reached for DBEs to perform the work.
 - (2) A bidder using good business judgment would consider a number of factors in negotiating with subcontractors, including DBE subcontractors, and would take a firm's price and capabilities as well as contract goals into consideration. However, the fact that there may be some additional costs involved in finding and using DBEs is not in itself sufficient reason for a bidder's failure to meet the contract DBE goal, as long as such costs are reasonable. Also, the ability or desire of a prime contractor to perform the work of a contract with its own organization does not relieve the bidder of the responsibility to make good faith efforts. Prime contractors are not, however, required to accept higher quotes from DBEs if the price difference is excessive or unreasonable.
 - E. Not rejecting DBEs as being unqualified without sound reasons based on a thorough investigation of their capabilities. The contractor's standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. non-union employee status) are not legitimate causes for the rejection or non solicitation of bids in the contractor's efforts to meet the project goal.
 - F. Making efforts to assist interested DBEs in obtaining bonding, lines of credit, or insurance as required by the recipient or contractor.
 - G. Making efforts to assist interested DBEs in obtaining necessary equipment, supplies, materials, or related assistance or services.
 - H. Effectively using the services of available minority/women community organizations; minority/women contractors' groups; local, state, and Federal minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBEs.
- V. In determining whether a bidder has made good faith efforts, you may take into account the performance of other bidders in meeting the contract. For example, when the apparent successful bidder fails to meet the contract goal, but others meet it, you may reasonably raise the question of whether, with additional reasonable efforts, the apparent successful bidder could have met the goal. If the apparent successful bidder fails to meet the goal, but meets or exceeds the average DBE participation obtained by other bidders, you may view this, in conjunction with other factors, as evidence of the apparent successful bidder having made good faith efforts.

Appendix E

Small Business Network [SBN] Overview

The Small Business Network is a part of the Bid Express® service that was created to ensure that prime bidders have a centralized online location to find subs - including small and disadvantaged business enterprises (DBEs). It is available for prime bidders to use as part of their Basic Service subscription. Within the Small Business Network, **Prime Contractors** can:

1. Easily select proposals, work types and items:
 - a. After adding applicable work types, select items that you wish to quote. Enter the sub-quote quantities and add comments, if desired. Adding or removing items and work types can be done quickly. If needed, you can save the sub-quote for completion at a later time.
2. Create sub-quotes for the subcontracting community:
 - a. Create sub-quotes with ease using the intuitive sub-quote creator. In seven short steps, you can rapidly create a custom sub-quote directed to all subcontractors that bid on the applicable work types. Steps include: provide contact information and sub-quote expiration date, select letting and proposal, add work types and items, specify terms and conditions, upload attachments, and select vendors.
 - b. Create a sub-quote to send to subcontractors or suppliers that lists the items in a proposal that you want quoted
 - c. Create an unlimited number of sub-quotes for items you want quoted, and optionally mark them as a DBE-preferred request
 - d. Add attachments to sub-quotes
3. View sub-quote requests & responses:
 - a. After logging into the Bid Express service, you can quickly review all of your sub-quote requests and all unsolicited sub-quote requests from subcontractors. To simplify the Small Business Network home screen, sub-quote requests can be hidden with one click if they are not applicable.
 - b. View or receive unsolicited sub-quotes that subcontractors have posted, complete with terms, conditions and pricing
4. View Record of Subcontractor Outreach Effort:
 - a. For each sub-quote produced, a *Record of Subcontractor Outreach Effort* is generated that shows the response statistics for a particular sub-quote. If accepted by the letting agency, this report may serve as proof of a “Good Faith” effort in reaching out to the DBE community.
 - b. Easily locate pre-qualified and certified small and disadvantaged businesses
 - c. Advertise to small and disadvantaged businesses more efficiently and cost effectively
 - d. Document your interactions with subs/DBEs by producing an Outreach Report (may be accepted as proof of DBE outreach at the discretion of each agency)

The Small Business Network is a part of the Bid Express® service that was created to ensure that small businesses have a centralized area to access information about upcoming projects. It can help small businesses learn more about opportunities, compete more effectively, network with other contractors and subcontractors, and win more jobs.

1. View and reply to sub-quote requests from primes:
 - a. After logging into the Bid Express service, you can quickly review all incoming sub-quote requests and all unsolicited sub-quotes created by your company. Receive notifications by selected work type. To simplify on the Small Business Network home screen, sub-quote requests can be filtered by work types relevant to your interests, or hidden with one click if they are not applicable.
2. Select items when responding to sub-quote requests from primes:
 - a. You have the freedom to choose and price any number of items when responding to a sub-quote request. Quantities can be modified, and per-item comments are also available.
 - b. View requests for sub-quotes for work that primes have posted for projects they are bidding, add your pricing, terms, and conditions, and submit completed sub-quotes to the requesting primes
 - c. Add attachments to a sub-quote
3. Create and send unsolicited sub-quotes to specific contractors:
 - a. Create unsolicited sub-quotes with ease using the intuitive sub-quote creator. In eight short steps, you can rapidly create a custom sub-quote directed at any number of specific vendors of your choosing. Steps include: provide contact information and sub-quote expiration date, select letting and proposal, add work types and items, specify terms and conditions, upload attachments, and select vendors.
4. Easily select and price items for unsolicited sub-quotes:
 - a. After adding applicable work types, select items that you wish to quote. The extended price calculates automatically, cutting out costly calculation errors. Comments can be provided on an per-item basis as well.
 - b. Create an unsolicited sub-quote that lists the items from a proposal that you want to quote, include pricing, terms and conditions, and send it to selected prime/plan holder
 - c. Add attachments to a sub-quote
 - d. Add unsolicited work items to sub-quotes that you are responding to
5. Easy Access to Valuable Information
 - a. Receive a confirmation that your sub-quote was opened by a prime
 - b. View Bid Tab Analysis data from past bids, including the high, average and low prices of items.
 - c. View important notices and publications from DOT targeted to small and disadvantaged businesses
6. Accessing Small Business Network for WisDOT contracting opportunities
 - a. If you are a contractor not yet subscribing to the Bid Express service, go to **www.bidx.com** and select “Order Bid Express.” The Small Business Network is a part of the Bid Express Basic Service.
 - b. DBE firms can request a Bid Express Small Business Network Account at no cost by calling 414-438-4588

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:

440.3.5.2 Corrective Actions for Localized Roughness

Replace paragraph two with the following effective with the September 2016 letting:

- (2) The engineer will not direct corrective action or assess a pay reduction for an area of localized roughness without physically riding that work. The engineer will not direct corrective action on bridges without authorization from the department's bureau of structures.
-

450.3.2.1 General

Replace the entire text with the following effective with the June 2016 letting:

450.3.2.1.1 Preparation and Paving Operations

- (1) Do not place asphaltic mixture when the air temperature approximately 3 feet above grade, in shade, and away from artificial heat sources is less than 36 F for upper layers or 32 F for lower layers unless the engineer allows in writing. The contractor should place HMA pavement for projects in the northern asphalt zone between May 1 and October 15 inclusive and for projects in the southern asphalt zone between April 15 and November 1 inclusive. CMM 4-53 figure 2 defines asphalt zones. Notify the engineer at least one business day before paving.
- (2) Unless the contract specifies otherwise, conform to the following:
 - Keep the road open to all traffic during construction.
 - Prepare the existing foundation for treatment as specified in 211.
 - Incorporate loose roadbed aggregate as a part of preparing the foundation, in shoulder construction, or dispose of as the engineer approves.
- (3) Place asphaltic mixture only on a prepared, firm, and compacted base, foundation layer, or existing pavement substantially surface-dry and free of loose and foreign material. Do not place over frozen subgrade or base, or where the roadbed is unstable.

450.3.2.1.2 Cold Weather Paving**450.3.2.1.2.1 General**

- (1) Conform to these cold weather paving provisions for work performed under the following:
 - The 460 HMA Pavement bid items.
 - The 465 Asphaltic Surface bid items.
 - Special provisions that require placing mixture conforming to the contract requirements under 460 for HMA pavement or under 465 for asphaltic surface.

450.3.2.1.2.2 Cold Weather Paving Plan

- (1) Submit a written cold weather paving plan to the engineer at the preconstruction meeting. In that plan outline material, operational, and equipment changes for paving when the air temperature approximately 3 feet above grade, in shade, and away from artificial heat sources is less than 40 F. Include the following:
 - Use a department-accepted HMA mix design that incorporates a warm mix additive from the department's approved products list. Do not use a foaming process that introduces water into the mix.
 - Identify the warm mix additive and dosage rate.
 - Identify modifications to the compaction process and when to use them.
- (2) Engineer written acceptance is required for the cold weather paving plan. Engineer acceptance of the plan does not relieve the contractor of responsibility for the quality of HMA pavement placed in cold weather except as specified in 450.5.2(3).

450.3.2.1.2.3 Cold Weather Paving Operations

- (1) Do not place asphaltic mixture when the air temperature approximately 3 feet above grade, in shade, and away from artificial heat sources is less than 40 F unless a valid engineer-accepted cold weather paving plan is in effect.

- (2) If the national weather service forecast for the construction area predicts ambient air temperature less than 40 F at the projected time of paving within the next 24 hours, confirm or submit revisions to the cold weather paving plan for engineer validation. Update the plan as required to accommodate the conditions anticipated for the next day's operations. Upon validation of the plan, the engineer will allow paving for the next day. Once in effect, pave conforming to the engineer-accepted cold weather paving plan for the balance of that work day or shift regardless of the temperature at the time of paving.

450.4 Measurement

Add the following as paragraph three effective with the June 2016 letting:

- (3) The department will measure HMA Cold Weather Paving by the ton of HMA mixture placed conforming to an engineer-accepted cold weather paving plan.

450.5 Payment

Replace the entire text with the following effective with the June 2016 letting:

450.5.1 General

- (1) All costs of furnishing, maintaining, and operating the truck scale or other weighing equipment and furnishing the weigh tickets are incidental to the contract.
- (2) Nonconforming material allowed to remain in place is subject to price adjustment under 105.3.2.
- (3) Full-depth sawing to remove integrally placed safety edge where not required is incidental to the contract.
- (4) The contractor is responsible for the quality of HMA placed in cold weather.

450.5.2 Cold Weather Paving

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

<u>ITEM NUMBER</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
450.4000	HMA Cold Weather Paving	TON

- (2) Payment for HMA Cold Weather Paving is full compensation for additional materials and equipment specified for cold weather paving under 450.3.2.1.2 including costs for preparing, administering, and following the contractor's cold weather paving plan. The department will not pay for HMA Cold Weather Paving for HMA placed as follows:
- If the lot density is less than the minimum specified in table 460-3 for mixture placed under 460.
 - On days when the department is assessing liquidated damages.
- (3) If because of an excusable compensable delay under 108.10.3, the engineer directs the contractor to pave when the temperature is less than 36 F for the upper layer or less than 32 F for lower layers, the department:
- Will relieve the contractor of responsibility for damage and defects the engineer attributes to cold weather paving.
 - Will not assess disincentives for density or ride.
- (4) If HMA pavement is placed under 450.3.2.1.2 and the HMA Cold Weather Paving bid item is not in the contract, the department will pay for the additional costs specified in 450.5.2(2) as extra work. The department will pay separately for providing HMA pavement and HMA surface under 460.5, 465.5, and the contract special provisions.

460.3.4 Cold Weather Paving

Delete the entire subsection effective with the June 2016 letting:

460.5.1 General

Replace the entire text with the following effective with the June 2016 letting:

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

<u>ITEM NUMBER</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
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460.5000 - 5999	HMA Pavement (gradation) LT (binder)(designation)	TON
460.6000 - 6999	HMA Pavement (gradation) MT (binder)(designation)	TON
460.7000 - 7999	HMA Pavement (gradation) HT (binder)(designation)	TON
460.8000 - 8999	HMA Pavement (gradation) SMA (binder)(designation)	TON
460.2000	Incentive Density HMA Pavement	DOL

460.5.2.2 Disincentive for HMA Pavement Density

Replace paragraph two with the following effective with the June 2016 letting:

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

460.5.2.4 Cold Weather Paving

Delete the entire subsection effective with the June 2016 letting:

501.2.6 Fly Ash

Replace paragraph four with the following effective with the July 2016 letting:

- (4) Use only one source of fly ash for a bid item of work under the contract, unless the engineer directs or allows otherwise in writing.

502.3.7.8 Floors

Replace paragraph sixteen with the following effective with the September 2016 letting:

- (16) The finished bridge floor shall conform to the surface test specified in 415.3.10. The engineer will not direct corrective grinding without authorization from the department's bureau of structures.

550.5.2 Piling

Add the following as paragraph three effective with the December 2015 letting:

- (3) The department will not entertain a change order request for a differing site condition under 104.2.2.2 or for a quantity change under 104.2.2.4.3 for the Piling bid items. Instead the department will adjust pay under the Piling Quantity Variation administrative item if the total driven length of each size is less than 85 percent of, or more than 115 percent of the contract quantity as follows:

Percent of Contract Length Driven	Pay Adjustment
< 85	(85% contract length - driven length) x 20% unit price
> 115	(driven length - 115% contract length) x 5% unit price

643.2.1 General

Replace paragraph two with the following effective with the December 2015 letting:

- (2) Use reflective sheeting from the department's approved products list on barricades, drums, and flexible tubular marker posts.

715.3.1.2.1 General

Replace paragraph one with the following effective with the July 2016 letting:

- (1) Designate the location and size of all lots before placing concrete. Ensure that no lot contains concrete of more than one mix design or placement method defined within 715.3.1.2 as follows:

Mix design change A modification to the mix requiring the engineer's approval under 710.4(5).

For paving mixes, a source change under item 1 of 710.4(5) for fly ash of the same class that does not require a modification under items 2 through 4 of 710.4(5) does not constitute a mix design change.

Placement method Either slip-formed, not slip-formed, or placed under water.

Errata

Make the following corrections to the standard specifications:

460.2.7 HMA Mixture Design - TABLE 460-2 MIXTURE REQUIREMENTS

Correct errata in the Fractured Faces row of table 460-2 to reference ASTM D5821.

Fractured Faces (ASTM D5821) (one face/2 face, % by count)	60 / __	65 / __	75 / 60	85 / 80	98 / 90	100/100	100/90
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Correct errata in footnote two of table 460-2 to reference AASHTO M323.

^[2] 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.

641.2.9 Overhead Sign Supports

Correct errata adding back accidentally deleted paragraphs one through three.

- (1) Provide commercially fabricated overhead sign supports conforming to AASHTO design and fabrication standards for structural supports for highway signs, luminaires, and traffic signals. Use a design life of 50 years with a wind importance factor of 1.00. Design to withstand a 3 second gust wind speed of 90 mph. Do not use the methods of appendix C of those AASHTO standards.
- (2) Design structures, listed as applicable structure types in the AASHTO standards, to the fatigue category criteria as follows:
 1. Structures carrying variable message signs:
 - Category I criteria for structures over all roadway types.
 2. Structures carrying type II or III signs:
 - Category I criteria for structures used over highways and free flow ramps.
 - Category II criteria for structures with arms greater than 30 feet used over local roads and city streets.
 - Category III criteria for structures with arms 30 feet or less used over local roads and city streets.
- (3) Use the posted speed limit of the roadway beneath the structure for truck-induced gusts.
- (4) Submit shop drawings identified by structure number, design computations, and material specifications, to the engineer before erecting sign supports. Provide tightening procedures for mast arm or luminaire arm to pole shaft connections on the shop drawings. Have a professional engineer registered in the state of Wisconsin sign, seal, and date the shop drawings and certify that the design conforms to AASHTO standards and the contract.
- (5) Provide steel pole shafts and mast arms zinc coated according to ASTM A123. Provide tapered pole and arm shafts with a minimum taper of 0.14 inch per foot for single-member vertical and single-member horizontal structure components. Provide bolts and other hardware conforming to 641.2.2.

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.

ADDITIONAL SPECIAL PROVISION 9

Electronic Certified Payroll Submittal

(1) Use the department's Civil Rights Compliance System (CRCS) to submit certified payrolls electronically. Details are available online through the department's highway construction contractor information (HCCI) site on the Labor, Wages, and EEO Information page at:

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

(2) Ensure that all tiers of subcontractors, as well as all trucking firms, submit their weekly certified payrolls electronically through CRCS. These payrolls 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 payrolls. The department will provide training either in a classroom setting at one of our regional offices or by telephone. Contact Tess Mulrooney at 608-267-4489 to schedule the training.

(4) The department will reject all paper submittals of forms DT-1816 and DT-1929 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 data from their computer system into CRCS should have their payroll coordinator send several sample electronic files to Tess two months before a payroll needs to be submitted. Not every contractor's payroll system is capable of producing export files. For details, see pages 17-22 of the CRCS System Background Information manual available online on the Labor, Wages, and EEO Information page at:

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

REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS

- I. General
- II. Nondiscrimination
- III. Nonsegregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Compliance with Governmentwide Suspension and Debarment Requirements
- XI. Certification Regarding Use of Contract Funds for Lobbying

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding \$10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under

this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: 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, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are

applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar

with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurance Required by 49 CFR 26.13(b):

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on [Form FHWA-1391](#). The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor

will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding \$2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages

a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions

of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b. (1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or

will notify the contracting officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program. Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-

Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b. (1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency..

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly

rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

6. Subcontracts. The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility.

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The following clauses apply to any Federal-aid construction contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.

3. Withholding for unpaid wages and liquidated damages. The FHWA or the contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2.) of this section.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term "perform work with its own organization" refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:

(1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;

(2) the prime contractor remains responsible for the quality of the work of the leased employees;

(3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and

(4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is

evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C.3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.

2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost \$25,000 or more – as defined in 2 CFR Parts 180 and 1200.

1. Instructions for Certification – First Tier Participants:

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this

covered transaction. The prospective first tier participant 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 first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

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

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction 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 or agency entering into this transaction.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

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

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant 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 or agency may terminate this transaction for cause or default.

* * * * *

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

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

(2) 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;

(3) 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 offenses enumerated in paragraph (a)(2) of this certification; and

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

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

2. Instructions for Certification - Lower Tier Participants:

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which

this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction 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 or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

h. 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 participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant 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 or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.

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

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000 (49 CFR 20).

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

**ATTACHMENT A - EMPLOYMENT AND MATERIALS
PREFERENCE FOR APPALACHIAN DEVELOPMENT
HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS
ROAD CONTRACTS**

This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

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).

SEPTEMBER 2002

**NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE
EQUAL EMPLOYMENT OPPORTUNITY (EXECUTIVE ORDER 11246)**

1. The Offeror's or Bidder's attention is called to the "Employment Practices" and "Equal Opportunity Clause" set forth in the Required Contract Provisions, FHWA 1273.
2. The goals and timetables for minority and female participation expressed in percentage terms for the contractor's aggregate work force in each trade, on all construction work in the covered area, are as follows:

Goals for Minority Participation for Each Trade:

<u>County</u>	<u>%</u>	<u>County</u>	<u>%</u>	<u>County</u>	<u>%</u>
Adams	1.7	Iowa	1.7	Polk	2.2
Ashland	1.2	Iron	1.2	Portage	0.6
Barron	0.6	Jackson	0.6	Price	0.6
Bayfield	1.2	Jefferson	7.0	Racine	8.4
Brown	1.3	Juneau	0.6	Richland	1.7
Buffalo	0.6	Kenosha	3.0	Rock	3.1
Burnett	2.2	Kewaunee	1.0	Rusk	0.6
Calumet	0.9	La Crosse	0.9	St. Croix	2.9
Chippewa	0.5	Lafayette	0.5	Sauk	1.7
Clark	0.6	Langlade	0.6	Sawyer	0.6
Columbia	1.7	Lincoln	0.6	Shawano	1.0
Crawford	0.5	Manitowoc	1.0	Sheboygan	7.0
Dane	2.2	Marathon	0.6	Taylor	0.6
Dodge	7.0	Marinette	1.0	Trempealeau	0.6
Door	1.0	Marquette	1.7	Vernon	0.6
Douglas	1.0	Menominee	1.0	Vilas	0.6
Dunn	0.6	Milwaukee	8.0	Walworth	7.0
Eau Claire	0.5	Monroe	0.6	Washburn	0.6
Florence	1.0	Oconto	1.0	Washington	8.0
Fond du Lac	1.0	Oneida	0.6	Waukesha	8.0
Forest	1.0	Outagamie	0.9	Waupaca	1.0
Grant	0.5	Ozaukee	8.0	Waushara	1.0
Green	1.7	Pepin	0.6	Winnebago	0.9
Green Lake	1.0	Pierce	2.2	Wood	0.6

Goals for female participation for each trade: 6.9%

These goals are applicable to all the contractor's construction work, (whether or not it is federal or federally assisted), performed in the covered area. If the contractor performs construction work in the geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and nonfederally involved construction.

The contractor's compliance with the Executive Order and the Regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from contractor to contractor or from project to project for the sole purpose of meeting the contractor's goals shall be a violation of the contract, the Executive Order and the Regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within ten (10) working days of award of any construction subcontract in excess of \$10,000.00 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor, employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed.

As referred to in this section, the Director means:

Director
Office of Federal Contract Compliance Programs
Ruess Federal Plaza
310 W. Wisconsin Ave., Suite 1115
Milwaukee, WI 53202

The "Employer Identification Number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941.

4. As used in this notice, and in the contract resulting from solicitation, the "covered area" is the county(ies) in Wisconsin to which this proposal applies.

APRIL 2013

ADDITIONAL FEDERAL-AID PROVISIONS

NOTICE TO ALL BIDDERS

To report bid rigging activities call:

1-800-424-9071

The U.S. Department of Transportation (DOT) operates the above toll-free "hotline" Monday through Friday, 8:00 a.m. to 5:00 p.m., Eastern Time. Anyone with knowledge of possible bid rigging, bidding collusion, or other fraudulent activities should use the "hotline" to report such activities.

The "hotline" is part of the DOT's continuing effort to identify and investigate highway construction contract fraud and abuse and is operated under the direction of the DOT Inspector General. All information will be treated confidentially and caller anonymity will be respected.

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.

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

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

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

Cargo Preference Act Requirement

All Federal-aid projects shall comply with 46 CFR 381.7 (a) – (b) as follows:

(a) Agreement Clauses. “Use of United States-flag vessels:”

(1) Pursuant to Pub. L. 664 (43 U.S.C. 1241(b)) at least 50 percent of any equipment, materials or commodities procured, contracted for or otherwise obtained with funds granted, guaranteed, loaned, or advanced by the U.S. Government under this agreement, and which may be transported by ocean vessel, shall be transported on privately owned United States-flag commercial vessels, if available.

(2) Within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, ‘on-board’ commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (a)(1) of this section shall be furnished to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590.”

(b) Contractor and Subcontractor Clauses. “Use of United States-flag vessels: The contractor agrees—”

(1) To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels.

(2) To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, ‘on-board’ commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (b) (1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590.

(3) To insert the substance of the provisions of this clause in all subcontracts issued pursuant to this contract.

Effective with September 2004 Letting

**WISCONSIN DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS AND TRANSPORTATION FACILITIES**

SUPPLEMENTAL REQUIRED CONTRACT PROVISIONS

- I. Wage Rates, Hours of labor and payment of Wages
- II. Payroll Requirements
- III. Postings at the Site of the Work
- IV. Affidavits
- V. Wage Rate Redistribution
- VI. Additional Classifications

I. WAGE RATES, HOURS OF LABOR AND PAYMENT OF WAGES

The schedule of "Minimum Wage Rates" attached hereto and made a part hereof furnishes the prevailing wage rates that have been determined pursuant to Section 103.50 of the Wisconsin Statutes. These wage rates are the minimum required to be paid to the various laborers, workers, mechanics and truck drivers employed by contractors and subcontractors on the construction work embraced by the contract and subject to prevailing hours and wages under Section 103.50, Stats. If necessary to employ laborers, workers, mechanics or truck drivers whose classification is not listed on the schedule, they shall be paid at rates conformable to those listed for similar classifications. Apprentices shall be paid at rates not less than those prescribed in their state indenture contracts.

While the wage rates shown are the minimum rates required by the contract to be paid during its life, this is not a representation that labor can be obtained at these rates. It is the responsibility of bidders to inform themselves as to the local labor conditions and prospective changes or adjustments of wage rates. No increase in the contract price shall be allowed or authorized on account of the payment of wage rates in excess of those listed herein.

Pursuant to Section 103.50 of the Wisconsin Statutes, the prevailing hours of labor have been determined to be up to 10 hours per day and 40 hours per calendar week Monday through Friday. If any laborer, worker, mechanic or truck driver is permitted or required to work more than the prevailing number of hours per day or per calendar week on this contract, they shall be paid for all hours in excess of the prevailing hours at a rate of at least one and one-half (1 1/2) times their hourly rate of pay. All work on Saturday, Sunday and the following holidays is to be paid at time and a half: (1) January 1, (2) the last Monday in May, (3) July 4, (4) the first Monday in September, (5) the fourth Thursday in November, (6) December 25, (7) the day before if January 1, July 4 or December 25 falls on a Saturday and (8) the day following if January 1, July 4 or December 25 falls on a Sunday.

All laborers, workers, mechanics and truck drivers shall be paid unconditionally not less often than once a week. Persons who own and operate their own trucks must receive the prevailing truck driver rate for the applicable type of truck (i.e. 2 axle, 3 or more axle, articulated, eculid or dumptor) he or she operates, plus an agreed upon amount for the use of his or her truck. Every owner-operator MUST be paid separately for their driving and for the use of their truck.

For those projects subject to the requirements of the Davis-Bacon Act, the Secretary of Labor will also have determined "Minimum Wage Rates" for work to be performed under the contract. These rates are, for all or most of the labor, worker, mechanic or truck driver classifications, identical to those established under Section 103.50 of the Wisconsin Statutes. In the event the rates are not identical, the higher of the two rates will govern.

II. PAYROLL REQUIREMENTS

All contractors and subcontractors must submit weekly Certified Payrolls and Compliance Statement verifying that all laborers, workers, mechanics and truck drivers working on the project have been paid the prevailing wage rates for all work performed under the contract required by Section 103.50 of the Wisconsin Statutes.

III. POSTINGS AT THE SITE OF THE WORK

In addition to the required postings furnished by the Department, the contractor shall post the following in at least one conspicuous place at the site of work:

- a. "NOTICE TO EMPLOYEES," which provides information required to be posted by the provisions of Section 103.50 of the Wisconsin Statutes.
- b. A copy of the State of Wisconsin Minimum Wages Rates. (Four pages.)
- c. A copy of the contractor's Equal Employment Opportunity Policy.
- d. On any project involving federal aid, in addition to the furnished postings, the contractor shall post a copy of the "Davis-Bacon Act, Minimum Wage Rates". (Three pages.)

IV. WAGE RATE REDISTRIBUTION

The amount specified as the hourly basic rate of pay and the amount(s) specified as the fringe benefit contribution(s), for all classes of laborers, workers, mechanics or truck drivers may be redistributed, when necessary, to conform to those specified in any applicable collective bargaining agreement, provided that both parties to such agreement

request and receive the approval for any such redistribution from both the Department of Transportation and the Department of Workforce Development prior to the implementation of such redistribution.

V. ADDITIONAL CLASSIFICATIONS

Any unlisted laborer or mechanic classification that is needed to perform work on this project, and is not included within the scope of any of the classifications listed in the application prevailing wage rate determination, may be added after award only if all of the following criteria have been met:

1. The affected employer(s) must make a written request to WisDOT Central Office to utilize the unlisted classification on this project.
2. The request must indicate the scope of the work to be performed by the unlisted classification and must indicate the proposed wage/fringe benefit package that the unlisted classification is to receive.
3. The work to be performed by the unlisted classification must not be performed by a classification that is included in the applicable prevailing wage rate determination.
4. The unlisted classification must be commonly employed in the area where the project is located.
5. The proposed wage/fringe benefit package must bear a reasonable relationship to those set forth in the applicable prevailing wage rate determination.
6. The request should be made prior to the actual performance of the work by the unlisted classification.
7. DWD must approve the use of the unlisted classification and the proposed wage/fringe benefit package. USDOL also must approve the use of the unlisted classification and the proposed wage/fringe benefit package on federal aid projects.
8. WisDOT and DWD may amend the proposed wage/fringe benefit package, as deemed necessary, and may set forth specific employment ratios and scope of work requirements in the approval document.

The approved wage/fringe benefit package shall be paid to all laborers, workers, mechanics or truck drivers performing work within the scope of that performed by the unlisted classification, from the first day on which such work is performed. In the event that work is performed by the unlisted classification prior to approval, the wage/fringe benefit package to be paid for such work must be in conformance with the wage/fringe

benefit package approved for such work. Under this arrangement a retroactive adjustment in wages and/or fringe benefits may be required to be made to the affected laborers, workers, mechanics or truck drivers by the affected employer(s).

**ANNUAL PREVAILING WAGE RATE DETERMINATION
FOR ALL STATE HIGHWAY PROJECTS
KENOSHA COUNTY**

Compiled by the State of Wisconsin - Department of Workforce Development
for the Department of Transportation
Pursuant to s. 103.50, Stats.
Issued on May 1, 2016

CLASSIFICATION: Contractors are required to call the Department of Workforce Development if there are any questions regarding the proper trade or classification to be used for any worker on a public works project.

OVERTIME: Time and one-half must be paid for all hours worked over 10 hours per day and 40 hours per calendar week and for all hours worked on Saturday, Sunday and the following six (6) holidays: January 1; the last Monday in May; July 4; the 1st Monday in September; the 4th Thursday in November; December 25; the day before if January 1, July 4 or December 25 falls on a Saturday; the day following if January 1, July 4 or December 25 falls on a Sunday.

FUTURE INCREASE: If indicated for a specific trade or occupation, the full amount of such increase MUST be added to the "TOTAL" indicated for such trade or occupation on the date(s) such increase(s) becomes effective.

PREMIUM PAY: If indicated for a specific trade or occupation, the full amount of such pay MUST be added to the "HOURLY BASIC RATE OF PAY" indicated for such trade or occupation, whenever such pay is applicable.

SUBJOURNEY: Wage rates may be available for some of the classifications indicated below. Any employer that desires to use any subjourney classification on a project MUST request the applicable wage rate from the Department of Workforce Development PRIOR to the date such classification is used on such project. Form ERD-10880 is available for this purpose and can be obtained by writing to the Department of Workforce Development, Equal Rights Division, P.O. Box 8928, Madison, WI 53708.

<u>TRADE OR OCCUPATION</u>	<u>HOURLY BASIC RATE OF PAY</u>	<u>HOURLY FRINGE BENEFITS</u>	<u>TOTAL</u>
	\$	\$	\$
Bricklayer, Blocklayer or Stonemason	31.55	18.52	50.07
Carpenter	35.28	20.96	56.24
Future Increase(s): Add \$1.65/hr on 6/1/2016.			
Premium Pay: DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.			
Cement Finisher	31.44	22.39	53.83
Future Increase(s): Add \$1.75 on 6/1/16.			
Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.40/hr when the Wisconsin Department of Transportation or responsible governing agency requires that work be performed at night under artificial illumination with traffic control and the work is completed after sunset and before sunrise.			
Electrician	38.30	16.81	55.11
Fence Erector	35.62	0.00	35.62
Ironworker	30.77	23.72	54.49
Line Constructor (Electrical)	38.38	15.74	54.12
Painter	29.87	18.79	48.66
Pavement Marking Operator	31.24	17.04	48.28
Piledriver	30.11	21.09	51.20
Roofer or Waterproofer	30.40	2.23	32.63
Teledata Technician or Installer	25.63	17.25	42.88
Tuckpointer, Caulker or Cleaner	35.72	19.07	54.79
Underwater Diver (Except on Great Lakes)	36.74	16.00	52.74
Heavy Equipment Operator - ELECTRICAL LINE CONSTRUCTION ONLY	36.73	15.92	52.65
Light Equipment Operator -ELECTRICAL LINE CONSTRUCTION ONLY	35.50	16.16	51.66
Heavy Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	28.57	13.71	42.28

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
	\$	\$	\$
Light Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	26.53	13.09	39.62
Groundman - ELECTRICAL LINE CONSTRUCTION ONLY	21.75	12.97	34.72

TRUCK DRIVERS

Single Axle or Two Axle	36.72	21.15	57.87
Three or More Axle	25.78	18.96	44.74
Premium Pay: DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.			
Articulated, Euclid, Dumptror, Off Road Material Hauler	30.82	21.85	52.67
Future Increase(s): Add \$1.30/hr on 6/1/2016; Add \$1.25/hr on 6/1/2017.			
Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.50/hr night work premium.			
See DOT'S website for details about the applicability of this night work premium at: http://wisconsin.gov/Pages/doing-bus/civil-rights/labornwage/prevaling-wage-compliance.aspx .			
Pavement Marking Vehicle	23.82	17.72	41.54
Shadow or Pilot Vehicle	25.28	18.31	43.59
Truck Mechanic	25.28	18.31	43.59

LABORERS

General Laborer	26.57	20.63	47.20
Future Increase(s): Add \$1.00/hr eff. 06/01/2016; Add \$1.00/hr eff. 06/01/2017			
Premium Pay: Add \$.10/hr for topman; Add \$.15/hr for air tool operator, joint sawer and filler (pavement), vibrator or tamper operator (mechanical hand operated), chain saw operator and demolition burning torch laborer; Add \$.26/hr for bottomman; Add \$.35/hr for bituminous worker (raker and luteman), formsetter (curb, sidewalk and pavement), strike off man; Add \$.32/hr for and line and grade specialist; Add \$.65/hr for blaster and powderman; Add \$.75/hr for pipelayer. / DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.25/hr for work on projects involving temporary traffic control setup, for lane and shoulder closures, when work under artificial illumination conditions is necessary as required by the project provisions (including prep time prior to and/or cleanup after such time period).			
Asbestos Abatement Worker	19.00	0.00	19.00
Landscaper	26.57	20.63	47.20
Future Increase(s): Add \$1.00/hr eff. 06/01/2016; Add \$1.00/hr eff. 06/01/2017			
Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.25/hr for work on projects involving temporary traffic control setup, for lane and shoulder closures, when work under artificial illumination conditions is necessary as required by the project provisions (including prep time prior to and/or cleanup after such time period).			
Flagperson or Traffic Control Person	23.55	20.03	43.58
Fiber Optic Laborer (Outside, Other Than Concrete Encased)	16.00	1.33	17.33
Railroad Track Laborer	17.00	2.94	19.94

HEAVY EQUIPMENT OPERATORS

Crane, Tower Crane, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 176 Ft or Over; Crane, Tower Crane, Pedestal Tower or	38.27	21.85	60.12
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<u>TRADE OR OCCUPATION</u>	<u>HOURLY BASIC RATE OF PAY</u>	<u>HOURLY FRINGE BENEFITS</u>	<u>TOTAL</u>
	\$	\$	\$
Derrick, With or Without Attachments, With a Lifting Capacity of Over 100 Tons, Self-Erecting Tower Crane With a Lifting Capacity Of Over 4,000 Lbs., Crane With Boom Dollies; Traveling Crane (Bridge Type). Future Increase(s): Add \$1.30/hr on 6/1/2016; Add \$1.25/hr on 6/1/2017. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: http://wisconsindot.gov/Pages/doing-bus/civil-rights/labornwage/prevailing-wage-compliance.aspx .			
Backhoe (Track Type) Having a Mfr.'s Rated Capacity of 130,000 Lbs. or Over; Caisson Rig; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 175 Ft or Under; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With or Without Attachments, With a Lifting Capacity of 100 Tons or Under, Self-Erecting Tower Crane With A Lifting Capacity Of 4,000 Lbs., & Under; Dredge (NOT Performing Work on the Great Lakes); Licensed Boat Pilot (NOT Performing Work on the Great Lakes); Pile Driver. Future Increase(s): Add \$1.30/hr on 6/1/2016; Add \$1.25/hr on 6/1/2017. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: http://wisconsindot.gov/Pages/doing-bus/civil-rights/labornwage/prevailing-wage-compliance.aspx .	37.77	21.85	59.62
Air Track, Rotary or Percussion Drilling Machine &/or Hammers, Blaster; Asphalt Heater, Planer & Scarifier; Asphalt Milling Machine; Asphalt Screed; Automatic Subgrader (Concrete); Backhoe (Track Type) Having a Mfr.'s Rated Capacity of Under 130,000 Lbs., Backhoe (Mini, 15,000 Lbs. & Under); Bituminous (Asphalt) Plant & Paver, Screed; Boatmen (NOT Performing Work on the Great Lakes); Boring Machine (Directional, Horizontal or Vertical); Bridge (Bidwell) Paver; Bulldozer or Endloader; Concrete Batch Plant, Batch Hopper; Concrete Breaker (Large, Auto, Vibratory/Sonic, Manual or Remote); Concrete Bump Cutter, Grinder, Planing or Grooving Machine; Concrete Conveyor System; Concrete Laser/Screed; Concrete Paver (Slipform); Concrete Pump, Concrete Conveyor (Rotec or Bidwell Type); Concrete Slipform Placer Curb & Gutter Machine; Concrete Spreader & Distributor; Crane (Carry Deck, Mini) or Truck Mounted Hydraulic Crane (10 Tons or Under); Crane With a Lifting Capacity of 25 Tons or Under; Forestry Equipment, Timbco, Tree Shear, Tub Grinder, Processor; Gradall (Cruz-Aire Type); Grader or Motor Patrol; Grout Pump; Hydro-Blaster (10,000 PSI or Over); Loading Machine (Conveyor); Material or Stack Hoist; Mechanic or Welder; Milling Machine; Post Hole Digger or Driver; Roller (Over 5 Ton); Scraper (Self Propelled or Tractor Drawn) 5 cu yds or More Capacity; Shoulder Widener; Sideboom; Skid Rig; Stabilizing or Concrete Mixer (Self-Propelled or 14S or Over); Straddle Carrier or Travel Lift; Tractor (Scraper, Dozer, Pusher, Loader); Tractor or Truck Mounted Hydraulic Backhoe; Trencher (Wheel Type or Chain Type); Tube Finisher; Tugger (NOT Performing Work on the Great Lakes); Winches & A- Frames. Future Increase(s): Add \$1.30/hr on 6/1/2016; Add \$1.25/hr on 6/1/2017. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: http://wisconsindot.gov/Pages/doing-bus/civil-rights/labornwage/prevailing-wage-compliance.aspx .	37.27	21.85	59.12
Belting, Burlap, Texturing Machine; Broom or Sweeper; Compactor (Self-Propelled or Tractor Mounted, Towed & Light Equipment); Concrete	37.01	21.85	58.86

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
	\$	\$	\$
Finishing Machine (Road Type); Environmental Burner; Farm or Industrial Type Tractor; Fireman (Asphalt Plant, Pile Driver & Derrick NOT Performing Work on the Great Lakes); Forklift; Greaser; Hoist (Tugger, Automatic); Jeep Digger; Joint Sawyer (Multiple Blade); Launch (NOT Performing Work on the Great Lakes); Lift Slab Machine; Mechanical Float; Mulcher; Power Subgrader; Robotic Tool Carrier (With or Without Attachments); Roller (Rubber Tire, 5 Ton or Under); Self Propelled Chip Spreader; Shouldering Machine; Skid Steer Loader (With or Without Attachments); Telehandler; Tining or Curing Machine. Future Increase(s): Add \$1.30/hr on 6/1/2016; Add \$1.25/hr on 6/1/2017. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: http://wisconsindot.gov/Pages/doing-bus/civil-rights/labornwage/prevaling-wage-compliance.aspx .			
Air Compressor (&/or 400 CFM or Over); Air, Electric or Hydraulic Jacking System; Augers (Vertical & Horizontal); Automatic Belt Conveyor & Surge Bin; Boiler (Temporary Heat); Concrete Proportioning Plant; Crusher, Screening or Wash Plant; Generator (&/or 150 KW or Over); Heaters (Mechanical); High Pressure Utility Locating Machine (Daylighting Machine); Mudjack; Oiler; Prestress Machine; Pug Mill; Pump (3 Inch or Over) or Well Points; Rock, Stone Breaker; Screed (Milling Machine); Stump Chipper; Tank Car Heaters; Vibratory Hammer or Extractor, Power Pack. Future Increase(s): Add \$1.30/hr on 6/1/2016; Add \$1.25/hr on 6/1/2017. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: http://wisconsindot.gov/Pages/doing-bus/civil-rights/labornwage/prevaling-wage-compliance.aspx .	36.72	21.85	58.57
Fiber Optic Cable Equipment.	26.00	3.86	29.86
Work Performed on the Great Lakes Including Diver; Wet Tender or Hydraulic Dredge Engineer.	41.65	21.71	63.36
Work Performed on the Great Lakes Including 70 Ton & Over Tug Operator; Assistant Hydraulic Dredge Engineer; Crane or Backhoe Operator; Hydraulic Dredge Leverman or Diver's Tender; Mechanic or Welder.	41.65	21.71	63.36
Work Performed on the Great Lakes Including Deck Equipment Operator or Machineryman (Maintains Cranes Over 50 Tons or Backhoes 115,000 Lbs. or More); Tug, Launch or Loader, Dozer or Like Equipment When Operated on a Barge, Breakwater Wall, Slip, Dock or Scow, Deck Machinery.	36.72	21.15	57.87
Work Performed on the Great Lakes Including Deck Equipment Operator, Machineryman or Fireman (Operates 4 Units or More or Maintains Cranes 50 Tons or Under or Backhoes 115,000 Lbs. or Under); Deck Hand, Deck Engineer or Assistant Tug Operator; Off Road Trucks-Great Lakes ONLY.	36.72	21.15	57.87

SUPERSEDES DECISION WI20120010
U. S. DEPARTMENT OF LABOR
(DAVIS-BACON ACT, MINIMUM WAGE RATES)

STATE: Wisconsin

GENERAL DECISION NUMBER: WI160010

DESCRIPTION OF WORK: Highways and Airport Runway and Taxiway Construction

DATE: July 29, 2016

LABORERS CLASSIFICATION:		Basic Hourly Rates	Fringe Benefits			Basic Hourly Rates	Fringe Benefits
Group 1:	General Laborer; Tree Trimmer; Conduit Layer; Demolition and Wrecking Laborer; Guard Rail, Fence and Bridge Builder; Landscaper; Multiplate Culvert Assembler; Stone Handler; Bituminous Worker (Shoveler, Loader, Utility Man); Batch Truck Dumper; or Cement Handler; Bituminous Worker; (Dumper, Ironer, Smoother, Tamper); Concrete Handler	\$26.57	20.35	Truck Drivers:			
				1 & 2 Axles	26.63	19.85	
				Three or More Axles; Euclids, Dumptr & Articulated, Truck Mechanic.....	26.78	19.85	
Group 2:	Air Tool Operator; Joint Sawyer and Filler (Pavement); Vibrator or Tamper Operator (Mechanical Hand Operated); Chain Saw Operator; Demolition Burning Torch Laborer	26.72	20.35				
Group 3:	Bituminous Worker (Raker and Luteman); Formsetter (Curb, Sidewalk, and Pavement); Strike Off man.....	26.92	20.35				
Group 4:	Line and Grade Specialist	26.89	20.35				
Group 5:	Blaster and Powderman	27.22	20.35				
Group 6:	Flagman; traffic control person.....	23.71	20.35				

CLASSES OF LABORER AND MECHANICS

Bricklayer	35.10	18.58
Carpenter	30.52	14.41
Piledriverman	24.47	19.46
Ironworker	32.36	24.07
Cement Mason/Concrete Finisher	32.02	22.99
Electrician		See Page 3
Line Construction		
Lineman.....	42.14	32% + 5.00
Heavy Equipment Operator	40.03	32% + 5.00
Equipment Operator.....	33.71	32% + 5.00
Heavy Groundman Driver.....	26.78	14.11
Light Groundman Driver	24.86	13.45
Groundsman	23.18	32% + 5.00
Millwrights.....	25.27	13.78
Painter, Brush.....	32.74	18.70
Painter, Structural Steel	32.89	18.70
Painter, Spray	33.74	18.70
Well Drilling:		
Well Driller.....	16.52	3.70

Notes: Welders receive rate prescribed for craft performing operation to which welding is incidental. Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29 CFR, 5.5(a)(1)(ii)). Includes Modification #0 dated January 8, 2016; Modification #1 dated January 29, 2016; Modification #2 dated February 26, 2016; Modification #3 dated March 11, 2016; Modification #4 dated April 8, 2016; Modification #5 dated June 17, 2016; Modification #6 dated July 1, 2016; Modification #7 dated July 22, 2016; Modification #8 dated July 29, 2016.

SUPERSEDES DECISION WI20120010
U. S. DEPARTMENT OF LABOR
(DAVIS-BACON ACT, MINIMUM WAGE RATES)

STATE: Wisconsin

GENERAL DECISION NUMBER: WI160010

DESCRIPTION OF WORK: Highways and Airport Runway and Taxiway Construction

DATE: July 29, 2016

<u>POWER EQUIPMENT OPERATORS CLASSIFICATION:</u>	<u>Basic Hourly Rates</u>	<u>Fringe Benefits</u>	<u>POWER EQUIPMENT OPERATORS CLASSIFICATION: (Continued)</u>	<u>Basic Hourly Rates</u>	<u>Fringe Benefits</u>
Group 1: Cranes, tower cranes and derricks, with or without attachments, with a lifting capacity of over 100 tons or cranes, tower cranes and derricks with boom, leads and/or jib lengths measuring 176 feet or longer	\$39.27	\$21.80	(scraper, dozer, pusher, loader); scraper - rubber tired (single or twin engine); endloader hydraulic backhoe (tractor-type); trenching machine; skid rigs; tractor, side boom (heavy); drilling or boring machine (mechanical heavy); roller (over 5 tons); percussion or rotary drilling machine; air track; blaster; loading machine (conveyor); tugger; boatmen; winches and A-frames; post driver; material hoist operator.	\$38.27	\$21.80
Group 2: Cranes, tower cranes and derricks, with or without attachments, with a lifting capacity of 100 tons or less or cranes, tower cranes and derricks with boom, leads and/or jib lengths measuring 175 feet or less, and backhoes (excavators) having a manufacturer's rated capacity of 3 cu. yds. and over, caisson rigs, pile driver, dredge operator, dredge engineer.	\$38.77	\$21.80	Group 4: Greaser, roller steel (5 tons or less); roller (pneumatic tired) - self-propelled; tractor (mounted or towed compactors and light equipment); shouldering machine; self-propelled chip spreader; concrete spreader; finishing machine; mechanical float; curing machine; power subgrader; joint saw (multiple blade) belting machine; burlap machine; texturing machine; tractor, endloader (rubber tired) - light; jeep digger; fork lift; mulcher; launch operator; fireman; environmental burner.	\$38.01	\$21.80
Group 3: Mechanic or welder - heavy duty equipment, cranes with a lifting capacity of 25 tons or less, concrete breaker (manual or remote); vibrator/sonic concrete breaker; concrete laser screed; concrete slipform paver; concrete batch plant operator; concrete pavement spreader - heavy duty (rubber tired); concrete spreader and distributor, automatic subgrader (concrete); concrete grinder and planing machine; concrete slipform curb and gutter machine; slipform concrete placer; tube finisher; hydro blaster (10,000 psi and over); bridge paver; concrete conveyor system; concrete pump; stabilizing mixer (self propelled); shoulder widener; asphalt plant engineer; bituminous paver; bump cutter and grooving machine; milling machine; screed (bituminous paver); asphalt heater, planer and scarifier; backhoes (excavators) having a manufacturers rated capacity of under 3 cu. yds.; grader or motor patrol; tractor			Group 5: Air compressor; power pack; vibratory hammer and extractor; heavy equipment, leadman; tank car heaters; stump chipper; curb machine operator; concrete proportioning plants generators; mudjack operator; rock breaker; crusher or screening plant; screed (milling machine); automatic belt conveyor and surge bin; pug mill operator; oiler; pump (over 3 inches); drilling machine helper.	\$37.72	\$21.80
			Group 6: Off - road material hauler with or without ejector	\$31.82	\$21.80
			Premium Pay: EPA Level "A" protection - \$3.00 per hour EPA Level "B" protection - \$2.00 per hour EPA Level "C" protection - \$1.00 per hours		

SUPERSEDES DECISION WI20120010
U. S. DEPARTMENT OF LABOR
(DAVIS-BACON ACT, MINIMUM WAGE RATES)

STATE: Wisconsin

GENERAL DECISION NUMBER: WI160010

DESCRIPTION OF WORK: Highways and Airport Runway and Taxiway Construction

DATE: July 29, 2016

LABORERS CLASSIFICATION:

Rates

Benefits

			Area 4 -	BROWN, DOOR, KEWAUNEE, MANITOWOC (except Schleswig), MARINETTE (Wausauke and area south thereof), OCONTO, MENOMINEE (East of a line 6 miles West of the West boundary of Oconto County), SHAWANO (except area North of Townships of Aniwa and Hutchins) COUNTIES.
Electricians				
Area 1	\$30.68	17.28		
Area 2:				
Electricians.....	32.00	19.28	Area 5 -	ADAMS, CLARK (Colby, Freemont, Lynn, Mayville, Sherman, Sherwood, Unity), FOREST, JUNEAU, LANGLADE, LINCOLN, MARATHON, MARINETTE (Area North of the town of Wausauke), MENOMINEE (Area West of a line 6 miles West of the West boundary of Oconto County), ONEIDA, PORTAGE, SHAWANO (Area North of the townships of Aniwa and Hutchins), VILAS AND WOOD COUNTIES
Area 3:				
Electrical contracts under \$130,000	28.96	18.26		
Electrical contracts over \$130,000	31.16	18.34		
Area 4:	29.84	29.50% + 9.37		
Area 5	28.96	24.85% + 9.70		
Area 6	37.02	29%+9.77	Area 6 -	KENOSHA COUNTY
Area 8				
Electricians.....	31.90	24.95% + 10.46	Area 8 -	DODGE, (Emmet Township only), GREEN, JEFFERSON, LAFAYETTE, RACINE (Burlington township), ROCK and WALWORTH COUNTIES
Area 9:				
Electricians.....	35.75	19.87		
Area 10	29.64	20.54	Area 9 -	COLUMBIA, DANE, DODGE, (area west of Hwy. 26, except Chester & Emmet Townships), GREEN LAKE (except townships of Berlin, Seneca and St. Marie), IOWA, MARQUETTE (except townships of Neshkoka, Crystal Lake, Newton and Springfield), and SAUK COUNTIES
Area 11	34.92	25.05		
Area 12	34.98	19.89	Area 10 -	CALUMET (Township of New Holstein), DODGE (East of Hwy. 26 including Chester Township), FOND DU LAC, MANITOWOC (Schleswig), and SHEBOYGAN COUNTIES
Area 13	35.13	23.26		
Teledata System Installer				
Area 14			Area 11 -	DOUGLAS COUNTY
Installer/Technician	24.35	13.15		
Sound & Communications			Area 12 -	RACINE (except Burlington township) COUNTY
Area 15				
Installer	16.47	14.84	Area 13 -	MILWAUKEE, OZAUKEE, WASHINGTON and WAUKESHA COUNTIES
Technician	26.00	17.70	Area 14 -	Statewide.
Area 1 -			Area 15 -	DODGE (East of Hwy 26 including Chester Twp, excluding Emmet Twp), FOND DU LAC (Except Waupun), MILWAUKEE, OZAUKEE, MANITOWOC (Schleswig), WASHINGTON, AND WAUKESHA COUNTIES.
CALUMET (except township of New Holstein), GREEN LAKE (N. part, including Townships of Berlin, St. Marie and Seneca), MARQUETTE (N. part, including Townships of Crystal Lake, Neshkoro, Newton & Springfield), OUTAGAMIE, WAUPACA, WAUSHARA and WINNEBAGO COUNTIES.				
Area 2 -				
ASHLAND, BARRON, BAYFIELD, BUFFALO, BURNETT, CHIPPEWA, CLARK (except Mayville, Colby, Unity, Sherman, Fremont, Lynn and Sherwood), CRAWFORD, DUNN, EAU CLAIRE, GRANT, IRON, JACKSON, LA CROSSE, MONROE, PEPIN, PIERCE, POLK, PRICE, RICHLAND, RUSK, ST. CROIX, SAWYER, TAYLOR, TREMPLEAU, VERNON and WASHBURN COUNTIES				
Area 3 -				
FLORENCE (townships of Aurora, Commonwealth, Fern, Florence and Homestead), MARINETTE (Niagara township)				

FEBRUARY 1999

**NOTICE TO BIDDERS
WAGE RATE DECISION**

The wage rate decision of the Secretary of Labor which has been incorporated in these advertised specifications is incomplete in that the classifications may be omitted from the Secretary of Labor's decision.

Since the bidder is responsible, independently, for ascertaining area practice with respect to the necessity, or lack of necessity, for the use of these classifications in the prosecution of the work contemplated by this project, no inference may be drawn from the omission of these classifications concerning prevailing area practices relative to their use. Further, this omission will not, per se, be construed as establishing any governmental liability for increased labor cost if it is subsequently determined that such classifications are required.

There may be omissions and/or errors in the federal wage rates. The bidder is responsible for evaluating and determining the correct applicable rate. The higher of state or federal rate will apply.

SCHEDULE OF ITEMS

REVISED:

CONTRACT:
20160913007PROJECT(S):
3200-02-73
3200-02-74FEDERAL ID(S):
WISC 2016308
N/A

CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS

SECTION 0001 GENERAL ROADWAY

0010	201.0105 Clearing	98.000				
		STA	.		.	
0020	201.0205 Grubbing	98.000				
		STA	.		.	
0030	202.0105 Roadside Clearing	5.000				
		STA	.		.	
0040	203.0100 Removing Small Pipe Culverts	92.000				
		EACH	.		.	
0050	203.0200 Removing Old Structure (station) 01. 69+92	LUMP	LUMP			.
0060	203.0200 Removing Old Structure (station) 02. 135+35	LUMP	LUMP			.
0070	203.0200 Removing Old Structure (station) 03. 135+48	LUMP	LUMP			.
0080	203.0200 Removing Old Structure (station) 04. 146+31	LUMP	LUMP			.
0090	203.0200 Removing Old Structure (station) 05. 214+03	LUMP	LUMP			.

SCHEDULE OF ITEMS

REVISED:

CONTRACT:
20160913007PROJECT(S):
3200-02-73
3200-02-74FEDERAL ID(S):
WISC 2016308
N/A

CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0100	203.0200 Removing Old Structure (station) 06. 47+39 CTH C	LUMP	LUMP		.	
0110	204.0100 Removing Pavement	11,850.000 SY	.		.	
0120	204.0110 Removing Asphaltic Surface	12,644.000 SY	.		.	
0130	204.0115 Removing Asphaltic Surface Butt Joints	2,262.000 SY	.		.	
0140	204.0120 Removing Asphaltic Surface Milling	69,841.000 SY	.		.	
0150	204.0150 Removing Curb & Gutter	5,560.000 LF	.		.	
0160	204.0155 Removing Concrete Sidewalk	53.000 SY	.		.	
0170	204.0165 Removing Guardrail	430.000 LF	.		.	
0180	204.0180 Removing Delineators and Markers	34.000 EACH	.		.	
0190	204.0195 Removing Concrete Bases	20.000 EACH	.		.	
0200	204.0220 Removing Inlets	8.000 EACH	.		.	

SCHEDULE OF ITEMS

REVISED:

CONTRACT:
20160913007PROJECT(S):
3200-02-73
3200-02-74FEDERAL ID(S):
WISC 2016308
N/A

CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0210	204.0245 Removing Storm Sewer (size) 01. 12-Inch	174.000 LF	.		.	
0220	204.0245 Removing Storm Sewer (size) 02. 18-Inch	72.000 LF	.		.	
0230	204.0245 Removing Storm Sewer (size) 03. 24-Inch	212.000 LF	.		.	
0240	204.9060.S Removing (item description) 01. Partial Small Pipe Culverts	4.000 EACH	.		.	
0250	204.9090.S Removing (item description) 02. Partial Pipe Underdrain 12-Inch	108.000 LF	.		.	
0260	205.0100 Excavation Common	69,708.000 CY	.		.	
0270	205.0400 Excavation Marsh	3,100.000 CY	.		.	
0280	205.0501.S Excavation, Hauling, and Disposal of Petroleum Contaminated Soil	1,946.000 TON	.		.	
0290	209.0100 Backfill Granular	5,401.000 CY	.		.	

SCHEDULE OF ITEMS

REVISED:

CONTRACT:
20160913007PROJECT(S):
3200-02-73
3200-02-74FEDERAL ID(S):
WISC 2016308
N/A

CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0300	211.0100 Prepare Foundation for Asphaltic Paving (project) 01. 3200-02-73	LUMP	LUMP			.
0310	213.0100 Finishing Roadway (project) 01. 3200-02-73	1.000 EACH	.		.	
0320	305.0110 Base Aggregate Dense 3/4-Inch	5,166.000 TON	.		.	
0330	305.0120 Base Aggregate Dense 1 1/4-Inch	65,036.000 TON	.		.	
0340	305.0410 Aggregate Detours	100.000 TON	.		.	
0350	311.0110 Breaker Run	8,600.000 TON	.		.	
0360	390.0203 Base Patching Asphaltic	300.000 SY	.		.	
0370	390.0303 Base Patching Concrete	2,470.000 SY	.		.	
0380	415.0085 Concrete Pavement 8 1/2-Inch	27,670.000 SY	.		.	
0390	415.0210 Concrete Pavement Gaps	3.000 EACH	.		.	

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0400	416.0170 Concrete Driveway 7-Inch	685.000 SY	.		.	
0410	416.0610 Drilled Tie Bars	430.000 EACH	.		.	
0420	416.0620 Drilled Dowel Bars	4,292.000 EACH	.		.	
0430	416.1010 Concrete Surface Drains	93.700 CY	.		.	
0440	440.4410 Incentive IRI Ride	10,000.000 DOL	1.00000		10000.00	
0450	450.4000 HMA Cold Weather Paving	6,687.000 TON	.		.	
0460	455.0605 Tack Coat	4,210.000 GAL	.		.	
0470	460.2000 Incentive Density HMA Pavement	26,470.000 DOL	1.00000		26470.00	
0480	465.0115 Asphaltic Surface Detours	50.000 TON	.		.	
0490	465.0120 Asphaltic Surface Driveways and Field Entrances	940.000 TON	.		.	

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0500	465.0425 Asphaltic Shoulder Rumble Strips 2-Lane Rural	23,521.000 LF	.		.	
0510	465.0475 Asphalt Center Line Rumble Strips 2-Lane Rural	17,856.000 LF	.		.	
0520	504.0900 Concrete Masonry Endwalls	36.000 CY	.		.	
0530	513.2050.S Railing Pipe	18.000 LF	.		.	
0540	520.8000 Concrete Collars for Pipe	21.000 EACH	.		.	
0550	521.0112 Culvert Pipe Corrugated Steel 12-Inch	48.000 LF	.		.	
0560	521.0115 Culvert Pipe Corrugated Steel 15-Inch	264.000 LF	.		.	
0570	521.0118 Culvert Pipe Corrugated Steel 18-Inch	1,107.000 LF	.		.	
0580	521.0121 Culvert Pipe Corrugated Steel 21-Inch	50.000 LF	.		.	
0590	521.0124 Culvert Pipe Corrugated Steel 24-Inch	62.000 LF	.		.	
0600	521.0771 Pipe Arch Corrugated Steel 71x47-Inch	115.000 LF	.		.	

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			DOLLARS	CTS	DOLLARS	CTS
0610	521.1012 Apron Endwalls for Culvert Pipe Steel 12-Inch	6.000 EACH	.		.	
0620	521.1015 Apron Endwalls for Culvert Pipe Steel 15-Inch	4.000 EACH	.		.	
0630	521.1018 Apron Endwalls for Culvert Pipe Steel 18-Inch	46.000 EACH	.		.	
0640	521.1021 Apron Endwalls for Culvert Pipe Steel 21-Inch	4.000 EACH	.		.	
0650	521.1024 Apron Endwalls for Culvert Pipe Steel 24-Inch	4.000 EACH	.		.	
0660	521.1271 Apron Endwalls for Pipe Arch Steel 71x47-Inch	1.000 EACH	.		.	
0670	521.1502 Apron Endwalls for Culvert Pipe Sloped Side Drains Steel 15-Inch 4 to 1	10.000 EACH	.		.	
0680	521.1503 Apron Endwalls for Culvert Pipe Sloped Side Drains Steel 18-Inch 4 to 1	12.000 EACH	.		.	
0690	521.1515 Apron Endwalls for Culvert Pipe Sloped Side Drains Steel 15-Inch 6 to 1	4.000 EACH	.		.	

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			DOLLARS	CTS	DOLLARS	CTS
0700	521.1518 Apron Endwalls for Culvert Pipe Sloped Side Drains Steel 18-Inch 6 to 1	11.000 EACH	.		.	
0710	522.0124 Culvert Pipe Reinforced Concrete Class III 24-Inch	270.000 LF	.		.	
0720	522.0130 Culvert Pipe Reinforced Concrete Class III 30-Inch	92.000 LF	.		.	
0730	522.0172 Culvert Pipe Reinforced Concrete Class III 72-Inch	160.000 LF	.		.	
0740	522.0324 Culvert Pipe Reinforced Concrete Class IV 24-Inch	156.000 LF	.		.	
0750	522.0336 Culvert Pipe Reinforced Concrete Class IV 36-Inch	192.000 LF	.		.	
0760	522.0342 Culvert Pipe Reinforced Concrete Class IV 42-Inch	78.000 LF	.		.	
0770	522.0360 Culvert Pipe Reinforced Concrete Class IV 60-Inch	16.000 LF	.		.	
0780	522.1012 Apron Endwalls for Culvert Pipe Reinforced Concrete 12-Inch	6.000 EACH	.		.	
0790	522.1015 Apron Endwalls for Culvert Pipe Reinforced Concrete 15-Inch	1.000 EACH	.		.	

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			DOLLARS	CTS	DOLLARS	CTS
0800	522.1018 Apron Endwalls for Culvert Pipe Reinforced Concrete 18-Inch	1.000 EACH	.		.	
0810	522.1024 Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	19.000 EACH	.		.	
0820	522.1030 Apron Endwalls for Culvert Pipe Reinforced Concrete 30-Inch	5.000 EACH	.		.	
0830	522.1036 Apron Endwalls for Culvert Pipe Reinforced Concrete 36-Inch	8.000 EACH	.		.	
0840	522.1042 Apron Endwalls for Culvert Pipe Reinforced Concrete 42-Inch	2.000 EACH	.		.	
0850	522.1060 Apron Endwalls for Culvert Pipe Reinforced Concrete 60-Inch	3.000 EACH	.		.	
0860	522.1072 Apron Endwalls for Culvert Pipe Reinforced Concrete 72-Inch	4.000 EACH	.		.	
0870	523.0419 Culvert Pipe Reinforced Concrete Horizontal Elliptical Class HE-IV 19x30-Inch	224.000 LF	.		.	

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			DOLLARS	CTS	DOLLARS	CTS
0880	523.0519 Apron Endwalls for Culvert Pipe Reinforced Concrete Horizontal Elliptical 19x30-Inch	6.000 EACH	.		.	
0890	523.0524 Apron Endwalls for Culvert Pipe Reinforced Concrete Horizontal Elliptical 24x38-Inch	1.000 EACH	.		.	
0900	601.0409 Concrete Curb & Gutter 30-Inch Type A	5,857.000 LF	.		.	
0910	601.0411 Concrete Curb & Gutter 30-Inch Type D	40.000 LF	.		.	
0920	601.0553 Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type D	4,050.000 LF	.		.	
0930	601.0555 Concrete Curb & Gutter 6-Inch Sloped 36-Inch Type A	5,368.000 LF	.		.	
0940	601.0557 Concrete Curb & Gutter 6-Inch Sloped 36-Inch Type D	20.000 LF	.		.	
0950	601.0600 Concrete Curb Pedestrian	151.000 LF	.		.	
0960	602.0410 Concrete Sidewalk 5-Inch	48,995.000 SF	.		.	
0970	602.0420 Concrete Sidewalk 7-Inch	838.000 SF	.		.	

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			DOLLARS	CTS	DOLLARS	CTS
0980	602.0505 Curb Ramp Detectable Warning Field Yellow	578.000 SF	.		.	
0990	602.1500 Concrete Steps	93.000 SF	.		.	
1000	606.0200 Riprap Medium	428.100 CY	.		.	
1010	608.0312 Storm Sewer Pipe Reinforced Concrete Class III 12-Inch	278.000 LF	.		.	
1020	608.0318 Storm Sewer Pipe Reinforced Concrete Class III 18-Inch	173.000 LF	.		.	
1030	608.0324 Storm Sewer Pipe Reinforced Concrete Class III 24-Inch	1,905.000 LF	.		.	
1040	608.0330 Storm Sewer Pipe Reinforced Concrete Class III 30-Inch	48.000 LF	.		.	
1050	608.0412 Storm Sewer Pipe Reinforced Concrete Class IV 12-Inch	1,162.000 LF	.		.	
1060	608.0415 Storm Sewer Pipe Reinforced Concrete Class IV 15-Inch	226.000 LF	.		.	
1070	608.0418 Storm Sewer Pipe Reinforced Concrete Class IV 18-Inch	563.000 LF	.		.	

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			DOLLARS	CTS	DOLLARS	CTS
1080	608.0424 Storm Sewer Pipe Reinforced Concrete Class IV 24-Inch	1,629.000 LF	.		.	
1090	608.0460 Storm Sewer Pipe Reinforced Concrete Class IV 60-Inch	80.000 LF	.		.	
1100	610.0424 Storm Sewer Pipe Reinforced Concrete Horizontal Elliptical Class HE-IV 24x38-Inch	80.000 LF	.		.	
1110	611.0420 Reconstructing Manholes	1.000 EACH	.		.	
1120	611.0530 Manhole Covers Type J	30.000 EACH	.		.	
1130	611.0612 Inlet Covers Type C	1.000 EACH	.		.	
1140	611.0624 Inlet Covers Type H	26.000 EACH	.		.	
1150	611.0627 Inlet Covers Type HM	38.000 EACH	.		.	
1160	611.0645 Inlet Covers Type MS-A	20.000 EACH	.		.	
1170	611.2003 Manholes 3-FT Diameter	1.000 EACH	.		.	

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			DOLLARS	CTS	DOLLARS	CTS
1180	611.2004 Manholes 4-FT Diameter	13.000 EACH	.		.	
1190	611.2005 Manholes 5-FT Diameter	19.000 EACH	.		.	
1200	611.2006 Manholes 6-FT Diameter	1.000 EACH	.		.	
1210	611.3004 Inlets 4-FT Diameter	12.000 EACH	.		.	
1220	611.3230 Inlets 2x3-FT	47.000 EACH	.		.	
1230	611.3901 Inlets Median 1 Grate	10.000 EACH	.		.	
1240	611.3902 Inlets Median 2 Grate	5.000 EACH	.		.	
1250	611.9800.S Pipe Grates	10.000 EACH	.		.	
1260	612.0204 Pipe Underdrain Unperforated 4-Inch	274.000 LF	.		.	
1270	612.0212 Pipe Underdrain Unperforated 12-Inch	77.000 LF	.		.	
1280	612.0404 Pipe Underdrain Wrapped 4-Inch	6,842.000 LF	.		.	

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			DOLLARS	CTS	DOLLARS	CTS
1290	612.0406 Pipe Underdrain Wrapped 6-Inch	451.000 LF	.		.	
1300	612.0700 Drain Tile Exploration	100.000 LF	.		.	
1310	612.0804 Apron Endwalls for Underdrain Reinforced Concrete 4-Inch	12.000 EACH	.		.	
1320	616.0204 Fence Chain Link 4-FT	155.000 LF	.		.	
1330	618.0100 Maintenance And Repair of Haul Roads (project) 01. 3200-02-73	1.000 EACH	.		.	
1340	619.1000 Mobilization	1.000 EACH	.		.	
1350	620.0100 Concrete Corrugated Median	381.000 SF	.		.	
1360	620.0300 Concrete Median Sloped Nose	55.000 SF	.		.	
1370	624.0100 Water	713.000 MGAL	.		.	
1380	625.0100 Topsoil	17,737.000 SY	.		.	

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			DOLLARS	CTS	DOLLARS	CTS
1390	625.0500 Salvaged Topsoil	126,086.000 SY	.		.	
1400	627.0200 Mulching	69,986.000 SY	.		.	
1410	628.1504 Silt Fence	16,727.000 LF	.		.	
1420	628.1520 Silt Fence Maintenance	16,727.000 LF	.		.	
1430	628.1905 Mobilizations Erosion Control	15.000 EACH	.		.	
1440	628.1910 Mobilizations Emergency Erosion Control	30.000 EACH	.		.	
1450	628.2004 Erosion Mat Class I Type B	30,208.000 SY	.		.	
1460	628.2023 Erosion Mat Class II Type B	23,474.000 SY	.		.	
1470	628.7005 Inlet Protection Type A	73.000 EACH	.		.	
1480	628.7010 Inlet Protection Type B	57.000 EACH	.		.	
1490	628.7015 Inlet Protection Type C	16.000 EACH	.		.	

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			DOLLARS	CTS	DOLLARS	CTS
1500	628.7020 Inlet Protection Type D	4.000 EACH	.		.	
1510	628.7504 Temporary Ditch Checks	750.000 LF	.		.	
1520	628.7515.S Stone or Rock Ditch Checks	170.000 CY	.		.	
1530	628.7555 Culvert Pipe Checks	146.000 EACH	.		.	
1540	628.7560 Tracking Pads	7.000 EACH	.		.	
1550	629.0210 Fertilizer Type B	113.000 CWT	.		.	
1560	630.0120 Seeding Mixture No. 20	423.000 LB	.		.	
1570	630.0130 Seeding Mixture No. 30	2,405.000 LB	.		.	
1580	630.0200 Seeding Temporary	4,500.000 LB	.		.	
1590	630.0300 Seeding Borrow Pit	500.000 LB	.		.	
1600	631.0300 Sod Water	524.000 MGAL	.		.	

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
1610	631.1000 Sod Lawn	17,737.000 SY	.		.	
1620	631.1100 Sod Erosion Control	2,315.000 SY	.		.	
1630	632.0101 Trees (species) (size) (root) 01. Autumn Blaze Maple, B&B , 2-Inch Cal (AB)	8.000 EACH	.		.	
1640	632.0101 Trees (species) (size) (root) 02. Pacific Sunset Maple, B&B, 2.5-Inch Cal (PS)	1.000 EACH	.		.	
1650	632.0101 Trees (species) (size) (root) 03. Ohio Buckeye, B&B, 2.5-Inch Cal (OB)	3.000 EACH	.		.	
1660	632.0101 Trees (species) (size) (root) 04. Hackberry, B&B, 2-Inch Cal (HB)	13.000 EACH	.		.	
1670	632.0101 Trees (species) (size) (root) 05. Honeylocust, B&B, 3-Inch Cal (SM)	8.000 EACH	.		.	
1680	632.0101 Trees (species) (size) (root) 06. Honeylocust, B&B, 2-Inch Cal (SH)	4.000 EACH	.		.	
1690	632.0101 Trees (species) (size) (root) 07. Kentucky Coffee, B&B, 1. 5-Inch Cal (KC)	3.000 EACH	.		.	

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			DOLLARS	CTS	DOLLARS	CTS
1700	632.0101 Trees (species) (size) (root) 08. Bur Oak, B&B, 2-Inch Cal (BO)	3.000 EACH	.		.	
1710	632.0101 Trees (species) (size) (root) 09. Chinkapin Oak, B&B, 2. 5-Inch Cal (CO)	2.000 EACH	.		.	
1720	632.0101 Trees (species) (size) (root) 10. Red Oak, B&B, 2-Inch Cal (RO)	8.000 EACH	.		.	
1730	632.0101 Trees (species) (size) (root) 11. Redmond Linden, B&B, 3-Inch Cal (RL)	11.000 EACH	.		.	
1740	632.0101 Trees (species) (size) (root) 12. New Horizon Elm, B&B, 2. 5-Inch Cal (NH)	16.000 EACH	.		.	
1750	632.0101 Trees (species) (size) (root) 13. Pioneer Elm, B&B, 2. 5-Inch Cal (PE)	13.000 EACH	.		.	
1760	632.0101 Trees (species) (size) (root) 14. Winter King Hawthorn, B&B, 2-Inch Cal (WK)	10.000 EACH	.		.	
1770	632.0101 Trees (species) (size) (root) 15. Ironwood, B&B, 1.5-Inch Cal (IW)	12.000 EACH	.		.	

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			DOLLARS	CTS	DOLLARS	CTS
1780	632.0101 Trees (species) (size) (root) 16. Flowering Crabapple, Harvest Gold, B&B, 2-Inch Cal (HG)	14.000 EACH	.		.	
1790	632.0101 Trees (species) (size) (root) 17. Flowering Crabapple, Prairiefire, B&B, 2-Inch Cal (PF)	9.000 EACH	.		.	
1800	632.0101 Trees (species) (size) (root) 18. Flowering Crabapple, Royal Raindrops B&B, 2-Inch Cal (RR)	6.000 EACH	.		.	
1810	632.0101 Trees (species) (size) (root) 19. Allegheny Serviceberry, B&B, 1.5-Inch Cal (AL)	2.000 EACH	.		.	
1820	632.0101 Trees (species) (size) (root) 20. Japanese Tree Lilac, B&B, 2-Inch Cal (JTL)	14.000 EACH	.		.	
1830	632.9101 Landscape Planting Surveillance and Care Cycles	25.000 EACH	.		.	
1840	633.5200 Markers Culvert End	52.000 EACH	.		.	
1850	634.0616 Posts Wood 4x6-Inch X 16-FT	149.000 EACH	.		.	
1860	634.0618 Posts Wood 4x6-Inch X 18-FT	96.000 EACH	.		.	

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			DOLLARS	CTS	DOLLARS	CTS
1870	637.2210 Signs Type II Reflective H	1,232.260 SF	.		.	
1880	637.2215 Signs Type II Reflective H Folding	41.440 SF	.		.	
1890	637.2230 Signs Type II Reflective F	615.250 SF	.		.	
1900	638.2102 Moving Signs Type II	12.000 EACH	.		.	
1910	638.2602 Removing Signs Type II	168.000 EACH	.		.	
1920	638.3000 Removing Small Sign Supports	164.000 EACH	.		.	
1930	642.5401 Field Office Type D	1.000 EACH	.		.	
1940	643.0100 Traffic Control (project) 01. 3200-02-73	1.000 EACH	.		.	
1950	643.0300 Traffic Control Drums	29,382.000 DAY	.		.	
1960	643.0410 Traffic Control Barricades Type II	512.000 DAY	.		.	
1970	643.0420 Traffic Control Barricades Type III	15,076.000 DAY	.		.	

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			DOLLARS	CTS	DOLLARS	CTS
1980	643.0705 Traffic Control Warning Lights Type A	20,608.000 DAY	.		.	
1990	643.0715 Traffic Control Warning Lights Type C	7,960.000 DAY	.		.	
2000	643.0800 Traffic Control Arrow Boards	135.000 DAY	.		.	
2010	643.0900 Traffic Control Signs	19,560.000 DAY	.		.	
2020	643.0920 Traffic Control Covering Signs Type II	40.000 EACH	.		.	
2030	643.1000 Traffic Control Signs Fixed Message	2,250.500 SF	.		.	
2040	643.1050 Traffic Control Signs PCMS	112.000 DAY	.		.	
2050	643.2000 Traffic Control Detour (project) 01. 3200-02-73	1.000 EACH	.		.	
2060	643.3000 Traffic Control Detour Signs	53,310.000 DAY	.		.	
2070	645.0120 Geotextile Type HR	2,013.000 SY	.		.	
2080	645.0140 Geotextile Type SAS	689.000 SY	.		.	

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			DOLLARS	CTS	DOLLARS	CTS
2090	646.0106 Pavement Marking Epoxy 4-Inch	101,838.000 LF	.		.	
2100	646.0600 Removing Pavement Markings	2,383.000 LF	.		.	
2110	646.0841.S Pavement Marking Grooved Wet Reflective Contrast Tape 4-Inch	1,167.000 LF	.		.	
2120	646.0881.S Pavement Marking Grooved Wet Reflective Tape 4-Inch	5,232.000 LF	.		.	
2130	647.0606 Pavement Marking Island Nose Epoxy	1.000 EACH	.		.	
2140	647.0726 Pavement Marking Diagonal Epoxy 12-Inch	768.000 LF	.		.	
2150	647.0856 Pavement Marking Concrete Corrugated Median Epoxy	155.000 SF	.		.	
2160	647.0955 Removing Pavement Markings Arrows	2.000 EACH	.		.	
2170	647.0965 Removing Pavement Markings Words	1.000 EACH	.		.	
2180	648.0100 Locating No-Passing Zones	5.360 MI	.		.	

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			DOLLARS	CTS	DOLLARS	CTS
2190	649.0403 Temporary Pavement Marking Epoxy 4-Inch	2,898.000 LF	.		.	
2200	650.4000 Construction Staking Storm Sewer	133.000 EACH	.		.	
2210	650.4500 Construction Staking Subgrade	21,080.000 LF	.		.	
2220	650.5000 Construction Staking Base	14,587.000 LF	.		.	
2230	650.5500 Construction Staking Curb Gutter and Curb & Gutter	4,050.000 LF	.		.	
2240	650.6000 Construction Staking Pipe Culverts	21.000 EACH	.		.	
2250	650.6500 Construction Staking Structure Layout (structure) 01. Retaining Wall STA 134+25	LUMP	LUMP		.	
2260	650.6500 Construction Staking Structure Layout (structure) 02. Retaining Wall STA 268+50	LUMP	LUMP		.	
2270	650.6500 Construction Staking Structure Layout (structure) 03. Retaining Wall STA 270+37	LUMP	LUMP		.	

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			DOLLARS	CTS	DOLLARS	CTS
2280	650.6500 Construction Staking Structure Layout (structure) 04. R-30-59	LUMP	LUMP			.
2290	650.7000 Construction Staking Concrete Pavement	6,451.000 LF	.		.	.
2300	650.8500 Construction Staking Electrical Installations (project) 01. 3200-02-73	LUMP	LUMP			.
2310	650.9910 Construction Staking Supplemental Control (project) 01. 3200-02-73	LUMP	LUMP			.
2320	650.9920 Construction Staking Slope Stakes	33,305.000 LF	.		.	.
2330	652.0225 Conduit Rigid Nonmetallic Schedule 40 2-Inch	3,019.000 LF	.		.	.
2340	652.0235 Conduit Rigid Nonmetallic Schedule 40 3-Inch	2,309.000 LF	.		.	.
2350	652.0800 Conduit Loop Detector	2,940.000 LF	.		.	.
2360	653.0135 Pull Boxes Steel 24x36-Inch	19.000 EACH	.		.	.
2370	653.0140 Pull Boxes Steel 24x42-Inch	17.000 EACH	.		.	.

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			DOLLARS	CTS	DOLLARS	CTS
2380	653.0905 Removing Pull Boxes	22.000 EACH	.		.	
2390	654.0101 Concrete Bases Type 1	8.000 EACH	.		.	
2400	654.0110 Concrete Bases Type 10	2.000 EACH	.		.	
2410	654.0113 Concrete Bases Type 13	6.000 EACH	.		.	
2420	654.0217 Concrete Control Cabinet Bases Type 9 Special	2.000 EACH	.		.	
2430	655.0230 Cable Traffic Signal 5-14 AWG	811.000 LF	.		.	
2440	655.0240 Cable Traffic Signal 7-14 AWG	1,206.000 LF	.		.	
2450	655.0260 Cable Traffic Signal 12-14 AWG	2,402.000 LF	.		.	
2460	655.0315 Cable Type UF 2-10 AWG	1,391.000 LF	.		.	
2470	655.0515 Electrical Wire Traffic Signals 10 AWG	2,904.000 LF	.		.	
2480	655.0610 Electrical Wire Lighting 12 AWG	1,152.000 LF	.		.	

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			DOLLARS	CTS	DOLLARS	CTS
2490	655.0700 Loop Detector Lead In Cable	9,797.000 LF	.		.	
2500	655.0800 Loop Detector Wire	10,546.000 LF	.		.	
2510	655.0900 Traffic Signal EVP Detector Cable	2,146.000 LF	.		.	
2520	656.0200 Electrical Service Meter Breaker Pedestal (location) 01. USH 45 & CTH WG	LUMP	LUMP		.	
2530	656.0200 Electrical Service Meter Breaker Pedestal (location) 02. USH 45 & CTH C	LUMP	LUMP		.	
2540	657.0100 Pedestal Bases	8.000 EACH	.		.	
2550	657.0420 Traffic Signal Standards Aluminum 13-FT	4.000 EACH	.		.	
2560	657.0425 Traffic Signal Standards Aluminum 15-FT	4.000 EACH	.		.	
2570	657.1350 Install Poles Type 10	2.000 EACH	.		.	
2580	657.1360 Install Poles Type 13	6.000 EACH	.		.	

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			DOLLARS	CTS	DOLLARS	CTS
2590	657.1530 Install Monotube Arms 30-FT	2.000 EACH	.		.	
2600	657.1535 Install Monotube Arms 35-FT	2.000 EACH	.		.	
2610	657.1540 Install Monotube Arms 40-FT	1.000 EACH	.		.	
2620	657.1545 Install Monotube Arms 45-FT	3.000 EACH	.		.	
2630	657.1815 Install Luminaire Arms Steel 15-FT	8.000 EACH	.		.	
2640	658.0110 Traffic Signal Face 3-12 Inch Vertical	24.000 EACH	.		.	
2650	658.0115 Traffic Signal Face 4-12 Inch Vertical	8.000 EACH	.		.	
2660	658.0215 Backplates Signal Face 3 Section 12-Inch	24.000 EACH	.		.	
2670	658.0220 Backplates Signal Face 4 Section 12-Inch	8.000 EACH	.		.	
2680	658.0600 Led Modules 12-Inch Red Ball	24.000 EACH	.		.	
2690	658.0605 Led Modules 12-Inch Yellow Ball	24.000 EACH	.		.	

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			DOLLARS	CTS	DOLLARS	CTS
2700	658.0610 Led Modules 12-Inch Green Ball	24.000 EACH	.		.	
2710	658.0615 Led Modules 12-Inch Red Arrow	8.000 EACH	.		.	
2720	658.0620 Led Modules 12-Inch Yellow Arrow	16.000 EACH	.		.	
2730	658.0625 Led Modules 12-Inch Green Arrow	8.000 EACH	.		.	
2740	658.5069 Signal Mounting Hardware (location) 01. USH 45 & CTH WG	LUMP	LUMP		.	
2750	658.5069 Signal Mounting Hardware (location) 02. USH 45 & CTH C	LUMP	LUMP		.	
2760	659.1125 Luminaires Utility LED C	8.000 EACH	.		.	
2770	690.0150 Sawing Asphalt	20,553.000 LF	.		.	
2780	690.0250 Sawing Concrete	123.000 LF	.		.	
2790	715.0415 Incentive Strength Concrete Pavement	27,670.000 DOL	1.00000		27670.00	

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			DOLLARS	CTS	DOLLARS	CTS
2800	ASP.1T0A On-the-Job Training Apprentice at \$5.00/HR	1,500.000 HRS	5.00000		7500.00	
2810	ASP.1T0G On-the-Job Training Graduate at \$5. 00/HR	4,000.000 HRS	5.00000		20000.00	
2820	SPV.0035 Special 01. Backfill Slurry	490.000 CY	.		.	
2830	SPV.0035 Special 02. Concrete Masonry Endwalls Special	1.720 CY	.		.	
2840	SPV.0060 Special 01. Manholes 9-FT Diameter	1.000 EACH	.		.	
2850	SPV.0060 Special 02. Construction Staking Curb Ramps	43.000 EACH	.		.	
2860	SPV.0060 Special 03. Pavt Mrkg Grooved Preformed Thermoplastic Arrows Type 1	5.000 EACH	.		.	
2870	SPV.0060 Special 04. Pavt Mrkg Grooved Preformed Thermoplastic Arrows Type 2	37.000 EACH	.		.	
2880	SPV.0060 Special 05. Pavt Mrkg Grooved Preformed Thermoplastic Arrows Type 3	6.000 EACH	.		.	
2890	SPV.0060 Special 06. Pavt Mrkg Grooved Preformed Thermoplastic Words	24.000 EACH	.		.	

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			DOLLARS	CTS	DOLLARS	CTS
2900	SPV.0060 Special 07. Section Corner Monuments Special	5.000 EACH	.		.	
2910	SPV.0060 Special 08. Sanitary Manhole Chimney Seal	32.000 EACH	.		.	
2920	SPV.0060 Special 09. Adjusting Sanitary Sewer Manholes	32.000 EACH	.		.	
2930	SPV.0060 Special 10. Adjusting Water Valve Box	24.000 EACH	.		.	
2940	SPV.0060 Special 11. Adjusting Water Valve Manhole	2.000 EACH	.		.	
2950	SPV.0090 Special 01. Heavy Duty Silt Fence 3-FT	9,013.000 LF	.		.	
2960	SPV.0090 Special 02. Heavy Duty Silt Fence 5-FT	2,027.000 LF	.		.	
2970	SPV.0090 Special 03. Pavt Mrkg Grooved Preformed Plastic Contrast Tape 4-Inch	2,641.000 LF	.		.	
2980	SPV.0090 Special 04. Pavt Mrkg Grooved Preformed Plastic Tape 4-Inch	9,589.000 LF	.		.	
2990	SPV.0090 Special 05. Pavt Mrkg Grooved Preformed Plastic Contrast Tape 8-Inch	742.000 LF	.		.	

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			DOLLARS	CTS	DOLLARS	CTS
3000	SPV.0090 Special 06. Pavt Mrkg Grooved Preformed Plastic Tape 8-Inch	6,693.000 LF	.		.	
3010	SPV.0090 Special 07. Pavt Mrkg Grooved Preformed Thermoplastic Crosswalk 6-Inch	1,124.000 LF	.		.	
3020	SPV.0090 Special 08. Pavt Mrkg Grooved Preformed Thermoplastic Stop Bars 18-Inch	833.000 LF	.		.	
3030	SPV.0090 Special 09. Concrete Pedestrian Curb 12-Inch	151.000 LF	.		.	
3040	SPV.0090 Special 10. Sawing Tree Roots	100.000 LF	.		.	
3050	SPV.0090 Special 11. Joint and Crack Repair	10,000.000 LF	.		.	
3060	SPV.0090 Special 12. Split Rail Fence Two Rails	206.000 LF	.		.	
3070	SPV.0105 Special 01. Maintaining Temporary Drainage STA 70+00	LUMP	LUMP		.	
3080	SPV.0105 Special 02. Maintaining Temporary Drainage STA 135+00	LUMP	LUMP		.	
3090	SPV.0105 Special 03. Maintaining Temporary Drainage STA 146+50	LUMP	LUMP		.	

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			DOLLARS	CTS	DOLLARS	CTS
3100	SPV.0105 Special 04. Maintaining Temporary Drainage STA 213+79	LUMP	LUMP			.
3110	SPV.0105 Special 05. Removing Flashing Beacon and Pole	LUMP	LUMP			.
3120	SPV.0105 Special 06. Install State Furnished Traffic Signal Cabinet USH 45 & CTH WG	LUMP	LUMP			.
3130	SPV.0105 Special 07. Install State Furnished Traffic Signal Cabinet USH 45 & CTH C	LUMP	LUMP			.
3140	SPV.0105 Special 08. Transport Traffic Signal & Lighting Materials USH 45 & CTH WG	LUMP	LUMP			.
3150	SPV.0105 Special 09. Transport Traffic Signal & Lighting Materials USH 45 & CTH C	LUMP	LUMP			.
3160	SPV.0105 Special 10. Remove Loop Detector Wire & Lead-in Cable USH 45 & CTH WG	LUMP	LUMP			.
3170	SPV.0105 Special 11. Remove Loop Detector Wire & Lead-in Cable USH 45 & CTH C	LUMP	LUMP			.
3180	SPV.0105 Special 12. Remove Traffic Signals USH 45 & CTH WG	LUMP	LUMP			.

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			DOLLARS	CTS	DOLLARS	CTS
3190	SPV.0105 Special 13. Remove Traffic Signals USH 45 & CTH C	LUMP	LUMP		.	
3200	SPV.0105 Special 14. EVP Detector Head Installation USH 45 & CTH WG	LUMP	LUMP		.	
3210	SPV.0105 Special 15. EVP Detector Head Installation USH 45 & CTH C	LUMP	LUMP		.	
3220	SPV.0105 Special 16. Transport & Install State Furnished Radar Detection System USH 45 & CTH WG	LUMP	LUMP		.	
3230	SPV.0105 Special 17. Concrete Pavement Joints Layout	LUMP	LUMP		.	
3240	SPV.0105 Special 18. Maintaining Temporary Drainage STA 47+39 CTH C	LUMP	LUMP		.	
3250	SPV.0165 Special 01. Wall Modular Block Gravity LRFD	1,013.000 SF	.		.	
3260	SPV.0165 Special 02. Wall Modular Block Mechanically Stabilized Earth LRFD/QMP	1,240.000 SF	.		.	
3270	SPV.0170 Special 01. Proof-Rolling Existing Subbase	57.000 STA	.		.	

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			DOLLARS	CTS	DOLLARS	CTS
3280	SPV.0195 Special 01. Coarse Aggregate Mix for Stream Bed	96.000 TON	.		.	
3290	SPV.0195 Special 02. Asphaltic Millings for Driveways	67.000 TON	.		.	
3300	SPV.0195 Special 03. HMA Pavement 3 MT 58-28 S 3% Va Regression	27,700.000 TON	.		.	
3310	SPV.0195 Special 04. HMA Pavement 4 MT 58-28 S 3% Va Regression	13,660.000 TON	.		.	
	SECTION 0001 TOTAL				.	
	TOTAL BID				.	

PLEASE ATTACH SCHEDULE OF ITEMS HERE