HIGHWAY WORK PROPOSAL

Proposal Number: Ø 4

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

COUNTY	STATE PROJECT ID	FEDERAL PROJECT ID	PROJECT DESCRIPTION	HIGHWAY
Milwaukee	2140-13-70	WISC 2016 306	N. 76th Street, City of Milwaukee Grantosa Drive to Florist Avenue	STH 181

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 **SAMPLE** **NOT FOR BIDDING PURPOSES**
Contract Completion Time October 27, 2017	
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 Excavation common, borrow, milling, base patching, grading, HMA pavement, concrete pavement, concrete sidewalk, traffic signal, Structure B-40-766, Structure R-40-604, Structure R-40-605, pavement marking and permanent signing.	
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 Express web site.
2. Use Expedite™ software to enter a unit price for every item in the schedule of items.
3. Submit the bid according to the requirements of Expedite™ software and the Bid Express™ web site. Do not submit a bid on a printout with accompanying diskette or CD ROM or a paper bid. If the bidder does submit a bid on a printout with accompanying diskette or a paper bid in addition to the internet submittal, the department will disregard the internet bid.
4. Submit the bid before the hour and date the Notice to Contractors designates.
5. Do not sign, notarize, and return the bidding proposal described in 102.2 of the standard specifications.

(3) The department will not consider the bid accepted until the hour and date the Notice to Contractors designates.

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

(1) Download the latest schedule of items from the Wisconsin pages of the Bid Express™ web site reflecting the latest addenda posted on the department's web site at:

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

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

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

Bidder

Name

BN00

Proposals: 1, 12, 14, & 22

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

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

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

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

C Waiver of Electronic Submittal

(1) The bidder may request a waiver of the electronic submittal requirements. Submit a written request for a waiver in lieu of bids submitted on the internet or on a printout with accompanying diskette or CD ROM. Use the waiver that was included with the paper bid document sent to the bidder or type up a waiver on the bidder's letterhead. The department will waive the electronic submittal requirements for a bidding entity (individual, partnership, joint venture, corporation, or limited liability company) for up to 4 individual proposals in a calendar year. The department may allow additional waivers for equipment malfunctions.

(2) Submit a schedule of items on paper conforming to section 102 of the standard specifications. The department charges the bidder a $75 administrative fee per proposal, payable at the time and place the department designates for receiving bids, to cover the costs of data entry. The department will accept a check or money order payable to: "Wisconsin, Dept. of Transportation."

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

1. The bidder fails to provide the written request for waiver of the electronic submittal requirements.
2. The bidder fails to pay the $75 administrative fee before the time the department designates for the opening of bids unless the bidder requests on the waiver that they be billed for the $75.
3. The bidder exceeds 4 waivers of electronic submittal requirements within a calendar year.

(4) In addition to the reasons specified in section 102 of the standard specifications, the department may refuse to issue bidding proposals for future contracts to a bidding entity that owes the department administrative fees for a waiver of electronic submittal requirements.

PROPOSAL BID BOND

Wisconsin Department of Transportation

DT1303 1/2006

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

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

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

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

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

PRINCIPAL

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

(Signature and Title)

(Company Name)

(Signature and Title)

(Company Name)

(Signature and Title)

(Company Name)

(Signature and Title)

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

(Signature of Attorney-in-Fact)

NOTARY FOR PRINCIPAL

(Date)

State of Wisconsin)
) ss.
_____ County)

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

(Signature, Notary Public, State of Wisconsin)

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

(Date Commission Expires)

Notary Seal

NOTARY FOR SURETY

(Date)

State of Wisconsin)
) ss.
_____ County)

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

(Signature, Notary Public, State of Wisconsin)

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

(Date Commission Expires)

Notary Seal

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

CERTIFICATE OF ANNUAL BID BOND

Wisconsin Department of Transportation

DT1305 8/2003

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

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

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

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

(Signature of Authorized Contractor Representative) (Date)

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.

Name of Subcontractor	Class of Work	Estimated Value

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 2140-13-70, N. 76th Street, City of Milwaukee, Grantosa Drive to Florist Avenue, STH 181, Milwaukee 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. Scope of Work.

The work under this contract shall consist of excavation common, milling, base patching, grading, HMA pavement, concrete pavement, concrete sidewalk, traffic signals, Structure B-40-766, Structure R-40-604, Structure R-40-605, pavement marking, permanent signing, and all incidental items necessary to complete the work as shown on the plans and included in the proposal and contract.
104-005 (20090901)

3. Prosecution and Progress.

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

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

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

Migratory Birds
Swallow and other migratory birds' nests have been observed on or under the existing bridge. All active nests (when eggs or young are present) of migratory birds are protected under the federal Migratory Bird Treaty Act.

The nesting season for swallows and other birds is usually between May 1 and August 30. Either prevent active nests from becoming established, or apply for a depredation permit from the US Fish and Wildlife Service for work that may disturb or destroy active nests. The need for a permit may be avoided by removing the existing bridge structure prior to nest occupation by birds, or clearing nests from all structures before the nests become active in early spring. As a last resort, prevent birds from nesting by installing a suitable netting device on the remaining structure prior to nesting activity. Include the cost for preventing nesting in the cost of Removing Old Structure.

Northern Long-eared Bat (*Myotis septentrionalis*)
Northern Long-eared Bats (NLEB) have the potential to inhabit the project limits because they roost in trees and structures (bridges, culverts, buildings). Evaluation of the Federal Highway Administration's Range-Wide Biological Assessment and Programmatic Informal Consultation process, and/or consultation with the United States Fish and Wildlife Service (USFWS) has determined the project will have "no effect" on northern long-eared bats. If additional construction activities beyond what was originally specified are required to complete the work, such as additional tree clearing, approval from the WisDOT Regional Environmental Coordinator (REC) is required prior to initiating these activities.

The species and all active roosts are protected by the Federal Endangered Species Act. If an individual or active roost is encountered during construction or Clearing operations, stop work and notify the engineer and the WisDOT REC.

4. Traffic.

General
The construction sequence, including the associated traffic control, shall be substantially accomplished as detailed in the Traffic Control and Detour Plans, and as described herein.

Contact James Brown at (414) 286-3276 or Sharon Betthauser at (414) 286-3632 five working days in advance of needing temporary no-parking signs to be placed along STH 181/76th Street.

PCMS will be used on the project to notify the traveling public of the project 10 days in advance of the project construction. The PCMS's will also be used to give advance notice to the public of lane closures, ramps closures and traffic switches that occur during construction.

Emergency Vehicle Access
Maintain emergency vehicular access at all times to all through roadways located within the project limits. Provide emergency responders and law enforcement agencies a 72 hour notice prior to making any major traffic switches; including ramp or full roadway closures.

Local Vehicle Access
Close driveways only for the minimum time required to construct new access approaches. Prior to removal or closing of driveway access, provide 48 hour notice to the occupant and owner of the premises.

Contact businesses which have entrances within the project limits five days prior to performing work which may affect the entrances.

5168 N 76th Street - CITGO:
The property's northern driveway on STH 181/76th Street is to remain open except during the concrete pouring and curing times for sidewalk, curb and gutter and driveway apron. Owner to be notified two weeks in advance of closure of northern driveway for each construction operation. Driveway closures to be no more than five days per occurrence. The southern driveway on N. 76th Street will remain open until the northern driveway is reconstructed.

5653 N. 76th Street - Sharks:
The driveways on STH 181/76th Street are to remain open except during the concrete pouring and curing times for sidewalk, curb and gutter and driveway apron. Owner to be notified three days in advance of driveway closure for each construction operation. Driveway closures to be no more than five days per occurrence. Only one driveway will be constructed at a time to remain access to Sharks throughout the project.

Construction equipment shall only be within the TLE area while work is being performed in the immediate area. Do not store equipment within the TLE during off-work hours.

5656 N. 76th Street - CITGO:
Southern driveway to remain open except during the concrete pouring and curing times for sidewalk, curb and gutter and driveway apron. Owner to be notified two weeks in advance of closure of southern driveway for each construction operation. Driveway closures to be no more than five days per occurrence.

Lane and Roadway Closures
Maintain one through lane of traffic in each direction on STH 181 (N. 76th Street) and CTH E (Silver Spring Drive) as detailed in the traffic control plans. Inside and outside lane closures will be allowed as detailed in the plans.

On W. Silver Spring Drive, full roadway closures will only be permitted during nighttime hours between 8:00 PM and 6:00 AM for the removal of existing bridge, erection of the bridge girders, bridge deck pours and as otherwise approved by the engineer to facilitate construction.

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

TABLE 108-1 CLOSURE TYPE AND REQUIRED MINIMUM ADVANCE NOTIFICATION

Closure type with height, weight, or width restrictions (available width, all lanes in one direction ≤16')	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)

Notify the engineer and WisDOT Statewide Traffic Operations Center, (414) 227-2142, if there are any changes in the schedule, early completions, or cancellations of scheduled work.

Staging
Perform construction operations in stages as shown in the traffic control/construction staging plans, unless modifications are approved in writing by the engineer.

Prohibit parking along the entire length of the project throughout the duration of the project. City of Milwaukee will place temporary No Parking Signs.

Stage 1
Reduce traffic to one northbound and one southbound lane on the outside lanes. Construct temporary cross-overs near W. Sheridan Avenue and W. Thurston Circle. Begin rehabilitation of median openings and median lane. All median openings (except W. Sheridan Avenue and W. Thurston Circle) will be constructed under live traffic.

Stage 2
Maintain single lane traffic in each direction on the outside lanes. Shift southbound traffic to northbound lanes between W. Sheridan Avenue and W. Thurston Circle. Construct southbound Bridge (Structure ID: B-40-766). Construct NW and SW ramps. Construct pavement of the inside shoulders as well as curb and gutter on Silver Spring Drive. Continue rehabilitation of median openings and median lane, all median openings (except

W. Sheridan Avenue and W. Thurston Circle) will be constructed under live traffic. Consecutive median openings shall not be under construction at the same time.

Stage 3
Maintain single lane traffic in each direction in the inside lanes. Shift northbound traffic to southbound lanes between W. Sheridan Avenue and W. Thurston Circle. Construct northbound Bridge (Structure ID: B-40-766). Construct NE and SE ramps. Construct pavement of the inside shoulders as well as curb and gutter on Silver Spring Drive. Rehabilitation of outside lane, shoulder, and side roads. All side road access (except W. Sheridan Avenue and W. Thurston Circle) to be constructed under live traffic. Consecutive side roads shall not be under construction at the same time. Begin replacement of sidewalk along southbound 76th Street, to be completed before replacement of sidewalk along northbound 76th Street begins.

Stage 4
Restoration of median and lanes in temporary cross-over locations, and install permanent pavement marking.

Detours
The following detours shall be used to allow staged construction of the project:

Detour 1
The eastbound exit ramp and westbound entrance ramp at N. 76th Street and W. Silver Spring Drive (CTH E) shall be detoured in Stage 2 in order to construct the proposed new ramps.

1. Vehicles travelling eastbound on Silver Spring Drive (CTH E) shall have detour access to STH 181 (N. 76th Street) via W. Fond du Lac Avenue; or via Mill Road and 60th Street.
2. Vehicles travelling northbound on STH 181 (N. 76th Street) shall have detour access to westbound W. Silver Spring Drive (CTH E) via Fond du Lac Avenue; or via Mill Road and 60th Street.
3. Vehicles travelling southbound on STH 181 (N. 76th Street) shall have detour access to westbound W. Silver Spring Drive (CTH E) via Mill Road and 60th Street; or via Fond du Lac Avenue.

Detour 2
The eastbound entrance ramp and westbound exit ramp at STH 181 (N. 76th Street) and W. Silver Spring Drive (CTH E) shall be detoured in Stage 3 in order to construct the proposed new ramps.

1. Vehicles travelling westbound on W. Silver Spring Drive (CTH E) shall have detour access to STH 181 (N. 76th Street) via 60th Street and Mill Road; or via Fond du Lac Avenue.

2. Vehicles travelling northbound on STH 181 (N. 76th Street) shall have detour access to eastbound W. Silver Spring Drive (CTH E) via Fond du Lac Avenue; or via Mill Road and 60th Street.
3. Vehicles travelling southbound on STH 181 (N. 76th Street) shall have detour access to eastbound W. Silver Spring Drive (CTH E) via Mill Road and 60th Street; or via Fond du Lac Avenue.

Detour 3

W. Silver Spring Drive (CTH E) shall have nighttime closures for bridge removal, girder placement and deck pours during Stage 2 and Stage 3 construction. Through traffic and access to/from STH 181(N. 76th Street) to Silver Spring Drive (CTH E) shall be detoured as follows:

1. Vehicles travelling eastbound on W. Silver Spring Drive (CTH E) shall be detoured north on 91st Street to Mill Road, east on Mill Road to 60th Street, and south on 60th Street back to Silver Spring Drive (CTH E).
2. Vehicles travelling westbound on W. Silver Spring Drive (CTH E) shall be detoured north on 60th Street to Mill Road, west on Mill Road to 91st Street, and south on 91st Street back to W. Silver Spring Drive (CTH E).

5. Holiday Work Restrictions.

Do not perform work on, nor haul materials of any kind along or across any portion of the highway carrying STH 181 (N. 76th Street) and CTH E (Silver Spring Drive) 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.

107-005 (20050502)

6. Utilities.

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

There are underground and overhead utility facilities located within the project limits and there are known utility adjustments required for this construction project. Coordinate construction activities with a call to Digger's Hotline or a direct call to the utilities which

have facilities in the area as required per statutes. Use caution to ensure the integrity of underground facilities and maintain code clearance from overhead facilities at all times.

Utility companies will be performing utility work and adjustments within the limits and during the life of this project. Cooperate and coordinate construction activities with these organizations.

Some of the utility work described below is dependent on prior work being performed by the contractor at a specific site. In such situations, provide the engineer and the affected utility a good faith notice of when the utility may begin work at the site. Notice shall be given 14 days prior to the contractor's anticipated completion date and when the site will be available to the utility. Follow up with a confirmation notice to the engineer and the utility no less than 3 business days before the site will be ready for the utility.

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 existing and any new utility relocation work.

If a conflict with abandoned utility facilities is encountered, contact the appropriate utility owner/representative for instructions on proper removal and disposal of said facility.

AT&T Local Network (Teleport Communications America, LLC (TCA)) has one aerial crossing of STH 181at Station 123+75 in the project limits. TCA plans to raise the overhead line on We Energies poles prior to construction.

The construction field contact for Teleport Communications America, LLC is Jennifer Navarro at office (414) 459-3564.

AT&T Wisconsin has facilities in the project area. The following work will be performed by AT&T prior to construction.

The existing 16 MTD AT&T duct package will be discontinued in place from Station 119+26, 13' RT to Station 122+83, 9' RT.

AT&T will relocate the 16 duct package to west side of bridge. Beginning at the existing AT&T Manhole # 1004, in the median at Station 119+26, 13' RT place new conduit to Station 104+16 E, 0.5' LT, then to Station 103+43 E, 12' RT and continue under the center of the new sidewalk to a new manhole at Station 100+80 E, 9' RT. Continue new conduit from manhole at Station 100+80 E, 9' RT to Station 104+67 B, 26' LT to Station 103+86 B, 10.4' RT, to Station 101+97 B, 19.5 RT to Station 101+36, 47' RT to Station 100+75 B, 61' RT to the existing manhole at Station 122+83, 9' RT.

This work is anticipated to be complete prior to March 1, 2017.

AT&T will perform the following work during construction:

17 AT&T Manhole Frame and Cover will be adjusted to final finished grades within the Pavement Rehabilitation and Pavement Reconstruction limits at the following locations:

Station 90+60; 13.7' RT
Station 97+55; 57.5' LT
Station 97+57; 65.8' LT
Station 97+65; 66.1' LT
Station 106+41; 9.4' RT
Station 106+41; 15.4' RT
Station 112+64; 8.7' RT
Station112+64; 15.3' RT
Station 119+26; 11.1' RT
Station 119+26; 15.6' RT - AT&T to also install Champion Precast Manhole Curb Entrance during construction. AT&T will be responsible for all future maintenance of Manhole Curb Entrance.
Station 122+83; 8.8' RT
Station 122+98; 0.4' LT
Station 122+98; 8.6' RT
Station 126+91; 11.5' RT
Station 133+39; 12.12' RT
Station 139+95; 12.5' RT
Station 146+68; 12.4' RT

This work will take 17 days during road construction. AT&T will need at least 10 days advance notice to adjust these manholes and to install Champion Precast Manhole Curb Entrance.

The proposed inlet at Station 115+77 is located in close proximity to the existing AT&T fiber optic line. No conflict is anticipated. Care shall be taken when constructing the storm sewer improvements in the immediate area as to not impact AT&T's existing facility.

The construction field contact for the AT&T Wisconsin facilities is David Ireland at (414) 257-0012 (office) or (414) 469-1221 (mobile).

The City of Milwaukee Conduit has facilities within the project limits. There is an existing City Underground Conduit (CUC) conduit and manhole system located in N. 76th Street from West Grantosa Drive to West Florist Avenue. No conflicts with the conduit system are anticipated with the exception of the adjustment of manholes located within the pavement limits and the removal of the conduit package on the existing Silver Drive overpass (Structure B-40-766).

Existing cabling and conduit through the Silver Spring Drive overpass will be discontinued in place prior to the start of construction. The contractor will be responsible for removing and disposing of the discontinued conduit and cabling within the bridge.

The adjustment of all existing CUC manholes that fall within the paving limits of the project is included in the project plans to be completed by the contractor.

The existing four duct conduit package through the existing bridge will be rerouted around the bridge to the west. The rerouted conduit package and associated new manhole work is included in the project plans as part of the contract work to be performed by the contractor. This work includes the placement of a 4 – 4" cement encased conduit package from the existing manhole at Station 118+83, 27.3' LT to a new 4' diameter TES manhole at Station 103+41.50 E, 17.5' LT, continuing the conduit package to a new 4' diameter TES manhole at Station 101+80.16 B, 9.0' LT, and back to the existing manhole at Station 122+55.13, 28.3' LT.

The construction field contact for City of Milwaukee Conduit is Karen Rogney, (414) 286-3243.

The City of Milwaukee - Communications has facilities within the project limits. There is an existing city Underground Conduit (CUC) conduit and manhole system located in N. 76th Street from West Grantosa Drive to West Florist Avenue.

<u>The City of Milwaukee will perform the following work prior to construction:</u>
Communications on existing cabling through the bridge will be rerouted onto alternate cable routes outside of the paving limits and off of the structure to avoid conflicts with construction. Cabling through conduit through the Silver Spring Drive overpass will be discontinued in place prior to the start of construction by City of Milwaukee forces. The contractor will be responsible for removing and disposing of the discontinued conduit and cabling within the bridge as part of the bridge demolition work. Contact the City of Milwaukee Communications Department 5 days prior to the start of bridge demolition to confirm cabling has been discontinued.

<u>The City of Milwaukee will perform the following work after construction:</u>
Install cable from the existing manhole at Station 118+83, 27.3' LT through the new conduit and manholes being constructed by the contractor as part of the contract work. Cable will be routed from the existing manhole at Station 118+82.88 27.3' LT to the new manholes at Station 103+41.50 E, 17.5' LT, and Station 101+80.16 B, 9.0' LT, then back to the existing manhole at Station 122+55.13, 28.3' LT.

This work will take 20 days after the new conduit and manholes are constructed. Provide the City of Milwaukee 5 days' advance notice to when the site is ready to perform new cabling installation.

The construction field contact for City of Milwaukee Communications is DPW/Communications Dispatch and Bryan M. Pawlak, (414) 286-3686.

City of Milwaukee – Lighting has facilities in the project area. The City of Milwaukee street lighting forces will install, maintain, relocate or remove all street lighting facilities prior to, during and after construction.

The contractor is responsible for installing conduit and junction boxes in the bridge and approaches. Contractor is to inform street lighting contact of status of this conduit installation. The street lighting contact is to be informed after the conduit is installed for street lighting to inspect, and before any concrete or backfill is placed over the conduit.

The street lighting forces will be removing bolt down light poles and will abandon their concrete bases. The contractor will be responsible for the removal of these concrete base left behind.

Work to be performed prior to construction:
Before roadway construction starts, street lighting forces will install temporary overhead facilities throughout the entire project including the ramps going down to West Silver Spring Drive. Street lighting facilities will be relocated to accommodate for the temporary traffic control crossovers at West Thurston Avenue and West Sheridan Avenue.

Temporary poles will be placed at the following location within the project limits:

STATION	LOCATION	STATION	LOCATION
146+06	Behind east curb	115+86.5	Behind west curb
145+48	Behind west curb	115+67	Behind east curb
143+73	72' LT	115+03	72' RT
143+31	107.5' LT	114+65	Behind west curb
142+87	Centered in island	114+50.5	Behind east curb
141+67	Centered in island	111+95	Behind east curb
139+65	109' LT	111+86.5	Behind west curb
137+94	Centered in island	108+83	Behind west curb
135+18	Centered in island	102+05	Behind west curb
133+92	Centered in island	100+79.5	Behind west curb
133+07	79' LT	100+75	Behind east curb
132+64.5	Centered in island	99+33.5	Centered in island
131+39	Centered in island	98+98	75' RT
129+92	Behind east curb	98+74	85.5' LT
130+08	Behind west curb	97+94.5	Behind east curb
127+29	Behind west curb	95+66	91.5' RT
126+44	Behind west curb	95+53.5	Behind west curb
125+23	Behind west curb	95+09	Behind east curb
125+19	Behind east curb	94+17.5	Centered in island

STATION	LOCATION
124+31.5	Behind west curb
123+56	Centered in island
122+85	78’ RT
122+85	72’ LT
119+20	Behind west curb
119+11	84.5' RT
118+41.5	Centered in island
117+42	Centered in island

STATION	LOCATION
93+77.5	95' LT
93+06	109' RT
92+76	Centered in island
91+18.5	Centered in island
90+57	108.5' RT
87+39	Behind east side curb of island
87+05	79' LT

NW RAMP

STATION	LOCATION
106+93B	27' LT
104+15B	27' LT
103+38.5B	27' LT
102+85B	27' LT

SW RAMP

STATION	LOCATION
102+59E	25.5' LT
103+89E	28' LT

NE RAMP

STATION	LOCATION
106+29C	25.5' LT
105+07C	25.5' LT
104+44C	25.5' LT
103+78C	25.5' LT

SE RAMP

STATION	LOCATION
101+06D	25.5' LT
102+33D	6' RT
103+61D	6' RT
104+91D	6' RT
106+21D	6' RT

Work before Stage 2:

The street lights on the bridge over West Silver Spring Drive that are above and below will remain in service until roadway is closed to traffic. Street lighting forces will remove the street light facilities above and below the bridge and discontinue in place cables on the west side of the bridge.

Street lighting will require 6 day notice before west side of bridge is closed to traffic, and need 4 to 6 working days for removals. After the west side construction is finished, but before it is opened to traffic street lighting forces will install permanent facilities.

Work before Stage 3:

Once the west side of the bridge is open to traffic and the east side is closed to traffic, street lighting forces will remove the street light facilities above and below the bridge and discontinue in place cables. Street lighting will require 3 day notice to do the removals. After the east side construction is finished, but before it is opened to traffic, Street lighting forces will install permanent facilities.

Work during Stage 2 and 3:
City of Milwaukee street lighting forces will install underground conduit in the center median of Silver Spring Drive (beneath the new structure) after the center bridge pier is constructed; and prior to the concrete sidewalk is poured in the median. Contact Dennis Miller at (414) 286-5942 (office) or (414) 708-4251 (mobile) to provide five days' notice for the city to perform this work. The estimated time to complete this work is two working days in both Stage 2 and 3 for the installation of street lighting materials below grade.

Work after Construction:
Street lighting forces will install permanent street lighting facilities, and put them into service. Street lighting temporary facilities will be removed, after permanent lighting is in service.

The estimated construction time for City of Milwaukee lighting work is estimated to be 45 working days before construction for temporary work, 60 working days for work during construction, and 90 working days after construction for installation of permanent facilities, and removal of temporary facilities. For work scheduled to be performed during construction, provide advance notification to the City of Milwaukee Lighting Department, as identified previously. Coordinate the contract construction activities with the City of Milwaukee Lighting Department to perform the scheduled lighting work concurrently during construction.

The construction field contact for the City of Milwaukee lighting facilities is Dennis Miller at (414) 286-2461 (office), or (414) 708-4251 (mobile).

City of Milwaukee – Sewer has facilities in the project area. No sewers in the project area need to be relocated. The City of Milwaukee plans to relay the storm sewer in the east side of N. 76th St. between approximately 82+80 (south of the project limits) and 89+70, 25' RT to 57' RT. The City also plans to relay the storm sewers between 110+70 to 114+70, 35' RT and 115+55 to 117+00, 35' LT. This work is anticipated to take approximately 40 working days and is scheduled to be complete prior to construction.

All city owned sanitary sewer and storm sewer manholes within the project grading limits will be adjusted during construction by the contractor as part of the contract work.

The construction field contact for the City of Milwaukee Sewer facilities is Samir Amin at (414) 286-2461.

City of Milwaukee – Water has water main, valves, and hydrants within the project limits.

Six hydrant alterations will be performed at the following locations during construction and will take approximately 15 working days:

- Station 118+43, 53 RT will be relocated to Station 118+43, 54 RT
- Station 123+88, 51 RT will be relocated to Station 123+88, 52 RT
- Station 123+90, 53 LT will be replaced at the same location
- Station 140+08, 63 LT will be relocated to Station 140+08, 70 LT
- Station 143+78, 63 LT will be relocated to Station 143+78, 66 LT
- Station 100+22 E, 2 RT will be relocated to Station 100+22 E, 6 RT

Valve box grade adjustments will be performed by the contractor during construction operations.

Contact Dave Goldapp, (414) 286-6301 (office) or (414) 708-2695 (mobile), of the City of Milwaukee – Water 7 days in advance to coordinate locations and any excavations near their facilities.

Milwaukee Metro Sewerage District has underground sanitary sewer and manholes within the project limits that will remain in place.

MMSD has a flow meter located in the manhole at Station 105+80, 16' LT, which will be removed prior to the roadway construction and will take approximately one working day. Contact Chris Schultz at (414) 225-2217 or cschultz@mmsd.com, with MMSD prior to the start of construction at least five days in advance to coordinate this work. This work is anticipated to take one day to complete.

MMSD will perform minor adjustments to manholes at the Stations below to match the new roadway grade during construction. This work will take approximately 3 working days. Contact Robert Rebitski at (414) 225-2214) of MMSD at least 5 days in advance to coordinate this work.

- 95+90, 60' RT
- 98+25, 16' LT
- 101+80, 16' LT
- 105+80, 16' LT
- 106+75, 20' LT
- 109+40, 24' LT
- 109+50, 64' LT

Contact Larry Anderson at (262) 225-2241 (office) or (414) 617-1429 (mobile), of MMSD 7 days in advance to coordinate locations and any excavation around their facilities.

Time Warner Cable (TWC) has overhead facilities within the project limits. No conflicts have been identified with Time Warner Cable facilities.

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.

The construction field contact for Time Warner Cable is Steve Cramer at office (414) 277-4045 or mobile at (414) 688-2385.

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

We Energies Electric plans to complete the following work prior to construction:

- The electric duct package between the manholes at Station 118+88 63'R and 122+26 49'R will be abandoned (discontinued) in place and the cable will be removed. The manhole at 122+26 will remain. The cables that are in the N 76th St bridge will be relocated into the existing electric duct along the south side of W Silver Spring Drive east to a proposed electric manhole at Station 103+33 D,14' RT. From that manhole 4 ducts will be bored north under W Silver Spring Drive to a second proposed manhole at Station 104+32 C, 28' LT. From that manhole another 4 duct package will be installed at the top of slope west to the south end of the existing manhole at 122+26.

- WE Energies to replace pole at sta123+87, 80'LT to facilitate raising of communication cable.

The proposed storm sewer between Station 122+45, 19' RT and Station 122+52 49' RT (between the manhole at 7.1 and the inlet at 7.0) will not be in conflict with the electric duct package. This electric duct package is above this proposed storm sewer pipe. The work to be performed prior to construction is expected to take 30 working days for the placement of new conduit and manholes, and 2 days for new pole placement and overhead adjustments.

We Energies Electric will perform the following work during construction:

Perform manhole adjustments at the following locations:

1) Electric manhole at Station 87+58 8' LT
2) Electric manhole at Station 87+61 45’ LT
3) Electric manhole at Station 90+85 45’ LT
4) Electric manhole at Station 93+52 41’ LT
5) Electric manhole at Station 96+92 39’ LT

6) Electric manhole at Station 101+73 37’ LT
7) Electric manhole at Station 106+17 35’ LT
8) Electric manhole at Station 110+58 29’ LT
9) Electric manhole at Station 115+10 28’ LT
10) Electric manhole at Station 115+16 63’ RT
11) Electric manhole at Station 118+88 63’ RT
12) Electric manhole at Station 122+26 49’ RT
13) Electric manhole at Station 126+49 20’ RT
14) Electric manhole at Station 126+56 20’ RT
15) Electric manhole at Station 139+16 5’ RT
16) Electric manhole at Station 142+91 5’ RT
17) Electric manhole at Station 146+09 5’ RT
18) Electric manhole at Station 146+15 5’ RT

The manhole adjustment work is anticipated to take 1 to 2 weeks during roadway construction. Provide We Energies 14 day notice to perform their necessary adjustments.

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 in place and carry no natural gas or electrical current. The contractor must not assume that unmarked facilities have been discontinued in place. 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 #1-800-662-4797
We Energies Gas Dispatch #1-800-261-5325

The construction field contact for We Energies Electric is Ken Franecki at office (414) 944-5531 or mobile at (262) 939-1039

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

<u>We Energies Gas plans to complete the following work prior to construction:</u>

- Install 8” steel main from Station 119+25, 87’ RT to Station 119+25, 57’ LT to Station 119+50, 57’ LT to tie back into the existing 8” steel main.

- Discontinue the existing 8” steel main crossing from Station 119+50, 57’ LT to Station 119+50, 85.8’ RT to Station 119+25, 87’ RT.

- Discontinue the existing 6” steel main along the bridge over W Silver Spring Drive from Station 119+50, 51’ LT to Station 122+75, 69’ LT.

- Discontinue the existing 4” PE main along W Silver Spring Drive from Station 122+75, 69’ LT to Station 124+50, 27.5’ LT

- Discontinue 20” HP Gas main from Station 119+33, 27’ RT to 125+01 41’ RT

- Install 20" HP Gas Replacement at Existing Location (Station 114+80, 30’ RT to 119+33, 27’ RT).

- Install 20" HP Gas Replacement at New Location (Station 119+33, 27’ RT to 125+01, 41’ RT) as follows:

The replacement of the gas main continues at a new location from 119+33 27 RT to 119+74, 28’ RT. The new main then heads east along the SE Ramp alignment from Station 100+54D, 4.0’ LT to Station 104+11D, 12.0’ LT. The main heads north crossing Silver Spring Drive at STA 174+00A, 0.0’ LT to the NE Ramp at Station 103+34, 10.0’ RT to Station 106+82, 64.0’ RT (STH 181 Station 122+93, 41.0’ RT).

The new main then heads north along STH 181 from Station 122+93, 41.0’ RT to Station 125+01, 41’ RT where it ties back into the existing 20" gas main.

- Install 20" HP Gas Replacement at Existing Location (Station 125+01, 41’ RT to Station 127+29, 40.0’ RT)

This work planned to be performed prior to the start of construction will take approximately 40 working days to complete.

<u>We Energies Gas will perform the following work during construction:</u>

- Adjust regulator pit boxes at Station 117+67, 57’ RT and Station 117+84, 57’ RT during construction.

- Valve box adjustments will be completed by We Energies forces during construction.

The work to be performed during construction will take approximately 3 working days for valve box adjustments and 5 working days for regulator pit adjustments.

Contact Dennis Sinjakovic, (414) 221-5617, of We Energies for valve box adjustments 14 days in advance to coordinate locations and any excavation near their facilities and a 3 day reminder notice to notify the utility that the site is ready.

Contact Ken Moutvic, (262) 574-6067, of We Energies for regulator pit adjustments 14 days in advance to coordinate locations and any excavation near their facilities and a 3 day reminder notice to notify the utility that the site is ready.

Contact Paul Osmanski, (414) 944-5796 (office) or (414) 315-1278 (mobile), of We Energies 14 days in advance to coordinate locations and any excavation near their facilities.

Any facilities not explicitly identified as being relocated have been deemed to be not in conflict and will remain in place as is. It is expected that contractors will work safely around any facilities left within the work zone.

We Energies Gas has the following facilities discontinued in place within the project corridor as of 2014:

- 2" steel main crossing at Station 126+62, from 51' LT to 49' RT.
- 2" steel main crossing at Station 146+64, from 57' LT to 58' RT.
- 4" steel main from Station 126+62, 51' LT to Station 131+00, 50' LT.
- 6" steel main from Station 131+00, 50' LT to Station 133+45, 52' LT.
- 6" steel main from Station 133+45, 52' LT to Station 133+48, 57' LT.
- 6" steel main from Station 133+48, 57' LT to Station 145+96, 59' LT.
- 2" steel main from Station 126+62, 49' RT to Station 140+29, 50' RT.
- 2" steel main from Station 140+29, 50' RT to Station 140+39, 58' RT.
- 2" steel main from Station 140+39, 58' RT to Station 145+23, 58' RT.

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 in place and carry no natural gas or electrical current. The contractor must not assume that unmarked facilities have been discontinued in place. 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

McLeod (Windstream) has facilities located in City of Milwaukee communications duct within the project limits.

Windstream will perform the following work prior to construction:
Windstream fiber optic facilities in the City of Milwaukee owned conduit through the Silver Spring Drive overpass will be discontinued in place prior to the start of construction by Windstream forces. The contractor will be responsible for removing and disposing of the discontinued cabling within the bridge as part of the bridge demolition work. Contact the Nathan Becker, (414) 313-9032, 7 days prior to the start of bridge demolition to confirm cabling has been discontinued.

Install two 11/4-inch conduit and cable from the existing City of Milwaukee Communications manhole at Station 119+83, 27' LT west to a bend at Station at 104+33, 28' LT then west to a new hand hole along the SW Ramp at Station 103+51.50 E, 28' LT, then north across Silver Spring Drive to a new hand hole at Station 101+65 B, 28.5' RT to bend at Station 101+19 52' RT, then east to the existing city owned communications manhole at Station 122+55.13, 28' LT.

The work planned to be performed prior to the start of construction will take approximately 30 working days to complete

Windstream will perform the following work during construction:
Adjust hand holes at Station 103+51.50 E, 28' LT and Station 101+65 B, 28.5' RT to finished grade elevation. Contractor to provide Windstream a 14 working day notice in advance of when work can be performed.

This work planned to be performed during construction will take approximately 3 working days to complete. The construction field contact for Windstream is Nathan Becker, (414) 313-9032.

WisDOT Signals has traffic signal facilities located at the intersections of STH 181 and W. Villard Avenue, STH 181 and W Fond du Lac Avenue, STH 181 and W Silver Spring Drive, and STH 181 and W Florist Avenue. Facilities include signal poles and heads, pedestrian push button poles, control cabinets, pull boxes, and pavement loop detector conduit.

The following proposed work will take place during construction as part of the project contract.

Loop detectors will be replaced at STH 181 and W Villard Avenue, STH 181 and W. Fond du Lac Avenue, and STH 181 and W Florist Avenue.

The traffic signal system at STH 181 and W Silver Spring Drive will be completed reconstructed; all equipment will be replaced and relocated.

Discontinue, remove, leave in place, and reconstruct these facilities as shown in the plans.

Contact the Electrical Field Unit at (414) 266-1170 or the Signal Operation Unit at (414) 750-2605) of WisDOT 7 days in advance to coordinate construction.

7. Erosion Control.

The contractor shall prepare and submit an erosion control implementation plan (ECIP) for the project including borrow sites, material disposal sites, dust control, and dewatering according to Chapter TRANS 401 requirements. The erosion control implementation plan shall supplement information shown on the plans and shall not reproduce it. The erosion

control implementation plan will identify how the contractor intends to implement the project's erosion control plan.

Provide the ECIP 14 calendar days prior to the pre-construction conference. Provide 1 copy of the ECIP to WisDOT and 1 copy of the ECIP to the WDNR Liaison Kristina Betzold, (414) 263-8517, 2300 N. Martin Luther King Jr. Drive, Milwaukee, WI 53212. Pursue operations in a timely and diligent manner, continuing all construction operations methodically from the initial removals and topsoil stripping operations through the subsequent grading, paving, and re-topsoiling to minimize the period of exposure to possible erosion. Do not implement the ECIP until it has been approved by the department.

Re-topsoil of graded areas, as designated by the engineer, immediately after grading is completed within those areas. Seed, fertilize, and mulch/erosion mat top-soiled areas, as designated by the engineer, within 5 calendar days after placement of topsoil. If graded areas are left exposed for more than 14 calendar days, seed those areas with temporary seed.

When performing roadway cleaning operations, the contractor shall use equipment having vacuum or water spray mechanism to eliminate the dispersion of dust. If vacuum equipment is employed, it shall have suitable self-contained particulate collectors to prevent discharge from the collection bin into the atmosphere.

Stockpile excess material or spoils on upland areas away from wetlands, floodplains and waterways. Stockpiled soil shall be protected against erosion. If stockpiled material is left for more than 14 calendar days, seed the stockpile with temporary seed.

8. Public Convenience and Safety.

Revise standard spec 107.8(6) as follows:

Check for and comply with local ordinances governing the hours of operation of construction equipment. Do not operate motorized construction equipment from 9:00 PM until the following 7:00 AM, unless prior written approval is obtained from the engineer. Nightime work will be allowed for
107-001 (20060512)

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

Both the department and City of Milwaukee 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 City of Milwaukee.
105-001 (20140630)

10. Notice to Contractor, Notification of Demolition and/or Renovation No Asbestos Found.

James Gondek, License Number All-108099, inspected Structure B-40-0146 for asbestos on June 30, 2011. No regulated Asbestos Containing Material (RACM) was found on this structure. A copy of the inspection report is available from: Traci Gengler, (262) 548-8727.

According to NR447 and DHS159, ensure that DNR or DHS receives a completed Notification of Demolition and/or Renovation (DNR Form 4500-113 (R 4/11), or subsequent revision) via U.S. mail, hand-delivery, or using the online notification system at least 10 working days prior to beginning any construction or demolition. Pay all associated fees. Provide a copy of the completed 4500-113 form to Traci Gengler, (262) 548-8727 and DOT BTS-ESS attn: Hazardous Materials Specialist PO Box 7965, Madison, WI. 53707-7965. In addition, comply with all local or municipal asbestos requirements.

Use the following information to complete WisDNR form 4500-113:

- Site Name: Structure B-40-0146, STH 181 over W. Silver Spring Drive
- Site Address: 0.2M N JCT STH 145 TO N
- Ownership Information: WisDOT Transportation Southeast Region, 141 NW Barstow Street, P.O. Box 798, Waukesha, WI 53187-0798
- Contact: Traci Gengler
- Phone: (262) 548-8727
- Age: 52 years old. This structure was constructed in 1964.
- Area: 17,127 SF of deck

Insert the following paragraph in Section 6.g.:

- If asbestos not previously identified is found or previously non-friable asbestos becomes crumbled, pulverized, or reduced to a powder, stop work immediately, notify the engineer, and the engineer will notify the department's Bureau of Technical Services at (608) 266-1476 for an emergency response according to standard spec 107.24. Keep material wet until it is abated or until it is determined to be non-asbestos containing material.

107-125 (20120615)

11. Coordination with Businesses and Residents.

The contractor shall 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 two meetings per month thereafter. The contractor shall 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.

108-060 (20141107)

12. City of Milwaukee Forestry Requirements.

Sidewalk construction:
The root system on the walk side of the tree shall be cut not deeper than 9 inches below the finished grade of the new walks, and not more than 5 inches from the edge of the new walk. Roots in the walk area shall be removed only to a depth 9 inches below finished grade of the new walk.

When replacing walks adjacent to the trees at Station 102+02 D, Station 102+53 D, Station 103+03 D, and Sta. 103+75 D, a slip of thin form must be used. Additionally, soil disturbances in the tree border should be limited to not more than 1/4 inch beyond the edge of new walk.

Sidewalks are to be removed, and roots cut by use of hand implements only.

Carriage and walk construction:
When constructing or replacing carriage walks, roots shall not be cut by means of mechanical root cutting machines. If root removal is essential to carriage walk replacement, roots shall be manually cut with hand implements. Roots shall be removed not deeper than 9 inches below the finished grade of the new carriage walk.

Curb, gutter and road construction:
The root system on the curb side shall be cut not more than 2 inches behind the back edge of the new curb, and not more than 18 inches in depth when constructing the new curb and gutter.

When constructing or replacing driveways or driveway approaches, roots shall not be cut by means of mechanical root cutting machines. If root removal is essential to driveway replacement, roots shall be manually cut with hand implements.

Exposed tree roots shall be covered with mulch and watered from a period immediately following curb and gutter removal, until the area is backfilled following construction.

General:
All cutting for the removal of sod and soil in order to establish a finished grade within 4 feet of existing trees must be done manually if necessary.

No construction equipment, cars, trucks, materials shall be parked or stored on any median or tree border on this project or adjacent roadways.

Root foundations must remain adequate to withstand heavy windstorms.

Root system of street trees shall not be cut for the installation of any type of cable by the contractor or city department. Contact forestry division at (414) 708-2428 for directional boring specifications.

Caution should be used during the construction process to avoid damage to the roots, trunks, and branches of all street trees. Damage caused to any street tree or irrigation system will be repaired by the City of Milwaukee's Forestry Division and the costs of repair, rejuvenation, and/or value lost will be billed to the contractor.

At locations where the contractor has not complied with the forestry special requirements stated in the special provisions above, and the maximum clearance was exceeded or a thin form was not used, a minimum charge of $50.00 per location will be taken. The amount will increase in proportion to the excess distance beyond clearance allowed. The charge will be $50.00 for each 2-inch increment or part thereof in excess of the initial clearance allowed. Any damage to the tree's structure totaling 15 percent of the trees value will be billed on a prorata basis. If, in the opinion of the City of Milwaukee's Forestry Division, the tree has been damaged to the point that it warrants removal, the charge will be equal to $100.00 per inch diameter of the tree. A field measurement will be taken to determine the tree size.

13. Debris Containment B-40-766, Item 203.0225.S.01.

A Description

This special provision describes providing a containment system to prevent debris from structure removal, reconstruction, or other construction operations from falling onto facilities located under the structure. Using this containment system does not relieve the contractor of requirements under standard spec 107.17 and standard spec 107.19 or requirements under a US Army Corps of Engineers Section 404 Permit.

B (Vacant)

C Construction

Prior to starting work, submit a debris containment plan to the engineer for review. Incorporate engineer-requested modifications. Do not start work over CTH E (Silver Spring Drive) until the engineer approves the debris containment plan.

Maintain adequate protection throughout construction for people and property within the potential fall zone. Ensure that a containment system capable of protecting underlying facilities from falling construction debris is in place before beginning deck repair, parapet removal, or other operations that may generate debris.

At least 15 working days before conducting potential debris generating operations, contact the following owners or lessees:

1. Traci Gengler, WisDOT, (262) 548-8727
2. David Tapia, City of Milwaukee, (414) 286-2453

D Measurement

The department will measure Debris Containment B-40-766 as a single lump sum unit of work for each structure, 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
203.0225.S.01	Debris Containment B-40-766	LS

Payment is full compensation for furnishing, installing, maintaining, and removing a debris containment system.

203-010 (20080902)

14. Backfill Controlled Low Strength, Item 209.0200.S.

A Description

This special provision describes furnishing and placing a controlled low strength material designed for use as backfill in trenches for culverts, sewers, utilities, or similar structures, as backfill behind bridges abutments, or as fill for the abandonment of culverts, pipes, or tanks.

B Materials

Provide controlled low strength backfill that consists of a designed cementitious mixture of natural or processed materials. Allowable materials include natural sand, natural gravel, produced sand, foundry sand, produced gravel, fly ash, Portland cement, and other broken or fragmented mineral materials. The designed mixture shall be self-leveling and shall be free of shrinkage after hardening. Design the mixture to reach a state of hardening such that it can support foot traffic in no more than 24 hours. Provide a mixture that also meets the following requirements.

Test	Method	Value
Flow (inch)	ASTM D-6103	9 min
Compressive Strength (psi)	ASTM D-6024	20-40 @ 14 days 40-80 @ 28 days 80-120 @ 90 days

Chemical admixtures to control air content and setting time are allowable. Ten days prior to placement, furnish the engineer with a design mix detailing all components and their proportions in the mix. Also, provide documentation from the supplier of the industrial byproducts that the foundry sand and fly ash used in the mixture meet the requirements for Industrial Byproducts Categories 1, 2, 3, or 4 in NR 538 of the Wisconsin Administrative Code for use as a confined geotechnical fill.

C Construction

Place controlled low strength backfill at the locations and to the lines and grades as shown on the plan. Proportion and mix materials to produce a product of consistent texture and flow characteristics. The engineer may reject any materials exhibiting a substantial change in properties, appearance, or composition.

If the official Weather Bureau forecast for the construction site predicts temperatures at or below freezing within the next 24 hours after placement of controlled low strength backfill, protect the placed materials from freezing during that time period. If the temperature is not forecast to rise above 40º F for 72 hours after placement, the engineer may require protection from freezing for up to 72 hours.

No controlled low strength backfill shall be allowed to enter any stream, lake, or sewer system. The contractor shall be responsible for any clean up or remediation costs resulting from such occurrences.

D Measurement

The department will measure Backfill Controlled Low Strength in volume by the cubic yard of material placed and accepted. Such volume shall be computed from actual measurements of the dimensions of the area to be backfilled. In irregular or inaccessible areas, the engineer may allow volume to be determined by other appropriate methods.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
209.0200.S	Backfill Controlled Low Strength	CY

Payment is full compensation for designing the mix; supplying all materials; preparing the proportioned mix; hauling it to the construction site; placing the material; and protecting it from freezing.

209-010 (20090901)

15. 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-rsrces/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 sublot 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://wisconsindot.gov/Pages/doing-bus/eng-consultants/cnslt-rsrces/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 three 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)

16. High Performance Dowel Bars for Concrete Pavement.

Replace standard spec 415.2.2 with the following:

(1) Furnish steel reinforcement according to standard spec 505. Furnish tie bars as the plans show and according to standard spec 505.2.6.

(2) Furnish dowel bars of the dimensions the plans show and according to standard spec 505.2.6 except for transverse joints in concrete pavement, use non-corrosive high performance dowel bars. Use only one type of high performance bar for work under the contract. The contractor may use any one of the following:

1. Bars with 316L stainless steel cladding meeting ASTM A276 chemical requirements. Ensure that the bars have a smooth finished surface cladding 0.060 inches thick or thicker over ASTM A615 grade 60 or higher carbon steel.

2. Bars with 316L stainless steel tubes meeting ASTM A276 chemical requirements. Ensure that the tubes have a smooth finished surface, a wall thickness of 0.060 inches or more, and are press-filled with ASTM A615 grade 60 or higher carbon steel. Use an adhesive or epoxy between the tube and the carbon steel to fill any voids.

3. Solid 316L stainless steel bars conforming to ASTM A955 grade 60 or higher.

4. Bars with a rolled UNS Z41121 zinc alloy cladding conforming to ASTM B6. Ensure that the bars have a smooth finished surface cladding 0.040 inches thick or thicker over ASTM A615 grade 60 or higher carbon steel.

5. Bars with a fully bonded longitudinal glass fiber reinforced polymer (GFRP) corrosion shield conforming to the GFRP materials requirements of AASHTO LRFD Bridge Design Guide Specifications for GFRP Reinforced Concrete Bridge Decks and Traffic Railings. Ensure that the bars have a smooth finished GFRP surface coating 0.125 inches thick or thicker over ASTM A615 grade 60 or higher carbon steel.

416-020 (20130615)

17. Bar Steel Reinforcement HS Stainless Structures, Item 505.0800.S.

A Description.

This special provision describes furnishing and placing stainless steel reinforcing bars and associated stainless steel bar couplers.

Conform to standard spec 505 as modified in this special provision.

B Materials

B.1 General

Furnish stainless steel reinforcing bars conforming to ASTM A955 and to one of the following Unified Numbering System (UNS) designations: S31653, S31803, S32205, or S32304. Supply grade 60 bars, all of the same UNS designation. Conform to the chemical composition specified for the given UNS designation in ASTM A276 table 1.

Supply bars that are free of dirt, mill scale, oil, and debris by pickling to a bright or uniform light finish. The department may reject bars displaying rust/oxidation, questionable blemishes, or lack of a bright or uniform pickled surface.

Furnish chairs or continuous supports made of stainless steel or recycled plastic to support high-strength stainless bar steel reinforcement subject to the plastic chair restriction stated in standard spec 505.3.4(1).

Furnish couplers made from one of the UNS alloys allowed for bar steel.

Furnish tie wire made from one of the UNS alloys allowed for bar steel or from an engineer-approved plastic or nonmetallic material. Ensure that stainless steel tie wire is dead soft annealed.

B.2 Fabrication

Before fabrication, supply test results from an independent testing agency certifying that the reinforcement meets the requirements of Annex A1 of ASTM A955.

Bend bars conforming to standard spec 505.3.2 and according to ASTM A955. Bend and cut bars using equipment thoroughly cleaned or otherwise modified to prevent contamination from carbon steel or other contaminants. Use tools dedicated solely to working with stainless steel.

B.3 Control of Material

Identify reinforcement bars delivered to the project site with tags bearing the identification symbols used in the plans. Include the UNS designation, heat treat condition, heat number, grade corresponding to minimum yield strength level, and sufficient documentation to track each bar bundle to a mill test report.

Provide samples for department testing and acceptance according to CMM 8-50 Exhibit 1 requirements for concrete masonry reinforcement for uncoated bar steel.

Provide mill test reports for the project that do the following:

1. Verify that sampling and testing procedures and test results conform to ASTM A955, ASTM A276 table 1, and these contract requirements.
2. Include a chemical analysis with the UNS designation, heat lot identification, and the source of the metal.
3. Include tensile strength, yield strength, and elongation tests results conforming to ASTM A955 for each size furnished.
4. Certify that the bars have been pickled to a bright or uniform light finish.

C Construction

C.1 General

Ship, handle, store, and place the stainless steel reinforcing as follows:

1. Separate from regular reinforcement during shipping. Pad points of contact with steel chains or banding, or secure with non-metallic straps.
2. Store on wooden cribbing separated from regular reinforcement. Cover with tarpaulins if stored outside.
3. Handle with non-metallic slings.
4. Do not flame cut or weld. Protect from contamination when cutting, grinding, or welding other steel products above or near the stainless steel during construction.
5. Place on plastic or stainless steel bar chairs. If placing stainless steel chairs on steel beams, use chairs with plastic-coated feet.
6. Tie with stainless steel wire or an engineer-approved plastic or nonmetallic material.

Do not tie stainless steel reinforcing bars to, or allow contact with, uncoated reinforcing bars or galvanized steel. Maintain at least 1-inch clearance between stainless steel bars or dowels and uncoated or galvanized steel. Where 1-inch clearance is not possible, sleeve bars with a continuous polyethylene or nylon tube at least 1/8-inch thick extending at least 1 inch in each direction and bind with nylon or polypropylene cable ties. Sleeves are not required between stainless steel bars and shear studs. Stainless steel bars can be in direct contact with undamaged epoxy-coated bars.

Cut flush with the top flange or remove uncoated fasteners, anchors, lifting loops, or other protrusions into a bridge deck before casting the deck on prestressed concrete beams.

C.2 Splices

Splice as the plans show. Provide stainless steel couplers conforming to the minimum capacity, certification, proof testing, and written approval requirements of standard spec

550.3.3.4. The contractor may substitute stainless steel couplers for lap slices the plans show if the engineer approves in writing.

If increasing or altering the number or type of bar splices the plans show, provide revised plan sheets to the engineer showing the reinforcement layout, type, length, and location of revised bar splices and revised bar lengths. Obtain engineer approval for the location of new lap splices or substitution of mechanical bar couplers before fabrication. Ensure that new lap splices are at least as long as those the plans show.

D Measurement

The department will measure Bar Steel Reinforcement HS Stainless Structures by the pound acceptably completed, computed from the nominal weights of corresponding sizes for carbon steel deformed bars in AASHTO M31 regardless of stainless steel alloy provided. The department will not measure extra material used if the contractor alters the reinforcement layout as allowed under C.2, extra material for splices or couplers the plans do not show, or the weight of devices used to support or fasten the steel in position.

The department will measure the Bar Couplers Stainless bid items as each individual coupler, 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
505.0800.S	Bar Steel Reinforcement HS Stainless Structures	LB

Payment for Bar Steel Reinforcement HS Stainless Structures is full compensation for furnishing and placing stainless steel reinforcing bars, including supports. Where the plans specify bar couplers, the department will pay for the length of bars as detailed with no deduction or increase for installation of the coupler.

505-005 (20141107)

18. Temporary Wall Wire Faced Mechanically Stabilized Earth, Item 532.0750.S.

A Description

This special provision describes designing, furnishing materials and erecting a temporary earth retention system according to the lines, dimension, elevations and details as shown on the plans and provided in the contract.

B Materials

B.1 Proprietary Mechanically Stabilized Earth Wire Faced Wall Systems

The department specifies approved temporary wire faced mechanically stabilized earth wall products on the department's approved product list.

Proprietary wall systems may be used for this work, but must conform to the requirements of this specification and be pre-approved for use by the department's Bureau of Structures, Structures Development Section. The name of the companies supplying pre-approved material shall be furnished within 25 days after the award of contract. The department maintains a list of pre-approved systems of retaining walls. To be eligible for use on this project, a system requiring pre-approval must have been pre-approved 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. Applications for pre-approval may be submitted at any time. Applications must be prepared according to the requirements of chapter 14 of the department's Bridge Manual. Information and assistance with the pre-approval process can be obtained by contacting the Structures Development 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 supply a design and supporting documentation as required by this special provision for review by the department to show the proposed wall design is in compliance with the design specifications. Four copies of the following shall be submitted to the engineer for review and acceptance no later than 60 days from the date of notification to proceed with the project.

The design/shop plans 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 and calculations shall be signed, sealed and dated by a professional engineer licensed in the State of Wisconsin.

The design of the Mechanically Stabilized Earth Wire Faced Wall shall be in compliance with the latest AASHTO Standard Specification for Highway Bridges including interim specifications, the standard specifications, and standard engineering design procedures as determined by the department.

The design life shall be three years, or the length of time the temporary wall will be in service, whichever is greater. A fine metallic screen or geotextile filter fabric shall be used at the front face of the wall to retain the fines of the soil mass. The maximum allowable stress in the reduced section of wire-faced walls after sacrificial steel has been removed at the end of the design life is 0.47. F_y, where F_y is the yield strength of the soil reinforcement. The minimum embedment of the MSE wire faced wall shall be 1 foot 6 inches, or as given in the plan, or as stated in AASHTO 5.8.1, whichever is greater. Frost depth shall not be considered. The overall vertical tolerance of the wall and the horizontal alignment tolerance shall not exceed 3 inches per 10 feet. For systems with separate components for soil reinforcement and wall panels, the force in the soil reinforcement at the face of the panel shall not exceed 0.5 of the connection strength failure load as determined by tests.

The design of the MSE Wire Faced Wall shall consider the internal stability of the wall mass, including reinforcement pullout resistance. The design shall be in compliance with the current AASHTO specifications for Mechanically Stabilized Earth Walls, except that the 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. Design the walls for the heights shown on the plans, and include the effects of highway surcharge loading. If a traffic rail or parapet is detailed within 3 feet of the top of the wall, the soil reinforcement at the top of the wall shall be designed for an additional horizontal traffic load as given in AASHTO. If the wall is installed in front of a bridge abutment, it shall also be designed to resist the applied abutment/bridge lateral forces. 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 feet. The soil reinforcement shall extend 3 feet beyond the theoretical failure plane in all cases.

B.3 Wall System Components

B.3.1 Welded Wire Fabric

Provide welded wire fabric that is used to fabricate the wire-faced wall that has a yield stress of 65,000 psi. All steel shall be shop fabricated of cold drawn steel wire conforming to the minimum requirements of ASTM A-82 and be welded into the finished configuration according to ASTM A-185. Replace welded wire fabric that has been damaged during handling, placing or backfilling at the direction of the engineer, at no expense to the department. Any geotextiles used in the construction of the wall and finally exposed to the sun shall be resistant to ultraviolet radiation for the design life of the wall.

B.3.2 Backfill

Provide and use material that consists of natural sand or a mixture of sand with gravel, crushed gravel or crushed stone. It shall not contain foundry sand, bottom ash, blast furnace slag or other potentially corrosive material.

Provide material that conforms to the following gradation requirements.

Sieve Size	Percentage 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.

In addition, backfill material shall meet the following requirements:

Test	Method	Value
pH	AASHTO T-289	4.5 – 10.0
Sulfate content	AASHTO T-290	200 ppm max.
Chloride content	AASHTO T-291	100 ppm max.
Electrical Resistivity	AASHTO T-288	3000 ohm/cm min.
Angle of Internal Friction	AASHTO T-236	30 degrees min.

Prior to placement of the backfill, obtain and furnish to the engineer current certified report of test results that the backfill material complies with the requirements of this specification. Tests will be performed by a certified independent laboratory. When backfill characteristics and/or sources change, a certified report of tests will be provided for the new backfill material.

C Construction

C.1 Methods

All excavation and preparation of the foundation for the reinforcing fabric 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 bottom of the wall 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 any materials or large equipment within 10 feet of the back of the wall. Stagger vertical joints in the welded wire facing.

Compact all backfill behind the wall as specified in standard spec 207.3.6. For walls with a maximum height greater than 6 feet, compact the backfill to 95.0% of maximum density as determined by AASHTO T-99, Method C. Perform compaction testing on the backfill. When performing nuclear testing, use a nuclear gauge from the department's approved list, ensure that the operator is a HTCP certified Nuclear Density Technician I, and conform to CMM 8.15 for testing and gauge monitoring methods. Conduct testing at a minimum frequency of 1 test per 2-foot layer per 200 feet of wall, or major portion thereof. A minimum of one test for every 2-foot layer is required. Test sites shall be selected using ASTM Method D3665. Deliver documentation of all compaction testing results to the engineer at the time of testing. The cost of compaction testing shall be considered incidental to the cost of the wall.

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.

C.2 Geotechnical Information

Geotechnical data to be used in the design of the wall is given on the wall plan. The allowable soil bearing capacity is given on the plan. After completing the excavation of the entire reinforced zone, the department's Regional Soils Engineer shall inspect the site and

determine if the foundation is adequate for the intended loads. Allow the Regional Soils Engineer two working days to perform the inspection.

D Measurement

The department will measure Temporary Wall Wire Faced Mechanically Stabilized Earth in area by the square foot of face on a vertical plane between a line 1 foot 6 inches below the finished grade in front of the wall shown on the plan, and a line indicating the top of wall including wall cap or copings as required and shown on the plans. Unless ordered by the engineer, wall area constructed above or below these lines will not be measured for payment.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
532.0750.S	Temporary Wall Wire Faced Mechanically Stabilized Earth	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 system including cap and copings; constructing the retaining system; providing backfill, backfilling and compacting; and performing compaction testing. Parapets, railings, abutment bodies 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.
532-037 (20110615)

19. Adjusting Manhole Covers.

This work shall be according to the pertinent provisions of standard spec 611, as shown on the plans, and as hereinafter provided.

Adjust manhole covers located in pavement areas in two separate operations. Initially, remove designated manhole covers along with sufficient pavement to permit installation of temporary cover plate over the opening. Fill the excavated area with asphaltic pavement mixture, which shall remain in place until contract milling and paving operations permit setting the manhole frames to grade. During the second phase, remove the asphaltic pavement mixture surrounding the manhole plus the temporary cover plate, and set the manhole cover to final grade. The department will measure and pay for the items of asphaltic pavement mixture, temporary cover plate, milling, and paving separately.

Revise standard spec 611.3.7 by deleting the last paragraph.

Set the manhole frames so that they comply with the surface requirements of standard spec 450.3.2.9. At the completion of the paving, a 6-foot straightedge shall be placed over the centerline of each manhole frame parallel to the direction of traffic. A measurement shall be made at each side of the frame. The two measurements shall be averaged. If this average is

greater than 5/8 inches, reset the manhole frame to the correct plane and elevation. If this average is 5/8 inches or less but greater than 3/8 inches, the manhole frame shall be allowed to remain in place but shall be paid for at 50 percent of the contract unit price.

If the manhole frame is higher than the adjacent pavement, the two measurements shall be made at each end of the straightedge. These two measurements shall be averaged. The same criteria for acceptance and payment as above, shall apply.
611-005 (20030820)

20. Cover Plates Temporary, Item 611.8120.S.

A Description
This special provision describes furnishing, installing and removing a steel plate to cover and support asphaltic pavement and traffic loading at manholes, inlets and similar structures during milling and paving operations.

B Materials
Provide a 0.25-inch minimum thickness steel plate that extends to the outside edge of the existing masonry.

C (Vacant)

D Measurement
The department will measure Cover Plates Temporary as 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
611.8120.S	Cover Plates Temporary	Each

Payment is full compensation for furnishing, installing, and removing the cover plates.

The steel plates shall become the property of the contractor when no longer needed in the contract work.
611-006 (20151210)

21. Fence Safety, Item 616.0700.S.

A Description
This special provision describes furnishing and installing a plastic fence at locations shown on the plans and as hereinafter provided.

B Materials
Furnish notched conventional metal “T” or “U” shaped fence posts.

Furnish fence fabric meeting the following requirements.

Color:	International orange (UV stabilized)
Roll Height:	4 feet
Mesh Opening:	1 inch min to 3 inch max
Resin/Construction:	High density polyethylene mesh
Service Temperature:	-60° F to 200° (ASTM D648)
Tensile Yield:	Avg. 2000 lb per 4 ft. width (ASTM D638)
Ultimate Tensile Strength:	Avg. 3000 lb per 4 ft. width (ASTM D638)
Elongation at Break (%):	Greater than 100% (ASTM D638)
Chemical Resistance:	Inert to most chemicals and acids

C Construction
Drive posts into the ground 12 to 18 inches. Space posts at 7 feet.

Use a minimum of three wire ties to secure the fence at each post. Weave tension wire through the top row of strands to provide a top stringer that prevents sagging.

Overlap two rolls at a post and secure with wire ties.

D Measurement
The department will measure Fence Safety by the linear foot along the base of the fence, center-to-center of posts, 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
616.0700.S	Fence Safety	LF

Payment is full compensation for furnishing and installing fence and posts; maintaining the fence and posts in satisfactory condition; and for removing and disposing of fence and posts at project completion.
616-030 (20070510)

22. 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 Milwaukee County Sheriff's Department, the Wisconsin State Patrol, 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.

Utilize flaggers, signs, barricades, and drums as may be necessary to safeguard and direct traffic at all locations where construction operations may interfere with or restrict the smooth flow of traffic.

Use drums and barricades to direct vehicular and pedestrian traffic in the work zone and to protect and delineate hazards such as open excavations, abrupt drop-offs, and exposed manholes, inlets, and hydrants.

Yield to all through traffic at all locations. Equip all contractor's vehicles or equipment operating in the live traffic lanes with a hazard identification beam (flashing yellow signal light). Operate the flashing yellow beam only when merging or exiting live traffic lanes or when parked or operating on shoulders.

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

The parking and storage of construction vehicles, equipment and material must be approved by the engineer and shall be restricted to the minimum required and the minimum time necessary at the work sites to prosecute the work. At such location the material and equipment involved shall not constitute a hazard to the traveling public.

Do not disturb, remove or obliterate any traffic control signs, advisory signs, shoulder delineators or beam guard in place along the traveled roadways without the approval of the engineer.

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

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.

23. Temporary Pedestrian Surface Asphalt, Item 644.1410.S; Temporary Pedestrian Surface Plywood, Item 644.1420.S.

A Description

This special provision describes providing, maintaining, and removing temporary pedestrian surface.

B Materials

Furnish 1 1/4-inch dense graded aggregate conforming to standard spec 305.2. Furnish:

- Asphaltic surface conforming to standard spec 465.2.
- Pressure treated 2x4 framing lumber, pressure treated 3/4-inch plywood with skid resistant surface coating, and weather resistant deck screws 3-1/2-inch minimum for framing and 1-5/8-inch minimum for plywood.
- 1/4 inch minimum steel plate or commercially available prefabricated plates with skid resistant surface coating conforming to Americans with Disabilities Act Accessibility Guidelines. If placed in the roadway, must be able to handle a vehicle weight of 88,000 lbs.

C Construction

Place, compact, and level a dense graded aggregate foundation before placing the surface.

Provide a firm, stable, and slip-resistant surface layer with vertical joints no higher than 1/4 inch and horizontal joints no wider than 1/2 inch. Sheet materials up to 1 inch thick may be lapped if the edge is beveled at 45 degrees or flatter. Asphalt may also be used to ramp up to materials up to 1 inch thick. Construct conforming to the following:

- Asphalt surface a minimum of 2 inches thick compacted with compactors, tampers, or rollers.
- Framed plywood panels 4 feet wide with a skid resistant surface coating.
- Steel or prefabricated plate with a skid resistant surface coating.

Align parallel to the existing roadway grade or, if outside of a street or highway right-of-way, do not exceed 5 percent longitudinal slope. Provide cross slope of 1 to 2 percent unless the engineer approves a steeper cross slope in writing.

Maintain the surface with a 4-foot minimum clear width and the specified joint and slope requirements. Repair or reconstruct installations disturbed during construction operations. Remove and dispose of as specified in standard spec 203.3.4 when no longer required.

D Measurement

The department will measure temporary pedestrian surface by the square 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
644.1410.S	Temporary Pedestrian Surface Asphalt	SF
644.1420.S	Temporary Pedestrian Surface Plywood	SF

Payment is full compensation for providing, maintaining, and removing temporary pedestrian surface.

644-010 (20150630)

24. Temporary Curb Ramp, Item 644.1601.S.

A Description

This special provision describes providing, maintaining, and removing temporary curb ramps.

B Materials

Furnish materials as follows:

- Asphaltic surface conforming to standard spec 465.2.
- Engineer-approved ready mixed concrete or ancillary concrete conforming to standard spec 602.2 except no QMP is required.
- Commercially available prefabricated curb ramps conforming to Americans with Disabilities Act Accessibility Guidelines.

Furnish yellow detectable warning fields conforming to Americans with Disabilities Act Accessibility Guidelines. Use either an engineer-approved surface-applied type or cast iron from the department's approved products list.

C Construction

Provide and maintain temporary curb ramps, including detectable warning fields, throughout the project duration. Place and compact a dense graded aggregate foundation before placing the curb ramp, unless the curb ramp is to be placed on existing roadway surface.

Remove and dispose temporary curb ramps and associated detectable warning fields when no longer required.

D Measurement

The department will measure temporary curb ramps by each individual ramp, 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
644.1601.S	Temporary Curb Ramp	Each

Payment is full compensation for providing, maintaining, and removing temporary curb ramps.

644-020 (20150630)

25. Pavement Marking Grooved Wet Reflective Contrast Tape 4-Inch, Item 646.0841.S; 8-Inch, Item 646.0843.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 ± 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 ft^3/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 ft^3/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 ft^3/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
646.0843.S	Pavement Marking Grooved Wet Reflective Contrast Tape 8-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)

26. Pavement Marking Grooved Wet Reflective Tape 4-Inch, Item 646.0881.S; 8-Inch, Item 646.0883.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 ± 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 ft^3/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 ft^3/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 ft^3/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
646.0883.S	Pavement Marking Grooved Wet Reflective Tape 8-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)

27. Install Conduit Into Existing Item, Item 652.0700.S.

A Description
This special provision describes installing proposed conduit into an existing manhole or other structure.

B Materials
Use 4-Duct Conduit, Cement Encased, 4-Inch Rigid Nonmetallic Conduit DB-60 as shown in plans, as provided and paid for under other items in this contract. Furnish backfill material conforming to the requirements of pertinent provisions of the standard specifications.

C Construction
Expose the outside of the existing structure without disturbing existing conduits or cabling. Drill the appropriate sized hole in a concrete structure or saw and remove full sections of block or bricks from the existing structure for the entering of conduit at a location within the structure that will not disturb the existing cabling and will not hinder the installation of new cabling within the installed conduit. This work may include the removal of the existing abandoned conduit from the structure to allow for the installation of the new conduits as indicated on the plans. Fill void area between the drilled hole and conduit with an engineer-approved filling material to protect against conduit movement and entry of fill material into the structure. Tamp backfill into place.

D Measurement
The department will measure Install Conduit Into Existing Item by the unit, acceptably installed. Up to five conduits entering a structure per entry point into the existing structure will be considered a single unit. Conduits in excess of five, or conduits entering at significantly different entry points into the existing manhole, or junction box will constitute multiple units of payment.

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

ITEM NUMBER	DESCRIPTION	UNIT
652.0700.S	Install Conduit Into Existing Item	Each

Payment is full compensation for excavating; drilling holes, removing block, removing brick, removing abandoned conduit; furnishing and installing all materials, including bricks, coarse aggregate, sand, bedding, and backfill; for excavating and backfilling; and for furnishing and placing topsoil, fertilizer, seed, and mulch in disturbed areas; for properly disposing of surplus materials; and for making inspections.

28. 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.

29. Section 652 Electrical Conduit.

Replace standard spec 652. 5 (2) with the following:

(2) Payment for Conduit Rigid Metallic, Conduit Rigid Nonmetallic, Conduit Reinforced Thermosetting Resin, and Conduit Special bid items is full compensation for providing the conduit, conduit bodies, and fittings; for providing all conduit hangers, clips, attachments, and fittings used to support conduit on structures; for pull wires or ropes; for expansion fittings and caps; for making necessary connections into existing pull boxes; for excavating, bedding, and backfilling, including any sand, concrete, or other required materials; for disposing of surplus materials; and for making inspections.

Replace standard spec 652.5 (5) with the following:

(5) Payment for Conduit Loop Detector is full compensation for providing all materials, including conduit, compacted backfill, surface sealer if required, pull wire if required, condulets, conduit fittings, and for making necessary connections into existing pull boxes.

30. Meter Breaker Pedestal Service (CB1-STH 181 and CTH E), Item 656.0200.01.

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.

31. Meter Breaker Pedestal Service (Temporary STH 181 and CTH E EB Ramps), 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.

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

(4) Install the meter breaker pedestal first, so the electrical utility company can install the service lateral. If needed, 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.

32. Anchor Assemblies Light Poles on Structures, Item 657.6005.S.

A Description
This special provision describes furnishing and installing anchor bolt assemblies for light poles as shown on the plans, and as hereinafter provided.

B Materials
Furnish anchors of the size and spacing as given on the plans, and that conform to ASTM A449 or AASHTO M314 GR 55. The upper 8 inches of the bolts, nuts, and washers shall be hot-dipped galvanized according to ASTM A153, Class C. Provide enlarged threads on nuts for proper fit after galvanizing.

C Construction
Provide two nuts and two washers per anchor bolt, and install per light standard manufacturer's recommendations.

D Measurement
The department will measure Anchor Assemblies Light Poles on Structures as a unit for each individual anchor bolt assembly, 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
657.6005.S	Anchor Assemblies Light Poles on Structures	Each

Payment is full compensation for furnishing and installing the anchorages.
657-060 (20100709)

33. Intelligent Transportation Systems – General Requirements.

A Description

A.1 General

This contract includes furnishing and installing elements for an Intelligent Transportation System (ITS) in or along the existing roadway as shown on the plans.

Unusual aspects of this project include:

1. The project includes working on cables and equipment that are carrying data between roadside equipment and the department's Statewide Traffic Operations Center (STOC). Interruption of this service is not expected to perform this work. If an interruption is determined necessary, it must be done on a weekend, and must be done in a way that minimizes communication outages for the existing equipment. Notify the department's STOC at least 48 hours in advance of the planned interruption.
2. The department will furnish some of the equipment to be installed. Make a reasonable effort to discover defects in that equipment prior to installing it.

A.2 Surge Protection

Equip every ungrounded conductor wire entering or leaving any equipment cabinet with a surge protector. For purposes of this section, multiple cabinets on a single pole or foundation are considered a single cabinet.

B Materials

B.1 General

Only furnish equipment and component parts for this work that are new and have high quality workmanship. All controls, indicators, and connectors shall be clearly and permanently labeled in a manner approved by the engineer. All equipment of each type shall be identical.

All electrical equipment shall conform to the standards and requirements of the Wisconsin Electrical Code, the National Electrical Manufacturers Association (NEMA), National Electric Safety Council (NESC), Underwriter's Laboratory Inc. (UL) or the Electronic Industries Association (EIA), when applicable. All materials and workmanship shall conform to the requirements of the National Electrical Code (NEC), Rural Electrification Administration (REA), Standards of the American Society for Testing and Materials (ASTM), American Association of State Highway and Transportation Officials (AASHTO), requirements of the plans these special provisions, the standard specifications, and to any other codes, standards, or ordinances that may apply. All system wiring, conduit, grounding hardware and circuit breakers shall be in conformance with the National Electrical Code. Whenever reference is made to any of the standards mentioned, the reference shall be considered to mean the code, ordinance, or standard that is in effect at the time of the bid advertisement.

B.2 Outdoor Equipment

All conductive connectors, pins (except pins connected by soldering), and socket contacts shall be gold plated. Acrylic conformal coating shall protect each circuit board side that has conductive traces. Except for integrated circuits containing custom firmware, all components shall be soldered to the printed circuit board.

To prevent galvanic corrosion, all connections between dissimilar metals shall incorporate a means of keeping moisture out of the connection. Where the connection need not conduct electricity, interpose a non-absorbing, inert material or washer between the dissimilar metals. Use nonconductive liners and washers to insulate fasteners from dissimilar metals. Where the connection must conduct electricity, use a conductive sealant between the dissimilar metals. Alternatively, use an insulating gasket and a bond wire connecting the two metal parts.

B.3 Custom Equipment

Equipment that is not part of the manufacturer's standard product line, or that is made or modified specifically for this project, shall conform to the following requirements:

Where practical, electronics shall be modular plug-in assemblies to facilitate maintenance. Such assemblies shall be keyed to prevent incorrect insertion of modules into sockets.

All components shall be available from multiple manufacturers as part of the manufacturers' standard product lines. All must be clearly labeled with the value, part number, tolerance, or other information sufficient to enable a technician to order an exact replacement part.

Lamps used for indicator purposes shall be light-emitting diodes.

The printed circuit boards shall be composed of "two-ounce" copper on 1/16-inch thick fiberglass epoxy or equivalent type construction. Holes that carry electrical connections from one side of the boards to the other shall be completely plated through. Multilayer printed circuit boards shall not be used. The name or reference number used for the board in the drawings and maintenance manuals supplied to the department shall be permanently affixed to each board.

All components shall be mounted so that the identifying markings are visible without moving or removing any part, if practical.

B.4 Environmental Conditions

Equipment shall continue to operate as specified under the following ranges of environmental conditions, except as noted in the specifications for individual pieces of equipment.

1. **Vibration and Shock:** Vehicle speed and classification sensors and any other equipment mounted atop poles or on structures shall not be impaired by the continuous vibration caused by winds (up to 90 mph with a 30 percent gust factor) and traffic.

2. **Duty Cycle:** Continuous
3. **Electromagnetic Radiation:** The equipment shall not be impaired by ambient electrical or magnetic fields, such as those caused by power lines, transformers, and motors. The equipment shall not radiate signals that adversely affect other equipment.
4. **Electrical Power:**
    a. **Operating power:** The equipment shall operate on 120-volts, 60-Hz, single-phase unless otherwise specified. It shall conform to its specified performance requirements when the input voltage varies from 89 to 135 volts and the frequency varies +3 Hz.
    b. **High frequency interference:** The equipment operation shall be unaffected by power supply voltage spikes of up to 150 volts in amplitude and 10 microseconds duration.
    c. **Line voltage transients:** The equipment operation shall be unaffected by voltage transients of plus or minus 20 percent of nominal line voltage for a maximum duration of 50 milliseconds. Equipment in the field shall meet the power service transient requirements of NEMA Standard TS-2 when connected to the surge protectors in the cabinets.
5. **Temperature and Humidity:**
    a. **Field equipment:** Equipment in the field shall meet the temperature and humidity requirements of NEMA Standard TS-2. Liquid crystal displays shall be undamaged by temperatures as high as 165 degrees F, and shall produce a usable display at temperatures up to 120 degrees F.
    b. **Equipment in Controlled Environments** shall operate normally at any combination of temperatures between 50 degrees F and 100 degrees F, and humidity's between 5 percent and 90 percent, non-condensing, and with a temperature gradient of 9 degrees F per hour.

B.5 Patch Cables and Wiring

All cables and wiring between devices installed in a single cabinet, or in separate cabinets sharing a single concrete base, will be considered incidental to the installation of the devices and no separate payment will be made for them. It is anticipated that this will include fiber optic patch cables between termination panels and Ethernet switches, 10 / 100 MBPS Ethernet cables, RS-232 cables between individual devices and terminal servers, and power cables between individual devices and power sources within the cabinets.

B.6 Surge Protection

Low-voltage signal pairs, including twisted pair communication cable(s) entering each cabinet shall be protected by two-stage, plug-in surge protectors and shall be installed on both ends of camera control cables. The protectors shall meet or exceed the following minimum requirements:

1. The protectors shall suppress a peak surge current of up to 10k amps.
2. The protectors shall have a response time less than one nanosecond.
3. The protector shall clamp the voltage between the two wires at a voltage that is no more than twice the peak signal voltage, and clamp the voltage between each wire and ground at 50 volts.

4. The first stage of protection shall be a three-element gas discharge tube, and the second stage shall consist of silicon clamping devices.
5. The protector shall also contain a resettable fuse (PTC) to protect against excessive current.
6. There shall be no more than two pairs per protector.
7. It shall be possible to replace the protector without using tools.

Cables carrying power to curve signs shall be protected at the cabinet by grounded metal oxide varistors of appropriate voltages. The varistors must be at least 0.8 inch in diameter.

C Construction

C.1 Thread Protection

Provide rust, corrosion, and anti-seize protection at all thread assemblies of metallic parts by coating (non-spray) the mating surfaces with an approved compound. Failure to use an approved compound will result in no payment for the items to which coating was to have been applied.

C.2 Cable Installation

When installing new cables into conduits containing existing cables, remove the existing cables and reinstall the existing cables simultaneously with the new cables. Take every precaution necessary to protect the existing cables. In the event of avoidable damage to the existing cables, replace all damaged cables, in-kind, at no additional expense to the department. When cables are pulled into conduit, use a cable pulling lubricant approved by the cable manufacturer. Submit documentation supporting manufacturer approval of the lubricant to the engineer.

C.3 Wiring

Every conductor, except a conductor contained entirely within a single piece of equipment, must terminate either in a connector or on a terminal block. Provide and install the connectors and terminal blocks where needed, without separate payment. Use approved splice kits instead of connectors and terminal blocks for underground power cable splices.

Permanently label and key connectors to preclude improper connection. Obtain prior engineer approval for the labeling method(s) prior to use.

Terminal blocks must be affixed to panels that permanently identify the block and what wire connects to each terminal. This may be accomplished by silk screening or by installing a laminated printed card under the terminal block, with the labels on portions of the card that extend beyond the block. Installation of terminal blocks by drilling holes in the exterior wall of the cabinet is not acceptable.

Use barriers to protect personnel from accidental contact with all dangerous voltages.

Do not install conductors carrying AC power in the same wiring harness as conductors carrying control or communication signals.

Arrange wiring, including fiber optic pigtails, so that any removable assembly can be removed without disturbing wiring that is not associated with the assembly being removed.

Communication and control cables may not be spliced underground, except where indicated on the plans.

Cables in the Statewide Traffic Operations Center or in communication hubs, which are not contained within a single cabinet, shall have at least 10 feet of slack.

C.4 System Operations
If the contractor's operations unexpectedly interrupt Intelligent Transportation Systems (ITS) service, notify the engineer immediately and restore service within 24 hours. Repair all damaged facilities to the condition existing before the interruption. If service is not restored within 24 hours, the department may restore service to any operating device and deduct restoration costs from payments due the contractor.

C.5 Surge Protection
Arrange the equipment and cabinet wiring to minimize the distance between each conductor's point of entry and its protector. Locate the protector as far as possible from electronic equipment. Ensure that all wiring between the surge protectors and the point of entry is free from sharp bends.

D Measurement
No separate measurement will be made for the work described in this article.

E Payment
No separate payment will be made for the work described in this article. All work described in this article shall be included under the ITS items in the contract.
670-010 (20100709)

34. Section 671 Intelligent Transportation Systems – Conduit.

Replace standard spec 671.5 (2) with the following:

(2) Payment for the Conduit HDPE and Conduit HDPE Directional Bore bid items is full compensation for providing, hauling, and installing all materials including conduit, fittings, couplers, and bends, and for making necessary connections into existing pull boxes and vaults. Payment includes full compensation for pull wires or ropes; for expansion fittings and caps; for excavating, bedding, backfilling, and restoration of ground to original condition including sand, concrete, or other required materials; for disposing of surplus materials; and for making inspections.

35. Traffic Signal Face, Item 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, when directed by WisDOT personnel. Connect the neutral conductors to the terminal strip. Be certain to twist wires prior to installing the wire nuts. All wire nuts must be installed facing up to prevent the entrance of water.

36. Pedestrian Signal Face 16-Inch, Item 658.0416.

Add the following to standard spec 658.2.3.1(1):

The contractor shall furnish 16 inch LED ready pedestrian signal housing, drilled for top/bottom pipe mount with the ability to rotate 270 degrees on poly mounting bracket. Black polycarbonate door with integral "Z" style protectors, lens and gasket mounted to door with four 1-1/2 inch stainless steel tabs.

Add the following to standard spec 658.2.3.1(2):

The contractor shall anchor a 5-position, 20a terminal block in the pedestrian signal face to the housing with threaded screws.

37. LED Modules Pedestrian Countdown Timer 16-Inch, Item 658.0635.

Add the following to standard spec 658.2.3.2(1):

The contractor shall furnish 16-inch, incandescent look, full symbol, and dual pedestrian, countdown signal module with Portland Orange hand, Lunar White man and Portland Orange countdown symbols, made of an approved polycarbonate resin.

38. Pedestrian Push Buttons, Item 658.0500.

Add the following to standard spec 658.2.5:

The contractor shall furnish vandal resistant, pressure activated, pedestrian push buttons, with die cast body type, in unfinished aluminum or yellow. Button constructed shall be constructed of stainless steel, with a Piezo driven solid state switch, momentary LED display and beeper that sounds simultaneously with button push.

The contractor shall furnish low profile, unfinished cast aluminum, vandal resistant, and flush mounting pole mount.

The contractor shall place a Size 1, Type H reflective (R10-3EL, R, D) sign sticker (per state sign plate), message series – B, directly above each push button. Include a directional arrow or arrows on the sign as the plans show.

39. Temporary Traffic Signals for Intersections, STH 181 and CTH E WB Ramps, Item 661.0200.01.

Replace standard spec 661.2.1 (3) with the following:

Use existing underground electric service and meter breaker pedestal for the operation of the Temporary Traffic Signal. The department will pay for all energy costs associated with the operation of the Temporary Traffic Signal.

Whenever a generator is used, coordinate the installation and use of temporary stop signs during switch over of the signal service. Placement of signs shall be according to the MUTCD, Signing Guidelines Manual and Work Zone Safety Guide.

40. Temporary Traffic Signals for Intersections, STH 181 and CTH E EB Ramps, Item 661.0200.02.

Replace standard spec 661.2.1 (3) with the following:

Use new temporary electric service and meter breaker pedestal for the operation of the Temporary Traffic Signal. The department will pay for all energy costs associated with the operation of the Temporary Traffic Signal.

Whenever a generator is used, coordinate the installation and use of temporary stop signs during switch over of the signal service. Placement of signs shall be according to the MUTCD, Signing Guidelines Manual and Work Zone Safety Guide.

41. Pavement Marking Arrows Grooved Preformed Thermoplastic Type 2, Item SPV.0060.01; Arrows Type 3, Item SPV.0060.02; Words, Item SPV.0060.03; Stop Line 18-Inch, Item SPV.0090.06; Crosswalk 6-Inch, Item SPV.0090.07.

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 preformed thermoplastic pavement marking and sealant material, if required, from the department's approved products list.

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 ±10 mils deeper than the thermoplastic thickness, 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 a box around the special marking up to 4 inches from the perimeter of the special marking.

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 ft^3/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 10 or more days after paving. Use a high-pressure air blower with at least 185 ft^3/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.

C.5.2 Asphalt
Use a high-pressure air blower with at least 185 ft^3/min air flow and 90 psi air pressure to clean the groove.

C.6 Preformed Thermoplastic Application
Preheat the surface if necessary based on manufacturer's recommendation.

Application of the preformed thermoplastic in the groove without sealant will be as follows:

- May 1 to September 30, both dates inclusive – the Southeast Region and the ozone non-attainment or maintenance Northeast Region counties of Sheboygan, Manitowoc, Kewaunee, and Door.
- June 1 to August 31 – the Southwest Region, and the Northeast, North Central, and Northwest Regions except for the ozone non-attainment or maintenance Northeast Region counties of Sheboygan, Manitowoc, Kewaunee, and Door.

Application of the preformed thermoplastic in the groove with sealant materials will be as follows:

- October 1 to April 30, both dates inclusive – the Southeast Region and the ozone non-attainment or maintenance Northeast Region counties of Sheboygan, Manitowoc, Kewaunee, and Door.
- September 1 to May 31, both dates inclusive – the Southwest Region and the Northeast, North Central, and Northwest Regions, except for the ozone non-attainment or maintenance Northeast Region counties of Sheboygan, Manitowoc, Kewaunee, and Door.

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.0060.01	Pavement Marking Arrows Grooved Preformed Thermoplastic Type 2	Each
SPV.0060.02	Pavement Marking Arrows Grooved Preformed Thermoplastic Type 3	Each
SPV.0060.03	Pavement Marking Words Grooved Preformed Thermoplastic	Each

SPV.0090.06	Pavement Marking Grooved Preformed Thermoplastic Stop Line 18-Inch	LF
SPV.0090.07	Pavement Marking Grooved Preformed Thermoplastic Crosswalk 6-Inch	LF

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

42. Adjusting Sanitary Sewer Manholes, Item SPV.0060.04.

A Description
This special provision describes adjusting the existing chimney of the block, precast, or brick round manholes; furnishing, installing and removing protection of the manhole during adjustment operations. Perform work according to the standard specifications, the provisions of the article Adjusting Manhole Covers, as shown on the plans, and as hereinafter specified.

B Materials
Furnish and install materials that conform to the requirements of standard spec 519. Salvage and reinstall existing covers on the manholes.

C Construction
This work shall be according to the pertinent provisions of standard spec 611, as shown on the plans, and as hereinafter provided.

Adjust manhole covers located in pavement areas in two separate operations. Initially, remove designated manhole covers along with sufficient pavement to permit installation of temporary cover plate over the opening. Fill the excavated area with asphaltic pavement mixture, which shall remain in place until contract milling and paving operations permit setting the manhole frames to grade. During the second phase, remove the asphaltic pavement mixture surrounding the manhole plus the temporary cover plate, and set the manhole cover to final grade. The department will measure and pay for the items of asphaltic pavement mixture, temporary cover plate, milling, and paving separately.

Revise standard spec 611.3.7 by deleting the last paragraph.

Set the manhole frames so that they comply with the surface requirements of standard spec 450.3.2.9. At the completion of the paving, a 6-foot straightedge shall be placed over the centerline of each manhole frame parallel to the direction of traffic. A measurement shall be made at each side of the frame. The two measurements shall be averaged. If this average is greater than 5/8 inches, reset the manhole frame to the correct plane and elevation. If this average is 5/8 inches or less but greater than 3/8 inches, the manhole frame shall be allowed to remain in place but shall be paid for at 50 percent of the contract unit price.

If the manhole frame is higher than the adjacent pavement, the two measurements shall be made at each end of the straightedge. These two measurements shall be averaged. The same criteria for acceptance and payment as above, shall apply.

D Measurement
The department will measure Adjusting Sanitary Sewer Manholes as 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.0060.04	Adjusting Sanitary Sewer Manholes	Each

Payment is full compensation for furnishing all required materials, exclusive of frames, grates, or lids available and designated for adjusting; and for removing, reinstalling and adjusting the covers. Covers to be adjusted and which are rendered unfit for use by the contractor through the contractor's operations shall be replaced by the contractor in kind at the contractor's own cost and expense.

Upon completion of the contract, the city will inspect all sanitary sewer facilities to ensure the manholes 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 city, the cost will be charged to the contractor.

43. Internal Sanitary Manhole Seal, Item SPV.0060.05.

A Description
This special provision describes furnishing and installing internal sanitary manhole seals.

B Materials
Use a Cretex or equal internal manhole seal.

C Construction
Field-measure the inside diameter of the manhole frame and the manhole chimney, and determine as to whether the inside face of the frame is vertical or tapered in order to obtain the proper size and shape rubber seal.

Install internal sanitary manhole seals no sooner than 24 hours following chimney back plastering.

The surfaces against which the sleeve is to be compressed shall be circular, clean, reasonably smooth and free of any loose materials and excessive voids. Repair all flaws in these surfaces with the approved low-shrink mortar or grind the surfaces smooth. Apply a bead of butyl rubber caulk conforming to AASHTO M-198 Type B to the lower sealing surface of sleeve.

Install the seal according to the manufacturer's instructions. (Refer to the plan data for configuration of chimney seal.)

D Measurement
The department will measure Internal Sanitary Manhole Seal as each individual unit, acceptably furnished and acceptably installed at locations indicated on the plans.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.05	Internal Sanitary Manhole Seal	Each

Payment is full compensation for furnishing and installing internal sanitary manhole seals.

44. Adjusting Water Boxes, Item SPV.0060.06.

A Description
This special provision describes adjusting, protecting, and maintaining accessibility, for the duration of the paving project, to all city water service boxes, water gate valve boxes and water manhole frames and lids located within the project limits.

B Materials
All material for the adjustment of these facilities must meet City of Milwaukee specifications and will be provided by the City of Milwaukee by contacting Jesse Hernandez, Milwaukee Water Works, at (414) 708-2670 (or Dave Goldapp, Milwaukee Water Works at (414) 286-6301). If there is contractor damage, the materials must still be provided by the City of Milwaukee, however, in this case, the contractor will be charged for all materials. Materials furnished by the City of Milwaukee and not used on the project shall be delivered back to DPW Field Headquarters – Infrastructure, Operations, Water Works at 3850 N. 35th St. Materials being returned must be accompanied with a "surplus material" form completed by the Public Works Inspector assigned to the project.

C Construction
All water service boxes, water gate valve boxes and water manhole frames and lids within the project limits shall be adjusted to proposed elevations by the contractor using materials meeting city specifications.

The city will locate, mark, inspect and repair all water service boxes, water gate valve boxes and water manhole frames and lids within the limits of the project prior to commencement of work on the project.

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

Upon completion of the contract, the city will inspect all water facilities to ensure the water boxes and manholes 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 city, the cost will be charged to the contractor.

D Measurement
The department will measure Adjusting Water Boxes as 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.0060.06	Adjusting Water Boxes	Each

Payment is full compensation for furnishing all excavation, backfilling, disposal of surplus materials, water box or manhole clean-out, and restoration of the work site.

45. Landmark Reference Monuments Special, Item SPV.0060.07.

A Description
Coordinate with Southeast Wisconsin Regional Planning Commission (SEWRPC) and provide a backfilled hole for placement of a section corner monument.

B Materials
SEWRPC will provide a pre-cast monument for the section corners.

Furnish base aggregate dense materials that conform to standard spec 305.

C Construction
SEWRPC will perpetuate existing section corner landmarks. The engineer will contact SEWRPC at 262-547-6721 one week before starting construction operations to allow for section corner perpetuation.

SEWRPC will install a pre-cast monument for the section corners. The engineer will contact SEWRPC at (262) 547-6721 one week prior to paving operations to coordinate installation of the monument. The contractor shall provide a 2-foot diameter by 3-foot deep hole backfilled with base aggregate dense in the location of the section corner location.

D Measurement
The department will measure Landmark Reference 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	Landmark Reference Monuments Special	Each

Payment is full compensation for furnishing all excavating; for placing and compacting backfill material; for disposing of surplus materials; and for furnishing all coordination with SEWRPC.
621-SER1 (20080714)

46. Adjusting TES Manhole Covers, Item SPV.0060.08.

A Description

This special provision describes adjusting the existing chimney of the block, precast, or brick round manholes; furnishing, installing and removing protection of the cables in the manhole during adjustment operations. Perform work according to the standard specifications, the provisions of the article Adjusting Manhole Covers, as shown on the plans, and as hereinafter specified.

B Materials

Furnish and install materials that conform to the requirements of standard spec 519. Salvage and reinstall existing covers on the manholes. The city will supply covers designated for replacement. Contractor shall contact Mr. Ricardo Lopez, inventory clerk at (414) 286-6123 prior to obtaining the frames and lids from the Department of Public Works Field Headquarters at 3850 North 35th Street. Contractor must have the "Castings Requisitions Form" which shall be supplied by the city at the preconstruction meeting to obtain the covers.

C Construction

Report any pre-existing problems to Ms. Karen Rogney of City of Milwaukee Conduit Section (414) 286-3243 three working days in advance of any construction on manholes.

Before removing the pavement around the manhole, the contractor shall place a ¾-inch plywood cover or equal over existing active street lighting, traffic control, and communication or private vendor electrical cables. This cover shall be properly supported to/at the manhole floor.

Break out and remove pavement around manhole. Remove existing covers and store and secure them properly. Any damaged, lost, or stolen covers shall be the responsibility of the contractor and shall be replaced at contractor's expense.

Remove existing chimney to surface of concrete roof slab. If manhole does not have an existing concrete roof slab, remove sufficient chimney as to provide adequate corbel to fit new larger cast iron frame and cover.

Adjust manhole cover to proposed grade using bricks or concrete rings as necessary. Remove wedges/shims. Fill voids with grout. Do not back plaster inside walls.

After completion of paving, remove all construction debris from manhole. Remove the temporary 3/4-inch plywood cover or equal which is over the existing electrical cables in the manhole as mentioned above.

Notify Ms. Karen Rogney three working days in advance of completion of each manhole adjustment, for inspection and acceptance of work performed. The contractor will receive no payment until the above work is approved by underground operations.

D Measurement
The department will measure Adjusting TES Manhole Covers 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.0060.08	Adjusting TES Manhole Covers	Each

Payment is full compensation for furnishing all required materials, exclusive of frames, grates, or lids available and designated for adjusting; and for removing, reinstalling and adjusting the covers; Covers to be adjusted and which are rendered unfit for use by the contractor through the contractor's operations will be replaced by the contractor in kind at the contractor's own cost and expense.

47. 4' Diameter Manhole Type TES, Item SPV.0060.09.

A Description
The work under this item consists of a 4'-0" round manhole for the City of Milwaukee Underground Conduit Section at locations shown in the plans, according to standard spec 301, 611 and 501, and as hereinafter provided.

B Materials
Concrete and steel reinforcement shall conform to ASTM specification: C478 (latest edition), except that the single cage circumferential reinforcement in all vertical walls shall consist of lines of #6 steel wire spaced 3" horizontally and lines of #10 steel wire spaced 8" vertically located in the center of the wall.

Two lifting inserts for 1-1/2" diameter lifting eyes shall be cast in the wall of the base and all other riser sections except the top cap section.

Up to four 7/8" diameter galvanized steel 1-11/16" pulling-in eyes shall be cast in the wall of the base section directly across from each duct entrance.

Four 5/8" diameter plastic threaded cable rack bolt inserts shall be cast in the wall of the riser section.

A continuous circumferential Butyl Rubber gasket shall be supplied, to be laid on the wall joint of the base and riser section when manhole is being assembled at job site.

The number of pulling-in eyes and/or cable rack bolt inserts may vary.

Additionally, the size, location, shape and number of duct entrances and/or knock-out area may vary. Unit price of manhole shall not vary for number of openings, pulling-in eyes and/or rack bolt inserts.

The city will supply a frame and lid for the manhole. Contractor shall contact Mr. Ricardo Lopez, Inventory Clerk at (414) 286-6123 prior to obtaining the frame and lid from the DPW Headquarters at 3850 N. 35th St. Contractor must have the "Casting Requisition Form" which shall be supplied by the city at the Preconstruction Meeting.

For any questions on materials, contact Ms. Karen Rogney at (414) 286-3243.

C Construction
4' Diameter Manholes Type TES shall be installed according to standard spec 611.3.

D Measurement
The department will measure 4' Diameter Manhole Type TES by 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	4-FT Diameter Manhole Type TES	Each

Payment is full compensation for furnishing all excavation work and disposal of material; for, furnishing and installing all materials, including bricks, and coarse aggregate, bedding and backfilling, concrete forms, concrete placement, appurtenances, and backfilling.

48. Sawing Curb Head, Item SPV.0090.01.

A Description
This special provision describes sawing curb head as shown on the plans and as hereinafter provided.

B (Vacant)

C Construction
Saw curb head according to the applicable portions of standard spec 690. Remove leftover concrete curb head material debris according to the applicable portions of standard spec 204.

D Measurement
The department will measure Sawing Curb Head by the linear foot, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.01	Sawing Curb Head	LF

Payment is full compensation for providing all sawing and sludge removal; and for disposal of leftover concrete curb head material debris.

49. 4-Duct Conduit, Cement Encased, 4-Inch Rigid Nonmetallic Conduit DB-60, Item SPV.0090.02.

A Description
This work consists of furnishing and installing cement encased multiple duct conduit packages below grade as shown on the plans and as hereinafter described.

B Materials
1. Conduit. The contractor shall furnish DB-60 polyvinyl chloride (PVC) conduit. Conduit will be accepted on the basis of a Manufacturer's Certificate of Compliance and WISDOT field inspection upon delivery to a project.

PVC conduit and fittings shall conform to the requirements of Standard Specifications for Smooth-Wall Poly (Vinyl Chloride) (PVC) Conduit and Fittings for Underground Installation, ASTM Designation: F512 (latest edition).

2. Conduit Spacers. The contractor shall furnish and install nonmetallic Snap-Loc 4 x 1 base spacer (part number S288NFN) and intermediate spacer (part number S289NFN) manufactured by Carlon or engineer (City of Milwaukee) approved equal.

3. Conduit Bed. The contractor shall furnish and install a minimum 2" conduit bed of stone chips or crushed stone screenings conforming to the following:

3/8 Inch Crushed Stone Chips

Sieve Sizes	% Passing by Weight
½"	100
3/8"	90-100
No. 8	0-15
No. 30	0-3

Crushed Stone Screenings

Sieve Sizes	% Passing by Weight
½”	100
No. 4	75-100
No. 100	10-25

4. Concrete. The type of concrete mix to be used to encase the ducts shall be:

Type I Cement	280 lbs
Fly Ash	100 lbs
Sharp Torpedo Sand	3100 lbs
Water	35 gals
Chryso Air 260	2.0 ozs
Chryso Plast 209	7.0 ozs
Air	5%

Once mixed, the materials shall have an approximate 3 inch slump.

5. Slurry Backfill. Aggregate slurry backfill consists of No. 1 concrete aggregate Class ‘C’ concrete mix with the cement deleted.

Fly Ash (Class C)	75 lbs.
Concrete Sand (Damp)	1830 lbs.
No. 1 Concrete Aggregate	1830 lbs.

Mix the materials with water to inundate the aggregate sufficiently to provide an approximate 3 inch slump. Deposit the mix in the trench directly from a concrete transit mix truck.

6. Pull Rope - Pull rope specifications shall be:

- Flat construction (7/16” to 5/8” wide)
- 100% woven aramid fiber (may include tracer wire)
- 1500 lbs. Minimum pull strength prelubricated
- sequential footage markings for location

For any questions on materials, contact Ms. Karen Rogney at (414) 286-3243.

C Construction Method

Notify the City of Milwaukee, Anthony Kotecki, Civil Engineer III - City of Milwaukee Construction Utility Coordinator, (414) 286-2433 office, (414) 708-3886 mobile; one week prior to beginning work for inspection purposes.

1. Excavation. The excavation shall have the minimum or maximum dimensions shown on the plans and as follows:

No. of Ducts Wide	Minimum	Maximum
2	14 1/8”	16 5/8”
3	19 3/4”	22 1/4”
4	25 3/8”	27 7/8”
5	31”	33 1/2”
6	36 5/8”	39 1/8”
7	42 1/4”	44 3/4”
8	47 7/8”	50 3/8”

These minimum and maximum trench widths apply to standard 4 inch PVC electrical duct only. When required, the excavation may be widened for the handling and placing of materials.

Open-cut trenches shall be sheathed and braced as required by code and as necessary to maintain safety. The cost of furnishing, placing and removing of sheathing and bracing shall be included in the unit bid for the work.

The dimensions of the excavation will be governed by the number, configuration and the grade (cover) to which the conduit is to be installed as shown on the plan. The walls of the excavation shall be clean and true.

Previous to excavating trenches, the contractor shall expose the existing manhole and conduit lines. The object of this is to permit adjustments in line and grade to avoid special construction methods. Protect the exposed manhole and conduit from damage.

Lay the conduit at a depth so that sufficient protection from damage is provided. Allowable covers shall be as follows:

The standard cover for mainline conduit is 39 inches and the minimum cover acceptable shall be 28 inches.

The standard cover shall be maintained wherever possible and any deviation less than the minimum may be allowed only with specific approval of the engineer.

Grade the trench so that it will have a minimum pitch of 3 inches per 100 feet. When an obstruction is encountered in the trench and it is necessary to excavate a deeper trench than would otherwise be required, in order to obtain drainage, refer the matter to the Inspector to determine whether the extra excavation should be made.

In grading a trench for mainline conduit, there are three general practices for direction of pitch.

(a) When grading a trench in a street with a level grade, the high point of the trench bottom should ordinarily be centered between manholes and pitched downward equally toward each manhole.

(b) Where the street slopes in one direction, locate the high point of the trench bottom approximately 30 feet from the end wall of the higher manhole and grade toward both manholes.

(c) Where a steep grade is encountered, grade the trench at the minimum pitch from the end wall of the higher manhole to a point 20 feet plus or minus toward the lower manhole. From this point, follow the street grade at the standard cover to a point 20 feet plus or minimum away from the end wall of the lower manhole. From this point, the remainder of the section shall be laid at the normal pitch.

After the rough excavation is completed, the bottom of the trench shall be prepared to receive the conduit. The duct bed shall be brought to the final grade and graded uniformly from the high point to the low or drainage points. Stone chips or crushed stone screenings shall be used for grading the trench. The duct bed shall be a minimum of 2" in depth.

2. Placing of Duct. Placing of the duct is to proceed as soon as the duct bed has been completed. Inspect all ducts before placing to see that the bores are clean and free from mud, sand, etc. Only ducts with a smooth bore, free from burrs, rough projections etc. shall be used. Smooth off by rasping or scraping any burrs or other rough areas found in the duct, so that they do not damage cable.,

Place the duct on base spacers with the ends staggered so no two couplings are adjacent. This may be accomplished by the use of the short lengths in stock or cutting back full length sections to the desired lengths. If cut pieces are used, place the cut end at the manhole. The base spacers shall be located within 2 feet of the end of each duct and one base spacer located in the middle of the duct.

Use full length pieces for the balance of the conduit line.

Formations of two ducts or more in height are to be carried forward in full formation, that is, as each tier of twenty foot lengths is laid, the next higher tier of ducts shall then be placed on the intermediate spacers. Place these intermediate spacers on top of the base spacers located within two feet from each duct end and one in the middle of each duct. Place the intermediate spacers and ducts for the remaining tiers. Glue each length into the adjoining coupling. A twist and push on the duct being placed will suffice for a water tight joint. Exercise caution in the driving operation, so that neither the coupling nor the duct are split or damaged in any way. After the full formation has been completed, place wood trench and duct bracing on the ducts to prevent shifting or floating while the concrete envelope is being placed and during driving operation.

This procedure shall be followed with succeeding lengths, providing spacers at the proper intervals, until sufficient trench footage of completed formation has been placed and is ready to receive concrete encasement.

The terminating point for mainline conduit will be the inside manhole wall. Install a standard end bell fitting flush with the wall on all duct access points.

Install a #10 copper tracer wire along and above the centerline of the duct for encasement in the concrete. The wire shall be 4 feet longer than the run of conduit and be at least 2 feet long at each access point.

Install a pull rope in each run of conduit, as laid. The rope shall be 4 feet longer than the run of conduit and shall be doubled back at least 2 feet at each raceway access point. Anchor the pull rope at each access point in a manner acceptable to the engineer.

3. Concreting. After sufficient conduit has been laid and the trench and duct have been inspected, begin concreting. The minimum concrete encasement of the ducts shall be 3 inches on the top, 2 inches on the sides, and 3 inches on the bottom. After placing, the concrete shall be puddled with a splicing bar or similar tool so that complete duct encasement is accomplished. Remove any wood braces used to keep the conduit from floating before the concrete sets completely and the resultant encasement voids filled with concrete.

Allow concrete encasement to set for a minimum of 6 hours before backfilling.

4. Slurry Backfill. Commence backfilling of the conduit after the duct has been inspected, approved and has had sufficient time to set to withstand the load.

Aggregate slurry backfill, as specified, shall be used to backfill all concrete encased conduit. Backfill the trench to the proposed or existing subgrade. Deposit the mix into the trench directly from a concrete transit mix truck.

D Measurement

The department will measure 4-Duct Conduit, Cement Encased, 4-Inch Rigid Nonmetallic Conduit DB-60, furnished and installed at the locations on the plans by the linear foot, acceptably installed. The measured quantity will equal the linear feet of encased duct, based on the distance along the centerline of duct between ends of conduit. City of Milwaukee shall have final acceptance.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.02	4-Duct Conduit, Cement Encased, 4-Inch Rigid Nonmetallic Conduit DB-60	LF

Payment is full compensation for providing the conduit, conduit bodies, conduit fittings, conduit spacers, end caps and trace wire; for excavating, bedding, encasement and backfilling including any concrete, stone, aggregate slurry, bracing, or other related materials; for disposing of surplus materials; and for making inspections, for installing the conduit.

50. Removing Existing Timber Piling, Item SPV.0090.03.

A Description

This special provision describes removing existing timber piling and includes removing, drilling, or coring through existing timber piles in conflict with proposed new piling for pier at Structure B-40-766. The work also includes backfilling the void left after removal with structure backfill. The purpose of this work is to clear the location so the proposed pile may be driven and installed without interference from an existing timber pile.

B (Vacant)

C Construction

Remove any existing timber piling that is in conflict with proposed piling locations. An existing timber pile is in conflict with a proposed pile if the clear space between piles is less than 1'-3". One of the following methods of removal shall be used:

Direct Pull: Wrap piling with a choker cable, chain, or other device attached to a crane. Pull the piling vertically, removing the piling from the soil.

Vibratory Excavation: Attach a vibratory hammer to a crane and to the existing piling. Vibrate the piling loose. Pull the piling vertically and remove the piling from the soil.

Coring: Core through existing timber piles to an elevation that will permit the installation of the proposed pile without interference. Unless directed otherwise, make the diameter of the core hole only as large as required to eliminate the pile conflict.

Contractor Proposed: The contractor may propose, in writing, an alternate method of pile removal.

When an existing pile is found to be in conflict with the proposed piling, the contractor shall notify the engineer, and receive approval on the selected removal method prior to beginning any work to remove the timber piling.

Fill any void remaining after pile removal with structure backfill the same day the pile is removed, or as approved by the engineer.

D Measurement

The department will measure Removing Existing Timber Piling in length by the linear foot, acceptably completed. Measurement will be made along the vertical length of the timber piling removed regardless of the method used. If the coring method is used, the contractor and engineer will agree to a cored depth.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.03	Removing Existing Timber Piling	LF

Payment is full compensation for removing existing timber piling; for providing and placing necessary structure backfill material; and for disposing of all material excavated.

51. Railing Tubular Steel Galvanized Pedestrian R-40-604, Item SPV.0090.04; Railing Tubular Steel Galvanized Pedestrian R-40-605, Item SPV.0090.05.

A Description

This special provision describes fabricating, galvanizing, and installing railing according to standard spec 506, 513 and 517 and the plan details, as directed by the engineer, and as hereinafter provided.

B Materials

All materials for railing shall be new stock, free from defects impairing strength, durability and appearance. Galvanize railing assemblies.

B.1 Coating System

B1.1 Galvanizing

Fabricate railings to meet the requirements of ASTM A385. After fabrication, blast clean steel railing assemblies per SSPC-SP6 and galvanize according to ASTM A123. Drill vent holes in members as required to facilitate galvanizing and drainage. Show location and size of vent holes on the shop drawings. Remove all burrs at component edges, corners and at holes and chamfer sharp edges before galvanizing. Condition any thermal cut edges before blast cleaning by shallow grinding or other cleaning to remove any hardened surface layer. Remove all evident steel defects exposed according to AASHTO M 160 prior to blast cleaning. Lumps, projections, globules, or heavy deposits of galvanizing, which will provide surface conditions that when coated will produce unacceptable aesthetic and/or visual qualities, will not be permitted. Water quenching and chromate or other passivating treatments will not be permitted.

B.2 Shop Drawings

Submit shop drawings showing the details of railing construction. Show the railing height post spacing, rail location, weld sizes and locations and all dimensions necessary for the construction of the railing. Show location of shop rail splices, field erection joints and expansion joints. State the size and material type used for all components. Also show the size and location of any vent or drainage holes provided.

C Construction

C.1 Delivery, Storage and Handling

Deliver material to the site in an undamaged condition. Upon receipt at the job site, thoroughly inspect all materials to ensure that no damage occurred during shipping or handling and conditions of materials is in conformance with these specifications. Handle galvanized railing according to standard spec 517. If galvanizing coating is damaged, repair or replace railing assemblies to the approval of the engineer at no additional cost to the

owner. Carefully store the material off the ground to ensure proper ventilation and drainage. Exercise care so as not to damage the galvanized surface during railing installation. No field welding, field cutting or drilling will be permitted without the approval of the engineer.

C.2 Touch-up and Repair
For minor damage caused by shipping, handling or installation to galvanized surfaces, touch-up the surface with cold-galvanized organic zinc paint as manufacturer recommends. If damage is excessive, replace the railing assembly at no additional cost to the owner. Provide the engineer with a copy of the manufacturer's recommended repair procedure and materials before repairing damaged coatings.

D Measurement
The department will measure Railing Tubular Steel Galvanized Pedestrian (Structure) by the linear foot, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.04	Railing Tubular Steel Galvanized Pedestrian R-40-604	LF
SPV.0090.05	Railing Tubular Steel Galvanized Pedestrian R-40-605	LF

Payment is full compensation for providing, fabricating, transporting, and erecting the railing; for galvanizing the railing; for providing and placing metal shims under the bases if required; and for providing and placing the anchor bolts.

52. Concrete Curb and Gutter 30-Inch (Modified), Item SPV.0090.08; Concrete Curb and Gutter 30-Inch (HMA Overlay), Item SPV.0090.09.

A Description
This special provision describes constructing Concrete Curb and Gutter 30-Inch (Modified), and Concrete Curb and Gutter 30-Inch (HMA Overlay). These items vary from standard Concrete Curb and Gutter, 30-Inch of the type specified in that the overall curb head height shall be 14 ¼ Inches minimum, and the pan depth shall be 8 1/4-inch minimum.

B Materials
Furnish material that is according to the pertinent requirements of standard spec 601.

C Construction
Construction shall be according to standard spec 601 and as shown and identified in the construction details drawings.

D Measurement
The department will measure Concrete Curb and Gutter 30-Inch (Modified), and Concrete Curb and Gutter 30-Inch (HMA Overlay) 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.0090.08	Concrete Curb and Gutter 30-Inch (Modified)	LF
SPV.0090.09	Concrete Curb and Gutter 30-Inch (HMA Overlay)	LF

Payment is full compensation for furnishing all foundation excavation and preparation; all special construction required at driveway entrances or curb ramps; for providing all materials, including concrete, expansion joints; for placing, finishing, protecting, and curing; for sawing joints; and for disposing of surplus excavation material, and restoring the work site. Payment also includes providing tie bars in unhardened concrete. For tie bars provided in concrete not placed under the contract, the department will pay separately under the Drilled Tie Bars bid item as specified in standard spec 416.5. The HMA overlay will be paid for under HMA pavement items.

53. Longitudinal Joint Repair, Item SPV.0090.10.

A Description

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

B (Vacant)

C Construction

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 Longitudinal Joint Repair by the linear foot of longitudinal joints, 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	Longitudinal Joint Repair	LF

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

Asphaltic material used to fill the joint will be paid at the contract unit price under the appropriate asphaltic bid item.

54. Remove Traffic Signals, STH 181 and CTH E, Item SPV.0105.01.

A Description

This special provision describes removing existing traffic signals at the intersection of STH 181 and CTH E 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, emergency vehicle preemption heads (evp), 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.0105.01	Remove Traffic Signals, STH 181 and CTH E	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.

55. Remove Loop Detector Wire and Lead-in Cable, STH 181 and W. Villard Ave, Item SPV.0105.02; STH 181 and Fond Du Lac Ave, Item SPV.0105.03; STH 181 and CTH E, Item SPV.0105.04; STH 181 and Florist Avenue, Item SPV.0105.05.

A Description

This special provision describes removing loop detector wire and lead-in cable at the intersections of, STH 181 and W. Villard Ave, STH 181 and Fond Du Lac Ave, STH 181 and CTH E, STH 181 and Florist Avenue. 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 three 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 (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.0105.02	Remove Loop Detector Wire and Lead in Cable, STH 181 and W. Villard Ave	LS
SPV.0105.03	Remove Loop Detector Wire and Lead in Cable, STH 181 and Fond Du Lac Ave	LS
SPV.0105.04	Remove Loop Detector Wire and Lead in Cable, STH 181 and CTH E	LS
SPV.0105.05	Remove Loop Detector Wire and Lead in Cable, STH 181 and Florist Avenue	LS

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

56. Transporting Traffic Signal Materials, STH 181 and CTH E, Item SPV.0105.08.

A Description
This special provision describes the transporting of department furnished materials for traffic signals.

B Materials
Transport materials furnished by the department including: Anchor rods and monotube arms/poles.

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 Transporting Traffic Signal Materials, STH 181 and CTH E 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	Transporting Traffic Signal Materials, STH 181 and CTH E	LS

Payment is full compensation for transporting the anchor rods and monotube poles. Installation of these materials is included under a separate pay item.

57. Install Fiber Optic Communications in Cabinet, STH 181 and W. Villard Ave, Item SPV.0105.09; STH 181 and Fond Du Lac Ave, Item SPV.0105.10; STH 181 and CTH E, Item SPV.0105.11.

A Description
This special provision describes installing fiber optic communications equipment in traffic signal cabinets.

B Materials

The department will furnish pre-terminated fiber optic patch panels and Ethernet switches. The materials will be provided with the traffic signal cabinet. The patch panels will have pre-terminated fiber optic cable pigtails. If required, provide ST-ST single mode fiber jumper (2 fibers per jumper) from the patch panel to the Ethernet switch. Provide CAT-5e cable from the Ethernet switch to the controller. Provide all patch panel and Ethernet switch attachment hardware.

C Construction

Install the patch panel and Ethernet switch on the side of the traffic signal cabinet opposite the electrical service at a location as approved by the engineer. With approval by the engineer, the Ethernet switch may be placed on a shelf near the patch panel.

Install the pre-terminated fiber optic cable in conduit from the patch panel to the communication vault as specified in standard spec 678.3.1. Leave the remainder of the fiber optic cable coiled in the nearest communication pull box or vault.

Install the fiber jumpers and CAT-5e cable and provide a continuous connection from the communication vault to the controller.

D Measurement

The department will measure Install Fiber Optic Communications in Cabinet (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.0105.09	Install Fiber Optic Communications in Cabinet, STH 181 and W. Villard Ave	LS
SPV.0105.10	Install Fiber Optic Communications in Cabinet, STH 181 and Fond Du Lac Ave	LS
SPV.0105.11	Install Fiber Optic Communications in Cabinet, STH 181 and CTH E	LS

Payment is full compensation for installing pre-terminated patch panels, Ethernet switches, and fiber optic cable pigtails; furnishing and installing attachment hardware, fiber jumpers, and CAT-5e cable.

58. Remove Light Pole and Reconnect Lighting Circuit, Item SPV.0105.12.

A Description

This special provision describes removing an existing street light pole and base; installing a pull box steel 24x42-Inch and rewiring the existing lighting circuit between adjacent light poles.

B Materials

Provide pull box steel 24x42-Inch, 6 AWG wiring and all incidental wiring connection hardware according to standard spec 653 and 655.

C Construction

Remove and dispose of the existing concrete base, street pole, luminaire arm, luminaire arm and wiring identified in the plans. Concrete base shall be removed in its entirety and a pull box steel 24x42-Inch shall be installed in its place. Remove wiring between adjacent existing street light poles. Install new wiring between poles identified in the plans. Splices shall be made at the poles only.

D Measurement

The department will measure Remove Light Pole and Reconnect Lighting Circuit 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.0105.12	Remove Light Pole and Reconnect Lighting Circuit	LS

Payment is full compensation for removing and disposing of the existing street light pole, concrete base; luminaire arm, luminaire and necessary wiring to complete the work; installing a pull box steel 24x42-Inch and rewiring the existing lighting circuit between adjacent light poles.

59. Metalizing B-40-766, Item SPV.0105.13.

A Description

This special provision describes surface preparation, application of a thermal sprayed metal coating (metalizing) to portions of the structural steel for B-40-766 as designated on the plans. All work shall be done at the steel fabrication shop unless otherwise noted.

A.1 Reference Specifications

The requirements as outlined in the Joint Standard SSPC-CS 23.00/AWS C2.23M/NACE No. 12 "Specification for the Application of Thermal Spray Coatings (Metalizing) of Aluminum, Zinc, and Their Alloys and Composites for the Corrosion Protection of Steel" shall be followed and considered as part of this special provision.

A.2. Contractor Prequalification

The metalizing contractor shall have satisfactorily performed three previous projects involving the preparation of steel surfaces or other large structural members for metalizing, and then thermally spraying various metals or alloys onto them. The metalizing contractor shall have performed at least one similar project within the past two years, and provide documentation of successful completion of projects that incorporated the use of thermal spraying. Prior to the pre-construction meeting or the beginning of any work on this project, provide the department a list of previous clients, including the names, addresses and telephone numbers of successfully completed projects. Suitability of the metalizing contractor's qualifications and prior experience will be considered by the department before granting approval to proceed.

B Materials

The wire used for metalizing shall be zinc per ASTM B-833, Standard Specification for Zinc Wire for Thermal Spraying (Metalizing). Use of aluminum or zinc/aluminum wire is not permitted. The metalizing material shall satisfy the requirements for Class B or better slip coefficient and creep resistance per Appendix A of the "Specification for Structural Joints Using High-Strength Bolts" by the Research Council on Structural Connections. Provide the test results to the engineer prior to the start of work.

Use a penetrating epoxy polyamide sealer over the metalized surface. Ensure that the epoxy sealer is compatible with the approved epoxy paint system to be applied over the sealed metalized surface.

C Construction

C.1 General

This procedure governs the methods, requirements and procedures for applying thermal sprayed metal onto new steel surfaces. The process consists of melting metal and spraying it onto a prepared surface by means of compressed gas. All steel surfaces designated on the plans shall be metalized unless otherwise noted.

C.2 Equipment

All cleaning equipment shall include gauges capable of accurately measuring fluid and air pressures and shall have valves capable of regulating the flow of air and or water as recommended by the equipment manufacturer. The equipment shall be maintained in proper working order.

Metalizing and surface preparation equipment shall utilize filters, traps or separators recommended by the manufacturer of the equipment and shall be kept clean to prevent oil, water, dried paint and other foreign materials from being deposited on the surface. The filters, traps and separators shall be cleaned or drained by means, and at intervals, recommended by the manufacturer of the equipment.

Pressure type abrasive air blasting equipment shall be capable of supplying a minimum of 100 psi (690 kPa) pressure and 250 CFM (120 L/S) capacity with all air blast nozzles being used. If blast nozzle orifice sizes larger than 3/8 inch (9.5 mm) are being used, the minimum capacity of the equipment shall be increased according to the recommendations of SSPC

Good Painting Practice, Volume 1, Chapter 2.4, and Table 1. The pressure will be measured at the blast nozzle. The equipment shall be capable of providing the minimum required pressure and volume, free of oil, water and other contaminants.

Diesel or gasoline powered equipment shall be positioned or vented in a manner to prevent deposition of combustion contaminants on any part of the structure.

Prior to beginning all metalizing operations, air equipment shall pass the requirements of ASTM D 4285. This test will be repeated as determined by the engineer.

The metalizing unit shall be a gun manufactured by an established domestic company. The gas or arc type is acceptable and recommended. The equipment shall be used according to manufacturer's recommendations. No surface shall be sprayed which shows any sign of rust, scale or moisture. All metalizing shall be applied within a maximum of four hours of the blasting. Spraying shall be done in a block pattern not to exceed 2 feet (600 mm) on a side with overlapping passes to ensure uniform coverage.

C.3 Test Sections

Before any metalizing is done, prepare a test section for each batch or lot of wire supplied. Submit a steel plate approximately 12 inch x 12 inch (300 mm x 300 mm) to which the metal has been deposited to the specified thickness, as checked with a magnetic or Eddy Current Gage, and obtain approval from the engineer as to grain size and texture of the sprayed metal. The test plate will be used to determine the acceptance of the finished job.

C.3.1 Acceptance

The engineer will perform the following test for adhesion on the metalized surface of the test plate. The engineer will cut through the coating with a knife or chisel, if the metalizing or any part of it can be lifted from the base metal 1/4 inch (6 mm) or more ahead of the cutting blade without actually cutting the metal, the surface preparation will be deemed improper and the coating will be considered unsatisfactory. Each spray operator shall be qualified to metalize according to ANSI/AWS C2.18-93. Any operator who does not show evidence of qualification shall not be allowed to spray.

C.4 Surface Preparation

The surface preparation shall be accomplished according to the requirements of Steel Structures Painting Council (SSPC) Surface Preparation Specifications SP1 for Solvent Cleaning and SP10 for Near White Blast Cleaning. Unless otherwise specified, the surface preparation shall result in 2 to 4 mil (50 to 100 microns) blast profile as determined by the engineer.

Abrasive shall be hard and sharp in order to produce an angular surface profile. Acceptable abrasives include but are not limited to, angular aluminum oxide, angular steel grit and angular crushed slag. Silica sand shall not be used. Steel shot and other abrasives producing a rounded surface profile are not acceptable. However, the steel can be prelisted with shot provided that the entire surface is re-blasted with angular abrasive. Submit a sample of the abrasive to the engineer two weeks prior to surface preparation for testing and approval.

Prior to surface preparation, prepare a test section on a representative section of the structural steel. Prepare the test section using the same equipment, materials and procedures as the production preparation. Prepare the test section surface to the specified level according to the SSPC visual standards supplied by the engineer. Ensure a test section area has been approved by the engineer prior to preceding with surface preparation operations. The test section shall be 10 square feet.

The average surface profile produced by the contractor's surface preparation procedures will be determined at the beginning of the work and as required by the engineer using a profile depth tape and micrometer. Profile depth tape measurements shall be retained and included with quality assurance documents. Single measurements less than 2 mil (50 microns), or greater than the specified maximum for the metalizing system used will be considered unacceptable. Areas having unacceptable measurements will be further tested to determine the limits of the deficient area. If unacceptable profiles are provided, work will be suspended. Submit a plan for the necessary adjustments to ensure the correct surface profile on all surfaces. Do not resume work until notified in writing by the engineer.

The visual standards shall be used in addition to the plans and specifications to determine the degree of conformance with the appearance requirements and to determine acceptance of surface preparation. Preparing test sections are incidental to this item.

Abrasive suppliers shall certify that abrasives are not oil contaminated and shall have a water extract pH value within the range of 6 to 8. All surfaces prepared with abrasives which are oil contaminated or have a pH outside the specified range shall be cleaned with solvent cleaner or low pressure water as directed by the engineer and re-blasted at the contractor's expense.

If the surface is degraded or contaminated subsequent to surface preparation and prior to metalizing, the surface shall be re-blasted before metalizing. Ensure all surfaces cleaning have been approved by the engineer prior to metalizing.

The surfaces to be metalized after surface preparation must remain free of moisture and other contaminants. Ensure that dust, dirt or moisture does not come in contact with surfaces prepared that day.

C.4.1 Temperature and Humidity

In addition to the metalizing system's manufacturer's written instructions for surface preparation, and metalizing, the following conditions shall apply. When in conflict, the most restrictive conditions shall govern.

Apply metalizing indoors, in a controlled protected environment. The minimum steel and air temperatures shall be 40° F (4° C). The maximum indoor relative humidity is 85%. Metalizing shall not be applied when the relative humidity is above 85%.

C.5 Metalizing
The thickness of the metalizing shall be 8 - 10 mils (200-250 microns) measured as specified by SSPC-PA2.

To produce the required thickness and uniformity, a minimum of two passes are required, overlapping and at right angles to each other. The gun shall be held at such a distance from the work surfaces that the metal is still plastic on impact 5 to 9 inches (125 mm - 230 mm). The coating shall be firmly adherent and free from uncoated spots, lumps or blisters, and have a fine sprayed texture.

Provide facilities to protect the finished metalized surface from damage during the blasting and thermal spraying work operations on adjacent areas. Repair and re-metalize all damaged coated areas Protect all surfaces not intended to be metalized from the effects of cleaning and metalizing operations.

Apply metalizing as a continuous film of uniform thickness free of pores. All thin spots or areas missed in the application shall be re- metalized.

Notify the engineer a minimum of one week prior to starting surface preparation or metalizing. The engineer will inspect completed sections of metalizing prior to acceptance. The coatings shall be checked for thickness by means of an approved thickness gauge. Add metalizing to any areas failing to register minimum thickness before any oxidation of the surface occurs.

C.5.1 Acceptance
Up to two locations on each beam will be tested for adhesion as outlined in paragraph C.3.1. All areas tested shall be repaired and re-metalized according to this specification. Correct the coating by an acceptable repair method to produce a surface comparable to the approved test section if the coating is inferior to the sample.

C.6 Sealing
Apply an approved penetrating epoxy polyamide sealer over the metalized surface according to Section 9 of SSPC- CS 23.

C.7 Painting Metalized Structural Steel
Paint all metalized steel according to standard spec article 517. Consult with the paint manufacturer of the coating system to be used. If recommended by the paint manufacturer, use a special prime or tie coat over the metalized surfaces specifically intended to prepare and adhere the top coats to the sealed zinc metalized surfaces.

C.8 Quality Control
Conduct a quality control program which ensures that the work accomplished complies with these specifications. The quality control program shall consist of:

1. Qualified personnel to manage the program and conduct quality control tests.
2. Proper quality measuring instruments.
3. Quality Control Plan.
4. Condition and quality recording procedures.

The personnel managing the quality control program shall have considerable experience and knowledge of metalizing and industrial coatings and the measurements needed to assure quality work. The personnel performing the quality control tests shall be trained in the use of the quality control instruments. These personnel shall not perform metalizing and surface preparation.

Supply all necessary equipment to perform quality control testing of weather conditions, equipment, surface preparation and profile, and metalizing thickness. Calibrate these instruments according to the equipment manufacturer's recommendations.

Implement a Quality Control Plan and obtain approval from the engineer including; a schedule of required measurements and tests as outlined herein, procedures for correcting unacceptable work and procedures for improving surface preparation, and metalizing quality as a result of quality control findings. Use forms supplied by the engineer to record the results of quality control tests. These reports shall be available at the work site for review by the engineer.

Quality control tests will not be used as the sole basis for acceptance of the work.

D Measurement
The department will measure Metalizing B-40-766 as a single lump sum unit of work, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.13	Metalizing B-40-766	LS

Payment is full compensation for providing all materials, test sections, surface preparation, applying metalizing, applying epoxy sealer, quality control, acceptance testing, correcting and/or removing deficient metalizing work and re-metalizing.

Painting sealed metalized structural steel will be paid for separately under the item Painting Epoxy System B-40-766.

60. Concrete Pavement Joint Layout, Item SPV.0105.14.

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 Joint 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.0105.14	Concrete Pavement Joint Layout	LS

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

The department will adjust pay for crack repairs as specified in standard spec 415.5.3.

61. Transport and Install Traffic Signal Cabinet Materials, STH 181 and CTH E, Item SPV.0105.15.

A Description
This special provision describes the transporting and installing of department furnished materials for traffic signals.

B Materials
Use materials furnished by the department including: the traffic signal controller, the traffic signal cabinet and the splice 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 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.

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 Transport and Install Traffic Signal Cabinet Materials, STH 181 and CTH E 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.0105.15	Transport and Install Traffic Signal Materials, STH 181 and CTH E	LS

Payment is full compensation for transporting and installing the traffic signal controller, the traffic signal cabinet and the splice 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.

62. Transport and Install State Furnished Radar Detection System, STH 181 and CTH E, Item SPV.0105.16.

A Description
This special provision describes the transporting and installing of department furnished radar detection system on monotube poles, monotube arms, or luminaire 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
Install the department furnished pole/arm mounting brackets, extension arms (if required), and radar units per manufacturer recommendations in the locations determined by the department.

Install the power and communication cable to run continuously (without splices) from the traffic signal cabinet to the pole handhole plus an additional 16-feet in each pull box and an extra 10-feet in the pole handhole. Install the detector unit cable whip from the detector unit

to the pole handhole. Splice the detector unit cable whip to the power and communication cable in the pole handhole using the provided junction box. Terminate the ends of the cables and make all connections to the radar units. 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 pole handhole to indicate the equipment label (i.e. RA1, RA2, etc.) on the plans.

Notify department's EFU at (414) 266-1170 upon completion of the installation and aiming of the radar units.

Assist the department and vendor with fine adjusting of the radar units during the radar system programming, if necessary.

D Measurement

The department will measure Transport and Install State Furnished Radar Detection System STH 181 and CTH E 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 STH 181 and CTH E	LS

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

63. Wall Concrete Panel Mechanically Stabilized Earth LRFD/QMP, 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.

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 Concrete Panel Mechanically Stabilized Earth Wall systems (Concrete Panel 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 concrete panels shall be furnished to the engineer at least 14 days prior to the start of panel production.

The department maintains a list of pre-approved Concrete Panel MSE 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 Concrete Panel 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. Where walls or wall sections intersect with an included angle of 130 degrees or less, a vertical corner element separate from the standard panel face shall abut and interact with the opposing standard panels. The corner element shall have ground reinforcement connected specifically to that panel and shall be designed to preclude lateral spread of the intersecting panels. If the wall is installed in front of a bridge abutment or wing, it shall also be designed to resist the applied abutment/bridge lateral forces specified on the plans.

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 Ratios (CDR) for sliding, eccentricity, and bearing checks is performed by the department and are provided on the wall plans.

The design of the Concrete Panel 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 panel-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 panels shall be designed according to AASHTO LRFD 11.10.2.3. The Facing panels shall also be designed to resist compaction stresses that occur during the wall erection. The minimum thickness of the facing panel shall be 5.5 inches. The surface area of a standard single panel cannot exceed 60 square feet. The maximum height of a standard panel shall be 5 feet. The top and bottom panels may exceed 5 foot in height based on site topography subject to the approval by the Structures Design Section. The design of the steel reinforcement within the panels shall be based on one-way bending action. Design the wall panels and joints between panels to accommodate a maximum differential settlement of 1 foot over a 100-foot length, unless the plans indicate other.

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 8 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 31 inches. The uppermost layer of the reinforcement shall be located between 6 inches and 18 inches below the bottom of an overlying slab, footing or top of the wall. The upper layers of the soil reinforcement shall also be checked to verify that they have sufficient tensile resistance against traffic barrier impact where applicable.

All soil reinforcement required for the reinforced soil zone shall be connected to the face panels. The reinforcement and the reinforcement/facing connection strength shall be designed to resist maximum factored reinforcement loads according to AASHTO LRFD Section 11.10.6. Facing connection strength shall be defined as the resistance factor times the failure load, or the load at 0.5 inch deformation times 0.9, whichever is less. The nominal long term design strength in steel reinforcement and connections shall be based upon assumed conditions at the end of the design life.

Soil reinforcement shall be prefabricated into single or multiple elements before galvanizing. 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. The leveling pad’s steps shall keep the bottom of the wall within one half the panel heights of the minimum embedment i.e. the minimum embedment plus up to one half the height of one panel. Additional embedment may be detailed by the contractor, but will not be measured for payment.

Wall facing panels shall be installed on concrete leveling pads. The minimum cross section of the leveling pad shall be 6-inches deep by 1-foot wide.

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 modular precast concrete face panels produced by a wet cast process, and have cast-in-place concrete pads or footings. The concrete panels shall have a minimum strength of 4000 psi at 28 days. The concrete for the panels shall be air entrained, with an air content of 6% +/- 1.5%. All materials for the concrete mixture for the panels shall meet the requirements of standard spec 501. The panel edges shall be configured so as to conceal the joints. The detail shall be a shiplap, tongue and groove or other detail adequate to prevent vandalism or ultraviolet light damage to the backside of the wall joint covering. Joints between panels shall be no more than 0.75 inch. Use full wall height slip joints at points of differential settlement when detailed on the plan. Horizontal joints must be provided with a compressible bearing material to prevent concrete to concrete contact.

A minimum of two bearing pads shall be used per panel. The allowable bearing stress shall not exceed 900 psi. The bearing pads shall be preformed EPDM rubber conforming to ASTM D-2000, Grade 2, Type A, Class A with a minimum Durometer Hardness of 80, or high- density polyethylene pads with a minimum density of 0.034 lb/in^3 according to ASTM 1505.

An 18-inch wide geotextile shall be used on the backface of the wall panels to cover all panel joints. The geotextile shall meet the physical requirements stated in standard spec 645.2.4 for Geotextile Fabric, Type DF, Schedule B, except that the grab tensile strength shall be a minimum of 180 pounds in both the machine and cross-machine directions. The geotextile shall be attached with a standard construction adhesive suitable for use on concrete surfaces and cold temperatures. The adhesive shall be applied to the panels, not to the geotextile.

B.3.2 Backfill

Furnish and place backfill for Concrete Panel MSE Walls as shown on the plans and as hereinafter provided. Place backfill in a zone extending horizontally from the back face of the wall facing to 1 foot minimum 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 shall meet the following requirements.

Test	Method	Value (Galvanized)	Value (Aluminized Type 2)
pH	AASHTO T-289	5.0-10.0	5.0 – 9.0
Sulfate content	AASHTO T-290	200 ppm max.	
Chloride content	AASHTO T-291	100 ppm max.	
Electrical Resistivity	AASHTO T-288	3000 ohm-cm min.	1500 ohm-cm min.
Organic Content	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.2.)	

*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

All steel portions of the wall system exposed to earth shall be galvanized. All soil reinforcement and attachment devices shall be carefully inspected to ensure they are true size and free from defects that may impair the strength and durability. Soil reinforcement shall be galvanized or aluminized Type 2. Galvanized soil reinforcement shall be according to AASHTO M 111 or ASTM A641. Aluminized soil reinforcement shall be according to ASTM A463 Aluminized Type 2-100, SS, Grade 50, Class 2. Design of galvanized soil reinforcement shall be according to Section 11.10.6.4.2 of the current AASHTO LRFD Specifications. The design life of steel soil reinforcements shall comply with AASHTO LRFD. Aluminized soil reinforcement shall be limited 16 years of steel protection. Aluminized steel shall only be used on soil reinforcement elements and shall not be used on facing connections or any other steel portion of the wall system. 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.

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.

Conduct backfilling operations in such a manner as to prevent damage or misalignment of the wall panels, 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 panels. The engineer may order the removal of any large or heavy equipment that may cause damage or misalignment of the panels.

C.2 Compaction

Compact all backfill behind the wall as specified in standard spec 207.3.6. Compact the backfill 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 panels.

A minimum of 3 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 panel facing and other associated elements according to the wall manufacturer's construction guide. 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 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 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.

C3.3 Panel Tolerances

As backfill material is placed behind a panel, maintain the panel in its proper inclined position according to the supplier specifications and as approved by the engineer. The supplier shall specify the back batter so that the final position of the wall is vertical. Vertical tolerances and horizontal alignment tolerances shall not exceed ¾-inch when measured along a 10-foot straight edge. The maximum allowable offset in any panel joint shall be ¾-inch. The overall vertical tolerance of the wall (plumbness from top to bottom) shall not exceed ½-inch per 10 feet of wall height. Erect the precast face panels to ensure that they are located within 1 inch from the contract plan offset at any location to ensure proper wall location at the top of the wall. Provide a ¾-inch joint separation between all adjacent face panels to prevent direct concrete-to-concrete contact. Maintain this gap by the use of bearing pads and/or alignment pins. Failure to meet this tolerance shall cause the engineer to require the contractor to disassemble and re-erect the affected portions of the wall. In addition, imperfect molding, honeycombing, cracking or severe chipping of panels shall be cause of panel rejection.

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 Concrete Panel Mechanically Stabilized Earth LRFD/QMP by the square foot acceptably completed, measured as the vertical area within the pay limits the contract plans show. No other measurement of quantities shall be made in the field. 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 plan quantities at the contract unit price under the following bid item:

ITEM NUMBER	DECRIPTION	UNIT
SPV.0165.01	Wall Concrete Panel 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, abutment bodies 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)

64. HMA Pavement 3 MT 58-28 S 3.0% Va Regression Special, Item SPV.0195.01; HMA Pavement 4 MT 58-28 S 3.0% Va Regression Special, Item SPV.0195.02.

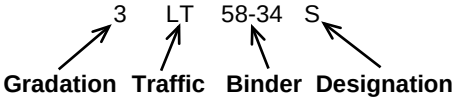
A Description

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:

GRADATIONS (NMAS)	TRAFFIC VOLUME	DESIGNATION LEVEL
37.5 mm	Low	*S Standard*
25.0 mm	Medium	*H Heavy*
19.0 mm	High	*V Very Heavy*
12.5 mm		*E Extremely Heavy*
9.5 mm		
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 106 (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:

PAYMENT FOR MIXTURE*[1] [2]*

ITEM	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 standard spec 460.2; except the engineer will not require the contractor to conform to the quality management program specified under standard spec 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]	93.5[4]	____
	UPPER	93.0	93.5	____
SIDE ROADS, CROSSOVERS, TURN LANES, & RAMPS	LOWER	93.0[3]	93.5[4]	____
	UPPER	93.0	93.5	____
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 Special 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.0195.01	HMA Pavement 3 MT 58-28 S 3.0% Va Regression Special	TON
SPV.0195.02	HMA Pavement 4 MT 58-28 S 3.0% Va Regression Special	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/ft^3 (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/ft^3 (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/ft^3 (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/ft^3 (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} x 62.24 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}) = 90.9%
Required % Density of the G_{mm} = 93.5%
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) = 93.5 - 90.9 = 2.6
- Payment Factor (SS 460.5.2.2) = 70% (30% Credit to the Department)
- Credit to the Department (HMA Mix) = 30% x $26.50/Ton x 750 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}) = 95.1%
Required % Density of the G_{mm} = 93.5%
Lot Tonnage = 750
Air Voids for day = 2.9-3.2%
Payment Factor = 95.1 – 93.5 (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):

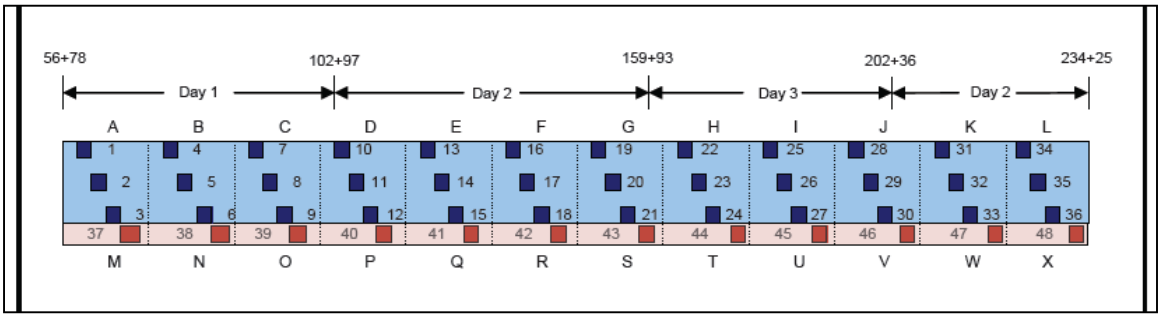
A project begins at station 56+78 and ends at station 234+25. It is a 2-lane roadway with a shoulder on each side. The traffic lanes are 12 feet wide and the shoulders are 3 feet wide. Shown in the figure below is the eastbound traffic lane and shoulder for the length of the project. The contractor will 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 93.5%. 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, sublot is the average of the density %)

Sublot ID	Test ID	% Density	Sublot Avg % Density
A 56+78 to 71+78	1	94.3	94.6
	2	94.7	
	3	94.9	
B 71+78 to 86+78	4	94.6	95.0
	5	95.2	
	6	95.1	
C 86+78 to 101+78	7	94.1	94.6
	8	95.0	
	9	94.8	
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 sublot and each shoulder sublot.

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 93.5%. All of the sublot 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 = (94.3 + 94.7 + 94.9 + 94.6 + 95.2+ 95.1+ 94.1 + 95.0 + 94.8) / 9 tests = 94.7%

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 sublot A, B & C and the 119' in sublot D that did not reach the random number.

- Shoulder:

The minimum required density is 92.0%. All of the sublot 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	92.3	92.3
	23	92.4	
	24	92.2	
I 176+78 to 191+78	25	95.6	95.4
	26	95.3	
	27	95.4	
J 191+78 to 202+36	28	92.5	92.4
	29	92.3	
	30	92.4	
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 93.5% is required for the traffic lane. When verifying whether or not the sublot densities meet the requirements, it is found that sublot H and sublot 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 sublot G, at station 159+93, but beyond its random test location. The tests for sublot G represent material placed on day 2. The tests in sublot H represent the day 3 material from station 159+93 to 176+78, a total length of 1685 feet long (185' from sublot G, paved on day 3, and 1500' in sublot H) by 12 feet wide.

Quantity represented by tests in sublot H =

$$\frac{(1685' \times 12')}{(9\ sf/sy)} \times \frac{(2\ in. \times 110\ lb/sy/in)}{(2000\ lb/ton)} = 247\ tons$$

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 sublot I =

$$\frac{(1500' \times 12')}{(9\ sf/sy)} \times \frac{(2\ in. \times 110\ lb/sy/in)}{(2000\ lb/ton)} = 220\ tons$$

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 sublot J, beyond its random test location. The day 3 quantity placed within sublot 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 sublot J is represented by the tests taken on day 2 within sublot K.

Quantity represented by tests in sublot J=

$$\frac{(1058' \times 12')}{(9\ sf/sy)} \times \frac{(2\ in. \times 110\ lb/sy/in)}{(2000\ lb/ton)} = 155\ tons$$

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 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

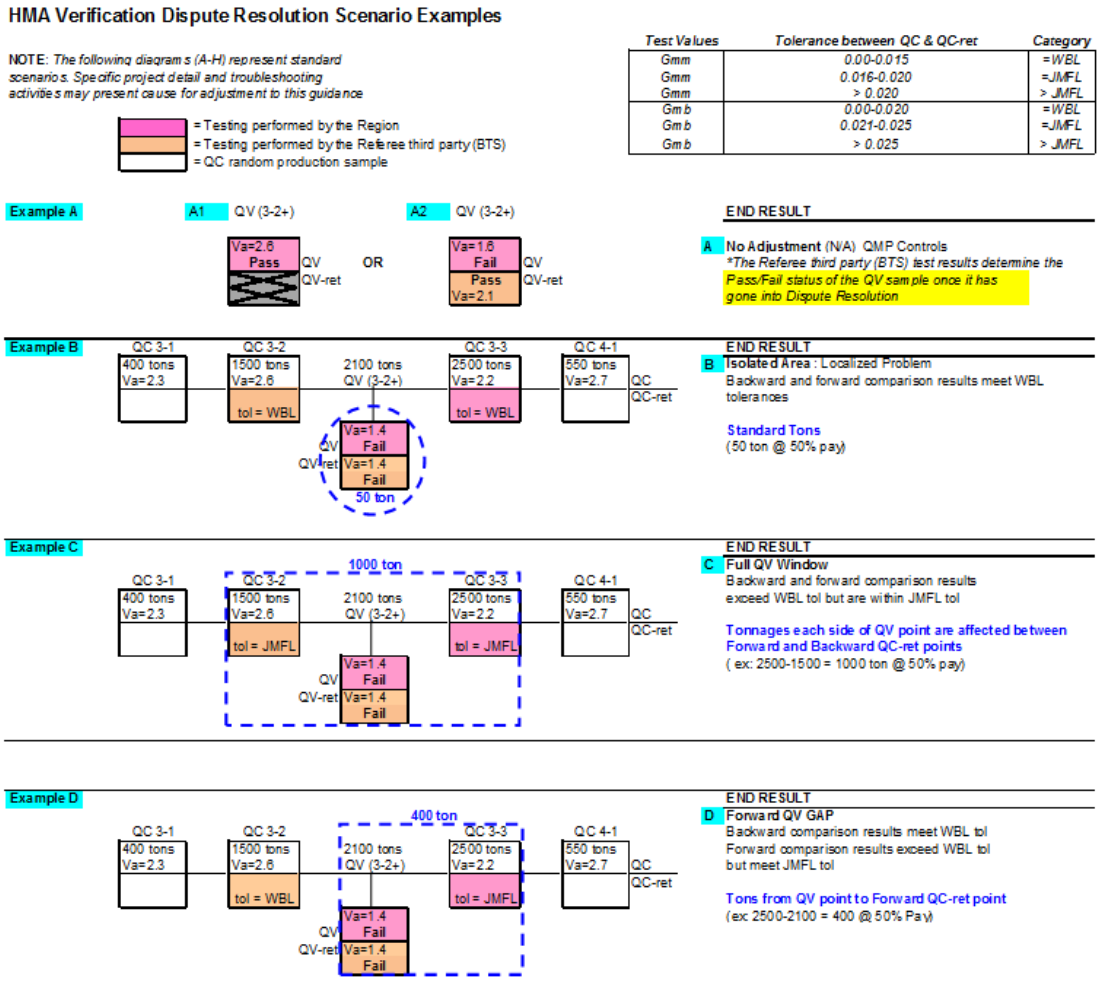
Delete CMM 8-36.6.1 QC Tests and replace with the following:

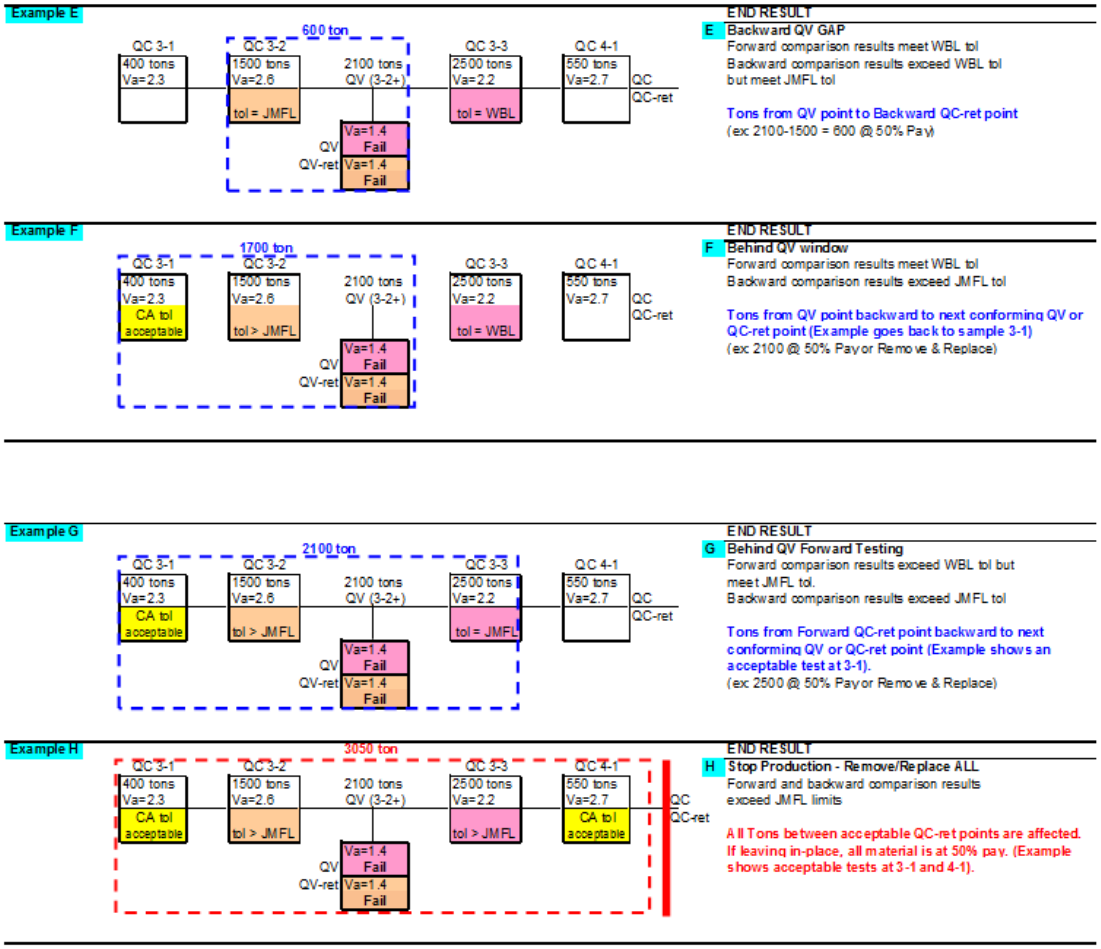
QC testing must be completed, and data posted, on the day the sample was taken or as approved by the engineer**.**

For administration of projects requiring only one, two, or three single tests per mix design, apply the following tolerances table for mixture evaluation:

- Va = 2.0 – 5.0%
- VMA = - 1.3 from required minimums for Table 460-1 as revised in STSP 460-025
- AC = within -0.1of JMF Pb after regression

Delete CMM 8-36 Figure 8 HMA Verification Dispute Resolution Scenarios and replace with the following:





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://wisconsindot.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		DBE Contractor Contact Person	
Phone:		Phone	
Fax:		Fax	
Email:		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:

ITEM NUMBER	DESCRIPTION	UNIT
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:

ITEM NUMBER	DESCRIPTION	UNIT

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

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

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 contacting 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:

County	%	County	%	County	%
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

Effective February 2016 letting

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

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 contacts.

While the wage rates shown are the minimum rates required by the contract to be paid during its life, this in 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
MILWAUKEE 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 reqarding 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.

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
	$	$	$
Bricklayer, Blocklayer or Stonemason	31.55	18.52	50.07
Carpenter	34.13	20.71	54.84
Cement Finisher	33.95	19.88	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	35.13	23.19	58.32
Future Increase(s): Add $1.60 on 6/1/16; Add $1.70 on 6/1/17 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.			
Fence Erector	35.62	0.00	35.62
Ironworker	30.77	23.72	54.49
Line Constructor (Electrical)	40.81	18.06	58.87
Painter	29.87	18.79	48.66
Pavement Marking Operator	30.27	19.83	50.10
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	34.28	18.60	52.88
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	32.65	15.67	48.32
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	22.45	11.84	34.29
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, Dumptor, 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://wisconsindot.gov/Pages/doing- bus/civil- rights/labornwage/prevailing- 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	27.51	20.63	48.14
Future Increase(s): Add $1.00/hr eff. 06/01/2016; Add $1.00/hr eff. 06/01/2017 Premium Pay: 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 $.35/hr for bituminous worker (raker and luteman), formsetter (curb, sidewalk and pavement) and strike off man; Add $.50/hr for line and grade specialist; Add $.65/hr for blaster and powderman; Add $2.01/hr for topman; Add $2.46/hr for bottomman; Add $3.23/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	27.51	20.63	48.14
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)	18.53	0.00	18.53
Railroad Track Laborer	17.00	5.43	22.43
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

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
	$	$	$
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 Mfgr.'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 Mfgr.'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 Sawer (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/prevailing- 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/prevailing- wage- compliance. aspx. .	36.72	21.85	58.57
Fiber Optic Cable Equipment.	21.00	0.00	21.00
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
DATE: July 29, 2016
DESCRIPTION OF WORK: Highways and Airport Runway and Taxiway Construction

LABORERS CLASSIFICATION:	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	$27.51	20.35
Group 2: Air Tool Operator; Joint Sawer and Filler (Pavement); Vibrator or Tamper Operator (Mechanical Hand Operated); Chain Saw Operator; Demolition Burning Torch Laborer	27.66	20.35
Group 3: Bituminous Worker (Raker and Luteman); Formsetter (Curb, Sidewalk, and Pavement); Strike Off man	27.86	20.35
Group 4: Line and Grade Specialist	28.01	20.35
Group 5: Blaster and Powderman	28.16	20.35
Group 6: Flagperson traffic control person	24.00	20.35

CLASSES OF LABORER AND MECHANICS

Bricklayer	36.74	18.19
Carpenter	30.52	14.41
Piledriverman	27.25	19.46
Ironworker	32.36	24.07
Cement Mason/Concrete Finisher	34.70	20.51
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	26.32	13.98
Painter, Brush	29.52	20.04
Painter, Spray and Sandblaster	30.27	20.04
Painter, Bridge	29.87	20.04
Well Drilling:		
Well Driller	16.52	3.70

Truck Drivers:	Basic Hourly Rates	Fringe Benefits
1 & 2 Axles	26.63	19.85
Three or More Axles; Euclids, Dumptor & Articulated, Truck Mechanic	26.78	19.85

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
DATE: July 29, 2016
DESCRIPTION OF WORK: Highways and Airport Runway and Taxiway Construction

POWER EQUIPMENT OPERATORS CLASSIFICATION:	Basic Hourly Rates	Fringe Benefits
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
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 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 (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 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 5: Air compressor; power pack; vibratory hammer and extractor; heavy equipment, leadman; tank car heaters; stump chipper; curb machine operator; concrete pro-portioning 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
DATE: July 29, 2016
DESCRIPTION OF WORK: Highways and Airport Runway and Taxiway Construction

LABORERS CLASSIFICATION:	Rates	Benefits
Electricians		
Area 1	$30.68	17.28
Area 2:		
Electricians	32.00	19.28
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 8		
Electricians	31.90	24.95% + 10.46
Area 9:		
Electricians	35.75	19.87
Area 10	29.64	20.54
Area 11	34.92	25.05
Area 12	34.98	19.89
Area 13	35.13	23.26
Teledata System Installer		
Area 14		
Installer/Technician	24.35	13.15
Sound & Communications		
Area 15		
Installer	16.47	14.84
Technician	26.00	17.70

Area 1 - 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, TREMPEALEAU, VERNON and WASHBURN COUNTIES

Area 3 - FLORENCE (townships of Aurora, Commonwealth, Fern, Florence and Homestead), MARINETTE (Niagara township)

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.

Area 5 - ADAMS, CLARK (Colby, Freemont, Lynn, Mayville, Sherman, Sherwood, Unity), FOREST, JUNEAU, LANGLADE, LINCOLN, MARATHON, MARINETTE (Area North of the town of Wausaukee), 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 6 - KENOSHA COUNTY

Area 8 - DODGE, (Emmet Township only), GREEN, JEFFERSON, LAFAYETTE, RACINE (Burlington township), ROCK and WALWORTH COUNTIES

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 10 - CALUMET (Township of New Holstein), DODGE (East of Hwy. 26 including Chester Township), FOND DU LAC, MANITOWOC (Schleswig), and SHEBOYGAN COUNTIES

Area 11 - DOUGLAS COUNTY

Area 12 - RACINE (except Burlington township) COUNTY

Area 13 - MILWAUKEE, OZAUKEE, WASHINGTON and WAUKESHA COUNTIES

Area 14 - Statewide.

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.

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 omision 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: 20160913004 PROJECT(S): 2140-13-70 FEDERAL ID(S): WISC 2016306

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
	SECTION 0001 Contract Items					
0010	201.0105 Clearing	4.000 STA		.		.
0020	201.0120 Clearing	149.000 ID		.		.
0030	201.0205 Grubbing	4.000 STA		.		.
0040	201.0220 Grubbing	149.000 ID		.		.
0050	203.0200 Removing Old Structure (station) 01. STA. 121+05	LUMP	LUMP			.
0060	203.0225.S Debris Containment (structure) 01. B-40-766	LUMP	LUMP			.
0070	204.0100 Removing Pavement	16,927.000 SY		.		.
0080	204.0125 Removing Asphaltic Surface Milling	8,433.000 TON		.		.
0090	204.0150 Removing Curb & Gutter	3,158.000 LF		.		.
0100	204.0155 Removing Concrete Sidewalk	5,305.000 SY		.		.

CONTRACT: 20160913004 PROJECT(S): 2140-13-70 FEDERAL ID(S): WISC 2016306

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0110	204.0165 Removing Guardrail	140.000 LF		.		.
0120	204.0170 Removing Fence	140.000 LF		.		.
0130	204.0195 Removing Concrete Bases	19.000 EACH		.		.
0140	204.0210 Removing Manholes	3.000 EACH		.		.
0150	204.0220 Removing Inlets	18.000 EACH		.		.
0160	204.0245 Removing Storm Sewer (size) 01. 12-Inch	808.000 LF		.		.
0170	205.0100 Excavation Common	10,632.000 CY		.		.
0180	206.1000 Excavation for Structures Bridges (structure) 01. B-40-766	LUMP	LUMP			.
0190	208.0100 Borrow	8,987.000 CY		.		.
0200	209.0100 Backfill Granular	2,690.000 CY		.		.
0210	209.0200.S Backfill Controlled Low Strength	20.000 CY		.		.

CONTRACT: 20160913004 PROJECT(S): 2140-13-70 FEDERAL ID(S): WISC 2016306

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0220	210.0100 Backfill Structure	440.000 CY		.		.
0230	213.0100 Finishing Roadway (project) 01. Project ID 2140-13-70	1.000 EACH		.		.
0240	305.0120 Base Aggregate Dense 1 1/4-Inch	10,410.000 TON		.		.
0250	310.0110 Base Aggregate Open-Graded	162.000 TON		.		.
0260	311.0110 Breaker Run	1,800.000 TON		.		.
0270	320.0155 Concrete Base 9-Inch	419.000 SY		.		.
0280	390.0303 Base Patching Concrete	2,486.000 SY		.		.
0290	390.0403 Base Patching Concrete Shes	131.000 SY		.		.
0300	415.0070 Concrete Pavement 7-Inch	5,495.000 SY		.		.
0310	415.0095 Concrete Pavement 9 1/2-Inch	8,217.000 SY		.		.
0320	415.0210 Concrete Pavement Gaps	3.000 EACH		.		.

CONTRACT: 20160913004 PROJECT(S): 2140-13-70 FEDERAL ID(S): WISC 2016306

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0330	415.0410 Concrete Pavement Approach Slab	314.000 SY		.		.
0340	415.1095 Concrete Pavement HES 9 1/2-Inch	350.000 SY		.		.
0350	416.0270 Concrete Driveway HES 7-Inch	400.000 SY		.		.
0360	416.0610 Drilled Tie Bars	3,528.000 EACH		.		.
0370	416.0620 Drilled Dowel Bars	10,080.000 EACH		.		.
0380	440.4410 Incentive IRI Ride	8,650.000 DOL	1.00000		8650.00	
0390	455.0605 Tack Coat	9,124.000 GAL		.		.
0400	460.2000 Incentive Density HMA Pavement	6,350.000 DOL	1.00000		6350.00	
0410	465.0120 Asphaltic Surface Driveways and Field Entrances	39.000 TON		.		.
0420	465.0125 Asphaltic Surface Temporary	291.000 TON		.		.
0430	502.0100 Concrete Masonry Bridges	1,105.000 CY		.		.

CONTRACT: 20160913004 PROJECT(S): 2140-13-70 FEDERAL ID(S): WISC 2016306

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0440	502.2000 Compression Joint Sealer Preformed Elastomeric (width) 01. 2 1/4 Inch	161.000 LF		.		.
0450	502.3200 Protective Surface Treatment	2,066.000 SY		.		.
0460	502.3210 Pigmented Surface Sealer	126.000 SY		.		.
0470	505.0400 Bar Steel Reinforcement HS Structures	17,590.000 LB		.		.
0480	505.0600 Bar Steel Reinforcement HS Coated Structures	172,290.000 LB		.		.
0490	505.0800.S Bar Steel Reinforcement HS Stainless Structures	3,940.000 LB		.		.
0500	506.0605 Structural Steel HS	332,140.000 LB		.		.
0510	506.2605 Bearing Pads Elastomeric Non-Laminated	36.000 EACH		.		.
0520	506.3015 Welded Stud Shear Connectors 7/8x6-Inch	8,448.000 EACH		.		.
0530	506.4000 Steel Diaphragms (structure) 01. B-40-766	80.000 EACH		.		.

CONTRACT: 20160913004 PROJECT(S): 2140-13-70 FEDERAL ID(S): WISC 2016306

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0540	506.5000 Bearing Assemblies Fixed (structure) 01. B-40-766	18.000 EACH		.		.
0550	511.1200 Temporary Shoring (structure) 01. B-40-766	998.000 SF		.		.
0560	513.4091 Railing Tubular Screening (structure) 01. B-40-766	317.000 LF		.		.
0570	516.0500 Rubberized Membrane Waterproofing	52.000 SY		.		.
0580	517.0600 Painting Epoxy System (structure) 01. B-40-766	LUMP	LUMP			.
0590	532.0750.S Temporary Wall Wire Faced Mechanically Stabilized Earth	1,631.000 SF		.		.
0600	550.2106 Piling CIP Concrete 10 3/4 X 0.365-Inch	5,400.000 LF		.		.
0610	601.0110 Concrete Curb Type D	18.000 LF		.		.
0620	601.0409 Concrete Curb & Gutter 30-Inch Type A	8,259.000 LF		.		.
0630	601.0411 Concrete Curb & Gutter 30-Inch Type D	176.000 LF		.		.

CONTRACT: 20160913004 PROJECT(S): 2140-13-70 FEDERAL ID(S): WISC 2016306

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0640	601.0600 Concrete Curb Pedestrian	21.000 LF		.		.
0650	602.0410 Concrete Sidewalk 5-Inch	43,791.000 SF		.		.
0660	602.0505 Curb Ramp Detectable Warning Field Yellow	704.000 SF		.		.
0670	602.1500 Concrete Steps	16.000 SF		.		.
0680	603.1142 Concrete Barrier Type S42	21.000 LF		.		.
0690	603.1156 Concrete Barrier Type S56	228.000 LF		.		.
0700	603.3559 Concrete Barrier Transition Type S42 to S56	2.000 EACH		.		.
0710	603.8000 Concrete Barrier Temporary Precast Delivered	3,687.000 LF		.		.
0720	603.8125 Concrete Barrier Temporary Precast Installed	3,687.000 LF		.		.
0730	604.0400 Slope Paving Concrete	674.000 SY		.		.
0740	608.0312 Storm Sewer Pipe Reinforced Concrete Class III 12-Inch	755.000 LF		.		.

CONTRACT: 20160913004 PROJECT(S): 2140-13-70 FEDERAL ID(S): WISC 2016306

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0750	611.0420 Reconstructing Manholes	5.000 EACH		.		.
0760	611.0430 Reconstructing Inlets	5.000 EACH		.		.
0770	611.0530 Manhole Covers Type J	5.000 EACH		.		.
0780	611.0606 Inlet Covers Type B	1.000 EACH		.		.
0790	611.0610 Inlet Covers Type BW	2.000 EACH		.		.
0800	611.0624 Inlet Covers Type H	27.000 EACH		.		.
0810	611.0642 Inlet Covers Type MS	2.000 EACH		.		.
0820	611.2004 Manholes 4-FT Diameter	3.000 EACH		.		.
0830	611.3220 Inlets 2x2-FT	2.000 EACH		.		.
0840	611.3225 Inlets 2x2.5-FT	2.000 EACH		.		.
0850	611.3230 Inlets 2x3-FT	26.000 EACH		.		.

CONTRACT: 20160913004 PROJECT(S): 2140-13-70 FEDERAL ID(S): WISC 2016306

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0860	611.3901 Inlets Median 1 Grate	2.000 EACH		.		.
0870	611.8110 Adjusting Manhole Covers	59.000 EACH		.		.
0880	611.8115 Adjusting Inlet Covers	44.000 EACH		.		.
0890	611.8120.S Cover Plates Temporary	91.000 EACH		.		.
0900	611.9710 Salvaged Inlet Covers	1.000 EACH		.		.
0910	612.0406 Pipe Underdrain Wrapped 6-Inch	744.000 LF		.		.
0920	614.0805 Crash Cushions Permanent Low Maintenance	2.000 EACH		.		.
0930	614.0905 Crash Cushions Temporary	10.000 EACH		.		.
0940	614.2300 MGS Guardrail 3	25.000 LF		.		.
0950	614.2500 MGS Thrie Beam Transition	78.660 LF		.		.
0960	614.2610 MGS Guardrail Terminal EAT	2.000 EACH		.		.

CONTRACT: 20160913004 PROJECT(S): 2140-13-70 FEDERAL ID(S): WISC 2016306

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0970	616.0204 Fence Chain Link 4-FT	140.000 LF		.		.
0980	616.0700.S Fence Safety	200.000 LF		.		.
0990	619.1000 Mobilization	1.000 EACH		.		.
1000	620.0300 Concrete Median Sloped Nose	218.000 SF		.		.
1010	624.0100 Water	90.000 MGAL		.		.
1020	625.0100 Topsoil	12,766.000 SY		.		.
1030	628.1504 Silt Fence	2,863.000 LF		.		.
1040	628.1520 Silt Fence Maintenance	2,863.000 LF		.		.
1050	628.1905 Mobilizations Erosion Control	4.000 EACH		.		.
1060	628.1910 Mobilizations Emergency Erosion Control	2.000 EACH		.		.
1070	628.2008 Erosion Mat Urban Class I Type B	4,804.000 SY		.		.

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CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1080	628.7005 Inlet Protection Type A	41.000 EACH		.		.
1090	628.7010 Inlet Protection Type B	55.000 EACH		.		.
1100	628.7015 Inlet Protection Type C	39.000 EACH		.		.
1110	628.7020 Inlet Protection Type D	13.000 EACH		.		.
1120	628.7560 Tracking Pads	4.000 EACH		.		.
1130	628.7570 Rock Bags	50.000 EACH		.		.
1140	629.0210 Fertilizer Type B	2.800 CWT		.		.
1150	630.0140 Seeding Mixture No. 40	81.000 LB		.		.
1160	631.0300 Sod Water	195.000 MGAL		.		.
1170	631.1000 Sod Lawn	8,678.000 SY		.		.
1180	633.0200 Delineators Flexible	2.000 EACH		.		.

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CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1190	634.0618 Posts Wood 4x6-Inch X 18-FT	17.000 EACH		.		.
1200	634.0814 Posts Tubular Steel 2x2-Inch X 14-FT	121.000 EACH		.		.
1210	637.2210 Signs Type II Reflective H	1,469.580 SF		.		.
1220	637.2215 Signs Type II Reflective H Folding	177.120 SF		.		.
1230	637.2230 Signs Type II Reflective F	295.500 SF		.		.
1240	638.2102 Moving Signs Type II	1.000 EACH		.		.
1250	638.2602 Removing Signs Type II	154.000 EACH		.		.
1260	638.3000 Removing Small Sign Supports	66.000 EACH		.		.
1270	642.5201 Field Office Type C	1.000 EACH		.		.
1280	643.0100 Traffic Control (project) 01. Project ID 2140-13-70	1.000 EACH		.		.
1290	643.0300 Traffic Control Drums	134,970.000 DAY		.		.

CONTRACT: 20160913004 PROJECT(S): 2140-13-70 FEDERAL ID(S): WISC 2016306

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1300	643.0410 Traffic Control Barricades Type II	2,346.000 DAY		.		.
1310	643.0420 Traffic Control Barricades Type III	41,144.000 DAY		.		.
1320	643.0500 Traffic Control Flexible Tubular Marker Posts	26.000 EACH		.		.
1330	643.0600 Traffic Control Flexible Tubular Marker Bases	26.000 EACH		.		.
1340	643.0705 Traffic Control Warning Lights Type A	73,153.000 DAY		.		.
1350	643.0715 Traffic Control Warning Lights Type C	26,285.000 DAY		.		.
1360	643.0900 Traffic Control Signs	60,664.000 DAY		.		.
1370	643.0920 Traffic Control Covering Signs Type II	16.000 EACH		.		.
1380	643.1000 Traffic Control Signs Fixed Message	285.000 SF		.		.
1390	643.1050 Traffic Control Signs PCMS	320.000 DAY		.		.
1400	643.2000 Traffic Control Detour (project) 01. Project ID 2140-13-70	1.000 EACH		.		.

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CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1410	643.3000 Traffic Control Detour Signs	7,728.000 DAY		.		.
1420	644.1410.S Temporary Pedestrian Surface Asphalt	480.000 SF		.		.
1430	644.1420.S Temporary Pedestrian Surface Plywood	80.000 SF		.		.
1440	644.1601.S Temporary Curb Ramp	36.000 EACH		.		.
1450	646.0106 Pavement Marking Epoxy 4-Inch	8,271.000 LF		.		.
1460	646.0600 Removing Pavement Markings	1,784.000 LF		.		.
1470	646.0841.S Pavement Marking Grooved Wet Reflective Contrast Tape 4-Inch	475.000 LF		.		.
1480	646.0843.S Pavement Marking Grooved Wet Reflective Contrast Tape 8-Inch	1,221.000 LF		.		.
1490	646.0881.S Pavement Marking Grooved Wet Reflective Tape 4-Inch	2,300.000 LF		.		.
1500	646.0883.S Pavement Marking Grooved Wet Reflective Tape 8-Inch	2,768.000 LF		.		.

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CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1510	647.0606 Pavement Marking Island Nose Epoxy	20.000 EACH		.		.
1520	647.0726 Pavement Marking Diagonal Epoxy 12-Inch	330.000 LF		.		.
1530	647.0955 Removing Pavement Markings Arrows	1.000 EACH		.		.
1540	647.0965 Removing Pavement Markings Words	1.000 EACH		.		.
1550	649.0400 Temporary Pavement Marking Removable Tape 4-Inch	32,710.000 LF		.		.
1560	649.0801 Temporary Pavement Marking Removable Tape 8-Inch	630.000 LF		.		.
1570	649.1200 Temporary Pavement Marking Stop Line Removable Tape 18-Inch	140.000 LF		.		.
1580	649.1600 Temporary Pavement Marking Diagonal Removable Tape 12-Inch	150.000 LF		.		.
1590	650.4000 Construction Staking Storm Sewer	35.000 EACH		.		.
1600	650.4500 Construction Staking Subgrade	3,232.000 LF		.		.

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CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1610	650.5500 Construction Staking Curb Gutter and Curb & Gutter	2,798.000 LF		.		.
1620	650.6500 Construction Staking Structure Layout (structure) 01. B-40-766	LUMP	LUMP			.
1630	650.6500 Construction Staking Structure Layout (structure) 02. R-40-604	LUMP	LUMP			.
1640	650.6500 Construction Staking Structure Layout (structure) 03. R-40-605	LUMP	LUMP			.
1650	650.7000 Construction Staking Concrete Pavement	3,232.000 LF		.		.
1660	650.7500 Construction Staking Concrete Barrier	298.000 LF		.		.
1670	650.8000 Construction Staking Resurfacing Reference	4,905.000 LF		.		.
1680	650.8500 Construction Staking Electrical Installations (project) 01. Project ID 2140-13-70	LUMP	LUMP			.
1690	650.9910 Construction Staking Supplemental Control (project) 01. Project ID 2140-13-70	LUMP	LUMP			.

CONTRACT: 20160913004 PROJECT(S): 2140-13-70 FEDERAL ID(S): WISC 2016306

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1700	650.9920 Construction Staking Slope Stakes	3,232.000 LF		.		.
1710	652.0225 Conduit Rigid Nonmetallic Schedule 40 2-Inch	1,245.000 LF		.		.
1720	652.0230 Conduit Rigid Nonmetallic Schedule 40 2 1/2-Inch	7,862.000 LF		.		.
1730	652.0235 Conduit Rigid Nonmetallic Schedule 40 3-Inch	2,369.000 LF		.		.
1740	652.0405 Conduit Reinforced Thermosetting Resin 2-Inch	350.000 LF		.		.
1750	652.0610 Conduit Special 2 1/2-Inch	275.000 LF		.		.
1760	652.0700.S Install Conduit into Existing Item	2.000 EACH		.		.
1770	652.0800 Conduit Loop Detector	4,150.000 LF		.		.
1780	653.0135 Pull Boxes Steel 24x36-Inch	6.000 EACH		.		.
1790	653.0140 Pull Boxes Steel 24x42-Inch	26.000 EACH		.		.
1800	653.0222 Junction Boxes 18x12x6-Inch	4.000 EACH		.		.

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CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1810	653.0905 Removing Pull Boxes	23.000 EACH		.		.
1820	654.0101 Concrete Bases Type 1	14.000 EACH		.		.
1830	654.0110 Concrete Bases Type 10	4.000 EACH		.		.
1840	654.0113 Concrete Bases Type 13	2.000 EACH		.		.
1850	654.0217 Concrete Control Cabinet Bases Type 9 Special	2.000 EACH		.		.
1860	655.0230 Cable Traffic Signal 5-14 AWG	982.000 LF		.		.
1870	655.0240 Cable Traffic Signal 7-14 AWG	1,783.000 LF		.		.
1880	655.0260 Cable Traffic Signal 12-14 AWG	2,473.000 LF		.		.
1890	655.0280 Cable Traffic Signal 19-14 AWG	688.000 LF		.		.
1900	655.0515 Electrical Wire Traffic Signals 10 AWG	8,828.000 LF		.		.
1910	655.0525 Electrical Wire Traffic Signals 6 AWG	688.000 LF		.		.

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CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1920	655.0700 Loop Detector Lead In Cable	13,827.000 LF		.		.
1930	655.0800 Loop Detector Wire	13,594.000 LF		.		.
1940	656.0200 Electrical Service Meter Breaker Pedestal (location) 01. CB1 - STH 181 & CTH E	LUMP	LUMP			.
1950	656.0200 Electrical Service Meter Breaker Pedestal (location) 02. Temporary STH 181 & CTH E EB Ramps	LUMP	LUMP			.
1960	657.0100 Pedestal Bases	14.000 EACH		.		.
1970	657.0405 Traffic Signal Standards Aluminum 3.5-FT	2.000 EACH		.		.
1980	657.0420 Traffic Signal Standards Aluminum 13-FT	4.000 EACH		.		.
1990	657.0425 Traffic Signal Standards Aluminum 15-FT	2.000 EACH		.		.
2000	657.0430 Traffic Signal Standards Aluminum 10-FT	6.000 EACH		.		.
2010	657.1345 Install Poles Type 9	4.000 EACH		.		.

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CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2020	657.1355 Install Poles Type 12	2.000 EACH		.		.
2030	657.1530 Install Monotube Arms 30-FT	4.000 EACH		.		.
2040	657.1545 Install Monotube Arms 45-FT	2.000 EACH		.		.
2050	657.6005.S Anchor Assemblies Light Poles on Structures	4.000 EACH		.		.
2060	658.0110 Traffic Signal Face 3-12 Inch Vertical	19.000 EACH		.		.
2070	658.0115 Traffic Signal Face 4-12 Inch Vertical	5.000 EACH		.		.
2080	658.0215 Backplates Signal Face 3 Section 12-Inch	19.000 EACH		.		.
2090	658.0220 Backplates Signal Face 4 Section 12-Inch	5.000 EACH		.		.
2100	658.0416 Pedestrian Signal Face 16-Inch	12.000 EACH		.		.
2110	658.0500 Pedestrian Push Buttons	14.000 EACH		.		.
2120	658.0600 Led Modules 12-Inch Red Ball	18.000 EACH		.		.

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CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2130	658.0605 Led Modules 12-Inch Yellow Ball	18.000 EACH		.		.
2140	658.0610 Led Modules 12-Inch Green Ball	18.000 EACH		.		.
2150	658.0615 Led Modules 12-Inch Red Arrow	6.000 EACH		.		.
2160	658.0620 Led Modules 12-Inch Yellow Arrow	10.000 EACH		.		.
2170	658.0625 Led Modules 12-Inch Green Arrow	7.000 EACH		.		.
2180	658.0635 Led Modules Pedestrian Countdown Timer 16-Inch	12.000 EACH		.		.
2190	658.5069 Signal Mounting Hardware (location) 01. STH 181 & CTH E	LUMP	LUMP			.
2200	661.0200 Temporary Traffic Signals for Intersections (location) 01. STH 181 & CTH E WB Ramps	LUMP	LUMP			.
2210	661.0200 Temporary Traffic Signals for Intersections (location) 02. STH 181 & CTH E EB Ramps	LUMP	LUMP			.
2220	661.0300 Generators	4.000 DAY		.		.

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CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2230	670.0100 Field System Integrator	LUMP	LUMP			.
2240	670.0200 ITS Documentation	LUMP	LUMP			.
2250	671.0112 Conduit HDPE 1-Duct 2-Inch	3,880.000 LF		.		.
2260	671.0212 Conduit HDPE Directional Bore 1-Duct 2-Inch	1,220.000 LF		.		.
2270	673.0105 Communication Vault Type 1	9.000 EACH		.		.
2280	678.0036 Install Fiber Optic Cable Outdoor Plant 36-CT	6,495.000 LF		.		.
2290	678.0200 Fiber Optic Splice Enclosure	3.000 EACH		.		.
2300	678.0300 Fiber Optic Splice	84.000 EACH		.		.
2310	678.0400 Fiber Optic Termination	12.000 EACH		.		.
2320	678.0500 Communication System Testing	LUMP	LUMP			.
2330	690.0150 Sawing Asphalt	1,872.000 LF		.		.

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CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2340	690.0250 Sawing Concrete	6,045.000 LF		.		.
2350	715.0415 Incentive Strength Concrete Pavement	970.000 DOL	1.00000		970.00	
2360	715.0502 Incentive Strength Concrete Structures	6,630.000 DOL	1.00000		6630.00	
2370	ASP.1T0A On-the-Job Training Apprentice at $5.00/HR	3,600.000 HRS	5.00000		18000.00	
2380	ASP.1T0G On-the-Job Training Graduate at $5.00/HR	2,000.000 HRS	5.00000		10000.00	
2390	SPV.0060 Special 01. Pavement Marking Arrows Grooved Preformed Thermoplastic Type 2	18.000 EACH		.		.
2400	SPV.0060 Special 02. Pavement Marking Arrows Grooved Preformed Thermoplastic Type 3	2.000 EACH		.		.
2410	SPV.0060 Special 03. Pavement Marking Words Grooved Preformed Thermoplastic	15.000 EACH		.		.
2420	SPV.0060 Special 04. Adjust Sanitary Sewer Manholes	24.000 EACH		.		.
2430	SPV.0060 Special 05. Internal Sanitary Manhole Seal	24.000 EACH		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2440	SPV.0060 Special 06. Adjusting Water Boxes	55.000 EACH		.		.
2450	SPV.0060 Special 07. Landmark Reference Monument Special	7.000 EACH		.		.
2460	SPV.0060 Special 08. Adjusting TES Manhole Covers	16.000 EACH		.		.
2470	SPV.0060 Special 09. 4' Diameter Manhole Type TES	2.000 EACH		.		.
2480	SPV.0090 Special 01. Sawing Curb Head	200.000 LF		.		.
2490	SPV.0090 Special 02. 4-Duct Conduit, Cement Encased, 4-Inch Rigid Nonmetallic Conduit DB-60	518.000 LF		.		.
2500	SPV.0090 Special 03. Removing Existing Timber Piling	840.000 LF		.		.
2510	SPV.0090 Special 04. Railing Tubular Steel Galvanized Pedestrian R-40-604	231.000 LF		.		.
2520	SPV.0090 Special 05. Railing Tubular Steel Galvanized Pedestrian R-40-605	206.000 LF		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2530	SPV.0090 Special 06. Pavement Marking Grooved Preformed Thermoplastic Stop Line 18-Inch	754.000 LF		.		.
2540	SPV.0090 Special 07. Pavement Marking Grooved Preformed Thermoplastic Crosswalk 6-Inch	3,135.000 LF		.		.
2550	SPV.0090 Special 08. Concrete Curb & Gutter 30-Inch (Modified)	2,923.000 LF		.		.
2560	SPV.0090 Special 09. Concrete Curb & Gutter 30-Inch (HMA Overlay)	528.000 LF		.		.
2570	SPV.0090 Special 10. Longitudinal Joint Repair	1,500.000 LF		.		.
2580	SPV.0105 Special 01. Remove Traffic Signals (STH 181 & CTH E)	LUMP	LUMP			.
2590	SPV.0105 Special 02. Remove Loop Detector Wire and Lead- In Cable, STH 181 & W. Villard Ave	LUMP	LUMP			.
2600	SPV.0105 Special 03. Remove Loop Detector Wire and Lead- In Cable, STH 181 & Fond Du Lac Ave	LUMP	LUMP			.
2610	SPV.0105 Special 04. Remove Loop Detector Wire and Lead- In Cable, STH 181 & CTH E	LUMP	LUMP			.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2620	SPV.0105 Special 05. Remove Loop Detector Wire and Lead- In Cable, STH 181 & Florist Ave	LUMP	LUMP			.
2630	SPV.0105 Special 08. Transporting Traffic Signal Materials, STH 181 & CTH E	LUMP	LUMP			.
2640	SPV.0105 Special 09. Install Fiber Optic Communications in Cabinet, STH 181 & W. Villard Ave	LUMP	LUMP			.
2650	SPV.0105 Special 10. Install Fiber Optic Communications in Cabinet, STH 181 & Fond Du Lac Ave	LUMP	LUMP			.
2660	SPV.0105 Special 11. Install Fiber Optic Communications in Cabinet, STH 181 & CTH E	LUMP	LUMP			.
2670	SPV.0105 Special 12. Remove Light Pole & Reconnect Lighting Circuit	LUMP	LUMP			.
2680	SPV.0105 Special 13. Metalizing B-40-766	LUMP	LUMP			.
2690	SPV.0105 Special 14. Concrete Pavement Joint Layout	LUMP	LUMP			.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2700	SPV.0105 Special 15. Transport & Install Traffic Signal Cabinet Materials, STH 181 & CTH E	LUMP	LUMP			.
2710	SPV.0105 Special 16. Transport & Install State Furnished Radar Detection System, STH 181 & CTH E	LUMP	LUMP			.
2720	SPV.0165 Special 01. Wall Concrete Panel Mechanically Stabilized Earth **P**	5,487.000 SF		.		.
2730	SPV.0195 Special 01. HMA Pavement 3 MT 58-28 S 3% VA Regression Special	5,557.000 TON		.		.
2740	SPV.0195 Special 02. HMA Pavement 4 MT 58-28 S 3% VA Regression Special	4,384.000 TON		.		.
	SECTION 0001 TOTAL					.
	TOTAL BID					.

PLEASE ATTACH SCHEDULE OF ITEMS HERE