HIGHWAY WORK PROPOSAL

Proposal Number: Ø 7

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

COUNTY	STATE PROJECT ID	FEDERAL PROJECT ID	PROJECT DESCRIPTION	HIGHWAY
Racine	1033-02-72	WISC 2014 041	N-S Freeway STH 20 Interchange Mainline & Ramps	IH 94

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, $ 660,000.00 Payable to: Wisconsin Department of Transportation	Attach Proposal Guaranty on back of this PAGE.
Bid Submittal Due Date: February 11, 2014 Time (Local Time): 9:00 AM	Firm Name, Address, City, State, Zip Code **SAMPLE** **NOT FOR BIDDING PURPOSES**
Contract Completion Time November 24, 2015	
Assigned Disadvantaged Business Enterprise Goal 12%	This contract is subject to 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 Removals, grading, base aggregate, HMA pavement, concrete pavement, concrete barrier wall, retaining wall structures, bridge structures, storm sewer, culverts, erosion control, permanent signing, FTMS, traffic control, pavement markings.	
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 2007 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://www.dot.wisconsin.gov/business/engrserv/bid-letting-information.htm. 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://www.dot.wisconsin.gov/business/engrserv/bid-letting-information.htm 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.

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://www.dot.wisconsin.gov/business/engrserv/bid-letting-information.htm**. 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.

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SPECIAL PROVISIONS

1. General.

Perform the work under this construction contract for Project 1033-02-72, IH 94, N-S Freeway, STH 20 Interchange, Mainline/Ramps, located in Racine 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, 2014 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 (20130615)

2. Scope of Work.

The work under this contract shall consist of removals, grading, base aggregate, HMA pavement, concrete pavement, concrete barrier wall, retaining wall structures, bridge structures, storm sewer, culverts, erosion control, permanent signing, FTMS, traffic control, pavement markings, restoration 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.

The contract time for completion is based on an expedited work schedule and may require extraordinary forces and equipment.

Provide an individual to serve as the contractor's sole point of contact for field utility coordination and communication for the duration of the project.

Interim Completion of Work July 21, 2014
Complete all of the work necessary to complete all work within Stage 2A and reopen the northbound IH 94 entrance and exit ramps prior to 12:01 AM on July 22, 2014.

Supplement standard spec 108.11 as follow:

If the contractor fails to complete all of the work necessary to complete all work within Stage 2A and reopen the northbound IH 94 entrance and exit ramps prior to 12:01 AM on July 22, 2014, the department will assess the contractor $1690 in interim liquidated damages for each calendar day that the roadway remains closed after 12:01 AM, July 22, 2014. An entire calendar day will be charged for any period of time within a calendar day that northbound IH 94 entrance and exit ramps are not fully open to traffic beyond 12:01 AM.

Interim Completion of Work November 25, 2014
Complete all of the work necessary to complete all work within Stage 2 and reopen all IH 94 eastbound and westbound lanes prior to 12:01 AM on November 26, 2014.

Supplement standard spec 108.11 as follow:

If the contractor fails to complete all of the work necessary to complete all work within Stage 2 and reopen all IH 94 eastbound and westbound lanes prior to 12:01 AM on November 26, 2014, the department will assess the contractor $1690 in interim liquidated damages for each calendar day that the roadway remains closed after 12:01 AM on November 26, 2014. An entire calendar day will be charged for any period of time within a calendar day that eastbound and westbound IH 94 is not fully open to traffic beyond 12:01 AM.

Interim Completion of Work June 2, 2015
Complete all of the work necessary to complete all work within Stage 4A and reopen the southbound IH 94 entrance and exit ramps prior to 12:01 AM on June 3, 2015.

Supplement standard spec 108.11 as follow:

If the contractor fails to complete all of the work necessary to complete all work within Stage 4A and reopen the southbound IH 94 entrance and exit ramps prior to 12:01 AM on June 3, 2015, the department will assess the contractor $1690 in interim liquidated damages for each calendar day that the roadway remains closed after 12:01 AM on June 3, 2015, that southbound IH 94 entrance and exit ramps are not fully open to traffic.

The department will not grant time extensions to the interim completion dates specified above for the following:

1. Severe weather as specified in standard spec 108.10.2.2.
2. Labor disputes that are not industry wide.
3. Delays in material deliveries.

If contract time expires before completing all work on all contract projects, additional liquidated damages will be affixed in accordance to standard spec 108.11.

The contractor is advised that there may be multiple mobilizations for such items as traffic control, temporary pavement marking, pavement marking, erosion control, salvaged topsoil, asphaltic surface temporary, seeding/sodding, mulching, fertilizer, temporary seeding, drainage items and other incidental items related to staging required to complete the work under this contract. No additional payment will be made by the department for said mobilizations.

A Schedule of Operations
The department anticipates that the schedule for each stage shall be as follows below, unless modifications are approved in writing by the engineer.

Anticipated schedule:

Stage 1A:	March 31, 2014 to April 13, 2014
Stage 1B:	April 14, 2014 to April 27, 2014
Stage 2A:	April 28, 2014 to July 21, 2014
Stage 2B:	July 22, 2014 to November 25, 2014
Stage 3:	November 26, 2014 to March 1, 2015
Stage 4A:	March 2, 2015 to June 2, 2015
Stage 4B:	June 3, 2015 to November 24, 2015

Project 1033-02-72:
(STH 20 Interchange – IH 94 Mainline and Ramps)

Stage 1A activities shall include construction of:

- Temporary widening, paving, and drainage modifications along outside of southbound IH 94
- Removing existing rumble strips and repairing outside shoulder along southbound IH 94

Keep IH 94 open to three lanes of through traffic for northbound IH 94 and two lanes for southbound IH 94, with the southbound IH 94 outside lane closed to traffic. Keep the STH 20 Interchange ramps open to traffic. Keep STH 20 and CTH C open to traffic. Keep the East and West Frontage Roads open to traffic.

Stage 1B activities shall include construction of:

- Complete the widening of southbound IH 94.
- Construct temporary crossovers on IH 94.
- Removing existing rumble strips and repairing inside shoulder along southbound IH 94.

Keep IH 94 open to two lanes of through traffic for northbound IH 94, with the northbound inside through lane closed. Keep two lanes for southbound IH 94, with the southbound IH 94 outside lane closed to traffic. Keep the STH 20 Interchange ramps open to traffic. Keep STH 20 and CTH C open to traffic. Keep the East and West Frontage Roads open to traffic.

Stage 2A activities shall include construction of:

- IH 94 northbound lanes
- STH 20 Interchange northbound off ramp and northbound on ramp
- CTH C over IH 94
- Bridge B-51-130 IH 94 northbound over STH 20
- Bridge B-51-131 CTH C over IH 94
- Retaining Walls R-51-42 and R-51-43 at STH 20
- Retaining Walls R-51-44 and R-51-45 at CTH C

Keep IH 94 open to two-way traffic (two travel lanes in each direction) on the widened southbound lanes at all times. Construct all of STH 20 northbound ramps as shown in plans. Keep STH 20 open to traffic as shown in the plans. northbound Ramps are closed during construction. CTH C is closed at structure for construction.

Stage 2B activities shall include construction of:

- IH 94 northbound lanes
- STH 20 Interchange northbound exit ramp and northbound entrance ramp are completed
- CTH C over IH 94
- Bridge B-51-130 IH 94 northbound over STH 20
- Bridge B-51-131 CTH C over IH 94
- Retaining Walls R-51-42 and R-51-43 at STH 20
- Retaining Walls R-51-44 and R-51-45 at CTH C
- Constrcut culverts at East Frontage Road

Keep IH 94 open to two-way traffic (two travel lanes in each direction) on the widened southbound lanes at all times. northbound ramp are completed and reopened to traffic. Keep STH 20 and the STH 20 ramps open to traffic as shown in the plans. East Frontage Road shall be closed temporarily for 5 days as shown in the plans.

Stage 3 shall consist of winter shutdown.

Reopen northbound IH 94 to three travel lanes on new pavement and southbound IH 94 to three travel lanes on existing pavement over the winter. Remove all construction equipment from the roadways and medians. Reopen all ramps and side roads to traffic. Suspend construction work and do not allow lane closures between November 26, 2014 and April 1, 2015 without written consent from the engineer.

Stage 4A activities shall include construction of:

- IH 94 southbound lanes
- STH 20 Interchange southbound off ramp and southbound on ramp
- Bridge B-51-129 IH 94 northbound over STH 20
- Retaining Walls R-51-42 and R-51-43 at STH 20
- Sign Structure S-51-27

Keep IH 94 open to two-way traffic (two travel lanes in each direction) on the widened northbound lanes at all times. southbound ramps are closed to traffic for construction as shown in plans. Keep STH 20 open to traffic as shown in the plans.

Stage 4B activities shall include construction of:

- IH 94 southbound lanes
- STH 20 Interchange southbound exit ramp and southbound entrance ramp are completed
- Bridge B-51-129 IH 94 northbound over STH 20
- Retaining Walls R-51-42 and R-51-43 at STH 20
- Sign Structure S-51-27

Keep IH 94 open to two-way traffic (two travel lanes in each direction) on the widened northbound lanes at all times. southbound ramps are opened to traffic as shown in plans. Keep STH 20 open to traffic as shown in the plans.

B Definitions

The following definitions shall apply to this contract:

Peak Travel Periods:
5:30 AM to 9:00 AM Monday, Tuesday, Wednesday, Thursday, and Friday
2:00 PM to 7:00 PM Monday, Tuesday, Wednesday, and Thursday
12:00 PM to 7:00 PM Friday
10:00 AM to 7:00 PM Saturday and Sunday

Off-Peak Hours:
9:00 AM to 2:00 PM Monday, Tuesday, Wednesday, and Thursday
9:00 AM to 12:00 PM Friday
7:00 PM to 9:30 PM Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, and Saturday
8:00 AM to 10:00 AM Saturday and Sunday

Night-time Work Hours:
9:30 PM to 5:30 AM (Sunday PM to Monday AM, Monday PM to Tuesday AM, Tuesday PM to Wednesday AM, Wednesday PM to Thursday AM, Thursday PM to Friday AM)
9:30 PM to 8:00 AM (Friday PM to Saturday AM, Saturday PM to Sunday AM)

Full Freeway Closure Work Hours
11:00 PM to 5:00 AM (Sunday PM to Monday AM, Monday PM to Tuesday AM, Tuesday PM to Wednesday AM, Wednesday PM to Thursday AM, Thursday PM to Friday AM)

SEF-IH-94 North-South Rev. 12_1030

Lane:
A lane is defined as 11-feet wide unless otherwise shown on the plans.

Freeway:
Traveled lanes of IH 94.

Local Street:
Traveled lanes of the East and West Frontage Roads.

Closure:
Closure is disruption of the flow of traffic in a basic lane or ramp, including any obstruction and erection/removal of lane closure traffic control. When referring to shoulders, it is the narrowing of a usable freeway shoulder to a dimension less than 8-foot clear width.

Full Closure of a Freeway Roadway:
Full closure is complete closure of a directional roadway on an interstate route for any duration longer than 15 minutes. A full closure and detour will be allowed only as specified in this article (Prosecution and Progress) under Freeway Work Restrictions.

Short Term Closure:
A roadway closure that is a maximum of 3 calendar days

C Freeway Work Restrictions
Follow plan details for closures. If plan details are not provided in the traffic control plan, or for any traffic control change requests, furnish plans for review by the engineer and Bill Wondrachek, Regional Workzone Operations Engineer, (262) 548-5669 a minimum of one week prior to the implementation so that approval, or disapproval, is obtained at least three days prior to roadway, lane, or ramp closures.

No additional lane closures from that shown in the plans are allowed two hours prior to and two hours after a Milwaukee Brewer home game against the Chicago Cubs or Chicago White Sox.

Do not, at any time, conduct construction operations in the median area and adjacent outside shoulder area of the freeway at the same time without permission of the engineer.

Restrict work on open freeway roads and ramps to working in closed shoulders or closed lanes as allowed by the plans or engineer. Provide and utilize temporary access roads and ramps to access work zones. Construct temporary access incidental to other items of work. Access into the work zones from the freeway roads will be allowed during Night Time hours and Off-Peak hours, subject to approval by the engineer, if operations can be safely accomplished and do not result in non-construction traffic entering the work zones. Access from ramps will be allowed as shown in the plans or as modified with written approval from the engineer. Exiting the work zones directly onto freeway roads will be allowed only when operations do not obstruct or slow traffic on the freeway.

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

Park or store equipment and material only at work sites approved by the engineer.

Where lane closure(s) has been permitted by the engineer in conjunction with the contractor's work schedule, make a continuous effort to complete the work with said lane closure(s) in a timely manner.

The contract time for completion is based on an expedited work schedule and may require extraordinary forces and equipment.

Work Zone Ingress/Egress.
Provide engineer approved signage and parallel deceleration and acceleration lanes for freeway access into and out of the work zones at locations approved by the engineer.
SEF Rev. 100813

D Winter Maintenance
Racine County will perform snow removal operations for freeway and ramp lanes that are open to traffic. The Village of Mount Pleasant and Town of Yorkville will perform snow removal operations for local streets that are open to traffic. Provide for snow removal in those areas closed to traffic as required to facilitate safe construction operations and as required to eliminate snow melt run-off from crossing active roadways. Provide Racine County Highway Maintenance and Racine County Sheriff's Department with a 24-hour emergency contact number for when maintenance is required.
SEF Rev. 12_0330

Traffic Control Deficiency Response Time Penalty

Supplement standard spec 643.3.1(7) with the following

Upon receiving electronic notification from the engineer, clean, repair or replace all noted traffic control devices not performing as intended to the satisfaction of the engineer within 2 hours. Failure to clean, repair or replace each required traffic control item within the time limits specified above will result in daily monetary deductions of $500 for each

24-hour period (or portion thereof starting 2 hours after time of notification) in which the traffic control deficiency exists.
SEF 13_0425

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.

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

- Hoods Creek, located at IH 94 Station 822+65.

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

4. Traffic.

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

Maintain access at all times to all driveways located along the IH 94 frontage roads, and all the other side roads within the project limits unless otherwise noted in the plans. Notify the property occupant 5 days in advance of the driveway reconstruction to verify closure or staged driveway construction methods.

Coordinate traffic requirements under this contract with other adjacent and concurrent department or local municipality projects. Implementing and coordinate with other contractors all traffic control as shown on the plans. Modifications to the traffic control plan may be required by the engineer to be safe and consistent with adjacent work by others.

Unless detailed in the plans, do not begin or continue any work that closes traffic lanes outside the allowed time periods specified in this article.

Do not store equipment, vehicles, or materials on adjacent streets beyond the project limits without specific approval of the engineer.

Contractor Coordination
Hold weekly scheduling meetings to discuss the near term schedule activities, address any long-term schedule issues, and discuss any relevant technical issues. Develop a rolling three week schedule identifying the previous week worked and a two week "look ahead". Provide sufficient detail to include actual and planned activities and all the subcontractors for offsite and construction activities, addressing all activities including ramp and lane closure schedules to be performed and identifying issues requiring engineering action or input. Submit plans for all traffic control for review by the engineer and approval a minimum of one week prior to implementation.

Traffic Meetings and Traffic Control Scheduling
On a to-be-determined (TBD) day of the week, by 10:00 AM submit a detailed proposed 2-week look-ahead traffic closure schedule to the engineer. Type the detailed proposed 2-week look-ahead closure schedule into an excel spreadsheet provided by the engineer. Enter information such as closure dates, duration, work causing the closure and detours to be used. Also enter information such as ongoing long-term closures, emergency contacts and general 2-month look-ahead closure information into the excel spreadsheet.

Meet with the engineer between 11:00 AM - 11:30 AM on the TBD day of the week to discuss and answer questions on the proposed schedule. Edit, delete and add closures to the detailed proposed 2-week look-ahead schedule, as directed by the engineer, so that proposed closures meet specification requirements. Other edits, deletions or additions unrelated to meeting specification requirements may also be agreed upon between the contractor and engineer during the 11:00 AM meeting. Upon editing, deleting and adding closures to the proposed schedule due to discussion from the 11:00 AM meeting, e-mail the detailed proposed 2-week look-ahead closure schedule to the project's list of stakeholders, including the Statewide Traffic Operations Center as provided by the engineer.

On the TBD day of the week at 2:00 PM, or as scheduled by the engineer, attend a weekly traffic meeting. The meeting will bring local agencies, project stakeholders, owner managers, owner engineers, contractors, document control and construction engineering personnel together to discuss traffic staging, closures and general impacts. Upon obtaining feedback from the meeting attendees, edit, delete and add information to the detailed two-week look-ahead closure schedule, as needed. Submit the revised two-week look-ahead to the engineer.

Obtain approval from the engineer for any mid-week changes to the closure schedule. Revise the two-week look-ahead as required and obtain engineer approval.

The contractor's weekly schedule of operations for all actual and anticipated work shall include roadway, lane and ramp closures for the upcoming week beginning on Sunday, 12:01 AM and ending on the following Saturday, 11:59 PM. This information will be reviewed by the department. Modifications to this schedule will be accepted until no later than noon on Thursdays. The final weekly schedule information will be provided to the local media on each Friday at 9:00 AM by department public information personnel.
SEF Rev. 091204

Advanced Notification
Provide the following minimum advance notification to the engineer for incorporation into the Wisconsin Lane Closure System.

Lane closures	3 business days
Service Ramp closures	3 business days
Extended closure hours	3 business days
System Ramp closures	7 calendar days
Local Street openings/closings	7 calendar days
Project Start	14 calendar days
Full Freeway closures	14 calendar days
Construction stage changes	14 calendar days
Detours	14 calendar days

Notify the engineer and WisDOT Region Work Zone Engineer at (262) 548-5669 if there are any changes in the schedule, early completions, or cancellations of scheduled work.

Notify and request assistance 14 days in advance from the Racine County Sheriff's department for freeway or ramp closures.

Ramp Closures
All entrance and exit ramps shall be posted three business days in advance of their closure with dates and time of closure.

Place a portable changeable message sign before the previous open entrance or exit ramp to advise traffic about the closure of the specific entrance or exit ramp.

Rolling Closure
Short term freeway mainline rolling closures may be allowed for a maximum of 15 minutes for the removal and erection of sign structures, equipment moves across the road, or other required work as determined by the engineer. The department will allow short term rolling closures only between 2:00 AM and 4:00 AM and they may only be performed by freeway law enforcement.

Coordinate these closures with freeway law enforcement 14 days in advance after obtaining approval from the engineer. Present the scheduled time for the short term rolling closure at the weekly traffic meeting a minimum of one week prior to the closure.
SEF Rev. 12_0427

Staging
Perform construction operations on IH 94 in stages as shown in the traffic control/construction staging plan. The construction stages are:

Project 1033-02-72:
(STH 20 Interchange – IH 94 Mainline and Ramps)

Stage 1A:
Keep IH 94 open to three lanes of through traffic for northbound IH 94 and two lanes for southbound IH 94, with the southbound IH 94 outside lane closed to traffic. Keep the STH 20 Interchange ramps open to traffic. Keep STH 20 and CTH C open to traffic. Keep the East and West Frontage Roads open to traffic.

Stage 1B:
Keep IH 94 open to two lanes of through traffic for northbound IH 94, with the northbound inside through lane closed. Keep two lanes for southbound IH 94, with the southbound IH 94 outside lane closed to traffic. Keep the STH 20 Interchange ramps open to traffic. Keep STH 20 and CTH C open to traffic. Keep the East and West Frontage Roads open to traffic.

Stage 2A:
Keep IH 94 open to two-way traffic (two travel lanes in each direction) on the widened southbound lanes at all times. Keep STH 20 open to traffic as shown in the plans. northbound Ramps are closed during construction. northbound ramp traffic is detoured using CTH K and STH 11. CTH C is detoured to STH 20.

Stage 2B:
Keep IH 94 open to two-way traffic (two travel lanes in each direction) on the widened southbound lanes at all times. northbound ramps are reopened to traffic. Keep STH 20 and the STH 20 ramps open to traffic as shown in the plans. East Frontage Road shall be closed temporarily for 5 days as shown in the plans. East Frontage Road is detoured to West Frontage Road at STH 11.

Stage 3:
All roadways open to traffic.

Stage 4A:
Keep IH 94 open to two-way traffic (two travel lanes in each direction) on the widened northbound lanes at all times. southbound ramps are closed to traffic. Keep STH 20 open to traffic as shown in the plans. southbound ramp traffic is detoured to CTH K and STH 11.

Stage 4B:
Keep IH 94 open to two-way traffic (two travel lanes in each direction) on the widened northbound lanes at all times. southbound ramps are opened to traffic as shown in plans. Keep STH 20 open to traffic as shown in the plans.

5. Lane Rental Assessment.

A General

This contract includes a lane rental charge procedure under which a rental charge is assessed for each freeway shoulder closure, each freeway lane closure, each service ramp closure, each system ramp closure, and each full closure of a directional freeway roadway from the time of notice to proceed until the project is complete. If a lane is obstructed at any time due to operations, it is considered a closure. The purpose of lane rental is to discourage unnecessary short term closures, especially during time periods outside night time hours.

A.1 Lane Rental Assessment Table

The hourly rental rate will be assessed for each shoulder closure, each freeway lane closure, each service ramp closure, each system ramp closure, and each full closure of a freeway roadway as follows:

Lane Rental Assessment Table								
Freeway Closure Type	Peak Hours		Weekday Off-Peak and Weekend Peak Hours		Weekend Off-Peak Hours		Night Time Hours	
	Hourly Rental	Closure Hour Credits	Hourly Rental	Closure Hour Credits	Hourly Rental	Closure Hour Credits	Hourly Rental	Closure Hour Credits
Shoulder when at least 8 ft, shoulder is reduced to less than 8 ft.	$2,000	0	$400	72	$200	40	$20	320
Single Lane when 2 or more lanes next to closure are open to traffic	$20,000	0	$4,000	0	$2,000	0	$200	352
Single Lane when only 1 lane next to closure is open to traffic	$40,000	0	$8,000	0	$4,000	0	$400	0

Lane Rental Assessment Table								
Freeway Closure Type	Peak Hours		Weekday Off-Peak and Weekend Peak Hours		Weekend Off-Peak Hours		Night Time Hours	
	Hourly Rental	Closure Hour Credits	Hourly Rental	Closure Hour Credits	Hourly Rental	Closure Hour Credits	Hourly Rental	Closure Hour Credits
2 Adjacent Lanes when 1 or 2 basic lanes next to closure are open to traffic	$40,000	0	$8,000	63	$4,000	35	$400	306
Service Ramp	$10,000	0	$2,000	0	$1,000	0	$100	0
System Ramp	$40,000	0	$8,000	0	$4,000	0	$400	0
Full Roadway Closure	$80,000	0	$16,000	0	$8,000	0	$800	95

The monetary amount represents the average hourly cost of the interference and inconvenience to the road user for each closure. Lane rental in excess of the maximum credited hours specified will be assessed. The assessment will be the total number of hours that each shoulder, lane, roadway, or ramp closure exceeds the "closure hour credits", multiplied by the "hourly rental" rate as defined in the Lane Rental Assessment Table.

The rental assessment will be 15-minute increments for closure time periods equal to or less than 60 minutes in length. All shoulder, lane, roadway, or ramp closure event durations will be rounded up or down to the nearest quarter hour for the purposes of this computation except where freeway shoulders or lanes of traffic and/or ramps are not opened to traffic by the specified times, as noted in the article Prosecution and Progress under Freeway Work Restrictions. Deductions will be made from the monies based on the hourly rental rate for the closure type and hourly definition that the non-compliant closure occurs. The deduction will be made based on the applicable rate for any and all closures whether work is being performed or not. The engineer, or designated representative, will be the sole authority in determining time period length for the lane rental charge.

Lane rental will not be assessed for closures noted in the plans under the title "Traffic Control/Construction Stage XX". Additional lane or ramp closures shown beyond those in the plans under the title "Traffic Control/Construction Stage XX" will be assessed if the closures exceed the credited hours.

Lane rental will not be assessed for ramp closures noted in the plans under the title "Traffic Control/Construction Stage XX" if the plans and construction operations already include such closures. Additional ramp closures shown beyond those in the plans under

the title "Traffic Control/Construction Stage XX" will be assessed if the closures exceed the credited hours.

Lane rental will not be assessed for closure of auxiliary lanes noted in the plans under the title "Traffic Control/Construction Stage XX" if the plans and construction operations already include such closures. However, when closure of an auxiliary lane requires the closure of a ramp, then lane rental will be assessed for each service and/or system ramp closure. Additional ramp closures shown beyond those in the plans under the title "Traffic Control/Construction Stage XX" will be assessed if the closures exceed the credited hours.

Lane rental for shoulder shall only apply to shoulders along the traveled way of IH 94 westbound and IH 94 eastbound. A shoulder is considered closed when a paved shoulder area with 8 feet or more of width is reduced to a dimension less than 8-feet wide by contractor's equipment or traffic control devices, excluding spot locations of advance traffic control devices "in use" for other lane or ramp closures. Lane rental for shoulder shall not apply to shoulders along ramps or along closed traffic lane(s).

Lane rental will not be assessed for maintenance of temporary surfaces, if in the opinion of the engineer, maintenance of the damaged pavement was completed expeditiously, and the lack of maintenance would cause safety concerns to the traveling public.

Lane rental will not be assessed for closures due to crashes, accidents or emergencies.

A1.1 Lane Rental Assessment and Liquidated Damages
On those days when charged with the liquidated damage fee; and a shoulder, ramp or lane closure is in effect to facilitate construction operations that are exceeding credited hours; both the lane rental assessment and the liquidated damages fee will be charged.

B (Vacant)

C (Vacant)

D Measurement
The department will assess Lane Rental Assessment by the dollar under the administrative bid item Failing to Open Road to Traffic. The charge will be the total dollar amount of each freeway closure type category where the total number of hours that each shoulder, lane, ramp, or roadway closure exceeds the project maximum number of "closure hour credits," as defined in the Lane Rental Assessment Table, multiplied by the "hourly rental" as defined in the Lane Rental Assessment Table. The Lane Rental Assessment total will not be reduced or offset with freeway closure type categories where the total closure hours were less than "closure hour credits."

Lane Rental Assessment will be in effect from the time of notice to proceed until such time that the project is complete.

6. Holiday Work Restrictions.

Do not perform work on, nor haul materials of any kind along or across any portion of the highway carrying IH 94 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 23, 2014 to 6:00 AM Tuesday, May 27, 2014 for Memorial Day;
- From noon Thursday, July 3, 2014 to 6:00 AM Monday, July 7, 2014 for Independence Day;
- From noon Friday, August 29, 2014 to 6:00 AM Tuesday, September 2, 2014 for Labor Day;
- From noon Wednesday, November 26, 2014 to 6:00 AM Monday, December 1, 2014 for Thanksgiving;
- From noon Friday, May 22, 2015 to 6:00 AM Tuesday, May 26, 2015 for Memorial Day;
- From noon Friday, July 3, 2015 to 6:00 AM Monday, July 6, 2015 for Independence Day;
- From noon Friday, September 4, 2015 to 6:00 AM Tuesday, September 8, 2015 for Labor Day;
- From noon Wednesday, November 25, 2015 to 6:00 AM Monday, November 30, 2015 for Thanksgiving.

107-005 (20050502)

7. Utilities.

This contract comes under the provisions of Administrative Rule TRANS 220.

Additional information regarding recently relocated utility facilities may be available on permits issued to the utility companies. These permits can be viewed at the Region Office during normal working hours. Contact WisDOT SE Freeways Utility Coordinator Rabi Bista at (414)-750-7224 for further information.

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

Some utility work, as described below, is dependent on prior work being performed by the contractor at a specific site. Provide the engineer and the affected utility a good faith notice of when the utility is to start work at the site. Notice shall be given 14 to 16 calendar days in advance of when the site will be available to the utility. Follow up with a confirmation

notice to the engineer and the utility not less than 3 working days before the site will be ready for the utility to begin its work.

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

Utility companies will be performing utility work and adjustments within the limits and during the life of the project. The contractor shall cooperate and coordinate construction activities with these companies.

There may be abandoned utility facilities within the project limits. If a conflict with an abandoned utility facility is encountered, contact the appropriate utility owner/representative to coordinate construction activities and proper removal and disposal of said facility as necessary.

Utility working days shown herein are as defined in Wisconsin Administrative Code Chapter Trans 220.

Known utilities in the project area are as follows:

AT&T Corporation has an underground duct package running northerly along the west fence line of IH 94 from the southerly project limits, crossing STH 20 at Station 292+82, continuing northerly along the west fence line and crossing CTH C at Station 66+00 and continuing northerly to beyond the northerly project limits. This line will remain in place without adjustment.

Contact Rich Schrank, (414) 315-2027 of AT&T Corporation 7 days in advance to coordinate locations and any excavation near their facilities.

AT&T Wisconsin has communication facilities within the project limits at the following locations:

- An underground communications line beginning from beyond the southerly project limits running northerly along the west right-of-way of IH 94 to the south side of STH 20 where it turns northwesterly to beyond the westerly project limits. This line will remain in place without adjustment.
- An overhead communications line beginning at a pole located at Station 4890+38, 47’LT and running easterly along the north right-of-way of CTH C, crossing IH 94 at Station 891+34, and continuing easterly to beyond the easterly project limits. This line will remain in place without adjustment.
- An underground communications line beginning beyond the westerly project limits and running southeasterly along the north side of STH 20, crossing IH 94 at Station 862+96, and continuing southeasterly to beyond the easterly project limits. This line will remain in place without adjustment.

- An underground communications line beginning at a pedastal located at Station 296+81, 175' RT and running southeasterly along the south side of STH 20 and continuing southeasterly to beyond the easterly project limits. This line will remain in place without adjustment.

Contact Mike Toyek, (262) 636-0549, of AT&T Wisconsin 7 days in advance to coordinate locations and any excavation near their facilities.

Level 3 Communications has an underground duct package bundled with the previously described AT&T Corporation duct package along the west fence line of IH 94 throughout the project limits. This line will remain in place without adjustment.

Contact Mark Dechant, (414) 271-1128 office / (414) 426-1857 cell, of Level 3 Communications 7 days in advance to coordinate locations and any excavation near their facilities.

Village of Mount Pleasant has a sanitary sewer beginning at a manhole located at Station 295+48, 87' LT and then it runs southeasterly to beyond the easterly project limits. This line will remain in place without adjustment.

Contact Bill Sasse, (262) 554-8750 office, of Village of Mount Pleasant - Engineering 7 days in advance to coordinate locations and any excavation near their facilities.

TDS Metrocom has an underground communications line beginning beyond the westerly project limits and running easterly along the along the north right-of-way of CTH C, crossing IH 94 at Station 891+34, and continuing easterly to beyond the easterly project limits. This facility will remain in place without adjustment.

Contact Michael Johnson, (262) 754-3052 office / (262) 939-6355 cell, of TDS MetroCom 7 days in advance to coordinate locations and any excavation near their facilities.
or
Contact Patrick Yates, (608) 664-4391, of TDS Metrocom 7 days in advance to coordinate locations and any excavation near their facilities.

We Energies – Electric has underground and overhead electric facilities within the project limits at the folowing locations:

- An underground electric line beginning from beyond the southerly project limits running northerly along the west right-of-way of IH 94 to a pedestal located at Station 859+06, 222'LT. This line will remain in place without adjustment.
- An overhead electric line beginning at a pole located at Station 857+36, 222'LT and running easterly, crossing IH 94 at Station 857+36, and continuing easterly to a pole located at Station 857+36, 174'RT. This line will remain in place without adjustment.

- An overhead electric line beginning from beyond the westerly project limits and running easterly along the north right-of-way of CTH C, crossing IH 94 at Station 891+34, and continuing easterly to beyond the easterly project limits. This line will remain in place without adjustment.
- An overhead electric line beginning from beyond the southerly project limits running northerly along the east right-of-way of IH 94 to the north side of STH 20 to a pole located at Station 295+34, 156'LT, where it turns westerly to a pole located at Station 294+73, 105'LT and drops down to an elctrical cabinet. This line will remain in place without adjustment.
- An underground electric line running northerly along the east right-of-way of IH 94 to a pole located at Station 877+23, 202' RT. This line then rises up the pole and runs northerly overhead beyond the northerly project limits. This line will remain in place without adjustment.

Contact Michael Quinn, (262) 886-7027 office / (262) 939-4012 cell, of We Energies – Electric 7 days in advance to coordinate locations and any excavation near their facilities.

We Energies – Gas has underground gas facilities within the project limits at the folowing locations:

- An underground gas main beginning at Station 846+65, 217'LT running northerly along the west right-of-way of IH 94 to the north side of STH 20 where it tees into an existing gas main at Station 291+36, 87'LT. This line will remain in place without adjustment.
- An underground gas main beginning at Station 835+08, 226'RT running northerly along the east right-of-way of IH 94 to the north side of STH 20 where it tees into an existing gas main at Station 295+58, 73'LT. This line will remain in place without adjustment.
- An underground gas main beginning at Station Station 295+58, 73'LT running northerly along the east right-of-way of IH 94 and continuing northerly to beyond the northerly project limits. This line will remain in place without adjustment.
- An underground gas main beginning beyond the westerly project limits and running southeasterly along the north side of STH 20, crossing IH 94 at Station 863+00, and continuing southeasterly to beyond the easterly project limits. This line will remain in place without adjustment.

Contact Chris Degrave, (262) 939-9814, of We Energies – Gas 7 days in advance to coordinate locations and any excavation near their facilities.

WisDOT STOC has fiber optic communications lines in the previously described AT&T Corporation duct package along the west fence line of IH 94 throughout the project limits. This line will remain in place without adjustment.

Contact Jeff Madson, (414) 225-3723, of WisDOT - STOC 7 days in advance to coordinate locations and any excavation near their facilities.

Town of Yorkville - Sewer has existing underground sewer facilities within the project limits at the folowing locations:

- A 12" sanitary sewer beginning beyond the westerly project limits and running northeasterly, crossing IH 94 at Station 873+55, and and continuing northeasterly to beyond the easterly project limits. This line will remain in place without adjustment.
- A sanitary sewer beginning beyond the westerly project limits and running southeasterly along the north side of STH 20, crossing IH 94 at Station 863+28, and continuing southeasterly to a manhole located at Station 295+48, 87' LT. This line will remain in place without adjustment.

Contact Mark Madsen, (262) 634-5588, of Town of Yorkville - Sewer 7 days in advance to coordinate locations and any excavation near their facilities.

8. Other Contracts.

Coordinate your work in accordance to standard spec 105.5.

Modifications to the traffic control plan may be required by the engineer to be safe and consistent with adjacent work by others.

It is expected that routine maintenance by the city and county personnel may be required at certain times concurrently with the work being done under this contract.

The following contracts are anticipated to be under construction within the time period of this contract, unless otherwise indicated:

2014
IH 94 N-S Freeway, Racine Co. Mainline construction contract:
Project 1030-33-60, South Racine Co Line to Rawson Avenue Construct and Resurface.

Project 1120-11-86, IH 41 Conversion State Line to Green Bay, Russell Road - SCL Dodge County Signing, USH 41, Washington, Milwaukee, Racine and Kenosha Counties, Wisconsin under a department contract. Work under this contract is anticipated to be LET in March 2014 with an anticipated completion date of November 14, 2014. Work areas under contract 1120-11-86 fall within the physical limits of work under this contract. Coordinate activities in these areas with the 1120-11-86 contractor.

9. Environmental Protection and Erosion Control.

Supplement standard spec 107.18 with the following:

Blasting of piers or abutments for removal purposes will not be permitted. Removal of debris shall be in accordance to this provision. Disposal of debris shall be in accordance to standard spec 203.3.4.

Take adequate precautions to install and maintain necessary erosion and sediment control during grading and construction operations at curbs and gutters, and at other locations as determined by the engineer. Protect storm drain inlets and manholes at locations determined by the engineer with a filter fabric or equivalent barrier meeting accepted design criteria, standards, and specifications.

If dewatering is required, pump the water removed into a settling basin before it is allowed to reenter the storm/combined sewer system. The cost of settling basin(s) construction will be paid for as erosion bales and geotextile fabric Type FF. Maintenance, operation and removal of temporary settling basin(s) will be incidental to the cost of constructing the settling basin(s). It will not be paid for separately. The design of settling basin(s) shall be approved by the engineer.

Do not store equipment or material in areas that are within 10 feet of wetlands or existing waterways.

Do not use fertilizer in areas that are within 10 feet of wetlands or existing waterways.

Place stockpiled spoil material on an upland site an adequate distance from the stream and any open water created by excavation. Install silt fence between the spoil pile and excavation site and between any disturbed area and the waterway. Seed and mulch, or sod all disturbed areas as designated in the plans as soon as possible following construction. Leave the silt fence in place until the seeded area has produced sufficient grass cover to stabilize the area and thereby reduce the danger of site erosion.

Store all containers (drums of concrete curing agents, petroleum storage tanks, pressurized gas cylinders, etc.) in secure locations to avoid an attractive nuisance and to prevent vandalism, spills, and unwanted dumping. If abandoned containers are found, notify Mike Thompson, DNR (414) 263-8648 or the DNR Hotline (24hrs/day) (800) 943-0003 to report the incident.

Supplement standard spec 107.20 with the following:

Provide the Erosion Control Implementation Plan (ECIP) 14 days prior to the pre-construction conference. 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.

Apply finishing items or temporary seeding to all disturbed grading areas within 7 calendar days after grading work is completed. Topsoil graded areas, as designated by the engineer, immediately after grading has been completed within those areas. Seed and mulch, and fertilize all topsoiled areas within 7 calendar days after placement of topsoil.

Do not pump water from the construction site to a storm water conveyance without the water first passing through a sediment trap.

Construct temporary sediment traps at locations that do not interfere with construction operations.

Culvert pipe ditch checks for pipes at IH 94 Station 695+35 on UT-18 to Kilbourn Road Ditch and at IH 94 Station 822+65 on Hoods Creek shall be removed immediately after completion of the pipe work.

Replace standard spec 107.20(3) with the following:

Prepare and submit an Erosion Control Implementation Plan (ECIP) for the project, including borrow sites and material disposal sites, in accordance to Chapter TRANS 401 requirements. The ECIP shall supplement information shown on the plans and shall not reproduce it. The erosion control implementation plan shall identify how the contractor intends to implement the project's erosion control plan. The erosion control plan shall include details for the methods of debris containment devices required, particularly during the removal of the old structures and construction of new structures.

10. Environmental Protection, Aquatic Exotic Species Control.

Exotic invasive organisms such as VHS, zebra mussels, purple loosestrife, and Eurasian water milfoil are becoming more prolific in Wisconsin and pose adverse effects to waters of the state. Wisconsin State Statutes 30.07, "Transportation of Aquatic Plants and Animals; Placement of Objects in Navigable Waters", details the state law that requires the removal of aquatic plants and zebra mussels each time equipment is put into state waters.

At construction sites that involve navigable water or wetlands, use the follow cleaning procedures to minimize the chance of exotic invasive species infestation. Use these procedures for all equipment that comes in contact with waters of the state and/or infested water or potentially infested water in other states.

Ensure that all equipment that has been in contact with waters of the state, or with infested or potentially infested waters, has been decontaminated for aquatic plant materials and zebra mussels prior to being used in other waters of the state. Before using equipment on this project, thoroughly disinfect all equipment that has come into contact with potentially infested waters. Use the following inspection and removal procedures (guidelines from the Wisconsin Department of Natural Resources http://dnr.wi.gov/topic/fishing/documents/vhs/disinfection_protocols.pdf for disinfection:

1. Prior to leaving the contaminated site, wash machinery and ensure that the machinery is free of all soil and other substances that could possibly contain exotic invasive species;
2. Drain all water from boats, trailers, bilges, live wells, coolers, bait buckets, engine compartments, and any other area where water may be trapped;

3. Inspect boat hulls, propellers, trailers and other surfaces. Scrape off any attached mussels, remove any aquatic plant materials (fragments, stems, leaves, seeds, or roots), and dispose of removed mussels and plant materials in a garbage can prior to leaving the area or invested waters; and
4. Disinfect your boat, equipment and gear by either:
    a. Washing with ~212º F water (steam clean), or
    b. Drying thoroughly for five days after cleaning with soap and water and/or high pressure water, or
    c. Disinfecting with either 200 ppm (0.5 oz per gallon or 1 Tablespoon per gallon) Chlorine for 10-minute contact time or 1:100 solution (38 grams per gallon) of Virkon Aquatic for 20- to 30-minute contact time. Note: Virkon is not registered to kill zebra mussel veligers nor invertebrates like spiny water flea. Therefore this disinfect should be used in conjunction with a hot water (>104º F) application.

Complete the inspection and removal procedure before equipment is brought to the project site and before the equipment leaves the project site.
107-055 (20130615)

11. Hauling Restrictions.

At all times, conduct operations in a manner that causes minimum disruption to traffic on existing roadways. Coordinate with the local authority.

This provision does not reduce or eliminate the contractor responsibility from restoring local roads under the item maintenance and repair of haul roads.
SEF Rev. 12_1004

12. 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 8:00 PM until the following 7:00 AM, unless prior written approval is obtained from the engineer.
107-001 (20060512)

13. 3D Model Data.

The department will provide for Project 1033-02-72 for informational purposes only (see following disclaimer) detailed 3D proposed and existing model data or portions of data which may include: roadways, temporary roadways, topography, grading, temporary grading, drainage, temporary drainage, structures, temporary structures, utilities, abandoned utilities, FTMS, signals, temporary signals, signs, temporary signs, lighting, temporary lighting, pavement markings, landscaping, wetlands, waterways, railways, geotech soil borings, parcels, fencing, and survey monumentation. The department will provide the above data or portions of the 3D model data electronically consisting of

electronic 2D/3D files containing features, points, reference lines, breaklines, area extents lines, profiles, LandXML v1.2 files and/or TIN Civil 3D surfaces in Autocad 2012 dwg files with horizontal datum - NAD-83 (97), vertical datum - NAVD-88 (91), and coordinate projection - Wisconsin County Coordinate System in U.S. survey ft. The department will provide the model data prior to project LET date within 5 business days of a contractor request submitted as follows: by email to joshua.leveque@dot.wi.gov.

The department is providing, by agreement with contractor and subcontractors, materials stored electronically. The parties recognize that data, plans, specifications, reports, documents, or other information recorded on or transmitted as electronic media (including but not necessarily limited to "CAD, CIM, BIM, GIS or other electronic documents") are subject to undetectable alteration, either intentional or unintentional, due to, among other causes, transmission, conversion, media degradation, software error, or human alteration. Accordingly, all such documents are provided to the parties for informational purposes only and not as an end product or as a record document. Any reliance thereon is deemed to be unreasonable and unenforceable. The signed and/or stamped hard copy of the engineer's Instruments of Service plans, specifications and estimates or other contract documents are the only true contract documents of record.
SEF13_0131

14. Material and Equipment Staging.

Submit a map showing all proposed material stockpile or equipment storage locations to the engineer 14 days prior to either preconstruction or proposed use, whichever comes first. Identify the specific purposes for the location. Obtain written permits from the property owner, and submit two copies to the engineer before use. Do not stockpile or store materials or equipment on wetlands.
SEF Rev. 13_0204

15. Traffic Meetings and Traffic Control Scheduling.

On a to-be-determined (TBD) day of the week, by 10:00 AM submit a detailed proposed 2-week look-ahead traffic closure schedule to the engineer. Type the detailed proposed 2-week look-ahead closure schedule into an excel spreadsheet provided by the engineer. Enter information such as closure dates, duration, work causing the closure and detours to be used. Also enter information such as ongoing long-term closures, emergency contacts and general 2-month look-ahead closure information into the excel spreadsheet.

Meet with the engineer between 11:00 AM - 11:30 AM on the TBD day of the week to discuss and answer questions on the proposed schedule. Edit, delete and add closures to the detailed proposed 2-week look-ahead schedule, as directed by the engineer, so that proposed closures meet specification requirements. Other edits, deletions or additions unrelated to meeting specification requirements may also be agreed upon between the contractor and engineer during the 11:00 AM meeting. Upon editing, deleting and adding closures to the proposed schedule due to discussion from the 11:00 AM meeting, e-mail the detailed proposed 2-week look-ahead closure schedule to the project's list of

stakeholders, including the Statewide Traffic Operations Center as provided by the engineer.

On the TBD day of the week at 2:00 PM, or as scheduled by the engineer, attend a weekly traffic meeting. The meeting will bring local agencies, project stakeholders, owner managers, owner engineers, contractors, document control and construction engineering personnel together to discuss traffic staging, closures and general impacts. Upon obtaining feedback from the meeting attendees, edit, delete and add information to the detailed two-week look-ahead closure schedule, as needed. Submit the revised two-week look-ahead to the engineer.

Obtain approval from the engineer for any mid-week changes to the closure schedule. Revise the two-week look-ahead as required and obtain engineer approval.

The contractor's weekly schedule of operations for all actual and anticipated work shall include roadway, lane and ramp closures for the upcoming week beginning on Sunday, 12:01 AM and ending on the following Saturday, 11:59 PM. This information will be reviewed by the department. Modifications to this schedule will be accepted until no later than noon on Thursdays. The final weekly schedule information will be provided to the local media on each Friday at 9:00 AM by department public information personnel.
SEF-IH-94 North-South Rev. 12_1030

16. Public Information Meetings.

Participate in department-sponsored public information meetings as the engineer requests. Ensure that representatives of subcontractors also participate in those meetings if the engineer requests.
SEF Rev. 12_0330

17. Leadership Partnering Meetings.

The department will implement mandatory leadership partnering meetings on this contract.

Key members of the contractor project team, major subcontractors project team shall meet with department leadership on a bi-weekly basis. Attendance at this meeting shall include project level supervisory personnel, contractor/state level management personnel, and FHWA. Project design engineers, key project personnel of the contractor's principal subcontractors and suppliers, local government representatives, environmental regulators, emergency service personnel, utility companies, impacted business and/or landowners, and other stakeholders may also be invited to attend, as needed.

This meeting will facilitate communication between parties and review issues and issues resolution procedures, help resolve disputes timely, satisfactorily, and as near as possible to the originating level of the dispute.

All mobilization workshop costs are incidental to the contract work.
SEF Rev. 12_0330

18. Available Documents.

The department will make all its information available to bidding contractors. The list of documents that are available for contractors' information includes but is not limited to:

- Design Study Report
- Exceptions to Standards Report
- Pavement Type Selection Report
- Preliminary Plans
- Environmental Impact Statement
- As-Built Drawings
- Preconstruction survey

These documents are available from Joshua LeVeque at 141 NW Barstow Street, Waukesha, WI 53187. He may be reached at (414) 220-5444.

Reproduction costs will be applied to any copies requested.
SEF Rev. 12_1212

19. Geotechnical Investigation Information.

Replace standard spec 102.5(3) 2 with the following:

Available information relative to subsurface exploration, borings, soundings, water levels, elevations or profiles are available for review at the department's Regions office. Contact Joshua LeVeque, 141 NW Barstow Street, Waukesha, WI 53187, (414) 220-5444

GEOTECHNICAL ENGINEERING REPORT
INTERSTATE HIGHWAY 94
STATE TRUNK HIGHWAY 20 INTERCHANGE
July 23, 2007

GEOTECHNICAL EXPLORATION AND FOUNDATION
EVALUATION REPORT
I-94 NORTH-SOUTH CORRIDOR
I-94 OVER STH 20
September 18, 2007

Additional geotechnical information is available from studies and analyses that have been performed by Milwaukee Transportation Partners (MTP) for the Wisconsin Department of Transportation (WisDOT) for other aspects of this project. Review the available information to determine if it is of use. The use or not of the geotechnical information does not relieve performing the work in accordance to the plans and specifications.
SEF Rev. 12_0813

20. Contract Award and Execution.

Supplement standard spec 103 as follows:

103.10 Mobilization Workshops
103.10.1 Workshop Schedule
After contract award, attend the following workshops. Each workshop is described below and will include but not be limited to the following topics.

Workshop Schedule

1. Project Kickoff and Initial Work Plan
2. Cost Reduction Incentives
3. Utility Coordination
4. Submittals
5. CPM Scheduling
6. Leadership Partnering (Initial Session)
7 Work Force Opportunities
8. Notice to Proceed

The workshop dates will be scheduled after contract award.

If necessary, the engineer may modify the workshop schedule to ensure attendance by the necessary department and contractor personnel; however, all workshops will be completed prior to issuing the Notice to Proceed.

103.10.2 Workshops
103.10.2.1 Project Kickoff and Initial Work Plan
103.10.2.1.1 General
The Project Kickoff and Initial Work Plan Workshop will provide a forum to discuss and answer questions relative to the proposal, bid schedule, and other questions in the Project Questionnaire described in standard spec 103.10.2.1.2. The Initial Work Plan Workshop will include:

- Contractor responses to the attached Project Questionnaire.
- Department presentation of the use of CPM scheduling on the project and presentation of the department's Master Schedule to the contractor.
- Contractor presentation of its conceptual work plan for the project.
- Department and contractor discussion of the level of detail and features in the Initial Work Plan and the Baseline CPM Progress Schedule.

103.10.2.1.2 Project Questionnaire

Provide the following information in the order shown below. This information will constitute the "Project Questionnaire."

General Information

If a Joint Venture, provide information for each member of the Joint Venture.

1. Provide the following information about the company:
    - Firm Name
    - Address
    - Telephone and facsimile numbers; e-mail address
    - Contracting Specialties
    - Years performing work in contracting specialties
    - Geographic areas served
    - Total Management Employees and years of service
        - Project Managers
        - General Superintendents
        - Craft Superintendents
        - Engineers
        - Estimators
        - CPM Schedulers

Construction Engineering

- Provide/attach a copy of your Construction Project Manager's resume indicating the manager's experience in similar major construction projects. The resume shall include similar projects with references. (Note: references are only for verification of work scope performed).
- Provide (if applicable) your third-party construction engineering firms.
- Provide plan for Construction surveying

Subcontractors

- Attach the list of all subcontractors that are intended for this Project and the items of work they shall perform.

Permanent Material Suppliers

- Attach the list of all permanent material suppliers that are intended for the project.

Quality Control (where applicable)

- Provide the name of your Construction Quality Control firm and qualifications indicating the firms' experience in similar major construction projects. The resume shall include similar projects with references. (Note: references are only for verification of work scope performed).

- Provide/attach a copy of your Construction Quality Control Manager's resume indicating the manager's experience in similar major construction projects. The resume shall include similar projects with references. (Note: references are only for verification of work scope performed).
- List the major elements and/or Table of Contents of your Construction Quality Management Program.
- Provide the name of your Independent Quality Control Testing firm (Construction Quality Control Lab) and qualifications indicating the firm's experience in similar major construction projects. The resume shall include similar projects with references. (Note: references are only for verification of work scope performed).

Organization Chart

- Provide a functional and personnel Organization Chart showing the authority and responsibilities of each individual identified.

Work Rules

- Provide the plan for hours per day, days per week, and number of shifts for key elements of work; i.e. sewer tunnels, retaining wall construction, roadway excavation, bridge structures, and roadway structural section activities.

Maintenance of Traffic

- Provide the name of your Traffic Control Manager and qualifications indicating the firm's experience in similar major construction projects. The resume shall include similar projects with references. (Note: references are only for verification of work scope performed).
- Include an outline of your approach to the maintenance of traffic and how you shall stage the construction to meet the substantial completion schedule including planned locations for local street and freeway access into and out of the work zones for each stage of construction.
- Attach a copy of your Preliminary Schedule indicating your approach to achieving the substantial completion schedule.

Construction

- Provide the approach (type of equipment, number of crews, and where required ground support systems) for the following activities.
  1. Retaining wall construction by type of work
  2. Bridge demolition
  3. Roadway structural section
  4. Roadway excavation
  5. Office and yard facilities

103.10.2.2 Cost Reduction Incentives

The Cost Reduction workshop will identify value enhancing opportunities and consider modifications to the plans and specifications that will reduce either the total cost, time of construction or traffic congestion, without impairing, in any manner, the essential functions or characteristics of the project, including, but not limited to, service life, economy of operation, ease of maintenance, benefits to the traveling public, desired appearance, or design and safety standards.

Submit recommendations resulting from the workshop for approval by the engineer as cost reduction incentive proposals in conformance with the provisions in standard spec 104.10 "Cost Reduction Incentive,".

The department and the contractor may be able to complete the CRI Concept process, as specified in standard spec 104.10.2, during the CRI workshop.

Submit CRIs after the CRI workshop that were not introduced at the CRI workshop.

103.10.2.3 Utility Coordination

The Utility Coordination Workshop will define the scope and schedule of utility relocation work and the respective roles and responsibilities of the project team.

1. At a minimum, the following key personnel will attend the Utility Coordination Meeting.

1.1 Department's Utility Coordinator.

1.2 Contractor's Utility Coordinator.

1.3 Designer Team's Utility Coordinator.

1.4 Key Utility Company Representative(s)

2. At a minimum, the Utility Coordination Meeting will include a review of the following:

2.1 Summary of all required utility relocations on the project.

2.2 Special provisions addressing utility work.

2.3 Sharing of contact information.

2.4 Scheduling of work for utility relocation including critical milestones and staging for the work.

103.10.2.4 Submittals
The Submittal Workshop will identify the key required submittals for the project, categorize submittals into functional areas, and develop a schedule for submittals and submittal reviews. The Workshop participants will at a minimum:

1. Review the project special provisions.

2. Categorize submittals into functional areas including but not limited to:

    2.1 MSE Retaining Walls

    2.2 Temporary Shoring

    2.3 Falsework and Formwork

    2.4 Girder Shop Drawings

    2.5 Steel Transportation, Delivery and Erection

    2.6 Structure Demolition Plans

    2.7 Pile Hammers and High Capacity Piling

    2.8 Concrete/ Asphalt

    2.9 Materials

    2.10 ITS / Lighting

    2.11 Traffic Signals

    2.12 Sanitary Sewer and Water

    2.13 Permits

3. Develop a schedule for submittals.

103.10.2.5 CPM Schedule
See specification Baseline CPM Progress Schedule.

103.10.2.6 Leadership Partnering
See specification Leadership Partnering Meetings.

103.10.2.7 Secant and Tangent Pile Drilled Shaft Construction
The Secant and Tangent Pile Drilled Shaft Construction workshop will serve as a pre-construction kickoff meeting specifically for the secant and tangent pile drilled shaft

work and occur prior to any secant and tangent pile work being performed on the job, including the installation of the secant pile trial wall panel. The workshop must be attended by representatives of the prime contractor and key members of the prequalified drilling shaft subcontractor performing the secant and tangent pile installation. At minimum, key members of the drilling subcontractor includes on-site principal in charge, on-site construction supervisor and crew foremen.

The workshop agenda will include review and discussion of the drilling subcontractors submitted drilled shaft installation plan; scheduling and coordination of the secant and tangent pile drilled shaft installation work; mobilization and preparation; and subsequent work operations associated with the construction.

103.10.2.8 Work Force Opportunities

The Work Force Opportunities workshop will provide a venue for contractors to have meaningful dialogue with TrANS providers regarding the hiring of TrANS graduates. For the prime contractor and the nine largest subcontractors according to let value of work, provide staff with hiring authority to participate in a job-matching session during this workshop. The workshop will take place on the same day and in the same location as the pre-construction meeting. The workshop participants will at a minimum:

- Review contractor hiring processes for general labor positions
- Review and listen to presentation provided by TrANS providers regarding the training program including details regarding how contractors can hire TrANS graduates
- Review TrANS graduate availability for working on project
- Meet one-on-one for two minutes with each TrANS graduate in attendance at the meeting

103.10.2.9 Notice to Proceed

After all workshops are completed, the Notice to Proceed will be issued.
SEF Rev. 13_0620

21. Contractor Notification.

Replace standard spec 104.2.2.2(2) with the following:

If the contractor discovers the differing condition, provide a written notice, as specified in standard spec 104.3.3, of the specific differing condition before further disturbing the site and before further performing the affected work.

104.3.2 (Vacant)

104.3.3 Contractor Initial Written Notice

Replace standard specs 104.3.2 and 104.3.3 with the following:

If required by standard spec 104.2, or if the contractor believes that the department's action, the department's lack of action, or some other situation results in or necessitates a contract revision, promptly provide a written notice to the engineer. At a minimum, provide the following:

- A written description of the nature of the issue.
- The time and date of discovering the problem or issue.
- If appropriate, the location of the issue.

Provide the additional information specified in standard spec 104.3.5 as early as possible to assist the engineer in the timely resolution of an identified issue. The engineer will not require, in subsequent submissions, duplication of information already provided.
SEF Rev. 12_0823

22. Contractor Document Submittals.

A Description

This special provision describes minimum requirements for submitting project documents to the department. This special provision does not apply to shop drawing submittals.

B Contractor Submittals

Provide two paper originals and one electronic copy of all documents requiring department review, acceptance, or approval. Attach a completed engineer-provided transmittal sheet to each paper original and email submittal. The department will reject submittals with incomplete transmittal sheets and require re-submittal.

The department will return one reviewed, accepted, or approved paper original to the contractor. Additional return originals can be requested. Submit an additional original for each additional return original requested.

Submit electronic copies in Adobe Acrobat (.pdf) format via email to an account the engineer determines. If possible, translate original documents from their native format (e.g. Word, Excel, AutoCAD, etc.) using an Adobe Acrobat translation routine. Scan other documents to Adobe Acrobat format with a minimum resolution of 600 dpi.

All costs for contractor document submittals are incidental to the contract.
SEF Rev. 12_ 0920

23. Claims Process for Unresolved Changes.

Replace standard specs 105.13.5, 105.13.6, and 105.13.7 with the following:

105.13.5 Review by the Department

The department will conduct an initial review phase and a decision phase to resolve the claim. At any point in these two phases, the department may waive its review and request a dispute review board (DRB).

In the initial review phase the contractor and the department will have up to 30 calendar days from the contractor's submission of the claim to submit all additional information required and for the department to review the claim and conduct all meetings. The department may request, in writing, that the contractor submit additional information related to the claim. Submit that additional information or notify the department, in writing, to base its decision on the information previously submitted. Either party may request a meeting to present its views. Before the meeting the department will distribute written ground rules for the meeting to both parties.

The contractor and the department can mutually agree to extend the 30-day review period. Upon completion of the review phase the department will notify the contractor, in writing, that it has begun the decision phase.

In the decision phase the department will have up to 30 calendar days to issue a written decision. The department will consider both parties' written and oral submissions and may consider other relevant information in the project records. The department and contractor can mutually agree to extend the 30-day decision period. The department will provide the following in its decision:

1. A concise description of the claim.

2. A clear contractual basis for its decision that includes a reference to 104.2 on revisions to the contract and as appropriate, specific reference to language regarding the bid items in question.

3. Other facts the department relies on to support its decision.

4. A concise statement of the circumstances surrounding the claim and reasons for its decision. If the department rejects the claim in whole or in part the department will explain why the claimed work is not a change to the contract work.

5. The amount of money or other relief, if any, the department will grant the contractor.

In the appeal phase there will be up to 21 calendar days from the date of the department's decision to request a dispute review board hearing. If a written request is as specified in standard spec 105.13.6.1.2 within the 21 calendar days, the department's decision is final.

If the department does not render a decision within the period allowed by standard spec 105.13.5, a dispute review board hearing may be requested.

105.13.6 Dispute Resolution

105.13.6.1 Dispute Review Board (DRB)

The purpose of a DRB is to resolve claims in a manner that complies with the contract, is impartial, and expedites the standard claims process. The DRB will do so by issuing recommendations that may be binding or non-binding depending on the claim amount.

105.13.6.1.1 Selection of Members and Agreement for Services

The department and the contractor will cooperatively establish the DRB promptly after contract execution. Each DRB will consist of one member appointed by the department and approved by the contractor, one member appointed by the contractor and approved by the department, and a third member appointed by the first two members and approved by both. The third member will act as DRB chairperson.

If a DRB member is unable to perform the duties of the office, the department may declare the office vacant. The new DRB member will be selected in the same manner as the original member. If the vacancy occurs after the hearings begin the remaining DRB members may continue with the hearing and determination of that claim, unless the department and contractor agree otherwise.

After approval of the DRB members, the department, contractor, and the DRB members will enter into a three-party agreement that sets forth the terms and conditions that apply to services provided by the DRB including procedures for standard operation of the DRB, use of the DRB in an advisory role, periodic site visits, and any other pertinent terms. The department, contractor, and all three DRB members will execute the DRB agreement within 14 calendar days after the selection of the chairperson. Payment for the DRB shall be in accordance to standard spec 105.13.7.

105.13.6.1.2 Pre-Hearing Submissions

If the contractor intends to appeal the department's decision, prepare a written statement of position setting forth in detail the nature of, and factual and legal basis for the claim and all remedies sought from the DRB. The statement shall also include and identify all claims on behalf of subcontractors. Submit the statement of position with the request for a DRB hearing within the 21 calendar day appeal phase as specified in standard spec 105.13.5.

Within 14 calendar days (or a period mutually agreed by the department and contractor) of receipt of the contractor's written statement of position, the department will provide the DRB and the contractor its response to the contractor's written statement. The response will set forth the position of the department and any counterclaims the department has relating to the claim, including a detailed statement setting forth each factual and legal defense to the claim and all documentation that establishes each defense.

105.13.6.1.3 Preparation of Claim File

The department will prepare a claim file within 14 calendar days of either the contractor or the department requesting a DRB hearing. The department will include all previous documents and evidence submitted during the department review and decision phases. The department may add additional documents but not additional analysis or conclusions. The claim file may contain, but is not limited to the following:

1. Contractor's notices and statements.

2. Engineer's written statements.

3. Engineer's decisions.

4. Supplemental information from the contractor during the department claim review.

5. Project photos.

6. Meeting minutes, correspondence, and other documents related to the claim.

7. Complete set of plans and specifications.

8. Applicable shop drawings and submittals.

9. The department's decision.

10. Contractor request for a DRB hearing.

After the department has assembled the claim file it will provide a copy to the contractor. Provide additional documentation as specified above, to the claim file within seven calendar days. Return complete copy of the claim file, including any additional documentation added to the department.

105.13.6.1.4 DRB Claim Review

The department will provide a copy of the completed claim file to each board member for review. If the DRB requests additional information, the appropriate party will provide the information to the DRB. The DRB may also visit the site to become familiar with the project and claim.

105.13.6.1.5 Scheduling and Conduct of Hearing

The DRB will set a date and location for a hearing no earlier than 30 calendar days but no later than 60 calendar days after the receipt of a written request for a DRB hearing.

The department and the contractor will have representatives at all hearings. Present your position first, followed by the department. Each party will be allowed one rebuttal. The DRB members, department, and the contractor may ask questions, request clarification, or

ask for additional data. Unless extended by agreement between the department and the contractor, the DRB will limit a hearing to two eight-hour days. Each party will have eight hours to present both its position and rebuttal.

Normally, the DRB will not prepare a formal transcript of the presentations. When requested be either party, the DRB may allow recordation and transcription by a court reporter with the cost allocated as agreed by both parties. This transcript will not constitute the official record of the DRB review. The record prepared by the DRB is the official record of the hearings.

105.13.6.1.6 Claims by the Subcontractor

If the contractor's claim includes one or more subcontractor claims, ensure that an authorized representative with actual knowledge of the facts underlying the subcontractor claim assists in presenting the subcontractor's claim and answering questions raised by the DRB members or the department's representatives.

105.13.6.1.7 Findings and Recommendations

After all DRB hearings are concluded the DRB will formulate findings and recommendations. The DRB will conduct private and confidential deliberations and attempt to reach a unanimous decision. The DRB will base its findings and recommendations on the terms of the contract documents, established principles of law, statutes and regulations, the facts and circumstances of the claim, and the information provided by the parties.

Within 30 calendar days of the hearings the DRB will issue its final findings and recommendations. Claims resulting in a decision involving $250,000 or less will be binding on the parties to the extent permitted by Wisconsin law. For claims resulting in a decision involving more than $250,000, if accepted by the parties, the department will process the DRB decision for approval and will promptly process any required contract changes.

If the DRB is unable to reach unanimity in its findings and recommendations, both parties will be advised by the DRB report. At their discretion, a dissenting member may prepare a minority report to be included in the DRB.

105.13.6.1.8 Further Action on Decisions Exceeding $250,000

Each party will have 45 calendar days from receipt of a final decision of the DRB exceeding $250,000 to accept or reject, in writing, the decision. If either party fails to accept or reject, in writing, that final decision of the DRB within 45 calendar days of receipt of such decision, the DRB will notify the parties that non-response is considered to be acceptance of that decision and further administrative or judicial review will be barred. Provide notice of acceptance or rejection of the final decision to the DRB in a manner and form prescribed by the DRB. The DRB will reject any notice on a final decision not filed by either party in a timely manner. This 45-day appeal period may be extended if agreed to in writing prior to the 45-day expiration period.

105.13.6.1.9 Advisory Dispute Review Board
As an alternative to the standard DRB process, the department may elect to use the DRB in an advisory role to expedite the resolution of a dispute or claim. The DRB may review and hear disputes or claim issues during a regularly scheduled site visit. The DRB will offer its advice either during or promptly after the site visit.

105.13.7 Payment for DRB
Pay all labor and expenses for the DRB member appointed by the contractor.

The department will be responsible for paying all labor and expenses for the DRB member appointed by the department.

The department and contractor shall share equally in the labor and expenses for the DRB chairperson. The chairperson will submit all costs for his/her labor and expenses to the contractor for payment. Invoice the department for 50 percent of those costs.
SEF Rev. 13_0626

24. Information to Bidders, Use of Recovered Material.

The department encourages the use of waste materials and recovered industrial byproducts as material substitutions (standard spec 106.2.1), provided they meet standard specification gradation requirements, conform to NR 538 requirements, and/or follow standard engineering practice for their intended use.
SEF Rev. 12_1212

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

The department has obtained a U.S. Army Corps of Engineers Section 404 permit. Comply with the requirements of the permit in addition to requirements of the special provisions. A copy of the permit is available from the regional office by contacting Joshua LeVeque at (414) 220-5444.
107-054 (20080901)

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

Tim Petrofske, License Number All-115985, inspected Structure B-51-72 for asbestos on January 6, 2009. No regulated Asbestos Containing Material (RACM) was found on this structure. A copy of the inspection report is available from: Joshua LeVeque (414) 220-5444.

In accordance with 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 Joshua LeVeque (414) 220-5444 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-51-72, CTH C over IH 94
- Site Address: 0.7M E JCT STH 20
- Ownership Information: WisDOT Transportation SE, 141 NW Barstow St., P.O. Box 798, Waukesha, WI 53187-0798
- Contact: Mark Klipstein
- Phone: (414) 750-1496
- Age: 26 years old. This structure was constructed in 1987.
- Area: 9,755 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 in accordance 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)

27. Notice to Contractor – Notification of Asbestos Removed Under Another Project.

Bridge B-51-22 had asbestos removed under Project ID 1033-02-80. No regulated Asbestos Containing Material (RACM) is remaining on this structure. A copy of the inspection report is available from: Joshua LeVeque, (414) 220-5444.

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 in accordance to standard spec 107.24. Keep material wet until it is abated or until it is determined to be non-asbestos containing material.

28. Payment Tracking.

A Reporting Payments During Construction

Comply with reporting requirements specified in the department's civil rights and labor compliance management system manual.

Report payments to all first tier relationships including subcontractors, suppliers, and trucking 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 subcontractors, suppliers, and trucking firms. Report the payment as specified in A(1) for all work satisfactorily performed and for all materials furnished or stockpiled.

Require all first tier relationships including subcontractors, suppliers, and trucking firms in receipt of a progress payment by contractor to acknowledge receipt of payment as specified in A(1) and (2).

Include the provisions in A(1) and (3) in all agreements . Agreements will be binding on all first tier relationships including subcontractors, suppliers, and trucking firms on the project.

B (Vacant)

C (Vacant)

D (Vacant)

E Payment
Costs for conforming to this special provision are incidental to the contract.
SEF Rev. 12_1108

29. Labor Compliance Reporting – Payroll Requirements.

Submit weekly certified payrolls verifying prevailing wage rates for all work performed under the contract as directed in the civil rights and labor compliance management system manual. Submit weekly certified payrolls within 7 calendar days of the week covered by the weekly certified payroll.
SEF Rev. 12_1008

30. Dust Control Implementation Plan.

A Description
Develop, update, and implement a detailed Dust Control Implementation Plan (DCIP) for all land-disturbing construction activities and associated impacts both within the project site boundaries and outside the project site boundaries. Incorporate contract bid items that this article specifies into the DCIP.

B (Vacant)

C Construction

C.1 General

Take responsibility for dust control on the project as specified in standard spec 107.18. Minimize dust emissions resulting from land disturbing activities. Do not generate excessive air borne particulate matter (PM) or nuisance dust conditions. Take direct responsibility for controlling dust at all times throughout the duration of the contract, 24 hours per day, 7 days per week, including non-working hours, weekends, and holidays.

Submit a DCIP to the engineer for review at least 14 calendar days before the preconstruction conference. Coordinate with the department, if requested, to resolve DCIP related issues before the preconstruction conference. The department will either approve the DCIP or request revisions. Do not initiate any land-disturbing activities without the department's approval of the DCIP.

C.2 Dust Control Implementation Plan Contents

Develop a DCIP tailored to the specific needs of the project. Consider potential impacts to businesses and residences adjacent to the job site. Describe in detail all land disturbing, dust generating activities. Identify strategies to prevent, mitigate, and collect excess dust. Establish clear lines of communication with the engineer to ensure that all dust control issues can be dealt with promptly.

The DCIP shall include, but not be limited to, all of the following:

1. A single contact person with overall responsibility for the DCIP development as well as surveillance and remediation of job related dust. Include the following:
    - Name, firm, address, and working-hours phone number.
    - Non-working-hours phone number.
    - Email address.
2. Individual contact persons and their respective areas of responsibility. Include the following:
    - Name, firm, address, and working-hours phone number.
    - Non-working-hours phone number.
    - Email address.
3. A site map locating project features, the job site boundaries, all ingress and egress points, air intakes and other dust-sensitive areas, and all public and private paved surfaces within and immediately adjacent to the job site. Show where specific land disturbing, dust generating activities will occur and, to the extent possible, where employing various dust control or prevention strategies.
4. A matrix showing, for each anticipated land disturbing, dust generating activity, the following:
    - Preventive measures that shall be employed.
    - The applicable contact person.
    - The contractor’s timetable and/or surveillance measures used to determine when remediation is required.

- The specific dust control and remediation measures that shall be employed. List the specific contract bid items that shall be used for payment. Also indicate costs that are incidental to the contract.
- Both maintenance and cleanup schedules and procedures.
- How excess and waste materials shall be disposed of.

5. A description of how off-site impacts shall be monitored and dealt with.

C.3 Updating the Dust Control Implementation Plan

Update the DCIP throughout the term of the contract as the engineer directs. Obtain the engineer's approval for all DCIP alterations. Also obtain the engineer's approval for DCIP routine adjustments for weather, job conditions, or emergencies that will have an impact on payment under the bid items listed in the approved DCIP.

C.4 Dust Control Deficiencies

Correct engineer identified dust control deficiencies within the time the engineer specifies. The engineer will allow from 30 minutes to 24 hours from the time the engineer notifies the contractor in writing of the deficiency. Deficiencies include, but are not limited to, actions or lack of actions resulting in excessive dust, failing to comply with the contractor's dust control implementation plan or associated special provisions, and failing to properly maintain equipment.

D Measurement

The department will measure the various bid items associated with dust control as specified in the applicable measurement subsections of either the standard specifications or other contract special provisions. The department will not measure work performed under a DCIP alteration unless the engineer specifically approves that alteration.

Measurement under the DCIP shall include, but is not limited to, the contract bid items listed below:

623.0200	Dust Control Surface Treatment
624.0100	Water
628.7560	Tracking Pads
SPV.0105.0005	Pavement Cleanup

The department will measure work completed under other existing contract bid items if approved as a part of the DCIP. The department will consider new bid items to the contract if proposed under the DCIP. The department will not measure work required under the DCIP that is not included in contract bid items.

E Payment

All costs associated with the development and updating of the DCIP are incidental to the contract. The department will pay separately for the work required to implement the actions approved in the DCIP under the contract bid items approved as a part of the DCIP. All other costs associated with work approved under the DCIP are incidental to the contract.

SEF Rev. 12_1004

31. Project Site Air Quality.

Because fine particulate matter levels for Milwaukee, Racine and Kenosha Counties are typically close to $PM_{2.5}$ limits and the project is in a non-attainment area for the federal 8-hour ozone standard, contributions from construction activities can have a major impact well beyond the project limits. Take practical measures to mitigate the impact of operating construction equipment on the air quality in and around the project site.

Voluntarily establishing the staging zones for trucks waiting to load and unload is encouraged by the department. Locate staging zones where idling of diesel powered equipment will have minimal impact on abutting properties and the general public. The department will make signs available to help identify these zones. Have truckers queue up in these zones whenever it is practical. The department further encourages drivers to shut down diesel trucks as soon as it appears likely that they will be queued up for more than ten minutes. Notify employees and sub-contractors about fueling and engine idling.

Portable Concrete Crusher Plants
Portable concrete crusher plants may need a NR 440 Concrete Crusher Plant Air Permit for air emissions. Please contact Mike Griffin, Wisconsin Department of Natural Resources, Air Compliance Engineer (414) 263-8554 to request additional information and permit application materials. Complete permit applications may take 3 months to process.
SEF Rev. 12_1008

32. OCIP Information.

The Owner Controlled Insurance Program (OCIP)
The I-94 North/South Corridor project will be constructed under the umbrella of an Owner Controlled Insurance Program (OCIP). Contractor/Consultant participation in this Corridor Project is mandatory and requires enrollment into the OCIP. Additional information regarding OCIP can be found at http://roadwaystandards.dot.wi.gov/hcci/index.shtm.

If you have any questions regarding the OCIP, including questions on if your company needs to be enrolled into the OCIP, please contact Kevin Gehrmann at (608) 267-7722.

SEF Rev. 13_0429

33. Owner Controlled Insurance Program.

Section 107.26, "Standard Insurance Requirements" is deleted in its entirety and the following standard spec 107.26 is substituted thereof:

107.26 Standard Insurance Requirements

107.26(1)(a) Owner Controlled Insurance Program

1. **Overview**. The State of Wisconsin, Department of Transportation ("the WisDOT") has arranged with Aon Risk Services Central, Inc., (the "OCIP administrator") for this Project to be insured under its Owner Controlled Insurance Program ("OCIP"). The OCIP is more fully described in the I-94 North-South Corridor manual for the Owner Controlled Insurance Program (the "Insurance Manual") and the Safety and Health Plan Manual that are incorporated in this Special Provision and the Contract by this reference. Parties performing labor or services at the Project are eligible to enroll in the OCIP unless the party is an excluded party (as defined below). The OCIP will provide to enrolled parties(as defined below) Workers' Compensation and Employer's Liability insurance, Commercial General Liability insurance, and excess liability insurance as summarily described below in connection with the performance of the Work ("OCIP coverage's").

2. **Enrolled Parties and Their Insurance Obligations.** OCIP coverage applies only to Enrolled Parties. Enrolled Parties include the WisDOT and its employees, eligible Contractors and Subcontractors who enroll in the OCIP, and such other persons or entities that the WisDOT, in its sole discretion, may designate (each such party who is insured under the OCIP is collectively referred to as an " Enrolled Party"). Enrolled Parties shall obtain and maintain, and shall require each of its Subcontractors to obtain and maintain, the insurance coverage specified in 107.26(1)(a) 8 below.

3. **Excluded Parties and Their Insurance Obligations.** OCIP coverage's do not apply to the following "Excluded Parties":

   a. Hazardous materials remediation, removal and/or transport companies;

   b. Vendors, suppliers, fabricators, material dealers, truckers, haulers, drivers and others who merely transport, pickup, deliver, or carry materials, personnel, parts or equipment or any other items or persons to or from the Project;

   c. Contractors and each of their respective Subcontractors who do not perform any actual labor on the Project site;

   d. Any party or entity not specifically identified in this special provision or excluded by the WisDOT as permitted by law, even if otherwise eligible.

   Excluded Parties and parties no longer enrolled or covered by the OCIP shall obtain and maintain, and shall require each of its Subcontractors to obtain and maintain, the insurance coverage specified in Section 107.26(1)(a) 8 below and in the Insurance Manual. Excluded Parties shall comply with all of the safety requirements pursuant to 107.26(1)(a) 16.

4. **OCIP Insurance Policies Establish OCIP coverage's**. The OCIP coverage's and exclusions summarized in this special provision and the other contract documents are set forth in full in their respective insurance policy forms. The summary descriptions of the OCIP coverage's in this special provision or the Insurance Manual are not intended to be complete or to alter or amend any provision of the actual OCIP coverage's. In the event any provision of this special provision, the Insurance Manual, the contract documents, or the summary below conflicts with the OCIP insurance policies, the provisions of the actual OCIP insurance policies shall govern.

5. **Summary of OCIP Coverage's**. OCIP coverage's will apply only to those operations of each Enrolled Party performed at the Project site, as defined in the OCIP insurance policies, in connection with the Work and only to Enrolled Parties that are eligible for the OCIP. OCIP coverage's will not apply to Excluded Parties, even if erroneously enrolled in the OCIP. An Enrolled Party's operations away from the Project site, including product manufacturing, assembling, or otherwise, will only be insured if such "off-site" operations are identified, endorsed onto the OCIP policies, and are dedicated solely to the Project. Contractor may request such "off-site" operations to be insured in writing to WisDOT; however, OCIP coverage's will not insure "off-site" operations until the OCIP policies have been endorsed to insure such "off-site" location. The decision to insure "off-site" operations shall be determined by WisDOT and the OCIP insurer.

   The OCIP coverage's are primary insurance for all on-site operations of eligible and Enrolled Parties. The OCIP will provide only the following insurance to eligible and Enrolled Parties:

   Summary Only

   a. Workers' Compensation insurance - Statutory Limit including Jones Act and USL&H coverage, as applicable.

   b. Employer's Liability insurance

      i. Bodily Injury by Accident, each accident $1,000,000
      ii. Bodily Injury by Disease, each employee $1,000,000
      iii. Bodily Injury by Disease, policy limits $1,000,000

   .

   c. Commercial General Liability (ISO Occurrence Form – Limits Shared By All Insureds)

      i. Each Occurrence Limit $2,000,000 (Annual Limit)

      ii. General Aggregate Limit for all Enrolled Parties $4,000,000 (Annual Limit)

      iii. 10 yr. Products & Completed Operations Extension

      iv. Products & Completed Operations Aggregate for all Enrolled Parties $4,000,000(Single Limit Applies to Entire Products & Completed Operations Extension)

d. The OCIP Commercial General Liability policy will not provide coverage for any claim that could be covered under a property policy or Builder's Risk policy.

e. Excess Liability insurance (over Employer's Liability & General Liability – Limits Shared By All Insureds)

Each Occurrence Limit $150,000,000

Aggregate $150,000,000 (Annual Limit)

$150,000,000 Products & Completed Operations Aggregate Limit (Single Limit Applies to Entire Products & Completed Operations Extension).

6. The WisDOT's Insurance Obligations. The WisDOT will pay the costs of premiums for the OCIP coverage's. The WisDOT will receive or pay, as the case may be, all adjustments to such costs, whether by way of dividends, retroactive adjustments, return premiums, other moneys due, audits or otherwise. Each Contractor and each of its Subcontractors hereby assign to the WisDOT the right to receive all such adjustments. The WisDOT assumes no obligation to provide insurance other than that specified in this special provision and the OCIP insurance policies. The WisDOT's furnishing of OCIP coverage's will in no way relieve or limit, or be construed to relieve or limit, Contractor or any of its Subcontractors of any responsibility, liability, or obligation imposed by the contract documents, the OCIP insurance policies, or by law, including without limitation any indemnification obligations which Contractor or any of its Subcontractors has to the WisDOT there under. The WisDOT reserves the right at its option, without obligation to do so, to furnish other insurance coverage of various types and limits provided that such coverage is not less than that specified in the contract documents.

7. Contractor's OCIP Obligations. Contractor shall:

a. Incorporate the terms of this special provision in all subcontract agreements.

b. Enroll in the OCIP within five (5) business days of execution of the contract and maintain enrollment in the OCIP, and assure that Contractor's eligible Subcontractors enroll in the OCIP and maintain enrollment in the OCIP within five (5) business days of subcontracting and prior to the commencement of their Work at the Project site.

c. Comply with all of the administrative, safety, insurance, and other requirements outlined in this special provision, the Insurance Manual, the OCIP insurance policies, the Safety and Health Plan Manual, or elsewhere in the contract documents.

d. Provide each of its Subcontractors with a copy of the Insurance Manual and ensure Subcontractor compliance with the provisions of the OCIP insurance policies, the Insurance Manual, this special provision, and the contract documents. The failure of (a) the WisDOT to include the Insurance Manual in the bid documents or (b) Contractor to provide each of its eligible Subcontractors with a copy of same, shall not relieve Contractor or any of its Subcontractors from any of the obligations contained therein.

e. Acknowledge, and require all of its Subcontractors to acknowledge in writing, that the WisDOT and the OCIP administrator are not agents, partners or guarantors of the insurance companies providing coverage under the OCIP (each such insurer, an "OCIP insurer") and that the WisDOT is not responsible for any claims or disputes between or among Contractor, its Subcontractors, and any OCIP insurer(s). Any type of insurance coverage or limits of liability in addition to the OCIP coverage's that Contractor or any Subcontractor requires for its or their own protection, or that is required by applicable laws or regulations, shall be Contractor's or its Subcontractor's sole responsibility and expense and shall not be billed to the WisDOT.

f. Cooperate fully with the OCIP administrator and the OCIP insurers, as applicable, in its or their administration of the OCIP.

g. Provide, within five (5) business days of the WisDOT's or the OCIP administrator's request, all documents or information as requested of Contractor or its Subcontractors. Such information may include but not be limited to, payroll records, certified copies of insurance coverage's, declaration pages of coverage's, certificates of insurance, underwriting data, prior loss history information, safety records or history, OSHA citations, or such other data or information as the WisDOT, the OCIP administrator, or OCIP insurers may request in the administration of the OCIP, or as required by the Insurance Manual.

h. Pay to the WisDOT's designee within five (5) days of written notification, a sum of up to $ 10,000 of each claim, including court costs, attorneys fees and costs of defense for property damage to the extent losses are insured under the OCIP Commercial General Liability policy for those losses that are attributable to Contractor's Work, acts or omissions, or the Work, acts or omissions of any of its Subcontractors, or any other entity or party for whom Contractor may be responsible ("contractor General Liability obligation"). The contractor General Liability obligation will not be insured by the OCIP Coverage's.

8. Additional Insurance Required From Enrolled Parties and Excluded Parties. Contractor shall obtain and maintain, and shall require each of its Subcontractors of every tier to obtain and maintain, the insurance coverage specified in this Section 107.26(1)(a) 8 in a form and from insurance companies reasonably acceptable to the WisDOT. The insurance limits may be provided through a combination of primary and excess policies, including the umbrella form of policy. The insurance required by this Section 107.26(1)(a) 8 shall conform to the WisDOT's requirements outlined in the Insurance Manual and be written by companies authorized to do business in the state of Wisconsin, and Illinois if applicable, with an AM Best rating of A- or better. Contractor shall provide certificates of insurance coverage to the WisDOT as required below and by the Insurance Manual. As to eligible and Enrolled Parties, the Workers' Compensation, Employer's Liability, and Commercial General Liability insurance required by this section shall only be for off-site activities or operations not insured under the OCIP coverage's. The cost of providing the required insurance

coverage and limits is incidental to the contract. The department will make no additional or special payment for providing insurance.

TYPE OF INSURANCE MINIMUM LIMITS REQUIRED

1. Commercial General Liability insurance shall be endorsed to include blanket contractual liability coverage.
   a. $2 Million Combined single limits per occurrence with an annual aggregate limit of not less than $4 Million.
   b. The OCIP Coverage's shall exclude blasting or explosion operations. If blasting or explosion operations are used in connection with the Work, Commercial General Liability insurance shall not contain an exclusion for blasting or explosion and shall be provided in limits established by the WisDOT at the time such blasting or explosion methods are elected. Such coverage shall apply to operations whether the operations occur on the Project site or away from the Project site.
   c. Commercial General Liability insurance shall be maintained in force for two (2) years following completion and the WisDOT's acceptance of the work.

2. Workers' Compensation and Employer's Liability insurance.
   a. Workers' Compensation limits: statutory limits
   b. Employer's Liability limits:
      i. Bodily injury by accident: $100,000 each accident
      ii. Bodily injury by disease: $500,000 policy limit
      iii. Bodily injury by disease: $100,000 each employee

3. Commercial automobile liability insurance as specified by Insurance Services Office (ISO), form CA 00 01, symbol 1 (any auto) with the following limits and endorsements:
   a. No Trucking or Hauling: $1,000,000 Each Accident
   b. Trucking or Hauling (Non Hazardous Materials): $2,000,000 Each Accident
   c. Trucking or Hauling Hazardous Materials: $5,000,000 Each Accident with an MCS 90 Endorsement and ISO Endorsement CA 99 48.
4. For any work over water, whether deemed navigatable or otherwise, Contractors Pollution Liability insurance with $2,000,000 per occurrence and $2,000,000 aggregate policy limits.
5. Aviation and/or Watercraft Liability insurance, as appropriate, including hull and protection and indemnity for watercraft, or other insurance, in form and with limits of liability and from an insuring entity reasonably satisfactory to the WisDOT.

Contractor's failure to procure or maintain the insurance required by this 107.26(1)(a)8 and to assure all its Subcontractors of every tier maintain the required insurance during the entire term of the contract shall constitute a material breach of this contract under which the WisDOT may immediately suspend or terminate this contract or, at its discretion, procure or renew such insurance to protect the WisDOT's interests and pay any and all premiums in connection therewith, and withhold or recover all monies so paid from the Contractor.

Contractor shall provide the WisDOT with certificates of insurance as evidence that required coverage's for insurance detailed in this section are in force. The bidder shall provide certificates of insurance in their pre-qualification statement as specified in 102.1.

Contractor shall notify the WisDOT at least 60 calendar days before a cancellation or material change in coverage and only obtain coverage from insurance companies licensed to do business in the state that have an AM Best rating of A- or better. The cost of providing the required insurance coverage and limits is incidental to the contract. The WisDOT will make no additional or special payment for providing insurance.

The above insurance requirements shall apply with equal force whether the Contractor or a Subcontractor, or anyone directly or indirectly employed by either, performs the work under the Project.

9. Contractor Representations and Warranties to the WisDOT. Contractor represents and warrants to the WisDOT on behalf of itself and its Subcontractors:

a. That all information it submits to the WisDOT or the OCIP administrator shall be accurate and complete.

b. That Contractor, on behalf of itself and its Subcontractors, has had the opportunity to read and analyze copies of the OCIP binders and specimen policies that are on file in the WisDOT's office. Any reference or summary in the contract, this special provision, the Insurance Manual, or elsewhere in any other contract document as to amount, nature, type or extent of OCIP coverage's and/or potential applicability to any potential claim or loss is for reference only. Contractor and its Subcontractors have not relied upon said reference but solely upon their own independent review and analysis of the OCIP coverage's in formulating any understanding and/or belief as to amount, nature, type or extent of any OCIP coverage's and/or its potential applicability to any potential claim or loss.

c. That the costs of OCIP coverage's were not included in Contractor's bid or proposal for the Work, the contract price, and will not be included in any change order, change modification, or any request for payment for the Work or extra work. The "costs of OCIP coverage's" is defined as the dollar amount of premiums, costs and fees the Contractor and its Subcontractors would have paid its insurance carrier to insure the operations and exposures which are being insured under the OCIP.

d. That Contractor acknowledges that the WisDOT will not pay or compensate Contractor or any Subcontractor, in any manner, for costs of OCIP coverage's or for "insurance costs" except as specifically required to be maintained by Contractor by the terms of this special provision.

10. **Audits.** Contractor agrees that the WisDOT, the OCIP administrator, and/or any OCIP insurer may audit Contractor's or any of its Subcontractor's Project payroll records, books and records, insurance coverage's, insurance cost information, or any other information that Contractor provides to the WisDOT, the OCIP administrator, or the OCIP insurers to confirm their accuracy and to assure that costs of OCIP coverage's are not included in any payment for the work.

11. **The WisDOT's Election to Modify or Discontinue OCIP.** The WisDOT may, for any reason, modify the OCIP coverage's, discontinue the OCIP, or request that Contractor or any of its Subcontractors withdraw from the OCIP upon thirty (30) days written notice. Upon such notice Contractor and/or one or more of its Subcontractors, as specified by the WisDOT in such notice, shall obtain and thereafter maintain at the WisDOT's expense, Contractor maintained coverages (or a portion thereof as specified by the WisDOT) of the OCIP coverage's. The form, content, limits of liability, cost, and the insurer issuing such replacement insurance shall be subject to the WisDOT's approval.

12. **Withhold of Payments.** The WisDOT may withhold from any payment owing to Contractor the costs of OCIP coverage's if included in a request for payment. In the event the WisDOT audit of Contractor's records and information as permitted in the Contract, this special provision, or other contract documents reveals a discrepancy in the insurance, payroll, safety, or any other information required by the contract documents to be provided by Contractor to the WisDOT, or to the OCIP administrator, or reveals the inclusion of costs of OCIP coverage's in any payment for the work, the WisDOT will have the right to full deduction from the Contract Price of all such costs of OCIP coverage's and all audit costs. Audit costs will include but not be limited to the fees of the OCIP administrator, and the fees of attorneys and accountants conducting the audit and review. If the Contractor or its Subcontractors fail to timely comply with the provisions of this special provision or the requirements of the Insurance Manual, the WisDOT may withhold any payments due Contractor and its Subcontractors until such time as they have performed the requirements of this special provision. Such withholding by the WisDOT will not be deemed to be a default hereunder.

13. **Waiver of Subrogation.** Where permitted by law, Contractor hereby waives all rights of recovery under subrogation because of deductible clauses, inadequacy of limits of any insurance policy, limitations or exclusions of coverage, or any other reason against the WisDOT, the State of Wisconsin and any of its Agencies or Officer's, Agents or employees including without limitation, the OCIP administrator, its or their officers, agents, shareholders or employees of each, if any, and any other Contractor or Subcontractor performing work or rendering services on behalf of the

WisDOT in connection with the planning, development and construction of the Project. Where permitted by law, Contractor shall also require that all Contractor maintained insurance coverage related to the work include clauses providing that each insurer shall waive all of its rights of recovery by subrogation against Contractor together with the same parties referenced immediately above in this section. Contractor shall require similar written express waivers and insurance clauses from each of its Subcontractors. A waiver of subrogation shall be effective as to any individual or entity even if such individual or entity (a) would otherwise have a duty of indemnification, contractual or otherwise, (b) did not pay the insurance premium directly or indirectly, and (c) whether or not such individual or entity has an insurable interest in the property damaged.

14. **Duty of Care**. Nothing contained in this special provision or the Insurance Manual shall relieve the Contractor or any of its Subcontractors of their respective obligations to exercise due care in the performance of their duties in connection with the work and to complete the work in strict compliance with the contract documents.

15. **Conflicts**. In the event of a conflict, the provisions of this special provision shall govern, then the provisions of the contract and its other related contact documents, then the provisions of the Insurance Manual.

16. **Safety.** Contractor shall be solely responsible for safety on the Project and safety relating to the Work. Contractor shall establish a safety program that, at a minimum, complies with all local, state and federal safety standards, and any safety standards established by the WisDOT for the Project, including the Project Safety and Health Plan Manual.

107.26(1)(b) Builder's Risk

1. **Overview.** The WisDOT will purchase a builder's risk insurance policy covering the Work, excluding road work at grade level, for "all risk" perils, including earthquake and flood, covering the interests of the WisDOT, Contractors and Subcontractors with a limit of $350,000,000 each occurrence.

2. **Coverage's.** The builder's risk insurance coverage will contain a sub-limit of $100,000,000 per annum aggregate for earthquake and flood coverage. Additionally, the builder's risk insurance coverage contains the following sub-limits:

Inland Transit/Temporary Storage – $10,000,000;
Blueprints/Drawings - $1,000,000;
Trees, Shrubs - $250,000 (not to exceed $5,000 any one item);
Debris Removal – 25% of Loss;
Expediting Expense – $500,000;
Fire Fighting Expense – $2,500,000;
Claim Preparation Expense - $250,000;
Pollution Cleanup – $1,000,000;
Mold/Fungus: $50,000;

Building Ordinance or Law –$5,000,000 (Coverages, A, B & C, Combined);
Service Interruption: $1,000,000 (excluding Overhead T&D Lines);
Damage to Owner's Existing Structures – $5,000,000.

3. **Builder's Risk Obligation.** Contractor shall pay to the WisDOT's designee within five (5) days written notice a maximum of up to twenty-five thousand dollars ($25,000.00) for each loss payable under the Builder's Risk Policy attributable to Contractor's Work, acts or omissions, or the Work, acts or omissions of any of Contractor's Subcontractors, or any other entity or party for whom Contractor may be responsible ("builder's risk obligation").

4. **Waiver of Subrogation.** The builder's risk insurance policy includes a waiver of subrogation in favor of the OCIP Enrolled Parties. The WisDOT and Contractor waive all rights against each other and against separate Contractors, if any, and any of their Subcontractors sub-Subcontractors, agents and employees, for damages caused by fire or other perils to the extent covered by property or Builder's Risk insurance applicable to the Work, except such rights as they may have to the proceeds of such insurance held by the WisDOT as fiduciary. This waiver applies only to the extent that proceeds are, in fact, realized as a result of a claim against the policy. Contractor shall require similar waivers in favor of the WisDOT from any of its Subcontractors, sub-Subcontractors, suppliers, and any other vendors in the procurement or construction of the Work.

SEF-IH-94 North-South Rev. 13_0506

34. Notice to Contractor – OCIP Exclusions.

The Owner Controlled Insurance Program (OCIP) insurance coverage excludes environmental/abatement work, including but not limited to hazardous materials/chemicals, lead and other materials considered hazardous – see Article – Owner Controlled Insurance Program for additional information. Environmental/abatement work must be performed by a qualified contractor who will not be enrolled in the OCIP. The qualified subcontractor must carry Construction Pollution Liability insurance with limits of at least $1,000,000 per Occurrence and $2,000,000 Aggregate.

Only payroll from non-environmental work shall be reported under the OCIP. All payroll generated from environmental/abatement work should not be reported.

Questions regarding this or any other aspects of OCIP should be directed to Kevin Gehrmann at (608) 267-7722, or Kevin.Gehrmann@dot.wi.gov.

SEF Rev. 13_0318

35. Coordination with Businesses.

The contractor shall arrange and conduct a meeting between the contractor, the department, local officials and business people to discuss the project schedule of operations including vehicular and pedestrian access during construction operations. Hold the first meeting prior to the start of work under this contract and hold two meetings per month thereafter.
108-060 (20030820)

36. Subletting the Contract.

Replace standard spec 108.1.1 (3) with the following:

If proposing to have a party other than a subcontractor perform work, notify the engineer and submit details of this arrangement in writing. The engineer will determine if that arrangement constitutes subcontracting. Submit copies of all other agreements between any parties regarding the performance of work under the contract with the Request to Sublet.
SEF Rev. 13_0225

37. Pay Plan Quantity.

A Bid Items Designated as Pay Plan Quantity

Replace standard spec 109.1.1.2 with the following:

If the schedule of items designates a bid item with a **P** in the title, the department will not measure that bid item. The department will use the plan quantity, the approximate quantity shown on the schedule of items, for payment unless a contract revision affects a designated bid item.

If the engineer revises the contract under standard spec 104.2, the department will adjust the quantity of designated items that are affected by the revised work. The engineer will adjust the affected quantity, with a contract modification as defined in standard spec 101.3, regardless of the magnitude of the revised work, which may result in either an increase or a decrease from the quantity shown on the schedule of items. The department will measure revised work as specified in standard spec 109.1.1.1. If the engineer revises the contract to eliminate a designated item, the engineer will not pay for the designated item, except as specified in standard spec 109.5.

The approximate quantity shown on the schedule of items for a designated item is for information only and only an estimate. The engineer makes no guarantee that the quantity, which can be determined by computations based on contract information, will equal the approximate quantity shown on the schedule of items. The engineer will not make a quantity adjustment for discrepancies.
SEF Rev. 12_0510

38. Force Account.

Supplement standard spec 109.4.5.1 (3)1 with the following:

Include accumulation of wages to date for each employee performing force account work and identify allowable Federal Unemployment Tax (FUTA) and State Unemployment Tax (SUTA) multipliers.
SEF Rev. 13_0228

39. Clearing and Grubbing, Emerald Ash Borer.

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

Supplement standard spec 201.3 with the following:

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

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

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

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

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

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

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

ATCP 21.17 Emerald ash borer; import controls and quarantine.

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

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

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

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

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

The emerald ash borer, Agrilus planipennis Fairmaire in any living stage.

Ash trees.

Ash limbs, branches, and roots.

Ash logs, slabs or untreated lumber with bark attached.

Cut firewood of all non-coniferous species.

Ash chips and ash bark fragments (both composted and uncomposted) larger than one inch in diameter.

Any other item or substance that may be designated as a regulated item if a DATCP pest control official determines that it presents a risk of spreading emerald ash borer and notifies the person in possession of the item or substance that it is subject to the restrictions of the regulations.

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

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

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

May be buried on site within the right-of-way in accordance to standard spec 201.3 (14).

May be buried on adjacent properties to projects within the quarantined zone with prior approval of the engineer in accordance to standard spec 201.3 (15).

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

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

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

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

Ash logs, Branches, and Roots
May be buried without chipping within the existing right-of-way or on adjacent properties in accordance to standard spec 201.3 (14)(15).

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

Burning is optional if in compliance with standard spec 201.3.

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

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

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

Anyone moving firewood or ash products from the state or these counties is subject to state and federal fines up to $1,000.00. All fines are the responsibility of the contractor. Obtain updated quarantine information at the DNR Firewood Information Line at (800) 303-WOOD.

Furnishing and Planting Plant Materials
Supplement standard spec 632.2.2 with the following:

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

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

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

Regulated Items
More frequent updates, if any, are available on the DATCP website at **www.datcp.state.wi.us** . Subsection (1) applies to new regulated areas as those areas are identified in the CFR, regardless of whether affected persons receive update notices from DATCP. Persons may request update notices by calling (608) 224−4573, by visiting the DATCP website, or by writing to the above address.
201-SER1 (20100401)

40. Abatement of Asbestos Containing Material B-51-23, Item 203.0210.S.0001.

A Description
This special provision describes abating asbestos containing material on structures in accordance to the plans, the pertinent provisions of the standard specifications, and as hereinafter provided.

B (Vacant)

C Construction

Tim Petrofske, License Number AII-115985, inspected Structures B-51-23 for asbestos on January 5, 2009. Tim Petrofske, License Number AII-115985, inspected Structure B-51-72 for asbestos on January 6, 2009. Regulated Asbestos Containing Material (RACM) was found on B-51-23 in the following locations and quantities:

B-51-23

Sample No.	Description	Sample Location	Analytical Results and Method	Category	Condition	Total Amount of Material on Structure
16	Gasket Light Grey	Bridge Railing Southeast	PC 1.2% Chrysotile	Category I Non-friable	Poor	8 sf
17	Gasket Light Grey	Bridge Railing East Center	PC 1.3% Chrysotile	Category I Non-friable	Poor	
18	Gasket Light Grey	Bridge Railing Northeast	PC 1.2% Chrysotile	Category I Non-friable	Poor	
Utilities	Conduit	Bridge Parapet Eastside	ATC	Category II Non-friable	Good	5.5 sf in PVC
Utilities	Lights	Underneath Bridge	ATC	Category II Non-friable	Good	2 sf

ATC = Assumed to Contain Asbestos

The RACM on this structure must be abated by a licensed abatement contractor. A copy of the inspection report is available from Ms. Sharlene TeBeest, (608) 266-1476, Sharlene.TeBeest@dot.wi.gov, Wisconsin Department of Transportation, 4802 Sheboygan Avenue, P.O. Box 7965, Madison, WI 53707. In accordance 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 and the abatement report to Ms. Sharlene TeBeest, (608) 266-1476 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-51-23, IH 94 Westbound over STH 20
- Site Address: Latitude 424330.00 Longitude 875712.00, Section 13 Town 03N Range 21E, Town of Yorkville
- Ownership Information: WisDOT Southeast Region, 141 NW Barstow Street, PO Box 798, Waukesha, WI, 53187
- Contact: Mark Klipstein, Regional construction engineer
- Phone: (262) 521-4402
- Age: 54 years old. These structures were constructed in 1959.
- Area of deck: B-51-23: 13,667 SF

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 in accordance to standard spec 107.24. Keep material wet until it is abated or until it is determined to be non-asbestos containing material.

D Measurement

The department will measure Abatement of Asbestos Containing Material (Structure) as a single complete unit of work, completed in accordance to the contract 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
203.0210.S.0001	Abatement of Asbestos Containing Material Struc. B-51-23	LS

Payment is full compensation for submitting necessary forms; removing all asbestos; properly disposing of all waste materials; and for furnishing all labor, tools, equipment, and incidentals necessary to complete the contract work.

203-005 (20120615)

41. Pavement Breaking Equipment.

Use only hydraulic pavement breaking equipment for breaking pavement within 300 feet of any building. Do not use guillotine, drop hammer, falling weight, gravity impact breakers or equivalent equipment.

SEF Rev. 13_0115

42. Removing Old Structures.

Prior to removing Structures B-51-34 and B-51-35, submit a Structure Removal Plan to the engineer for review and set up a pre-demolition meeting. Do not remove Structures B-51-34 and B-51-35 until the engineer has approved the Structure Removal Plan.

43. Removing Pavement.

Perform this work in accordance to standard spec 204, as shown on the plans, and as hereinafter provided.

Remove existing concrete pavement in a manner that causes minimal disturbance to the underlying base material.

Use material removed under this item as aggregates or crushed materials, and recycle and use in the construction of work under this contract to the maximum extent feasible.

Any surplus salvaged material or unusable material shall become the property of the contractor and shall be disposed of by the contractor in an environmentally acceptable manner. The cost to dispose of all excess materials, including steel reinforcement, shall be included in the item of Removing Pavement.

The crushing, screening, and processing of the removed concrete pavement shall not be measured and paid for separately, but shall be considered as included in the cost of the item into which the produced aggregates are incorporated.

44. Removing Concrete Barrier.

Supplement standard spec 204.5 with the following:

Payment for removing concrete barrier includes all necessary saw cuts.

45. Removing or Abandoning Miscellaneous Structures.

Delete standard spec 204.5.1(3) in its entirety and replace with the following:

When backfilling with Backfill Granular as specified in this special provision articles or as directed by the engineer, the item Backfill Granular is considered incidental to the appropriate bid item.

At locations where Backfill Granular is not specified, contractor may choose to use either Backfill or Backfill Granular and no separate payments will be made for using Backfill Granular.
SEF Rev. 13_0122

46. Removing Underdrain, Item 204.9090.S.0001.

A Description
This special provision describes removing underdrain in accordance to the pertinent provisions of standard spec 204 and as hereinafter provided.

B (Vacant)

C (Vacant)

D Measurement
The department will measure Removing Underdrain by the linear foot.

E Payment
Supplement standard spec 204.5 to include the following:

ITEM NUMBER	DESCRIPTION	UNIT
204.9090.S.0001 204-025 (20041005)	Removing Underdrain	LF

47. Temporary Shoring, Item 206.6000.S.

A Description
This special provision describes designing and providing temporary shoring at locations the plans show.

B Materials
B.1 Shoring Design
Provide a shoring design for each location where the plan requires temporary shoring. Have a professional engineer, registered in the State of Wisconsin and knowledgeable of the specific site conditions and requirements, verify the adequacy of the design. Submit one copy of each shoring design, signed and sealed by the same professional engineer verifying the design, to the engineer for incorporation into the permanent project record.

C Construction
Provide temporary shoring at each required location conforming to the design developed for that location.

Remove the shoring when it is no longer needed unless the engineer allows it to remain in place. Backfill the space that is excavated but not occupied by the new permanent construction conforming to standard spec 206.3.13.

D Measurement
The department will measure Temporary Shoring by the square foot, acceptably completed at locations the plans show, measured as the area of exposed face in the plane of the shoring from the ground line in front of the shoring to a maximum of one foot above the retained grade. Shoring used for staged construction in multiple configurations without removal and reinstallation will be measured once based on the configuration with the largest area of exposed face.

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

ITEM NUMBER	DESCRIPTION	UNIT
206.6000.S	Temporary Shoring	SF

Payment is full compensation for designing and providing shoring; for providing a signed and sealed copy of the design; and for backfilling and removing the shoring.

The department will not pay for temporary shoring, installed for contractor convenience, that is not required in the plans.
206-005 (20110615)

48. QMP Subgrade.

A Description

This special provision describes requirements for subgrade materials within the roadway as defined in standard spec 101.3. Conform to standard spec 207 as modified in this special provision for all work within the roadway and railway foundation at the following locations:

- IH 94 Stage 1A and 1B Southbound Widening Station 819+94 to Station 902+91
- IH 94 Mainline
- IH 94 Ramps

Provide and maintain a quality control program. A quality control program is defined as all activities, including process control inspection, sampling and testing, documentation, and necessary adjustments in the process that are related to the construction of subgrade which meets all the requirements of this provision.

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 Quality Control Plan

Submit a comprehensive written quality control plan to the engineer at or before the pre-construction meeting. Do not perform grading 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 review and approval of the engineer. 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. An outline for resolving a process control problem. Include responsible personnel, required documentation, and appropriate communication steps.
4. Location of the QC laboratory, retained sample storage, and control charts and other documentation.

5. A summary of the locations and calculated quantities to be tested under this provision.
6. An explanation regarding the basis of acceptance for material that cannot be tested by nuclear methods due to a high percentage of oversized particles.

B.2 Personnel

Perform the quality control sampling, testing, and documentation required under this provision using HTCP certified technicians. Have a grading technician certified under HTCP at level I present at the site during all subgrade preparation, fill placement, compaction, and nuclear testing activities. Have a nuclear density technician certified under HTCP at level I perform field density and field moisture content testing.

B.3 Laboratory

Perform quality control testing in a department-qualified laboratory. Obtain information on the Wisconsin laboratory qualification program from:

Materials Laboratory
3502 Kinsman Boulevard
Madison, Wisconsin 53704-2583
Telephone: (608) 246-7938
http://www.dot.state.wi.us/business/engrserv/lab-qualification.htm

B.4 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 within 12 months before using it on the project. Retain a copy of the calibration certificate with the gauge. Nuclear density gauge calibration verification is required daily when earthwork construction operations require testing under this special provision article. This calibration verification shall be performed using the departments "Validator" apparatus which is located at the WisDOT I-94 Construction Field Office: 5675 South 27th Street, Milwaukee, WI 53221. The contractor must establish a standard gauge reading for the "Validator" using the ten test average method. The source emitter depth for calibration verification, in the direct transmission mode, will be determined by the engineer. This procedure will establish the "Validator" apparatus, as the contractor's project reference site.

Conform to ASTM D 2950 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.

B.5 Soil Source Study

Conduct and submit a soil source study before beginning of grading operations. Ensure that this study identifies each distinct soil type on the project within the top 15 feet of cut areas and all borrow material. Provide the in-bank natural moisture content for each soil. Develop moisture-density curves for each identified soil type by utilizing AASHTO T 99 with a minimum of 5 individual points, and a zero air voids curve at a specific gravity of 2.65. If the specific gravity is not considered to be equal to 2.65, use the specific gravity considered appropriate for the material. Specific gravity tests may need to be performed to confirm the value used for generation of the zero air voids curve. Determine the maximum density and corresponding optimum moisture level for each soil type. Develop a site-specific family of Proctor curves for this contract from the completed soil source study and submit to the engineer for review and acceptance.

Perform characterization tests on each of the soil types selected for the soil source study. The tests for roadway (and railway) include AASHTO T 89 (ASTM D4318), AASHTO T 90 (ASTM D4318), AASHTO T 27 (ASTM C136), and AASHTO T 11 (ASTM C117). Classify each soil type selected according to the AASHTO soil classification system based on the characterization tests. Do not begin grading operations until the engineer accepts the soil source study.

Use the soil types identified in the soil source study with corresponding maximum densities and optimum moisture values to determine the compaction compliance on the project. Continue the soil source study in those areas of cuts greater than 15 feet that were not accessible during the initial study. Include data on additional soil types if project conditions change. Ensure that tests of additional soil types are complete and the engineer accepts the results before incorporating the material into the roadway foundation.

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 at:

Regional Materials Laboratory
935 S. 60th Street
West Allis, Wisconsin 53214
Telephone: (414) 266-1158

Retain and identify two representative samples of each Proctor. Submit one sample to the engineer. Retain one sample on site for use when performing textural identification.

B.6 Quality Control Documentation

B.6.1 Control Charts

Maintain separate control charts for the field density and field moisture content of each grading area. Designate grading areas within the project as follows:

1. Embankment portions of the project, except within 200 feet of bridge abutments.
2. Embankment within 200 feet of bridge abutments.
3. Subgrade cut portions of the project.
4. Embankment in pipe culvert, sewer and waterline trenches.
5. Structure and granular backfill placed at bridge abutments.
6. Embankments of the project where embankments are 20 feet or higher regardless of location to be known as special compaction area.

Ensure that all tests are recorded and become part of the project records. Plot required test results on the control charts. Include random and engineer-requested testing but only include the contractor's randomly selected QC test results in the 4-point running average. The contractor may plot other contractor-performed process control or informational tests on the control charts, but do not include them in 4-point running averages.

Post control charts in an engineer-approved location and update daily. Ensure that the control charts include the project number, the test number, each test element, the applicable control limits, the contractor's individual test results, the running average of the last 4 data points, and the engineer's quality verification test data points. Use the control charts as part of a process control system for identifying potential problems and assignable causes. Format control charts according to the CMM.

Submit control charts to the engineer in a neat and orderly manner within 10 business days after completing subgrade construction.

B.6.2 Records

Document all observations, inspection records, adjustments to fill placement procedures, soil changes, and test results daily. Note the results of the observations and inspection records as they occur in a permanent field record. Density test locations shall be identified by a specific test number and include horizontal and vertical control for reference as noted in Section B.7.1.

Provide copies of the field density and field moisture running average calculation sheets, the one-point Proctor tests, records of procedure adjustments, and soil changes to the engineer daily.

Submit original testing records to the engineer in a neat and orderly manner within 10 business days after completing subgrade construction.

B.7 Contractor Testing

B.7.1 General

Have a grading technician certified under HTCP at level I present during all subgrade preparation, fill placement, compaction, and testing. Have a nuclear density technician certified under HTCP at level I perform the testing for field density and field moisture content. During subgrade construction, use sampling and testing methods identified in the

CMM to perform the required tests at randomly selected locations at the indicated minimum frequency for each grading area.

Determine the cubic yards for testing based on a total load count system the engineer and contractor agree to.

For each test, provide the cubic yards represented and the test location to within 2 feet horizontally and 0.5 feet vertically. Use project stationing to determine horizontal location and grade stakes to determine vertical location.

Test areas of suspect compaction or areas which appear to be nonconforming as determined by the engineer.

B.7.2 Field Density and Field Moisture

Perform the field density and field moisture tests using the nuclear density meter method according to AASHTO T 310. Ensure that each field density test material is related to one of the specific soil types identified in the soil source study in determining the percent compaction. Use textural identification as the primary method of establishing this relationship. Utilize the representative samples retained from the soil source study when performing the textural identification. Use a coarse particle correction according to AASHTO T 224.

If field density and field moisture tests cannot be performed by the nuclear density method due to a high percentage of oversized particles as determined according to AASHTO T 99 for highway embankments, observe the placement of the embankment and document the basis of acceptance. Document daily quantities of untested embankment and locations where untested embankment is placed, and keep a cumulative quantity of untested embankment material for the duration of the project. Include the daily documentation and a summary of the cumulative quantity of untested embankment material with the project records.

B.7.3 One-Point Proctor

Obtain a representative sample of the fill material and test according to AASHTO T 272. Compare the sample to the curves developed in the soils source study to determine the maximum dry density and optimum moisture. Use the appendix for AASHTO T 272 as a guide in this determination.

B.7.4 Testing Frequency

B.7.4.1 Subgrade Embankment portions of the project, except within 200 Feet of bridge abutments

Perform the required tests at the following frequencies:

Test	Minimum Frequency
Field Density and Moisture (AASHTO T 310)	One per 2,000 cubic yards of fill per lift or one test per grading area per day whichever yields the most tests.
One-Point Proctor (AASHTO T 272)	One per 9,000 cubic yards or when a change in fill material occurs.

B.7.4.2 Subgrade Embankment Within 200 Feet of Bridge Abutments

Perform the required tests at the following frequencies:

Test	Minimum Frequency
Field Density and Moisture (AASHTO T 310)	One per 1,000 cubic yards of fill per lift or one test per grading area per day whichever yields the most tests.
One-Point Proctor (AASHTO T 272)	One per 9,000 cubic yards or when a change in fill material occurs.

B.7.4.3 Subgrade Cut

Perform the required tests at the following frequencies:

Test	Minimum Frequency
Field Density and Moisture (AASHTO T 310)	One test per 1,000 linear feet of cut or one test per cut area whichever yields the most tests. The testing will be completed at the finished subgrade elevation.

B.7.4.4 Subgrade Embankment in Pipe Culvert, Sewer and Waterline Trenches

Perform the required tests at the following minimum frequencies per trench run between structures. Test trenches individually at the frequency listed below. For example, lateral lines and trunk lines are to be considered individual trenches:

Test	Minimum Frequency
Field Density and Moisture (AASHTO T 310)	One test per 100 CY of backfill placed per lift or one test per day whichever yields the most tests.
One-Point Proctor (AASHTO T 272)	One per 3,000 cubic yards or when a change in fill material occurs.

B.7.4.5 Structure and Granular Backfill at Bridge Abutments

Perform the required tests at the following minimum frequencies:

Test	Minimum Frequency
Field Density and Moisture (AASHTO T 310)	One test per 2 feet of vertical backfill height per abutment.
One-Point Proctor (AASHTO T 272)	One per 3,000 cubic yards or when a change in fill material occurs.

B.7.4.6 Embankments of the project where embankments are 20 feet or higher regardless of location to be known as special compaction area
Perform the required tests at the following minimum frequencies but exclude MSE wall backfill:

Test	Minimum Frequency
Field Density and Moisture (AASHTO T 310)	One per 2,000 cubic yards of fill per lift or one test per grading area per day whichever yields the most tests.
One-Point Proctor (AASHTO T 272)	One per 6,000 cubic yards or when a change in fill material occurs.

B.7.5 Compaction Zones
B.7.5.1 Subgrade Embankment portions of the project, except within 200 Feet of bridge abutments

Embankment material placed within 6 feet of the finished subgrade elevation is classified as upper zone material. Material placed more than 6 feet below the finished subgrade elevation is classified as lower zone material.

B.7.5.2 Subgrade Embankment Within 200 Feet of Bridge Abutments
All embankment material placed within 200 feet of bridge abutments is subject to the quality controls for upper zone material.

B.7.5.3 Subgrade Cut
Subgrade material in cut areas is subject to the quality controls for upper zone material.

B.7.5.4 Subgrade Embankment in Culvert Pipe Trenches
Material placed within culvert pipe trenches is subject to the quality controls for the zone that the material is located in.

B.7.5.5 Structure and Granular Backfill at Bridge Abutments
All backfill material placed adjacent to bridge abutments is subject to the quality controls for upper zone material.

B.7.5.6 Embankments of the project where embankments are 20 feet or higher regardless of location to be known as special compaction area

All embankment material placed where embankments are 20 feet or higher regardless of location is subject to the quality controls for upper zone material. Exclude MSE wall backfill.

For this contract, the station ranges where embankments are 20 feet or higher and require higher levels of compaction (special compaction) are as follows:

SB fill sections > 20': 857+75 to 870+00
NB fill sections > 20': 863+50 to 873+00

Also see plan notes identifying special compaction

B.7.6 Control Limits

B.7.6.1 Field Density

The lower control limit for field density measurements in the upper zone is a minimum of 95.0% of the maximum dry density as determined by AASHTO T 99 or T 272 for the 4-point running average and a minimum of 92.0% of the maximum dry density for any individual test.

The lower control limit for field density measurements in the lower zone is a minimum of 93.0% of the maximum dry density as determined by AASHTO T 99 or T 272 for the 4-point running average and a minimum of 90.0% of the maximum dry density for any individual test. The lower zone lower control limit for field density measurements is a minimum of 93.0% of the maximum dry density as determined by AASHTO T 99 or T 272 for the 4-point running average and a minimum of 92.0% of the maximum dry density for any individual test.

B.7.6.1.1 Field Density

Embankments of the project where embankments are 20 feet or higher regardless of location to be known as special compaction area excluding MSE wall backfill.

The lower control limit for field density measurements in the special compaction area is a minimum of 98.0% of the maximum dry density as determined by AASHTO T 99 or T 272 for the 4-point running average and a minimum of 95.0% of the maximum dry density for any individual test.

B.7.6.2 Field Moisture Content

The upper control limit for the field moisture content in the upper and lower zones is 105.0% of the optimum moisture as determined by AASHTO T 99 or T 272 for the 4-point running average.

The lower control limit for the field moisture content in the upper and lower zones is 65.0% of the determined optimum moisture for the 4-point running average. There is no lower control limit for the field moisture of material having less than 5% passing the No. 200 sieve.

B.7.6.2.1 Field Moisture Content

Embankments of the project where embankments are 20 feet or higher regardless of location to be known as special compaction area excluding MSE wall backfill

The upper control limit for the field moisture content in the special compaction area is 105.0% of the optimum moisture as determined by AASHTO T 99 or T 272 for the 4-point running average. The lower control limit for the field moisture content in the special compaction area is 65% of the determined optimum moisture for the 4-point running average.

B.7.7 Corrective Action

Notify the engineer if an individual field density test falls below the individual test control limit. The subgrade in this area is unacceptable. Perform corrective actions, acceptable to the engineer, to improve the density of the subgrade material. After corrective action, perform a randomly located retest within the represented quantity to ensure that the material is acceptable. Each embankment lift shall be tested for compaction compliance before the next lift is placed.

Notify the engineer if the field density or field moisture running average point falls below the running average control limit for field density or outside the control limits for field moisture. The subgrade in this area is unacceptable. Perform corrective actions, acceptable to the engineer, to improve the quality of the material represented by the running average point. Retest each corrected area at a new random location within its represented quantity and determine a new 4-point running average. If the new running average is not acceptable, perform further corrective actions and retest at new random locations.

If the contractor's control data is proven incorrect resulting in a field density or field moisture point falling below the control limit for field density or outside the control limits for field moisture, the subgrade is unacceptable. Employ the methods described above for unacceptable material.

B.8 Department Testing

B.8.1 General

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 verification and independent assurance personnel for the project.

The department will provide field density and field moisture test results to the contractor on the day of testing. Test results from Proctor split samples will be provided to the contractor within 7 business days after the sample has been received by the department.

B.8.2 Verification Testing

The department will have an HTCP technician, or ACT under the direction of a certified technician, perform QV sampling and testing. Department verification testing personnel must meet the same certification level requirements specified for contractor testing personnel for each test being verified. The department will notify the contractor before testing so the contractor can observe QV testing.

The department will test field density and field moisture randomly at locations independent of the contractor's QC work. The department will use split samples for verification of Proctor testing. In all cases, the department will conduct the verification tests in a separate laboratory and with separate equipment from the contractor's QC tests.

The department will perform verification testing as follows:

- The department will conduct verification tests on Proctor split samples taken by the contractor. These samples may be from the Soil Source Study or the one-point Proctor or sample locations chosen by the engineer from anywhere in the process. The minimum verification testing frequency is one per 90,000 cubic yards, with at least one for each soil type identified in the Soil Source Study.
- The department will test the first split sample obtained by the contractor for the one-point Proctor. The engineer may select any contractor-retained sample for verification testing.
- The department will conduct at least one verification test for field density and field moisture per 30,000 cubic yards.

Plot verification tests on the contractor's quality control charts as specified in B.6.1. Do not include verification tests in the 4-point running average.

If verification tests are within specified control limits, no further action is required. If verification tests are not within specified control limits, the engineer and contractor will jointly investigate any testing discrepancies. The investigation may include additional testing as well as review and observation of both the department's and contractor's sampling and testing procedures and equipment. Both parties will document all investigative work.

Correct all deficiencies. If the contractor does not respond to an engineer request to correct a deficiency or resolve a testing discrepancy, the engineer may suspend grading work until action is taken. Resolve disputes as specified in B.9.

B.8.3 Independent Assurance Testing

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

Plot the independent assurance tests on the contractor's quality control charts as specified in B.6.1. Do not include independent assurance tests in the 4-point running average.

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 grading work until action is taken. Resolve disputes as specified in B.9.

B.9 Dispute Resolution

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.

If the project personnel cannot resolve a dispute and the dispute affects payment or could result in incorporating nonconforming 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 tests 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.

B.10 Acceptance

The department will accept the material tested under this provision based on the contractor QC tests unless it is shown through verification testing or the dispute resolution process that the contractor's test results are in error.

C (Vacant)

D (Vacant)

E Payment

Costs for all sampling, testing, and documentation required under this special provision are incidental to the work. If the contractor fails to perform the work required under this

special provision, the department may reduce the contractor's pay. The department will administer pay reduction under the Non-performance of QMP administrative item.

49. Select Borrow.

Conform to the requirements of standard spec 208 and as hereinafter provided.

Material
Furnish and use material that consists of granular material meeting the requirements of granular backfill, Grade Number 2, in accordance to standard spec 209.2.
208-005 (20031103)

50. 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, 305, and 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://roadwaystandards.dot.wi.gov/standards/cmm/index.htm

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://www.dot.state.wi.us/business/engrserv/lab-qualification.htm

B.4 Quality Control Documentation

B.4.1 General

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

B.4.2 Records

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

B.4.3 Control Charts

(1) Plot gradation and fracture on the appropriate control chart as soon as test results are available. Format control charts according to CMM 8.30. Include the project number on base placement control charts. Maintain separate control charts for each base aggregate size, source or classification, and type.

(2) Provide control charts to the engineer within 6 hours after obtaining a sample. For 3-inch base, extend this 6-hour limit to 24 hours. Post or distribute charts using a method mutually agreeable to the engineer and contractor. Update control charts daily to include the following:

1. Contractor individual QC tests.
2. Department QV tests.
3. Department IA tests.
4. Four-point running average of the QC tests.

(3) Except as specified under B.8.2.1 for nonconforming QV tests, include only QC tests in the running average. The contractor may plot process control or informational tests on control charts, but do not include these tests, conforming QV tests, or IA tests in the running average.

B.5 Contractor Testing

(1) Test gradation, fracture, liquid limit and plasticity index during placement for each base aggregate size, source or classification, and type.

(2) Test gradation once per 3000 tons of material placed. Determine random sample locations and provide those sample locations to the engineer. Obtain samples after the material has been bladed, mixed, and shaped but before compacting; except collect 3-inch samples from the stockpile at load-out. Do not sample from material used to maintain local traffic or from areas of temporary base that will not have an overlying pavement. On days when placing only material used to maintain local traffic or only temporary base that will not have an overlying pavement, no placement testing is required.

(3) Split each contractor QC sample and identify it according to CMM 8.30. Retain the split for 7 calendar days in a dry, protected location. If requested for department comparison testing, deliver the split to the engineer within one business day.

(4) The engineer may require additional sampling and testing to evaluate suspect material or the technician's sampling and testing procedures.

(5) Test fracture for each gradation test until the fracture running average is above the lower warning limit. Subsequently, the contractor may reduce the frequency to one test per 10 gradation tests if the fracture running average remains above the warning limit.

(6) Test the liquid limit and plasticity index for the first gradation test. Subsequently, test the liquid limit and plasticity index a minimum of once per 10 gradation tests.

B.6 Test Methods

B.6.1 Gradation

(1) Test gradation using a washed analysis conforming to the following as modified in CMM 8.60:

Gradation..... AASHTO T 27
Material finer than the No. 200 sieve..... AASHTO T 11

(2) For 3-inch base, if 3 consecutive running average points for the percent passing the No. 200 sieve are 8.5 percent or less, the contractor may use an unwashed analysis. Wash at least one sample out of 10. If a single running average for the percent passing the No. 200 sieve exceeds 8.5 percent, resume washed analyses until 3 consecutive running average points are again 8.5 percent passing or less.

(3) Maintain a separate control chart for each sieve size specified in standard spec 305 or 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 2 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 2 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 (20100709)

51. Base Aggregate Dense 1¼-Inch for Lower Base Layers.

Replace standard spec 305.2.2.1(2) with the following:

- Use 1¼-inch base throughout the full base depth.
- Use ¾-inch base in the top 3 inches of the unpaved portion of shoulders. Use ¾-inch base or 1¼-inch base elsewhere in shoulders.

305-020 (20080902)

52. Select Crushed Material.

Replace standard spec 312.2(6) with the following:

312.2 Materials

(6) The department will assess select crushed material acceptability based primarily on the engineer's visual inspection. The department may require contractor to sample, test and report gradation or fracture results to show conformance of material. One test per source, production process or change of production process may be required.

Replace standard spec 312.5(2) with the following:

312.5 Payment

(2) Payment for Select Crushed Material is full compensation for providing and compacting select crushed material and all work necessary to provide gradation or fracture test results.

SEF Rev. 13_0430

53. Asphaltic Base.

A Description

Furnish materials for and prepare the asphaltic base in accordance to standard spec 315, except as modified herein.

B Materials

Supplement standard spec 315.2 with the following:

Furnish asphaltic mixture meeting the requirements specified for E-10 under standard spec 460.2.

Provide asphaltic material (PG 64-22 and (PG 64-28) for this mix in accordance to standard spec 455.

C Construction
Replace standard spec 315.3.1 with the following:

Conform to the general requirements for asphaltic pavements specified in standard spec 450, except as modified here in 315.3. Place the mixture in a single 3-inch (75 mm) compacted layer unless the engineer directs otherwise. Substandard spec 460.3.2 shall not apply to this item.

If automatics break down during string line controlled placement, stop and suspend placement of the asphaltic base until the line and grade controls are restored.

C.2 Foundation
Prepare the foundation according to standard spec 211. Before placing asphaltic base, repair and re-compact rutted or disturbed areas of the foundation resulting from hauling or paving operations as specified in standard spec 211. If the contractor fails or neglects to perform the required repair of damaged foundation, the engineer may suspend paving operations until the satisfactory reconditioning of the foundation is performed.

C.3 Pavers
If the automatics break down during ski controlled placement, manual control may be used only until the end of that working day.

C.4 Mixture and Density Testing
Perform QMP testing work as designated in standard spec 460 for this item.

Sample the HMA material as soon as plant operations have stabilized, the sample shall be collected within the first hour of mix delivery. Nuclear density testing may commence after HMA mix acceptance results have been satisfactorily reported for the sample.

Replace standard spec 460.3.3.1 and standard spec 460.3.3.2 with the following:

The determination of density for asphaltic base shall be done by the Control Strip Method. A control strip shall be constructed at the beginning of work for each contract. Each control strip when acceptably compacted, which meets finish and smoothness requirements shall remain in place and become part of the completed pavement. The asphaltic base shall be composed of the same material and shall be of the same design as the mixture to be used in the rest of the work.

The control strip shall consist of 1,000 feet of the asphaltic base mixture that contains a minimum of one QC test and twelve sites for nuclear density testing. Within the control strip, the department, using random numbers for sample determination, will identify twelve locations for density testing. Upon completion of the desired compaction for the

control strip, nuclear density tests will be performed at the twelve locations. The nuclear densities will be direct readings and shall be taken without additional materials to aid in seating the gauge.

The Control Strip accepted density will be determined by calculating the median value of the random twelve nuclear density locations. The average difference between the department's gauge and contractor's gauge must not exceed 1.5 pcf. As long as the gauges meet the 1.5 pcf requirement, the median value of the contractor's gauge readings will determine acceptance. Provide to the department test results within (4) hours for the QC sample and Control Strip acceptance density. The QC sample shall be taken randomly within the first 300 tons of production not to include the first 50 tons. The Control Strip acceptance density of 89.5% will validate the rolling pattern to be used for the remainder of the contract if the air voids from the QC sample fall between 3.5% to 5.0%. If the test results do not meet these minimum requirements, an investigation will result and a new control test strip will be required.

Mixture production will be stopped and an investigation initiated if any of the following conditions occur:

- There is a change in binder source;
- The previous day's maximum specific gravity average from QC testing varies by 0.020 from the value of the initial QC test;
- The overall blend changes have deviated from the original mix design by 20% or an individual aggregate by 10% and no aggregate size shall be deleted; or
- Any other condition occurs which in the judgment of the engineer would warrant the establishment of a new control strip density. Core samples may also be requested by the engineer to verify compaction or to indicate the need for another control test strip.

Incentive and Disincentive for HMA Pavement Density are not included with this item.

D (Vacant)

E Payment
Supplement standard spec 315.5 with the following:

The department will adjust payment for asphaltic base for non conforming QMP HMA Mixtures as specified in 460.2.8.2.1.7.
SEF Rev 12_0829

54. Rubblizing.

Supplement standard spec 335 with the following:

Due to moisture-sensitive subgrade beneath the existing pavement from approximately IH 94 Station 825+00 to 895+00 Northbound, coordinate the rubblizing, base aggregate, and paving operations to minimize exposure of the subgrade to adverse weather.

55. Concrete Pavement Approach Slab.

Concrete Pavement Approach Slabs on I-94 North/South Corridor will require high performance dowel bars in accordance to the Special Provision HPC Pavement Requirement for Concrete Pavement.
SEF Rev. 13_0717

56. Concrete Maturity Testing.

A Description
This special provision requires using concrete maturity testing to determine strength for project control of concrete pavement, falsework removal, and structural concrete under the designated subsections of the standard specifications as follows:

Duration of the curing period	standard spec 415.3.12
Duration of the cold weather protection period	standard spec 415.3.13
Opening to service	standard spec 415.3.15
Removing falsework	standard spec 502.3.4.2
Duration of the required curing period	standard spec 502.3.8
Duration of the cold weather protection period	standard spec 502.3.9
Opening to service	standard spec 502.3.10.1

The requirement for determining strength by the concrete maturity testing method supersedes all provisions for strength determination by other methods or provisions based on equivalent days within those designated subsections. The concrete maturity testing requirement also applies to all other provisions referencing strength determination under these designated subsections.

B Materials
Provide a maturity testing system that uses data-encrypted sensor devices permanently embedded in the field-placed concrete. Data-encrypted sensors have a chip that records both temperature and time information that can be downloaded to a reading device not permanently attached to those sensors.

Provide the department with a maturity reading device for each maturity testing system utilized on the project. Devices provided for the department use will become department property under the contract.

C Construction

Develop a strength/maturity relationship for each concrete mix design used under the contract. Base that relationship on strength results of cylinders from pavement, appurtenant construction, ancillary concrete, or structural masonry units incorporated into the work and using those same mixes. Submit the maturity test results to the engineer for approval before proceeding with the next pour using that mix. Develop a new strength/maturity relationship every time the mix changes, when average daily temperature changes by 30º F (17º C) or more, or if engineer verification cylinder strength varies more than 10 percent from the required opening strength when tested at the calibrated opening maturity.

Conform to the department's procedure for developing the strength/maturity relationship, field calibration of the resulting curve, and for all maturity testing. Use a mix-specific datum temperature per Annex A1 of ASTM C1074. Develop data points for the strength/maturity relationship up to 120 percent of the highest required opening strength for each mix design.

For mainline concrete pavement placements, place two probes at the beginning of the day's placement and two probes at the end of the day's placement. Place at least one sensor for each 100 cubic yards (76 m^3) of concrete placed under non-pavement bid items. Place additional probes as the engineer directs at no additional cost to the department. The resulting concrete maturity test data, after engineer verification, will apply to concrete on the same project conforming to the following:

1. The same mix design as the test location.
2. Cured under conditions similar to or move favorable than that of the test location.
3. Placed on or before the time the test location was placed.

Each work week provide a set of three verification cylinders to the engineer for each strength/maturity field calibration curve currently in use on the project. The engineer will designate the sampling location for the verification cylinders. Provide two cylinders for compressive strength testing and one with a data-encrypted sensor embedded in its center for maturity evaluation. Cast and cure these cylinders on-site as the engineer directs and conforming to the requirements of ASTM 31 for field curing. Deliver them to the engineer promptly after attaining 50 percent of their opening maturity so the engineer can perform verification testing as closely as possible to the opening maturity level.

D (Vacant)

E Payment

No additional payment will be made by the department for maturity testing
SEF Rev. 12_0920

57. HPC Pavement Requirements for Concrete Pavement.

A Description

This special provision describes specialized material and construction requirements to utilize on the IH-94 mainline pavement and shoulders. These requirements apply to the following bid item:

- Concrete Pavement 12-Inch

Conform to standard specs 415 and 501 as modified in this special provision, and in accordance to special provision QMP Concrete Pavement Special Requirements.

Concrete pavement mixes from standard spec 501 may not be used. Provide an independent contractor developed mix design.

B Materials

Conform to standard specs 415.2 and 501.2 and as modified in this special provision.

B.1 Concrete

Add the following to standard spec 415.2.1:

Furnish a cementitious material that does not contain more than 30% slag. Ensure that the combination of fly ash and slag does not exceed 30% of the total cementitious material.

B.2 Reinforcement

Replace standard spec 415.2.2 with the following:

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

Furnish dowel bars conforming to standard spec 505.2.6 except, for transverse joints in mainline concrete pavement, use non-corrosive high performance dowel bars. Use only one type of high performance bar for work under the contact. The following may be used:

- 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.

- 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.

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

- 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.

- 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.

- Use bars with a minimum outside diameter of 1.5-inches and a length of 18-inches for all non-corrosive high performance dowel bars.

B.3 Concrete Curing Compounds
Replace standard spec 415.2.4 with the following:

Furnish poly-alpha-methylstyrene membrane curing compound conforming to ASTM C 309 as modified below.

Total Solids (% by weight of compound)	42 Minimum
% Reflectance in 72 hours (ASTM E1347)	65 Minimum
Loss of Water, kg/m2 in 24 hours (ASTM C156)	0.15 Maximum
Loss of Water, kg/m2 in 72 hours (ASTM C156)	0.40 Maximum
VOC content (g/L)	350 Maximum
Infrared Spectrum, Vehicle	100% alpha methylstyrene

B.4 Coarse Aggregates
B.4.1 General
Replace standard spec 501.2.5.4.1 with the following:

Use clean, hard, durable crushed limestone with 100% fractured surfaces and free of an excess of thin or elongated pieces, frozen lumps, vegetation, deleterious substances or adherent coatings considered injurious.

Use virgin aggregates only.

B.5 Deleterious Substances

Replace standard spec 501.2.5.4.2(1) with the following:

The amount of deleterious substances shall not exceed the following percentages:

DELETERIOUS SUBSTANCE	PERCENT BY WEIGHT
Shale	1.0
Coal	1.0
Clay lumps	0.3
Soft fragments	3.0
Any combination of above	3.0
Thin or elongated pieces based on a 3:1 ratio	15.0
Materials passing the No. 200 (75 µm) sieve	1.5
Chert[1]	3.0

[1] Material classified lithologically as chert and having a bulk specific gravity (saturated surface-dry basis) of less than 2.45. Determine the percentage of chert by dividing the weight of chert in the sample retained on a 3/8-inch (9.5 mm) sieve by the weight of the total sample.

B.6 Physical Properties

Replace standard specs 501.2.5.4.3 (1) and (2) with the following:

The percent wear shall not exceed 30%.

The department will ensure that soundness testing conforms to AASHTO T 104, using five cycles in sodium sulfate solution on aggregate retained on the No. 4 (4.75 mm) sieve. The weighted loss shall not exceed six percent.

The department will ensure that freeze-thaw soundness testing confirms to AASHTO T 103. The weighted freeze-thaw average loss shall not exceed 15 percent.

B.7 QMP Testing Requirement Modification

B.7.1 Concrete Pavement Mixes

Testing referred to in this section pertains to concrete mix design approval and trial batch proving.

In addition to B.5.2.3.2 paragraph one of the QMP Concrete Pavement Special Requirements provision of this contract, use at least five pairs of beams and five pairs of cylinders to demonstrate the flexural strength and splitting tensile strength of a mix design. Demonstrate that the 28-day flexural strength of the proposed mix will equal or exceed 650 psi. Ensure that the average flexural strength of any one pair of beams is not less than 490 psi.

B.7.2 Contractor Testing

B.7.2.1 General

Perform all quality control tests applicable to this special provision and as described in the quality control plan. Use the test methods identified below to perform the required tests:

Flexural strength……AASHTO T 97

The department may periodically observe contractor sampling and testing, and direct additional contractor sampling and testing for department evaluation. Ensure that all test results are available for the engineer's review at any time during normal working hours.

B.7.3 Flexural Strength

B.7.3.1 Sampling

Cast specimens for testing flexural strength in each lot tested under the QMP Concrete Pavement Special Requirements provision of this contract. Cast compressive strength and flexural strength test specimens from the same concrete mix sample.

Sample according to AASHTO T 141. Cast and cure the specimens according to AASHTO T 23.

Cast one set of three standard 6 x 6 inch beams to test the lot flexural strength.

B.7.3.2 Testing

Have a technician certified for flexural strength strength through the department's HTCP, in a department-qualified laboratory, perform flexural strength testing and document the results.

Determine the 28-day strength in psi of each specimen according to the specified AASHTO standards for each required test. Test each specimen to failure. Use a machine that automatically records the date, time, rate of loading, and maximum load of each specimen. Include a printout of this information with the strength documentation for each specimen tested.

C Construction

Conform to standard specs 415.3 and 501.3 and as modified in this special provision.

C.1 Jointing

C.1.1 General

Add the following to standard spec 415.3.7.1:

Treat sawed surfaces of transverse and longitudinal joints with a silane joint sealant found on the department's approved products list for Concrete Protective Surface Treatments. Prepare surface by pressure washing all saw slurry from sawed joints and allow to dry thoroughly prior to application of silane sealer. Apply the product directly to the interior of the sawed joint. Do not use the broadcast spray method of application.

C.2 Surface Finishing
Replace standard spec 415.3.8.3.1 with the following:

Tine freshly placed pavement as soon as it is practical after floating.

Tine with a self-propelled tining machine. Where using a tining machine is not practical, tine by hand. Produce uniformly deep grooves approximately 1/8 to 3/16 inch (3 mm to 5 mm) deep. Provide a finished surface free of tining defects. Complete before tining tears or unduly roughens the concrete.

Tine surface longitudinally as specified in standard spec 415.3.8.3.2.

Delete standard spec 415.3.8.3.3

C.3 Curing Concrete
C.3.1 General
Replace standard spec 415.3.12.1 with the following:

Maintain adequate moisture throughout the concrete mass to support hydration until the concrete develops sufficient strength to open it to service. Cure all concrete by impervious coating as specified in standard spec 415.3.12.2 within 75 minutes from the time concrete is discharged from the truck.

If the concrete is not cured as specified in the subsection, the engineer may suspend concrete placement operations.

C.4 Extended Delivery Time
Delete paragraph one from standard spec 501.3.2.4.3.3.

C.5 Ready-Mixed Concrete
C.5.1 General
Replace standard spec 501.3.5.1 with the following:

Use central-mixed concrete for all work under this special provision. Central-mixed concrete is completely mixed in a stationary mixer and transported to the point of delivery with or without mechanical agitation in the transporting vehicle.

C.6 Hot Weather Concreting
C.6.1 General
Replace standard spec 501.3.8.2.1 with the following:

Take the following steps to ensure that the concrete will cure in during hot weather conditions. Submit a written temperature control plan at or before the pre-pour meeting. In that plan, outline the actions to control concrete temperature if the concrete temperature at the point of placement exceeds 80° F (27° C). Do not place concrete

without the engineer's written acceptance of that temperature control plan. Perform the work as outlined in the temperature control plan.

If the air temperature exceeds 80° F (27° C) ensure that the asphalt base is in a moist condition during concrete placement. Water the asphalt base, as required, not less than six hours before placing the concrete. If the asphalt base subsequently dries, moisten it by sprinkling water just before placing the concrete. Sprinkle the water to avoid forming pools.

If the concrete temperature at the point of placement exceeds 90° F (32° C), do not place concrete for items covered in this special provision.

Notify the engineer whenever conditions exist that might cause the temperature at the point of placement to exceed 80° F (27° C). If project information is not available, obtain information from similar mixes placed for other nearby work.

Any additive or action taken to control the temperature of concrete to within the limits of this special provision, including but not limited to the addition of ice to the concrete mix, is considered incidental to the work and will not be measured or paid for separately.

D Measurement
Conform to standard spec 415.4.

E Payment
Conform to standard spec 415.5 and as modified in this special provision.

Add the following to standard spec 415.5:

E.1 Pay Adjustment for Compressive Strength
The department will adjust pay for each lot using percent within limits (PWL) of the 28-day sublot average strengths for that lot. The department will measure PWL relative to the lower specification limit of 4500 psi.
SEF Rev. 13_0723

58. Protection of Concrete.

Supplement standard spec 415.3.16 as follows:

Provide for a minimum of one concrete finisher to remain on the project site after final finishing of all concrete surfaces until such time as the concrete has hardened sufficiently to resist surface scarring caused by footprints, handprints, or any other type of imprint, malicious or otherwise. Actively and continuously patrol on foot the newly placed concrete and repair any damage to the surface that might be sustained as described above.

Providing the finisher(s), the necessary equipment, and materials shall be construed to be included in the contract unit price for each concrete item.

59. QMP Ride; Incentive IRI Ride, Item 440.4410.S.

A Description

(1) This special provision describes profiling pavements with a non-contact profiler, locating areas of localized roughness, and determining the International Roughness Index (IRI) for each wheel path segment.

(2) Profile the final riding surface of all mainline pavements**.** Include auxiliary lanes in Category I and II segments; crossroads with county, state or U.S. highway designations greater than 1500 feet in continuous length; bridges, bridge approaches; and railroad crossings. Exclude roundabouts and pavements within 150 feet of the points of curvature of roundabout intersections.

(3) The engineer may direct straightedging under standard spec 415.3.10 for pavement excluded from localized roughness under C.5.2 (1); for bridges; and for roundabouts and pavements within 150 feet of the points of curvature of roundabout intersections. Other surfaces being tested under this provision are exempt from straightedging requirements.

B (Vacant)

C Construction

C.1 Quality Control Plan

(1) Submit a written quality control plan to the engineer at or before the pre-pave meeting. 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 all quality control personnel.
2. The process by which quality control information and corrective action efforts will be disseminated to the appropriate persons. Include a list of recipients, the communication means that will be used, and action time frames.
3. The methods and timing used for monitoring and/or testing ride quality throughout the paving process. Also indicate the approximate timing of acceptance testing in relation to the paving operations.
4. The segment locations of each profile run used for acceptance testing.
5. Traffic Control Plan

C.2 Personnel

(1) Have a profiler operator, certified under the department's highway technician certification program (HTCP), operate the equipment, collect the required data, and analyze the results using the methods taught in the HTCP profiling course. Ensure that an HTCP-certified profiler operator supervises data entry into the material records system (MRS).

C.3 Equipment

(1) Furnish a profile-measuring device capable of measuring IRI from the list of department-approved devices published on the department's web site:

http://roadwaystandards.dot.wi.gov/standards/qmp/index.htm

(2) Unless the engineer and contractor mutually agree otherwise, arrange to have a calibrated profiler available when paving the final riding surface.

(3) Perform daily calibration verification of the profiler using test methods according to the manufacturer's recommendations. Notify the engineer before performing the calibration verification. If the engineer requests, arrange to have the engineer observe the calibration verification and operation. Maintain records of the calibration verification activities, and provide the records to the engineer upon request.

C.4 Testing

C.4.1 Run and Reduction Parameters

(1) Enter the equipment-specific department-approved filter settings and parameters given in the approved profilers list on the department's QMP ride web site.

http://roadwaystandards.dot.wi.gov/standards/qmp/profilers.pdf

C.4.2 Contractor Testing

(1) Operate profilers within the manufacturer's recommended speed tolerances. Perform all profile runs in the direction of travel. Measure the longitudinal profile of each wheel track of each lane. The wheel tracks are 6.0 feet apart and centered in the traveled way of the lane.

(2) Coordinate with the engineer to schedule profile runs for acceptance. The department may require testing to accommodate staged construction or if corrective action may be required.

(3) Measure the profiles of each standard or partial segment. Define primary segments starting at a project terminus and running contiguously along the mainline to the other project terminus. Field-locate the beginning and ending points for each profile run. When applicable, align segment limits with the sublot limits used for testing under the QMP Concrete Pavement specification. Define segments one wheel path wide and distinguished by length as follows:

1. Standard segments are 500 feet long.
2. Partial segments are less than 500 feet long.

(4) Treat partial segments as independent segments.

The department will categorize each standard or partial segment as follows:

Segments with a Posted Speed Limit of 55 MPH or Greater	
Category	**Description**
HMA I	Asphalt pavement with multiple opportunities to achieve a smooth ride. The following operations performed under this contract are considered as opportunities: a layer of HMA, a leveling or wedging layer of HMA, and diamond grinding or partial depth milling of the underlying pavement surface.
HMA II	Asphalt pavement with a single opportunity to achieve a smooth ride.
HMA III	Asphalt pavement segments containing any portion of a bridge, bridge approach, railroad crossing, or intersection. An intersection is defined as the area within the points of curvature of the intersection radii.
PCC II	Concrete pavement.
PCC III	Concrete pavement segments containing any portion of a bridge, bridge approach, railroad crossing, intersection or gap. An intersection is defined as the area within the points of curvature of the intersection radii.

Segments with Any Portion Having a Posted Speed Limit Less Than 55 MPH	
Category	**Description**
HMA IV	Asphalt pavement including intersections, bridges, approaches, and railroad crossings.
PCC IV	Concrete pavement including gaps, intersections, bridges, approaches, and railroad crossings.

C.4.3 Verification Testing

(1) The department may conduct verification testing (QV) to validate the quality of the product. A HTCP certified profiler operator will perform the QV testing. The department will provide the contractor with a listing of the names and telephone numbers of all verification personnel for the project.

(2) The department will notify the contractor before testing so the contractor can observe the QV testing. Verification testing will be performed independent of the contractor's QC work using separate equipment from the contractor's QC tests. The department will provide test results to the contractor within 1 business day after the department completes the testing.

(3) The engineer and contractor will jointly investigate any testing discrepancies. The investigation may include additional testing as well as review and observation of both the department's and contractor's testing procedures and equipment. Both parties will document all investigative work.

(4) If the contractor does not respond to an engineer request to resolve a testing discrepancy, the engineer may suspend production until action is taken. Resolve disputes as specified in C.6.

C.4.4 Documenting Profile Runs

(1) Compute the IRI for each segment and analyze areas of localized roughness using the ProVAL software. Also, the contractor shall prepare the ProVAL Ride Quality Module Reports, showing the IRI for each segment and the areas of localized roughness exceeding an IRI of 200 in/mile. Use ride quality module report as follows:

	Fixed Interval	Continuous (Localized Roughness)
Base-length	500’	25’
Threshold	140”/Mile	200”/Mile

The ProVAL software is available for download at:

http://www.roadprofile.com.

(2) As part of the profiler software outputs and ProVAL reports, document the areas of localized roughness. Field-locate the areas of localized roughness prior to the engineer’s assessment for corrective actions. Document the reasons for areas excluded and submit to the engineer.

(3) Within 5 business days after completing profiling of the pavement covered under this special provision, unless the engineer and contractor mutually agree to a different timeline, submit the electronic ProVAL project file containing the .ppf files for each profiler acceptance run data and Ride Quality Module Reports, in .pdf format using the department’s Materials Reporting System (MRS) software available on the department’s web site:

http://www.atwoodsystems.com/mrs

Notify the engineer when the Profiler Acceptance Run data and the Ride Quality Report have been submitted to the MRS system.

C.5 Corrective Actions

C.5.1 General

(1) Analyze the data from the PROVAL reports and make corrective action recommendations to the department. The department will independently assess whether a repair will help or hurt the long-term pavement performance before deciding on corrective action. Correct the ride as the engineer directs in writing.

C.5.2 Corrective Actions for Localized Roughness

(1) Apply localized roughness requirements to all pavements, including HMA III, PCC III, HMA IV, and PCC IV; except localized roughness requirements will not be applied to pavements within 25 feet of the following surfaces if they are not constructed under this contract: bridges, bridge approaches, or railroad crossings. The department may direct the contractor to make corrections to the pavement within the 25-foot exclusionary zones.

(2) The engineer will review each individual wheel track for areas of localized roughness. The engineer will assess areas of localized roughness within 5 business days of receiving notification that the reports were uploaded. The engineer will analyze the report documenting areas that exceed an IRI of 200 in/mile and do one of the following for each location:

1. Direct the contractor to correct the area to minimize the effect on the ride.
2. Leave the area of localized roughness in place with no pay reduction.
3. Except for HMA IV and PCC IV segments, assess a pay reduction as follows for each location in each wheel path:

Localized Roughness IRI (in/mile)	Pay Reduction[1] (dollars)
> 200	(Length in Feet) x (IRI –200)

[1] A maximum $250 pay reduction may be assessed for locations of localized roughness that are less than or equal to 25 feet long. Locations longer than 25 feet may be assessed a maximum pay reduction of $10 per foot.

(3) The engineer will not direct corrective action or assess a pay reduction for an area of localized roughness without independent identification of that area as determined by physically riding the pavement. For corrections, use only techniques the engineer approves.

(4) Re-profile corrected areas to verify that the IRI is less than 140 in/mile after correction. Submit a revised ProVAL ride quality module report to the reference documents section of the MRS for the corrected areas to validate the results.

C.5.3 Corrective Actions for Excessive IRI

(1) If an individual segment IRI exceeds 140 in/mile for HMA I, HMA II, and PCC II pavements after correction for localized roughness, the engineer may require the contractor to correct that segment. Correct the segment final surface as follows:

HMA I:	Correct to an IRI of 60 in/mile using whichever of the following methods as approved by the engineer: Mill and replace the full lane width of the riding surface excluding the paved shoulder. Continuous diamond grinding or fine-tooth milling the full lane width, if required, of the riding surface including adjustment of the paved shoulders.
HMA II:	Correct to an IRI of 85 in/mile using whichever of the following methods as approved by the engineer: Mill and replace the full lane width of the riding surface excluding the paved shoulder. Continuous diamond grinding or fine-tooth milling of the full lane width, if required, of the riding surface including adjustment of the paved shoulders
PCC II:	Correct to an IRI of 85 in/mile using whichever of the following methods as approved by the engineer: Continuous diamond grinding of the full lane width, if required, of the riding surface including adjustment of the paved shoulders. Conform to sections C.1 through C.4 of Concrete Pavement Continuous Diamond Grinding Special provision contained elsewhere in the contract. Remove and replace the full lane width of the riding surface.

(2) Re-profile corrected segments to verify that the final IRI meets the above correction limits and there are no areas of localized roughness. Enter a revised ProVAL ride quality module report for the corrected areas to the reference documents section of the MRS. Segments failing these criteria after correction are subject to the engineer's right to adjust pay for non-conforming work under standard spec 105.3.

C.6 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 testing procedures, and perform additional testing.

(2) If the project personnel cannot resolve a dispute and the dispute affects payment or could result in incorporating nonconforming pavement, the department will use third party testing to resolve the dispute. The department's Quality Assurance Unit, or a mutually agreed on independent testing company, 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 tester. The department may use third party tests to evaluate the quality of questionable pavement and determine the appropriate payment.

D Measurement

(1) The department will measure Incentive IRI Ride by the dollar, adjusted as specified in E.2.

E Payment

E.1 Payment for Profiling

(1) Costs for furnishing and operating the profiler, documenting profile results, and correcting the final pavement surface are incidental to the contract. The department will pay separately for engineer-directed corrective action performed within the 25-foot exclusionary zones under C.5.2 as extra work.

E.2 Pay Adjustment

(1) The department will pay incentive for ride under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
440.4410.S	Incentive IRI Ride	DOL

(2) Incentive payment is not limited, either up or down, to the amount the schedule of items shows.

(3) The department will administer disincentives for ride under the Disincentive IRI Ride administrative item.

(4) The department will not assess disincentive on HMA III or PCC III segments. Incentive pay for HMA III and PCC III segments will be according to the requirements for the category of the adjoining segments.

(5) The department will adjust pay for each segment based on the initial IRI for that segment. If corrective action is required, the department will base disincentives on the IRI after correction for pavement meeting the following conditions:

All Pavement:	The corrective work is performed in a contiguous, full lane width section 500 feet long, or a length as agreed with the engineer.
HMA Pavements:	The corrective work is a mill and inlay or full depth replacement and the inlay or replacement layer thickness conforms to standard spec 460.3.2.
Concrete Pavements:	The corrective work is a full depth replacement and conforms to standard spec 415.

(6) The department will adjust pay for 500-foot long standard segments nominally one wheel path wide using equation “QMP 1.04” as follows:

HMA I	
Initial IRI (inches/mile)	**Pay Adjustment[1] (dollars per standard segment)**
< 30	250
≥ 30 to <35	1750 – (50 x IRI)
≥ 35 to < 60	0
≥ 60 to < 75	1000 – (50/3 x IRI)
≥ 75	-250

HMA II and PCC II	
Initial IRI (inches/mile)	**Pay Adjustment[1] [2] (dollars per standard segment)**
< 50	250
≥ 50 to < 55	2750 – (50 x IRI)
≥ 55 to < 85	0
≥ 85 to < 100	(4250/3) – (50/3 x IRI)
≥ 100	-250

HMA IV and PCC IV	
Initial IRI (inches/mile)	**Pay Adjustment[1] [2] (dollars per standard segment)**
< 35	250
≥ 35 to < 45	1125-(25xIRI)
≥ 45	0

[1] If the engineer directs placing upper layer asphaltic mixtures between October 15 and May 1 for department convenience as specified in standard spec 450.3.2.1(5), the department will not adjust pay for ride on pavement the department orders the contractor to place when the temperature, as defined in standard spec 450.3.2.1(2), is less than 36 F.

[2] If the engineer directs placing concrete pavement for department convenience, the department will not adjust pay for ride on pavement the department orders the contractor to place when the air temperature falls below 35 F.

(7) The department will prorate the pay adjustment for partial segments based on their length.

440-010 (20130615)

60. QMP HMA Pavement Nuclear Density.

A Description

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

(1) This special provision describes density testing of in-place HMA pavement with the use of nuclear density gauges. Conform to standard spec 460 as modified in this special provision.

(2) Provide and maintain a quality control program defined as all activities and documentation of the following:
1. Selection of test sites.
2. Testing.
3. Necessary adjustments in the process.
4. Process control inspection.

(3) Chapter 8 of the department's construction and materials manual (CMM) provides additional detailed guidance for QMP work and describes required procedures. Obtain the CMM from the department's web site at:
http://roadwaystandards.dot.wi.gov/standards/cmm/index.htm

(4) The department's Materials Reporting System (MRS) software allows contractors to submit data to the department electronically, estimate pay adjustments, and print selected reports. Qualified personnel may obtain MRS software from the department's web site at:
http://www.atwoodsystems.com/mrs

B Materials

B.1 Personnel

(1) Perform HMA pavement density (QC, QV) testing using a HTCP certified nuclear technician I, or a nuclear assistant certified technician (ACT-NUC) working under a certified technician.

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

B.2 Testing

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

B.3 Equipment

B.3.1 General

(1) Furnish nuclear gauges from the department's approved product list at http://www.dot.wisconsin.gov/business/engrserv/approvedprod.htm.

(2) Have the gauge calibrated by the manufacturer or an approved calibration service within 12 months of its use on the project. Retain a copy of the manufacturer's calibration certificate with the gauge.

(3) Prior to each construction season, and following any calibration of the gauge, the contractor must perform calibration verification for each gauge using the reference blocks located in the department's central office materials laboratory. To obtain information or schedule a time to perform calibration verification, contact the department's Radiation Safety Officer at:

Materials Management Section
3502 Kinsman Blvd.
Madison, Wisconsin 53704
Telephone: (608) 243-5998

B.3.2 Correlation of Nuclear Gauges

B.3.2.1 Correlation of QC and QV Nuclear Gauges

(1) Select a representative section of the compacted pavement prior to or on the first day of paving for the correlation process. The section does not have to be the same mix design.

(2) Correlate the 2 or more gauges used for density measurement (QC, QV). The QC and QV gauge operators will perform the correlation on 5 test sites jointly located. Record each density measurement of each test site for the QC, QV and back up gauges.

(3) Calculate the average of the difference in density of the 5 test sites between the QC and QV gauges. Locate an additional 5 test sites if the average difference exceeds 1.0 lb/ft^3. Measure and record the density on the 5 additional test sites for each gauge.

(4) Calculate the average of the difference in density of the 10 test sites between the QC and QV gauges. Replace one or both gauges if the average difference of the 10 tests exceeds 1.0 lb/ft^3 and repeat correlation process from B.3.2.1 (2).

(5) Furnish one of the QC gauges passing the allowable correlation tolerances to perform density testing on the project.

B.3.2.2 Correlation Monitoring

(1) After performing the gauge correlation specified in B.3.2.1, establish a project reference site approved by the department. Clearly mark a flat surface of concrete or asphalt or other material that will not be disturbed during the duration of the project. Perform correlation monitoring of the QC, QV, and all back-up gauges at the project reference site.

(2) Conduct an initial 10 density tests with each gauge on the project reference site and calculate the average value for each gauge to establish the gauge's reference value. Use the gauge's reference value as a control to monitor the calibration of the gauge for the duration of the project.

(3) Check each gauge on the project reference site a minimum of one test per day if paving on the project. Calculate the difference between the gauge's daily test result and its reference value. Investigate if a daily test result is not within 1.5 lb/ft^3 of its

reference value. Conduct 5 additional tests at the reference site once the cause of deviation is corrected. Calculate and record the average of the 5 additional tests. Remove the gauge from the project if the 5-test average is not within 1.5 lb/ft^3 of its reference value established in B.3.2.2(2).

(4) Maintain the reference site test data for each gauge at an agreed location.

B.4 Quality Control Testing and Documentation

B.4.1 Lot and Sublot Requirements

B.4.1.1 Mainline Traffic Lanes, Shoulders, and Appurtenances

(1) A lot consists of the tonnage placed each day for each layer and target density specified in standard spec 460.3.3.1. A lot may include partial sublots.

(2) Divide the roadway into sublots. A sublot is 1500 lane feet for each layer and target density.

(3) A sublot may include HMA placed on more than one day of paving. Test sublots at the pre-determined random locations regardless of when the HMA is placed. No additional testing is required for partial sublots at the beginning or end of a day's paving.

(4) If a resulting partial quantity at the end of the project is less than 750 lane feet, include that partial quantity with the last full sublot of the lane. If a resulting partial quantity at the end of the project is 750 lane feet or more, create a separate sublot for that partial quantity.

(5) Randomly select test locations for each sublot as specified in CMM 8.15 prior to paving and provide a copy to the engineer. Locate and mark QC density test sites when performing the tests. Perform density tests prior to opening the roadway to traffic.

(6) Use Table 1 to determine the number of tests required at each station, depending on the width of the lane being tested. When more than one test is required at a station, offset the tests 10 feet longitudinally from one another to form a diagonal testing row across the lane.

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

Table 1

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

(1) A lot represents a combination of the total daily tonnage for each layer and target density.

(2) Each side road, crossover, turn lane, ramp, and roundabout must contain at least one sublot for each layer.

(3) If a side road, crossover, turn lane, or ramp is 1500 feet or longer, determine sublots and random test locations as specified in B.4.1.1.

(4) If a side road, crossover, turn lane, or ramp is less than 1500 feet long, determine sublots using a maximum of 750 tons per sublot and perform the number of random tests as specified in Table 2.

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

Table 2

B.4.2 Pavement Density Determination

B.4.2.1 Mainline Traffic Lanes and Appurtenances

(1) Calculate the average sublot densities using the individual test results in each sublot.

(2) If all sublot averages are no more than one percent below the target density, calculate the daily lot density by averaging the results of each random QC test taken on that day's material.

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

B.4.2.2 Mainline Shoulders

B.4.2.2.1 Width Greater Than 5 Feet

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

B.4.2.2.2 Width of 5 Feet or Less

(1) If all sublot test results are no more than 3.0 percent below the minimum target density, calculate the daily lot density by averaging all individual test results for the day.

(2) If a sublot test result is more than 3.0 percent below the target density, the engineer may require the unacceptable material to be removed and replaced with acceptable material or allow the nonconforming material to remain in place with a 50 percent pay reduction. Determine the limits of the unacceptable material according to B.4.3.

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

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

B.4.2.4 Documentation

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

B.4.3 Corrective Action

(1) Notify the engineer immediately when an individual test is more than 3.0 percent below the specified minimum in standard spec 460.3.3.1. Investigate and determine the cause of the unacceptable test result.

(2) The engineer may require unacceptable material specified in B.4.3(1) to be removed and replaced with acceptable material or allow the nonconforming material to remain in place with a 50 percent pay reduction. Determine limits of the unacceptable area by measuring density of the layer at 50-foot increments both ahead and behind the point of unacceptable density and at the same offset as the original test site. Continue testing at 50-foot increments until a point of acceptable density is found as specified in standard spec 460.5.2.2(1). Removal and replacement of material may be required if extended testing is in a previously accepted sublot. Testing in a previously accepted sublot will not be used to recalculate a new lot density.

(3) Compute unacceptable pavement area using the product of the longitudinal limits of the unacceptable density and the full sublot width within the traffic lanes or shoulders.

(4) Retesting and acceptance of replaced pavement will be according to standard spec 105.3.

(5) Tests indicating density more than 3.0 percent below the specified minimum, and further tests taken to determine the limits of unacceptable area, are excluded from the computations of the sublot and lot densities.

(6) If 2 consecutive sublot averages within the same paving pass and same target density are more than one percent below the specified target density, notify the engineer and take necessary corrective action. Document the locations of such sublots and the corrective action that was taken.

B.5 Department Testing

B.5.1 Verification Testing

(1) The department will have a HTCP certified technician, or ACT working under a certified technician, perform verification testing. The department will test randomly at locations independent of the contractor's QC work. The department will perform verification testing at a minimum frequency of 10 percent of the sublots and a minimum of one sublot per mix design. The sublots selected will be within the active

work zone. The contractor will supply the necessary traffic control for the department's testing activities.

(2) The QV tester will test each selected sublot using the same testing requirements and frequencies as the QC tester.

(3) If the verification sublot average is not more than one percent below the specified minimum target density, use the QC tests for acceptance.

(4) If the verification sublot average is more than one percent below the specified target density, compare the QC and QV sublot averages. If the QV sublot average is within 1.0 lb/ft^3 of the QC sublot average, use the QC tests for acceptance.

(5) If the first QV/QC sublot average comparison shows a difference of more than 1.0 lb/ft^3 each tester will perform an additional set of tests within that sublot. Combine the additional tests with the original set of tests to compute a new sublot average for each tester. If the new QV and QC sublot averages compare to within 1.0 lb/ft^3, use the original QC tests for acceptance.

(6) If the QV and QC sublot averages differ by more than 1.0 lb/ft^3 after a second set of tests, resolve the difference with dispute resolution specified in B.6. The engineer will notify the contractor immediately when density deficiencies or testing precision exceeding the allowable differences are observed.

B.5.2 Independent Assurance Testing

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

B.6 Dispute Resolution

(1) The testers may perform investigation in the work zone by analyzing the testing, calculation, and documentation procedures. The testers may perform gauge correlation according to B.3.2.1.

(2) The testers may use correlation monitoring according to B.3.2.2 to determine if one of the gauges is out of tolerance. If a gauge is found to be out of tolerance with its reference value, remove the gauge from the project and use the other gauge's test results for acceptance.

(3) If the testing discrepancy cannot be identified, the contractor may elect to accept the QV sublot density test results or retesting of the sublot in dispute within 48 hours of paving. Traffic control costs will be split between the department and the contractor.

(4) If investigation finds that both gauges are in error, the contractor and engineer will reach a decision on resolution through mutual agreement.

B.7 Acceptance

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

C (Vacant)

D (Vacant)

E Payment

E.1 QMP Testing

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

E.2 Disincentive for HMA Pavement Density

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

E.3 Incentive for HMA Pavement Density

(1) Delete standard spec 460.5.2.3.

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

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

(3) The department will adjust pay under the Incentive Density HMA Pavement bid item. Adjustment under this item is not limited, either up or down, to the bid amount shown on the schedule of items.

(4) If a traffic lane meets the requirements for disincentive, the department will not pay incentive on the integrally paved shoulder.

(5) Submit density results to the department electronically using the MRS software. The department will validate all contractor data before determining pay adjustments.

460-020 (20100709)

61. Asphaltic Surface Temporary.

Replace standard spec 465.2 (1) with the following:

Under the Asphaltic Surface Temporary bid item; submit a mix design. Furnish asphaltic mixture meeting the requirements specified for either type E-3 or E-10 under 460.2; except the engineer will not require the contractor to conform to the quality management program specified under standard spec 460.2.8.
SEF Rev. 12_1018

62. Concrete Masonry Structures.

A Description

A.1 General

Work under this item applies to cast in place concrete for structures. Conform to standard specs 501, 502, 504, 701, 710 and 715 and as modified in this special provision. Apply this special provision to all cast in place concrete placed under the following bid items:

502.0100	Concrete Masonry Bridges
502.0200	Concrete Masonry Bridges HES
502.1100	Concrete Masonry Seal
504.0100	Concrete Masonry Culverts
504.0200	Concrete Masonry Culverts HES
504.0500	Concrete Masonry Retaining Walls
504.0600	Concrete Masonry Retaining Walls HES
504.0900	Concrete Masonry Endwalls

A.2 Concrete Masonry Bridges

Work under the item Concrete Masonry Bridges applies to cast in place concrete for bridge substructures, which includes abutments and piers. Cast in place concrete for bridge superstructures, which includes bridge decks, raised medians, sidewalks, and parapets, is covered under the special provision item HPC Masonry Structures.

B (Vacant)

C Construction

Replace standard spec 501.3.8.2 with the following:

The contractor is responsible for the quality of the concrete placed in hot weather. Submit a written temperature control plan at or before the pre-pour meeting. In that plan, outline the actions taken to control concrete temperature if the concrete temperature at the point of placement exceeds 80° F (27° C). Do not place concrete without the engineer's written acceptance of that temperature control plan. Perform the work as outlined in the temperature control plan.

If the concrete temperature at the point of placement exceeds 90° F (32° C), do not place concrete under the following bid items:

Concrete Masonry Bridges
Concrete Masonry Bridges HES
Concrete Masonry Retaining Walls
Concrete Masonry Retaining Walls HES
Concrete Masonry Culverts
Concrete Masonry Culverts HES
Concrete Masonry Endwalls
Concrete Masonry Soldier Pile Footings

Notify the engineer whenever conditions exist that might cause the temperature at the point of placement to exceed 80º F (27º C). If project information is not available, obtain information from similar mixes placed for other nearby work.

Any additive or action taken to control the temperature of the Concrete Masonry to within the limits of this special provision, including but not limited to the addition of ice to the concrete mix, is considered incidental to the work and will not be measured or paid for separately.

Add the following to standard spec 501.3:

501.3.11 Slip Forming
Do not place concrete by the slip-form method for any item covered by this special provision.

D (Vacant)

E (Vacant)
SEF Rev. 12_1011

63. Concrete Staining B-51-129, Item 517.1010.S.0001; Concrete Staining B-51-130, Item 517.1010.S.0002; Concrete Staining B-51-131, Item 517.1010.S.0003; Concrete Staining R-51-42, Item 517.1010.S.0004; Concrete Staining R-51-43, Item 517.1010.S.0005; Concrete Staining R-51-44, Item 517.1010.S.0006; Concrete Staining R-51-45, Item 517.1010.S.0007.

A Description
Furnish and apply a two coat concrete stain to the exposed concrete surfaces of the structure, as detailed in the plans and as hereinafter provided.

B Materials

B.1 Mortar

Use mortar for sack rubbing the concrete surfaces as given in standard spec 502.3.7.5 or use one of the following products:

Preblended, Packaged Type II Cement:	Tri-Mix by TK Products
	Thoroseal Pearl Gray by Thoro Products

The mortar shall contain one of the following acrylic bonding admixtures mixed and applied in accordance to manufacturer's recommendations:

Acrylic Bonding Admixture:	TK-225 by TK Products
	Achro 60 by Thoro Products
	Achro Set by Master Builders

B.2 Concrete Stain

Use concrete stain manufactured for use on exterior concrete surfaces, consisting of a base coat and a pigmented sealer finish coat. Use the following products, or equal as approved by the department, as part of the two coat finish system:

Tri-Sheen Concrete Surfacer, Smooth by TK Products
Tri-Sheen Acrylic by TK Products
TK-1450 Natural Look Urethane Anti-Graffiti Primers by TK Products
Safe-Cure and Seal EPX by Chem Masters
H + C Shield Plus by Sherwin-Williams

C Construction

C.1 General

Furnish, prepare, apply, cure, and store all materials in accordance to the product manufacturer's specifications for the type and condition of application required.

Match or exceed the stain manufacturer's minimum recommended curing time of the concrete or 28 days, whichever is greater, prior to staining.

C.2 Preparation of Concrete Surfaces

Provide a sack rubbed finish in accordance to standard spec 502.3.7.5, using mortar as indicated above on concrete surfaces with open voids or honeycombing.

Following the sack rubbing, clean all concrete surfaces that are to be coated to ensure that the surface is free of all laitance, dirt, dust, grease, efflorescence, and any foreign material and that the surface will accept the coating material according to product requirements. As a minimum, clean the surface using a 3000-psi water blast. Hold the nozzle of the water blaster approximately 6 inches from the concrete surface and move it continuously in a sweeping motion. Give special attention to smooth concrete surfaces to produce an acceptable surface texture. Correct any surface problems resulting from the surface preparation methods. Grit blasting of the concrete surface is not allowed.

C.3 Staining Concrete Surfaces
Apply the concrete stain in accordance to the manufacturer's recommendations.

Apply the concrete stain when the temperature of the concrete surface is 45º F or higher, or as given by the manufacturer.

The color of the stain shall be as given on the plan. Tint the base coat to match the finish coat; the two coats shall be compatible with each other.

Do not begin staining the structure until earthwork operations are completed to a point where this work can begin without receiving damage. Where this work is adjacent to exposed soil or pavement areas, provide temporary covering protection from overspray or splatter.

C.4 Test Areas
Prior to applying stain to the structure, apply the stain to sample panels measuring a minimum of 48-inches x 48-inches and constructed to demonstrate workmanship in the use of the form liner specified on the structure if applicable. Match or exceed the stain manufacturer's minimum recommended curing time of the concrete or 28 days, whichever is greater, prior to staining. Prepare the concrete surfaces of the sample panels and apply stain using the same materials and in the same manner as proposed for the structure, including staining of the joints between the stones produced by the form liner if applicable. Do not apply stain to the structure until the department approves the test panels.

C.5 Surfaces to be Coated.
Apply concrete stain to the surfaces in accordance to the plan.

D Measurement
The department will not measure Concrete Staining (Structure). The department will use pay plan quantity according to the Pay Plan Quantity article of these special provisions.

E Payment
The department will pay for plan quantities according to the Pay Plan Quantity article at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
517.1010.S.0001	Concrete Staining B-51-129	SF
517.1010.S.0002	Concrete Staining B-51-130	SF
517.1010.S.0003	Concrete Staining B-51-131	SF
517.1010.S.0004	Concrete Staining R-51-42	SF
517.1010.S.0005	Concrete Staining R-51-43	SF
517.1010.S.0006	Concrete Staining R-51-44	SF
517.1010.S.0007	Concrete Staining R-51-45	SF

Payment is full compensation for furnishing and applying the two coat system; for preparing the concrete surface; and for preparing the sample panels.

64. Architectural Surface Treatment R-51-42, Item 517.1050.S.0001; Architectural Surface Treatment R-51-43, Item 517.1050.S.0002; Architectural Surface Treatment R-51-44, Item 517.1050.S.0003; Architectural Surface Treatment R-51-45, Item 517.1050.S.0004.

A Description

Construct a concrete masonry architectural surface treatment on the exposed concrete surfaces of the structure, as detailed in the plans and as hereinafter provided.

B Materials

Use form liners that attach easily to the forming system, and do not compress more than ¼-inch when poured at a rate of 10 vertical feet/hour.

Use a release agent that is compatible with the form liner and coloring materials.

Wall ties shall have set "break-backs" at a minimum of ¾-inches from the finished concrete surface.

C Construction

C.1 Equipment

Equipment and tools necessary for performing all parts of the work shall be satisfactory as to design, capacity, and mechanical condition for the purposes intended. Repair, improve, replace, or supplement all equipment that is not maintained in full working order, or which is proven inadequate to obtain the results prescribed.

C.2 Form Liner Preparation

Clean the form liner prior to each pour and ensure that it is free of any build-up. Visually inspect each liner for blemishes or tears, and repair if necessary per manufacturer's recommendations.

Apply form release per manufacturer's recommendations.

C.3 Form Liner Attachment

Place adjacent liners less than ¼-inch from each other, attach liner securely to forms in accordance to the manufacturer's recommendations, and coordinate wall ties with form liner and form manufacturer, e.g., diameter, size, and frequency.

C.4 Surface Finishing

Ensure that the textured surface is free of laitance; sandblasting is not permitted.

Grind or fill pouring blemishes.

D Measurement

The department will not measure Architectural Surface Treatment (Structure). The department will use pay plan quantity according to the Pay Plan Quantity article of these special provisions.

E Payment

The department will pay for plan quantities according to the Pay Plan Quantity article at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
517.1050.S.0001	Architectural Surface Treatment R-51-42	SF
517.1050.S.0002	Architectural Surface Treatment R-51-43	SF
517.1050.S.0003	Architectural Surface Treatment R-51-44	SF
517.1050.S.0004	Architectural Surface Treatment R-51-45	SF

Payment is full compensation for producing the proposed architectural surface treatment including: preparing the foundation; finishing and protecting the surface treatment; and for properly disposing of surplus material.

65. Driven Piles Using Pile Dynamic Analyzer.

Where indicated in the structure plans, replace standard spec. 550.3.6 with the following:

550.3.6 Driving Resistance

(1) Drive piles to the depths necessary to obtain the required driving resistance per the driving resistance determination method called for in the plans.

(2) Driving resistance will be developed by the engineer from Pile Dynamic Analyzer (PDA) testing performed on the designated piles at each substructure unit as shown on the plans. The driving criteria will be given as blows per foot with hammer stroke and minimum penetration of the pile or as directed by the engineer.

The PDA test piles at each substructure unit are designated on the plans and will be monitored using a PDA. Pile installation for these test piles will be controlled by the PDA testing and the engineer per the Pile Dynamic Analyzer (PDA) Testing and Restrike Special Provision within this contract.

For the PDA driving resistance determination method, pile restrikes will be required per the PDA Testing and Restrike Special Provision, or as directed by the engineer. Accommodate a time delay in the pile driving sequence as defined in the PDA Testing Special Provision to allow the engineer time to develop the production pile driving criteria.

(3) If the required driving resistance is not met at the minimum tip elevation, driving shall continue until it is achieved. If the required driving resistance is achieved above the minimum tip elevation, driving shall continue until both the minimum tip elevation and required driving resistance criteria are met. If practical pile refusal is

encountered prior to the minimum tip elevation, the engineer will determine if driving can be halted.

Where indicated in the structure plans, delete standard spec. 550.3.7.

66. Pipe Grates, Item 611.9800.S.

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

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

Furnish pipe grates galvanized in accordance to ASTM A123.

Furnish angles and brackets galvanized in accordance to ASTM A123.

Furnish required hardware galvanized in accordance to ASTM A153.

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

D Measurement
The department will measure Pipe Grates in units of work, where one unit is one grate, 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
611.9800.S	Pipe Grates	Each

Payment is full compensation for furnishing and installing all materials; drilling and connecting grates to pipes; and for furnishing all labor, tools, equipment and incidentals necessary to complete the contract work.
611-010 (20030820)

67. Right-of-Way Fencing.

Maintain all existing freeway right-of-way fencing or temporary fencing, which is disturbed by your operations. At no time leave a site where the fencing is inadequate to protect the general public.

68. 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)

69. Fence Woven Wire 4-FT.

A Description
This special provision describes the removal of barbed wire from the woven wire fence standard bid item.

B Materials
Delete standard spec 616.2.2.2.

C Construction
Replace standard spec 616.3.2.1 with the following:

Erect woven wire fencing fabric on preservative treated wood posts. Place all end, corner, pull, and vertical angle posts at the locations staked or where the engineer designates.

Replace standard spec 616.3.2.3 (1), (2) with the following:

Attach the woven wire to the posts so that the bottom wire is approximately 2 inches above the ground but not more than 4 inches above the ground at the posts, except on abrupt grade changes as the plans show.

Secure the woven wire to all end and corner posts by wrapping each line of wire around the post and tying the wire back on itself with not less than 1 ½ twists tightly wrapped with tools designed for the purpose, and supplement with staples driven into the posts. Stretch the wire until no slack exists, longitudinal wires are tight, and approximately 50 percent of the factory fabricated fence crimp is removed. Apply tension with an engineer-approved stretcher designed to produce a uniform amount of tension in each wire.

D (Vacant)

E (Vacant)
SEF Rev. 101019

70. Sign Supports Concrete Masonry.

Add the following to standard spec 636.3.2:

(3) The contractor is responsible for drilling or excavating and maintaining a stable open excavation for subsequent installation of drilled footings for sign structure foundations as shown in the plans. The subsurface conditions vary across the project site and are not necessarily the same at each sign structure foundation in the project. Anticipate the possibility of encountering randomly interlaced seams of loose, permeable sand or gravel of substantial thickness situated within glacial clays and till deposits; saturated soils; ground water; isolated cobbles or boulders; and nested cobbles and boulders at any sign structure foundation when selecting equipment and methods for drilling or otherwise excavating. Partial or full depth temporary casing

may be required to maintain the stability of the excavation prior to placement of reinforcement and filling the excavation with concrete.

The contractor is strongly advised to obtain and review the Geotechnical Exploration and Foundation Evaluation Reports for the sign structures and as well as nearby structures to the sign structure foundation being constructed. See article "Geotechnical Investigation Information" in these special provisions for information on obtaining geotechnical reports.

Add the following paragraph to standard spec 636.3.3:

(8) For drilled foundations, no more than 3 inches of standing water is permitted in the bottom of the drilled excavation immediately prior to placing concrete masonry in the excavation.

Replace standard spec 636.5.2(1) with the following:

Payment for Sign Supports Concrete Masonry is full compensation for providing, transporting, placing and curing the concrete; for providing and removing casing if applicable; for providing required ground rods; for furnishing all required excavating; for placing post stubs or anchor bolts, and for providing and placing electrical conduit if required; for pumping of ground water seepage if applicable; for cleaning-up, repairing damage, and for disposing of excavation and surplus materials.
SEF Rev. 100607

71. Signs Type I and II.

Furnish and install mounting brackets per approved product list for type II signs on overhead sign supports incidental to sign. For type II signs on sign bridges use aluminum vertical support beams noted above incidental to sign.

Modify standard spec 637.2.4 with the following:

Use stainless steel bolts, washers and nuts for type I and type II signs mounted on sign bridges or type I signs mounted on overhead sign supports. Use clips on every joint for Sign Plate A 4-6 when mounted on a sign bridge or overhead sign support. Inspect installation of clips and assure bolts and nuts are tightened to manufacturers recommended torque values.

Use aluminum vertical sign support beams that have a 5-inch wide flange and weigh 3.7 pounds per foot, if the L-brackets are 4 inches wide then use 4 inch wide flange beams weighing 3.06 pounds per foot. Contractor shall measure the width of the L-brackets on existing structures of determine the width needed for sign support beams

Use beams a minimum of six feet in length or equal to the height of the sign to be supported, whichever is greater. Use U-bolts that are made of stainless steel, one-half inch diameter and of the proper size to fit the truss cords of each sign bridge. Install vertical sign support beams on each sign and use new U-bolts to attach each beam to the top and bottom cord of the sign bridge truss.

For type II signs on overhead sign supports follow the approved product list for mounting brackets.

Replace standard spec 637.2.4.1(2)2 with the following:

Clips may be either stainless steel or ASTM B 108, aluminum alloy, 356.0-T6.

Append standard spec 637.3.2.1(3) with the following:

Provide the engineer with 3 copies of drawings of the signs proposed to be furnished under this contract for approval.

Append standard spec 637.3.3.2(2) with the following:

Install Type I Signs at the offset stated in the plan, which shall be the clear distance between the edge of mainline pavement right edgeline and the near edge of the sign.

Append standard spec 637.3.3.3(3) with the following:

Furnish and install new aluminum vertical sign support beams on each sign and new U-bolts to attach each beam to the top and bottom cord of the sign bridge truss for Type I or Type II Signs and Type I signs on overhead sign supports incidental to sign.

637-SER1 (20120401)

72. Blue Specific Service Signs.

Supplement standard spec 638.3.4 with the following:

Do not remove or move blue specific service signs or their associated posts. Specific service signs are signs with logos that identify commercial entities providing gas, food, lodging, camping, or attractions. A separate contractor, Derse, Inc., is responsible for these signs. Contact Mark Rognsvoog of the Derse Company at (800) 345-5772 a minimum of 14 calendar days in advance to coordinate removing, moving, or re-installation of these signs.

The contractor is responsible for damage done to these signs due to contractor operations.
638-010 (20120615)

73. Sign Bridge Identification Plaques.

Supplement standard spec 641.5 with the following:

Payment for Sign Bridge and Overhead Sign Support is considered full compensation for providing and installing sign bridge identification plaques and mounting hardware as shown on the detail in the plans for each existing and new sign bridge or overhead sign support

74. Traffic Control.

The work under this item shall be in accordance to the requirements of standard spec 643, and as shown on the plans, or as approved by the engineer, except as hereinafter set forth.

Place traffic control devices for work in the proper location before operations proceed. Traffic Control is subject to change at the direction of the engineer in the event of an emergency.

Provide the Wisconsin State Patrol, Racine County Sheriff's Department and the engineer a current telephone number with which the contractor or his representative can be contacted during non-working hours in the event a safety hazard develops.

Do not park or store equipment, vehicles, or construction materials within 30 feet of the edge of freeway traffic lanes without barrier separation for any roadway carrying freeway traffic; or within 20 feet off the edge of a freeway service interchange ramp during any time except as approved by the engineer. At such locations, the materials and equipment involved shall not constitute a hazard to the traveling public.

Do not park personal vehicles within the access control limits of the freeway. Do not cross live freeway traffic lanes with equipment or vehicles.

Do not use flag persons to direct, control, or stop freeway traffic. Obtain approval from the engineer to use a flag person to direct, control, or stop local street traffic. Adhere to Manual of Uniform Traffic Control Devices chapter 6E standard requirements for flagger control.

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

Place one flashing arrow board in advance of each lane closure taper and one flashing arrow board within each lane closure taper at locations directed by the engineer.

SEF Rev 13_0610

75. Flexible Tubular Markers.

Replace standard spec 643.2.5.2 with the following:

Only flexible tubular markers with bases that bolt to the pavement surface shall be allowed for installations in which the flexible tubular markers will be in place during December, January, February and March. Flexible tubular markers that will be in place during these four months that attach to the pavement surface using any other means than a bolt connection will not be accepted. Provide a base designed to hold the post securely using locking pins, or other devices, to withstand a series of direct wheel impacts with speeds up to 65 mph.
SEF Rev. 12_0330

76. Traffic Control Surveillance and Maintenance.

Replace standard spec 643.3.2(2) with the following:

Provide one person, certified by the American Traffic Safety Services Association (ATSSA) or equivalent, as a Traffic Control Specialist responsible for inspections and maintaining traffic control signs or devices; other personnel as may be needed to accomplish the inspection and maintenance; and all necessary vehicles, equipment, tools and repair materials. Obtain department approval of the Traffic Control Specialist before construction by supplying the qualifying credentials to the engineer.
SEF Rev. 13_0620

77. Nighttime Work Lighting-Stationary.

A Description
Provide portable lighting as necessary to complete nighttime work. Nighttime operations consist of work specifically scheduled to occur after sunset and before sunrise.

B (Vacant)

C Construction
C.1 General
This provision shall apply when providing, maintaining, moving, and removing portable light towers and equipment-mounted lighting fixtures for nighttime stationary work operations, for the duration of nighttime work on the contract.

At least 14 days prior to the nighttime work, furnish a lighting plan to the engineer for review and acceptance. Address the following in the plan:

1. Layout, including location of portable lighting – lateral placement, height, and spacing. Clearly show on the layout the location of all lights necessary for every aspect of work to be done at night.

2. Specifications, brochures, and technical data of all lighting equipment to be used.

3. The details on how the luminaires will be attached.

4. Electrical power source information.

5. Details on the louvers, shields, or methods to be employed to reduce glare.

6. Lighting calculations. Provide illumination with average to minimum uniformity ratio of 5:1 or less throughout the work area.

7. Detail information on any other auxiliary equipment.

C.2 Portable Lighting

Provide portable lighting that is sturdy and free standing and does not require any guy wires, braces, or any other attachments. Furnish portable lighting capable of being moved as necessary to keep up with the construction project. Position the portable lighting and trailers to minimize the risk of being impacted by traffic on the roadway or by construction traffic or equipment. Provide lightning protection for the portable lighting. Portable lighting shall withstand up to 60 mph wind velocity.

If portable generators are used as a power source, furnish adequate power to operate all required lighting equipment without any interruption during the nighttime work. Provide wiring that is weatherproof and installed according to local, state, federal (NECA and OSHA) requirements. Equip all power sources with a ground-fault circuit interrupter to prevent electrical shock.

C.3 Light Level and Uniformity

Position (spacing and mounting height) the luminaires to provide illumination with an average to minimum uniformity ratio of 5:1 or less throughout the work area.

Illuminate the area as necessary to incorporate construction vehicles, equipment, and personnel activities.

C.4 Glare Control

Design, install, and operate all lighting supplied under these specifications to minimize or avoid glare that interferes with all traffic on the roadway or that causes annoyance or discomfort for properties adjoining the roadway. Locate, aim, and adjust the luminaires to provide the adequate level of illumination and the specified uniformity in the work area without the creation of objectionable glare.

Provide louvers, shields, or visors, as needed, to reduce any objectionable levels of glare. As a minimum, ensure the following requirements are met to avoid objectionable glare on the roadways open to traffic in either direction or for adjoining properties:

1. Aim tower-mounted luminaires, either parallel or perpendicular to the roadway, so as to minimize light aimed toward approaching traffic.

2. Aim all luminaires such that the center of beam axis is no greater than 60 degrees above vertical (straight down).

If lighting does not meet above-mentioned criteria, adjust the lighting within 24 hours.

C.5 Continuous Operation
Provide and have available sufficient fuel, spare lamps, generators, and qualified personnel to ensure that the lights will operate continuously during nighttime operation. In the event of any failure of the lighting system, discontinue the operation until the adequate level of illumination is restored. Move and remove lighting as necessary.

D (Vacant)

E Payment
Costs for furnishing a lighting plan, and for providing, maintaining, moving, and removing portable lighting, tower mounted lighting, and equipment-mounted lighting required under this special provision are incidental to the contract.
643-010 (20100709)

78. 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

- 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. –

- 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)

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

A Description
This special provision describes installing proposed conduit into an existing manhole, pull box, junction box, communication vault, or other structure.

B Materials
Use nonmetallic conduit and HDPE ducts, as provided and paid for under other items in this contract. Furnish backfill material, topsoil, fertilizer, seed, and mulch 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 for the entering conduit(s) at a location within the structure without disturbing the existing cabling and without hindering the installation of new cabling within the installed conduit. 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 System 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 pull box, 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; 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.
652-070 (20100709)

80. General Requirements for Electrical Work.

Append standard spec 651.3.3 (3) with the following:

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

81. Traffic Signals, General.

All traffic signal work shall be in accordance with the standard spec and these plans and specifications.

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

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

82. Freeway Lighting Systems.

General
Append standard specs 651, 652, 653, 654, 655, 656, 657 and 659 as follows.

Wet Location Splices
Modify standard spec 655.3.1 as follows:

Wet location splices are not anticipated on this project and not shown in the plans. In the event that the engineer allows wet location splices, make pull box splices with engineer approved epoxy kit.

Branch Circuit Tagouts
Any circuit that the contractor does not personally tag out at the disconnect shall be considered live, and will be subject to being activated by another person with no notice to the contractor. Make tagouts with manufactured tags, and endorse them with the date and the name of the contractor. Clear tagouts at the end of the workday.

Shop Locations
Materials indicated to be returned to the department shall be hauled to one of the following two locations:

- Milwaukee County Grounds, 10191 West Watertown Plank Road, Wauwatosa, as directed by Mr. Pat Stoetzel, tel. (414) 750-5306.
- State Electrical Shop at 935 South 60th street, West Allis, as directed by Mike Prebish, tel. (414) 266-1170.

Arrange pickups and deliveries 3 days in advance and during regular business hours (Monday – Thursday 7:00 AM to 3:45 PM).

Corrosion Protection
Corrosion protection measures described in standard specs 657.3.1 and 657.3.5 are invoked for breakaway transformer bases and aluminum light poles.

Wire Networks
Where two or more wire networks pass through a pull point, tag each circuit network (i.e. A/B/N and C/D/N) with approved all-weather tags.

At each pull point or access point, indicate the line side bundle with a lap of blue tape.

Lighting Pull Box Covers
This provision modifies the standard detail drawing for pull boxes and thereby both the standard items and SPV pay item for pull boxes. Lighting pull box covers shall read "LIGHTING".

83. Intelligent Transportation Systems (ITS) Control of Materials.

Section 106.2 – Supply Source and Quality
Is modified by the addition of the following:

A portion of equipment to be installed by the contractor will be furnished by the department. This state-furnished equipment includes the following:

State-furnished Items
12-Count Fiber Optic Termination Panel
Fiber Optic Cable Outdoor Plant 6-CT
Ethernet Switch
Ethernet Video CODEC
Pole-Mount Cabinet
Portable CCTV Camera System
CCTV Camera
50-Foot Camera Pole
Wireless Ethernet Bridge
Serial Communications Spread Spectrum Radio
Serial Communications Spread Spectrum Radio Antenna
Solar Power Systems
Microwave Vehicle Detectors

Pick-up small state-furnished equipment, such as communications devices, cameras, and controllers from the department Statewide Traffic Operations Center (STOC), 433 W. St. Paul Ave., Milwaukee, WI 53203 at a mutually agreed upon time during normal State office hours. Contact Don Schell at (414) 227-2148 to coordinate pick-up of equipment.

Pick up camera poles from the department facility at 531 W Newhall Ave, Waukesha, WI.

Standard spec 106.3 – Approval of Materials
Is modified by the addition of the following:

Design/Shop Drawings
Prior to the purchase and/or fabrication of any of the components listed herein, and for any non-catalog item shown on the Material and Equipment List specified above, and no more than 30 days after notice to proceed, submit five copies of design drawings and shop drawings, as required, to the department for review. The items and the drawings that represent them, shall meet the requirements of the standard specifications.

Design drawing submissions shall consist of signed and certified designs, design drawings, calculations, and material specifications for required items.

The department will complete its review of the material within 30 days from the date of receipt of the submission, unless otherwise specified. The department will advise the contractor, in writing, as to the acceptability of the material submitted. The department may determine that if no exceptions were taken for the item, it is approved, and no further action is required by the contractor; or the item may be partially or totally rejected, in which case modify and/or amend the submittal as required by the department and resubmit the item within 14 days. At this time, the review and approval cycle described above will begin again.

Approval by Testing, General
All equipment and material furnished by the contractor will be subject to monitoring and testing to determine conformance with all the applicable requirements specified herein and to ensure proper operation of the ITS components and assemblies. Furnish documentation, as required, to demonstrate component performance and operation in conformance with the standard specifications, supplemental specifications, and these special provisions. Supply required testing equipment. No separate payment will be made for the monitoring, testing, test equipment, and documentation of test results. This shall be included in the amount bid for other pay items.

Rejected equipment or material may be offered again by the contractor for consideration provided all non-compliance has been corrected and pre-tested by the contractor.

The times and dates of the tests will be approved by the engineer. Conduct all tests in the presence of the engineer or his designated representative. Testing shall only take place on weekdays, which are official business days of the state, and during normal working hours of the state.

The test procedures shall, at a minimum, contain the testing methodology, test environment, and expected test results for functional operation and electrical/power performance. The test procedure shall include a 30-day field operational test. The contractor is responsible for a properly functioning subsystem for 30 consecutive days. If a system failure occurs at any portion of the 30-day test, schedule a retest. Any testing or retesting periods are incidental to individual pay items.

Sixty days prior to the testing of a local unit or subsystem, submit, for review and acceptance, five copies of a test procedure. Develop and document a test procedure, including proposed forms to be used during the testing procedure, which, when conducted, will demonstrate whether or not all hardware, cable, and connections furnished and installed by the contractor operates properly, and whether or not all functions are in conformance with the standard specifications and these special provisions.

The department will complete its review of the test procedure within 30 days from the date of receipt of the submission. The department will advise the contractor, in writing, as to the acceptability of the test procedure. The department may determine that the test is acceptable, in which case no changes are required and each unit will be tested according to the procedure; or the procedure may be partially or totally rejected, in which case modify the procedure and resubmit within 15 days. At this time, the review and approval cycle described above will begin again. It is not necessary to submit test procedures for all key items at the same time.

The following local subsystems are subject to a 30-day field operational test:

- CCTV Camera Assemblies
- Traffic Signal Assemblies
- Detection Classification Sensors and Controllers
- Spread Spectrum Radios and Antennas
- Wireless Ethernet Bridges and Antennas
- Microwave Detector Assemblies

The department, with 10 days notice, may postpone any scheduled testing for seven days, without incurring an excusable project delay.

84. Intelligent Transportation System - General.

A Description

The work herein is included in the contract items for 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:

- The project includes working on cables and equipment that are carrying data between roadside equipment and the WisDOT Traffic Operations Center (TOC). This work must be done in a way that minimizes communication outages for the existing equipment.
- Some of the equipment to be installed will be furnished by the department. Make a reasonable effort to discover defects in that equipment prior to installing it.

A.1 Surge Protection

Equip every ungrounded conductor wire entering or leaving any equipment cabinet or camera housing 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

All equipment and component parts furnished shall be 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 Technical 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” 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**: Camera assemblies, vehicle detectors, detection 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 ten 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 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:

- The protectors shall suppress a peak surge current of up to 10K amps.
- The protectors shall have a response time less than one nanosecond.
- 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.
- The first stage of protection shall be a three-element gas discharge tube, and the second stage shall consist of silicon clamping devices.
- The protector shall also contain a resettable fuse (PTC) to protect against excessive current.
- There shall be no more than two pairs per protector.
- It shall be possible to replace the protector without using tools.

Loop detector cables and cables carrying power to camera assemblies 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.

Coaxial cables carrying video signals shall be protected at each end by suppressors designed for baseband CCTV signals. The suppressors shall conform to the following:

- Surge: 18,000 amps with an 8 x 20 microsecond waveform
- Turn-on time: 4ns for 2 kV/ns
- VSWR: 1.1:1 or less
- Insertion loss: 0.3 dB or less
- Frequency range: DC to 30 MHz
- BNC connectors
- Operating voltage: 1.5 volts
- Impedance: 75 ohms

C Construction

C.1 Communication Vaults

All openings in communication vaults must be cored or blocked out at time of fabrication, or cored at time of placement. Where multi-cell or standard nonmetallic conduit is terminated at manholes, the coring or boxout shall be no larger than 6 inches in diameter or 6 inches square respectively for each conduit. Where multi-cell, directional bore or nonmetallic conduit special is terminated at manholes, a boxout of no more than 14 inches by 6 inches high by 3 inches deep positioned at 90 degrees will be allowed.

C.2 Thread Protection

Rust, corrosion, and anti-seize protection shall be provided 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.3 Cable Installation

When new cables are to be installed 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.

When cables are installed in conduit before the proper installation of bushings or bell ends on the conduit or without the use of cable lubricant, the cables will be paid at 50 percent of the contract unit price if testing shows no damage to the cables. Replace all cables which testing shows to be damaged at no cost to the department.

C.4 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.

Approved splice kits shall be used instead of connectors and terminal blocks for underground power cable splices.

Permanently label and key connectors to preclude improper connection. The labeling method(s) must be approved by the engineer 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 Traffic Operations Center or in communication hubs, that are not contained within a single cabinet, shall have at least 10 feet of slack.

C.5 System Operations
If the contractor's operations 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.6 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. All wiring between the surge protectors and the point of entry shall be 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.

85. Install Pole Mounted Cabinet, Item 673.0225.S.

A Description

This special provision describes installing department furnished aluminum enclosures on poles for intelligent transportation systems equipment.

B Materials

Use stainless steel bolts, nuts, and washers unless otherwise specified.

All conductors, terminals, and parts that could be hazardous to maintenance personnel shall be protected with suitable insulating material.

The cabinet will be equipped with service panels. Two panels shall be provided and mounted on the cabinet sidewalls. The left side panel shall be designated as "Input/Communications," and the right side panel shall be designated as the "Service Panel."

The service panel will be equipped with a four-outlet handi-box. Wire the handi-box to the series portion of the filtering surge protector.

Use metallic conduit, fittings, and adapters required from the underground conduit transition point to the cabinet as part of this item. A typical installation requires on 2-inch conduit. Use metallic conduit according to standard spec 652.

C Construction

Fasten the field cabinet securely onto a pole. Provide bolted stainless steel connections with lock washers, locking nuts, or other engineer-approved means to prevent the connection nuts from backing off. Isolate dissimilar materials from one another using stainless steel fittings. Make all power connections to the cabinet as specified in standard spec 656.

Drill and tap the cabinet, as necessary, to mount the terminal blocks and other attachments to the service panel, to provide an entrance on the back of the cabinet for cable from the pole mounted intelligent transportation systems equipment, and to mount the service panel to the cabinet as shown in the details. Remove all sharp edges or burrs, or both, caused by the cutting or drilling process. Seal all openings to prevent water from entering the cabinet. Mount the surge protector to the service panel.

Install metallic conduit on the exterior of the pole (for entrance to the cabinet from the ground) as shown in the plans, and according to the applicable requirements of standard spec 652.

D Measurement

The department will measure Install Pole Mounted Cabinet as each individual 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
673.0225.S	Install Pole Mounted Cabinet	Each

Payment is full compensation for installing the pole mounted cabinet; for making all connections and conduit/wire entrances; and for furnishing all testing.
673-010 (20100630)

86. Install Ethernet Switch, Item 675.0400.S.

A Description
This special provision describes installing an Ethernet switch, and providing all necessary associated wiring.

B Materials
The department will furnish the Ethernet switch. Provide all necessary cables between the Ethernet switch and terminal server or other device.

C Construction
Install the Ethernet switch in a new or existing field cabinet. Connect it to devices as shown on the plans, or as directed by the engineer.

D Measurement
The department will measure Install Ethernet Switch by the unit, installed according to the contract, tested, 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
675.0400.S	Install Ethernet Switch	Each

Payment is full compensation for installing an Ethernet switch; furnishing all necessary incidental hardware; and making all necessary connections.
675-040 (20100630)

87. Install Video Encoder, Item 677.0300.S.

A Description
This special provision describes installing a state-furnished video encoder in a pole mounted cabinet or field cabinet as shown on the plans and as hereinafter provided.

B Materials
Provide Category 5 or better Ethernet cable to connect the Ethernet video encoder to the Ethernet switch. The department will furnish the video encoder or it will be an existing and salvaged encoder.

C Construction
Make the necessary electrical and communication network connections to the video encoder. Mount the video encoder in the pole mounted cabinet or field cabinet. Program the video encoder according to the manufacturer's instructions.

D Measurement
The department will measure Install Video Encoder by each individual 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
677.0300.S	Install Video Encoder	Each

Payment is full compensation for installing the video encoder in a pole mounted cabinet or field cabinet; for making all connections; and for furnishing all programming.
677-030 (20100630)

88. Removing 50-Foot Camera Pole, Item 677.9051.S.

A Description
This special provision describes removing an existing camera pole.

B (Vacant)

C Construction
Disconnect all cables, wiring and equipment that are mounted on or in the poles, and remove the pole from the concrete footing. The department will pick up any antennae, cameras, or other equipment mounted on the pole; contact maintenance staff at (414) 227-2166 at the department's Statewide Traffic Operations Center, when the material is ready to be picked up. Properly dispose of the pole, conduit, cabling, and wiring away from the project site.

D Measurement
The department will measure Removing (Height) Camera Pole by the unit, acceptably removed.

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

ITEM NUMBER	DESCRIPTION	UNIT
677.9051.S	Removing 50-Foot Camera Pole	Each

Payment is full compensation for removing and disposing of the existing camera pole; disconnecting any necessary wiring; removing the equipment mounted on the poles; disposing of cabling and wiring; and transportation.
677-901 (20100630)

89. Removing CCTV Camera, Item 677.9200.S.

A Description
This special provision describes removing an existing CCTV camera from an existing camera pole as described in the plan.

B (Vacant)

C Construction
Disconnect all wiring at the control cabinet and at the top of the camera pole. Remove all fastening hardware and remove the existing camera and pan, tilt, and zoom mechanisms from the top of the pole. Salvage and store the cameras for pick up by the department; contact maintenance staff at (414) 227-2166 at the department's Statewide Traffic Operations Center to coordinate when the materials will be picked up.

The contractor may request a meeting with the engineer to assess the condition and operability of the camera prior to beginning work on removing the camera. Any damage or improper operation not noted at the meeting, or prior to the contractor starting work on the removal, will be assumed to be the fault of the contractor; repair or replace the camera at no additional cost to the department. Store the camera until the department picks up the camera.

D Measurement
The department will measure Removing CCTV Camera by the unit, acceptably and completely removed.

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

ITEM NUMBER	DESCRIPTION	UNIT
677.9200.S	Removing CCTV Camera	Each

Payment is full compensation for removing an existing CCTV camera; for disconnecting all necessary cables and wiring; and properly storing the materials.
677-902 (20100630)

90. QMP Concrete Pavement Special Requirements.

This is a specialized QMP Concrete Pavement specification modified for Zoo Interchange projects.

Supplement standard specs 701, 710, 715 with the following:

A Description

A.1 General

Conform to standard spec 320, 415, 416, and 501 as modified in this special provision. Apply this special provision only to the following bid items:

415.0060 - 0199 Concrete Pavement (inch)
415.0410 Concrete Pavement Approach Slab
SPV.0180.0009 Concrete Pavement 12-Inch Special

A.2 Contractor Testing for Small Quantities

The requirements under this special provision apply equally to a small quantity for a particular mix design and placement method, except as follows:

1. A full quality control plan need not be submitted but provide an organizational chart to the engineer including names, telephone numbers and current certifications of all persons involved in the quality control program.
2. The engineer may accept aggregate gradation based upon satisfactory records of previous testing.
3. No concrete control charts are required. Submit test results to the engineer each day as they become available. Assure that all properties are within the limits specified in the standard specifications for each sublot tested.
4. The department will not adjust the pay for sublots with conforming compressive strength.

B Materials

B.1 Quality Control Plan

Supplement standard specs 701.2.2 and 715.1.1.4 with the following:

Ensure that the plan provides the following elements:

1. The locations of the QC laboratories for mix design, aggregate testing, cylinder curing, concrete testing, and compressive strength testing.
2. The frequency of contractor quality control testing, if planning to perform more frequently than section B.5 specifies.
3. The format for control charts and sampling, testing, and pay adjustment data documentation, if different from the forms provided in the CMM 8.35.

B.2 Laboratory Certification

Supplement standard spec 701.2.4 with the following:

Obtain information on the Wisconsin laboratory qualification program from:

Materials Management Section
935 S. 60th Street
West Allis, Wisconsin 53214
Telephone: (414) 266-1156

B.3 Class I Concrete Mixes

B.3.1 General

For concrete base, use a grade A-IL, grade B, B-FA, B-S, B-IS, or B-IP concrete mix conforming to standard spec 501.

Use clean, hard, durable crushed limestone with 100% fractured surfaces and free of an excess of thin or elongated pieces, frozen lumps, vegetation, deleterious substances or adherent coatings considered injurious.

Use virgin aggregates only.

B.3.2 Contractor Concrete Mix Design

Delete standard spec 501.2.5.3.4, 501.2.5.4.4, 501.3.1.1.2, 501.3.2.1, 501.3.2.2, and 501.3.2.3. Delete the maximum limit for percent passing the No. 200 (75 μm) sieve from standard spec 501.2.5.3.1 and 501.2.5.4.2.

B.3.2.1 Pavements

Replace standard specs 715.2.3.1(2) and 715.2.3.1(3) with the following:

Provide minimum cement content of 565 pounds per cubic yard (335 kg/m^3). Portland cement may be partially replaced with fly ash at a replacement ratio of not less than one pound (kg) of fly ash per one pound (kg) of cement up to a maximum fly ash content of 30% of total cementitious material. Alternatively, slag may be used as a partial replacement for cement at a replacement ratio of not less than one pound (kg) of slag per one pound (kg) of cement up to a maximum slag content of 30% of the total cementitious material. Alternatively, A combination of fly ash and slag may be used up to a maximum combined fly ash and slag content of 30 percent. Ensure that fly ash conforms to standard spec 501.2.6 and slag conforms to standard spec 501.2.7.

The amount of deleterious substances shall not exceed the following percentages:

DELETERIOUS SUBSTANCE	PERCENT BY WEIGHT
Shale	1.0
Coal	1.0
Clay lumps	0.3
Soft fragments	3.0
Any combination of above	3.0
Thin or elongated pieces based on a 3:1 ratio	15.0
Materials passing the No. 200 (75 μm) sieve	1.5
Chert[1]	3.0

[1] Material classified lithologically as chert and having a bulk specific gravity (saturated surface-dry basis) of less than 2.45. Determine the percentage of chert by dividing the weight of chert in the sample retained on a 3/8-inch (9.5 mm) sieve by the weight of the total sample.

B.3.2.2 Combined Aggregate Gradation
Replace standard spec 715.2.2(1) items 2 and 3 with the following:

2. The percent passing the 1 inch (25 mm) sieve is less than or equal to 95.
3. The percent passing the No. 4 (4.75 mm) sieve is less than or equal to 47.

B.4 Quality Control Program
B.4.1 Control Charts
Maintain control charts when required by the test reporting procedures. Ensure that all tests are recorded and become part of the project records. Plot required test results on the control charts. Include random, non-random, and engineer requested testing but only include the contractor's randomly selected QC test results in the 4-point running average. Other process control or informational tests on the control charts may be plotted, but do not include them in 4-point running averages.

Post control charts in an engineer-approved location and update daily. Ensure that the control charts include the project number, the test number, each test element, the applicable warning and control limits, the contractor's individual test results, the running average of the last 4 data points, and the engineer's verification and independent assurance test data points. Use the control charts as part of a process control system for identifying potential problems and assignable causes. Format control charts according to CMM 8.30.

Submit control charts to the engineer in a neat and orderly manner within 10 days after completing concrete production.

B.4.2 Documentation
Replace standard spec 701.2.6(3) with the following:

Submit original paper copy testing records to the engineer in a neat and orderly manner within 10 days after completing concrete production.

B.5 Contractor Testing
B.5.1 General
Supplement standard spec 701.3 with the following:

Ensure that all test results are available for the engineer's review at any time during normal working hours.

B.5.2 Aggregate Testing

B.5.2.1 General

Supplement standard spec 710.5.6.1 with the following:

Ensure that only results of randomly selected QC tests are included in the 4-point running average.

Use control limits for sieve sizes as identified in the project concrete mix report or, if the concrete mix report is not published at the time of testing, in the contractor's quality control plan. Gradation warning limits are inside the upper and lower control limit values by one percentage point for all sieves except as follows:

1. The upper warning limits for percent passing the No. 100 (150 μm) and No. 200 (75 μm) sieves are inside the control limit by 0.5 percent.
2. For sieves allowing 100 percent passing, there is no upper warning limit. For sieves with 0 percent passing, there is no lower warning limit.

Replace standard spec 710.5.6.2(2) with the following:

Wash each sample of fine aggregate and the first 4 samples of each of the coarse aggregates. If the percent passing the No. 200 (75 μm) sieve for the combined gradation is less than the warning limit, wash at least every 10th sample of each of the coarse aggregates. If the percent passing the No. 200 (75 μm) sieve for the combined gradation is greater than or equal to the warning limit, wash each sample of the coarse aggregate until 4 consecutive tests are less than the warning limit.

B.5.2.2 Documentation

Maintain control charts at the laboratory for each aggregate stockpile. Maintain a chart for each control sieve for each material. Record contractor test results the same day tests are conducted.

B.5.2.3 Corrective Action

When the 4-point running average value approaches a warning limit, consider corrective action. Ensure that any corrective action is documented and becomes part of the project records.

Document whenever a 4-point running average exceeds the warning limits. When a second consecutive running average value exceeds the warning limits, take corrective action. Continue corrective action until 2 consecutive average points are within the warning limits.

Notify the engineer whenever an individual test value exceeds a control limit. Material is nonconforming when an individual test exceeds the control limit. The quantity of nonconforming material includes the material of the first test exceeding the control limit, continuing to but not including, the material from the first subsequent test that is within the control limits. The department may reject material or otherwise determine the final disposition of nonconforming material as specified in standard spec 106.5.

B.5.3 Aggregate Percent Passing the No. 200 Sieve

B.5.3.1 Sampling and Testing

Measure and record the percent passing the No. 200 (75 μm) sieve of both the fine and course aggregates when producing concrete pavement. Conduct tests according to AASHTO T 11 as modified by the department. Test at least one sample as early as it is practical each day and as mix or material conditions change. This testing frequency may be reduced, if the engineer approves, but maintain at least one test per 5 days of concrete production.

Document testing as specified in B.6.1, B.7.2.1, and B.7.2.2, by developing a combined gradation control chart for the percent passing the No. 200 (75 μm) sieve. Use the control limits defined in the concrete pavement mix report. Ensure that only results of QC tests are included in the 4-point running average.

B.5.3.2 Corrective Action

When an individual test approaches a warning limit, consider corrective action. Document corrective actions and include that documentation in the project records.

Notify the engineer if an individual test exceeds the warning limits. If a second consecutive individual test exceeds the warning limits, the engineer will assist in determining the course of corrective action. If the corrective action improves the property in question such that additional individual tests are within the warning limits, production may continue. If the correction does not improve the property, and new individual tests stay in the warning band, repeat the steps outlined here in B.7.3.2(2) starting with notifying the engineer.

Notify the engineer whenever an individual test value exceeds a control limit. Material is nonconforming when an individual test exceeds the control limit. The quantity of nonconforming material includes the material of the first test exceeding the control limit, continuing to but not including, the material from the first subsequent test that is within the control limits. The department may reject material or otherwise determine the final disposition of nonconforming material as specified in standard spec 106.5.

B.5.4 Lot and Sublot Definition

Supplement standard spec 715.3.1.2.1 with the following:

Ensure that no single lot contains concrete of more than one mix design, or more than one placement method, except for mainline pavement gaps.

B.5.4.1 Lots by Lane-Feet

Supplement standard spec 715.3.1.2.2 with the following:

Lots and sublots may include concrete from more than one day of paving.

A sublot is 350 linear feet for 3-lane paving width or 2-lane plus shoulder.

Sublots at either end of a paving pass may be greater than 1000 lane-feet in size to accommodate the actual project length and staging requirements. For ease of layout, begin the first sublot at the first even station of the project. Place the resulting partial quantity into the first full sublot.

Document the locations and quantities of integral shoulders, and identify the travel lane sublot tests used for acceptance. For a shoulder pavement placed in a separate paving pass, designate separate lots and sublots.

Ancillary concrete placed integrally with a pavement may be accepted using the tests from the pavement sublot. Document the locations and quantities of integral concrete, and identify the pavement sublot tests used for acceptance.

B.5.4.2 Non-Mainline Surfaces

Non-mainline surfaces shall be defined as all concrete surfaces under this special provision, which are not mainline travel lanes or mainline shoulders.

Lots and sublots may include concrete from more than one day of paving.

A lot consists of a minimum of 4 sublots and a maximum of 8 sublots.

All sublots within a lot shall have the same approximate size.

A sublot is a maximum of 250 cubic yards of concrete.

B.5.5 Strength Evaluation

B.5.5.1 General

Supplement standard spec 715.3.2.1(1) with the following:

Include tests of concrete base and high early strength concrete for all other QC testing, except no 28-day cylinders are required for concrete base or for high early strength concrete.

B.5.5.2 Removal and Replacement

B.5.5.2.1 Pavement

Replace standard spec 715.3.2.2.1 with the following:

If a sublot strength is less than 3000 psi (17.2 MPa), the department may direct that sublot to be cored to determine its structural adequacy and whether to direct removal. Cut and test cores according to AASHTO T 24 as and where the engineer directs. Have an HTCP certified PCC technician I perform or observe the coring. Bear all coring and testing costs, fill all core holes with an approved grout, and provide traffic control during coring at no cost to the department.

The sublot pavement is conforming if the compressive strengths of all cores from the sublot are 3000 psi (17.2 MPa) or greater or the engineer does not require coring.

The sublot pavement is nonconforming if the compressive strengths of any core from the sublot is less than 3000 psi (17.2 MPa). The department may direct removal and replacement or otherwise determine the final disposition of nonconforming material as specified in standard spec 106.5.

B.5.6 Air Content
Supplement standard spec 710.5.3 with the following:

The lower warning limit for air content is 0.5 percent above the lower control limit. There is no upper warning limit.

B.5.6.1 Documentation
Maintain a control chart at a fixed location on the project site. Ensure that all test results are recorded and become part of the project records. Chart all results on the same day tests are conducted. Only plot results of samples selected randomly in the 4-point running average.

B.5.6.2 Corrective Action
If an individual air test is between the lower warning limit and lower control limit, double the air content test frequency to 2 tests per compressive strength sublot. Perform one of these tests from the same concrete sample used for the QC strength cylinders. Select the second sample randomly from the half of the sublot not used for the QC strength cylinders. Determine both random test locations within a sublot before paving that sublot. Continue testing at increased frequency until an individual test point is above the lower warning limit and below the upper control limit.

When the 4-point running average value trend is towards the lower warning limit or the upper control limit, consider corrective action.

Notify the engineer if a 4-point running average is less than the lower warning limit. If a second consecutive running average is below the warning limit, the engineer will assist in determining the course of corrective action. If the corrective action improves the property in question such that the new running average, after four additional individual tests, is between the lower warning limit and upper control limit, production may continue. If the new running average is below the lower warning limit, repeat the steps outlined here in B.7.5.2(3) starting with notifying the engineer.

If an individual air test is outside the control limits, notify the engineer, and perform additional air tests as often as it is practical on subsequent loads until the air content is inside the control limits. The material is nonconforming when an individual test exceeds the control limit. Material from the load with the first test exceeding the control limit, continuing to but not including the load with the first subsequent test within the control limits, is nonconforming. The department may direct removal and replacement or

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

B.6 Department Testing

B.6.1 Verification Testing

Supplement standard spec 701.4.2 with the following:

The department will perform verification testing as follows:

	Testing Frequency Guide[1]	**Sampling Material and Location**	**Test Method**	**Alternate Test Methods**
Air content	1 per lot	Plastic concrete, ahead or behind[2] the paver	AASHTO T 152 as modified	Hardened air content testing[2] after construction
28-day compressive strength	1 per lot	Cylinders	AASHTO T 22, T 23 & T 141 as modified	Random cores[2] after construction

[1] The engineer may increase the frequency at start-up or as necessary to validate the quality of the materials. The engineer may reduce the frequency based on a history of satisfactory contractor or material performance.

[2] Evaluation of test results shall account for systematic differences in testing methods or sampling locations.

The department will conduct verification testing for pavement thickness as specified in standard spec 415.3.16.

Plot verification tests on the contractor's quality control charts as specified in B.4.1. Do not include verification tests in the 4-point running average.

B.6.2 Independent Assurance Testing

Supplement standard spec 701.4.3 with the following:

Plot the independent assurance tests on the contractor's quality control charts as specified in B.6.1. Do not include independent assurance tests in the 4-point running average.

B.7 Dispute Resolution

The engineer and contractor shall 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.

If the project personnel cannot resolve a dispute and the dispute affects payment or could result in incorporating nonconforming 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 tests 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.

B.8 Acceptance
The department will accept concrete pavement based on the contractor QC tests unless it is shown through the verification or the dispute resolution process that the contractor's tests are in error.

C (Vacant)

D (Vacant)

E Payment
E.1 General
Replace standard spec 715.5.1(4) with the following:

The department will adjust pay for each lot using percent within limits (PWL) of the 28-day sublot average strengths for that lot. The department will measure PWL relative to the lower specification limit of 4500 psi.

E.2 Pavements
Replace standard spec 715.5.2(1) through 715.5.2(3) with the following:

The department will adjust pay for each lot using equation "QMP 3.03" as follows:

Percent Within Limits (PWL)	**Pay Adjustment***[1]* (dollars per square yard)
≥ 85 to 100	0
≥ 30 to < 85	(1.5/55 x PWL) – (127.5/55)
< 30	-1.50

[1] For lots with less than 4 sublots, the department will assess a disincentive based on the individual sublot average strengths. The department will reduce pay for sublots with an average strength below 4500 psi by $1.50 per square yard.

SEF Rev.13_1210

91. HPC Masonry Structures, Item SPV.0035.4000.

This special provision describes specialized material and construction requirements for high-performance concrete used in bridge structures. Conform to standard spec 501, 502 and 509, as modified in this special provision. This special provision also describes QMP

concrete pavement and structures. Conform to standard spec 715 as modified in this special provision.

MODIFY THE STANDARD SPECIFICATIONS AS FOLLOWS:

501.2.5.4.1 General

Replace the entire text with the following:

(1) Use clean, hard, durable crushed limestone with 100% fractured surfaces and free of an excess of thin or elongated pieces, frozen lumps, vegetation, deleterious substances or adherent coatings considered injurious.

(2) Use virgin aggregates only.

501.2.5.4.2 Deleterious Substances

Replace paragraph one with the following:

(1) The amount of deleterious substances must not exceed the following percentages:

DELETERIOUS SUBSTANCE	PERCENT BY WEIGHT
Shale	1.0
Coal	1.0
Clay lumps	0.3
Soft fragments	5.0
Any combination of above	5.0
Thin or elongated pieces based on a 3:1 ratio	15.0
Materials passing the No. 200 sieve	1.5
Chert[1]	1.0

[1]Material classified lithologically as chert and having a bulk specific gravity (saturated surface-dry basis) of less than 2.45. Determine the percentage of chert by dividing the weight of chert in the sample retained on a 3/8-inch sieve by the weight of the total sample.

501.2.5.4.3 Physical Properties

Replace paragraph one with the following:

(1) The department will ensure that Los Angeles wear testing conforms to AASHTO T 96, soundness testing conforms to AASHTO T 104 using 5 cycles in sodium sulfate solution on aggregate retained on the No. 4 sieve, and freeze-thaw soundness testing conforms to AASHTO T 103. The percent wear must not exceed 30, the weighted soundness loss must not exceed 6 percent, and the weighted freeze-thaw average loss must not exceed 15 percent.

501.3.2.4.3.3 Extended Delivery Time

Delete paragraph one.

501.3.5.1 General

Replace paragraph one with the following:

(1) Use central-mixed concrete as defined in standard spec 501.3.5.1(2) for all work under this special provision.

501.3.5.2 Delivery

Replace paragraph three with the following:

(3) Deliver and completely discharge concrete within one hour beginning when adding water to the cement, or when adding cement to the aggregates. A decrease in air temperature below 60° F or the use of department-approved retarders does not increase the discharge time.

501.3.7.1 Slump

Replace the entire text with the following:

(1) Use a 2-inch to 4-inch slump.

(2) Perform the slump tests for concrete according to AASHTO T 119.

501.3.8.2.1 General

Replace paragraphs one and two with the following:

(1) Take the following steps to ensure the quality of the concrete placed. Submit a written temperature control plan at or before the pre-pour meeting. In that plan, outline the actions the contractor will take to control concrete temperature if the concrete temperature at the point of placement exceeds 80° F. Do not place concrete without the engineer's written acceptance of that temperature control plan. Perform the work as outlined in the temperature control plan.

(2) If the concrete temperature at the point of placement exceeds 80° F, do not place concrete for items covered in this special provision.

501.3.8.2.2 Bridge Decks

Replace the entire text with the following:

(1) Do not place concrete for bridge decks when the ambient air temperature is above 80° F.

(2) For concrete placed in bridge decks, submit a written evaporation control plan at each pre-pour meeting. In that plan, outline the actions the contractor will take to maintain concrete surface evaporation at or below 0.15 pounds per square foot per hour. Do not place concrete for bridge decks without the engineer’s written acceptance of that evaporation control plan. If the engineer accepts an evaporation control plan calling for ice, the department will pay

$0.75 per pound for that ice. Perform the work as outlined in the evaporation control plan.

(3) If predicting a concrete surface moisture evaporation rate exceeding 0.15 pounds per square foot per hour, do not place concrete for bridge decks.

(4) Provide evaporation rate predictions to the engineer 24 hours prior to each bridge deck pour.

(5) Compute the evaporation rate from the predicted ambient conditions at the time and place of the pour using the nomograph, or computerized equivalent, specified in CMM 5.25, figure 1. Use weather information from the nearest national weather service station. The engineer will use this information to determine if the pour will proceed as scheduled.

(6) At least 8 hours before each pour, the engineer will inform the contractor in writing whether or not to proceed with the pour as scheduled. If the actual computed evaporation rate during the pour exceeds 0.15 pounds per square foot per hour, at the sole discretion of the engineer, the contractor may be allowed to implement immediate corrective action and complete the pour. If the engineer allows the placement to continue, the department will pay $0.75 per pound for the quantity of ice required to maintain the concrete surface evaporation at or below 0.15 pounds per square foot per hour.

502.2.6.2 Burlap
Replace the entire text with the following:

(1) Furnish burlap conforming to AASHTO M 182, class 1, 2, 3 or 4.

502.3.2.1 Detailed Plans
Replace the entire text with the following:

(1) As specified in standard spec 105.2, submit four copies of detailed plans and computations for falsework, signed and sealed by a professional engineer registered in the State of Wisconsin, three weeks prior to erection of falsework for review and acceptance. Acceptance of the detailed plans and computations will in no way relieve the contractor of the responsibility of providing a safe and stable structure, and obtaining satisfactory results.

502.3.5.4 Superstructures
Delete paragraph six.

502.3.7.8 Floors

Replace paragraph five with the following:

(5) Set the rails or tracks that the finish machine rides on, to the required elevation; and ensure they adjust to allow for settlement under load. Support the rails or tracks outside the limits of the finished riding surface. Do not support rails or tracks on the tops of girders, or within the finished riding surface, without written permission of the engineer.

Delete paragraph thirteen, fourteen and fifteen.

Add the following to the end as paragraphs nineteen, twenty, twenty-one, twenty-two, and twenty three:

(19) Do not place bridge deck concrete more than 10 feet ahead of the finishing machine. If there is a delay of more than 10 minutes during the placement of a bridge deck, cover all concrete (unfinished and finished) with wet burlap to protect the concrete from evaporation until placement operations resume.

(20) Keep hand finishing, except for the edge of deck, to a minimum. Equip the finishing machine with a pan behind the screed. Apply micro texture using a broom or turf drag following the use of a 10-foot straight edge. Only finish by hand as necessary to close up finished concrete. Begin wet curing the deck immediately following the micro texture.

(21) For bridge decks with a design speed of 40 mph or greater, provide longitudinal grooving according to the provision included in this contract.

(22) Place HPC Masonry Structures for bridge decks during nighttime hours. Begin work no earlier than two hours before sunset and end no later than 2 hours after sunrise; unless alternate begin and end times are approved prior to the concrete placement by the engineer. To determine acceptable hours, use the sunset and sunrise times published by the National Weather Service for the proposed date of the concrete placement or as mutually agreed to by the contractor and the engineer.

(23) Provide lighting as necessary to safely perform the required work and facilitate inspection during nighttime hours. Ensure that lighting does not interfere with or impede traffic on open roadways and does not cause glare, shine or directly face the eyes of oncoming drivers. After initial setup, drive through and observe the lighted work area from each direction on the main roadway. Adjust lighting alignment if lighting causes glare, shine or directly faces the eyes of oncoming drivers.

502.3.8.1 General

Replace paragraph one with the following:

(1) Maintain adequate moisture throughout the concrete mass to support hydration for at least 14 days.

502.3.8.2.1 General

Replace the entire text with the following:

(1) Wet-cure the concrete for bridge decks, structural approach slabs, sidewalks on bridges and raised medians on bridges for 14 days by use of a soaker hose system, or other engineer-approved methods. Cover the finished surface of bridge decks and overlays with one layer of wetted burlap or wetted cotton mats within 10 minutes after the finishing machine has passed. Apply the burlap/cotton gently so as to minimize marking of the fresh concrete. Keep the first layer of burlap/cotton continuously wet until the bridge deck or overlay is sufficiently hard to apply a second layer of wetted burlap/cotton. Immediately after applying the second layer of burlap/cotton, continue to keep the deck wet until placing and activating the soaker hose system. Throughout the remainder of the curing period, keep the burlap/cotton continuously wet with soaker hoses hooked up to a continuous water source. Inspect the burlap/cotton twice daily to ensure the entire surface is moist. If necessary, alter the soaker hose system as needed to ensure the entire surface is completely covered and stays moist. After 48 hours from the time of completion of the bridge deck or overlay pour, the soaker hose system and burlap/cotton may be covered with polyethylene sheeting. Provide a continuous flow of water through the soaker hose system for the entire curing period.

(2) Do not uncover any portion of the deck at any time for any reason during the first 7 days of the curing period except as permitted by the engineer.

(3) Set up and test the fogging system before each bridge deck, structural approach slab, bridge mounted sidewalk or bridge mounted raised median pour. Keep the fogging system set up and operational for the duration of the pour.

502.3.8.2.3 Decks

Delete the entire text.

502.3.8.2.4 Parapets

Replace the entire text with the following:

(1) Cure the inside and outside concrete faces and tops of railings or parapets by covering with wetted burlap immediately after form removal and surface finish application. Keep the burlap thoroughly wet for at least 7 days; or by covering for the same period with thoroughly wet polyethylene-coated burlap conforming to 502.2.6.4

(2) Secure coverings along all edges to prevent moisture loss.

502.3.9.6 Bridge Decks
Replace paragraph two with the following:

(2) Protect the underside of the deck, including the girders, for bridge deck and overlay pours by housing and heating when the national weather service forecast predicts temperatures to fall below 32° F during the cold weather protection period. Maintain a minimum temperature of 40° F in the enclosed area under the deck for the entire 14-day curing period.

502.5.1 General
Replace paragraph one with the following:

(1) The department will pay for plan quantities at the contract unit price and incidentals necessary to complete the work under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0035.4000	HPC Masonry Structures	CY

Lighting for nighttime bridge deck placement is included in the item HPC Masonry Structures and will not be measured or paid for separately.

710.5 Sampling and Testing
Add the following standard spec:

710.5.7 Chloride Penetration Resistance

(1) For each new or changed mix design, measure chloride penetration resistance according to AASHTO T 277 (Rapid Chloride Permeability Test) at a frequency of 1 test per 3 months (quarterly) of production.

(2) Strip permeability samples for AASHTO T 277 testing of their molds and wet cure to an age of 7 days in a standard moist room or water tank. After 7 days, submerge the samples in water heated to 100° F until an age of 28 days. Upon completion of the curing process, obtain one sample from each cylinder and test according to AASHTO T 277.

(3) Ensure that the initial accepted mix designs meet the chloride penetration resistance limit of 1500 coulombs based on the AASHTO T 277 Rapid Chloride Permeability test. Chloride resistance testing conducted quarterly using AASHTO T 277 Rapid Chloride Permeability Test during production will not be used for acceptance of previously accepted mixes and concrete masonry mixed and placed according to the contract requirements. For quarterly chloride resistance test results exceeding 1500 coulombs, the department may require adjustment of the concrete mix going forward to improve the chloride penetration resistance.

715.2.3.2 Structures

Replace paragraph one with the following:

(1A) Develop and test each mix to be used for HPC Masonry Structures. Produce a laboratory trial mix for each mix, as well as a trial mix from each plant used to supply the project. Test all mixes at a department-qualified laboratory.

(1B) The laboratory trial mix data must include the results of the following tests:

1. AASHTO T 119 Slump of Hydraulic Cement Concrete.
2. AASHTO T 121 Mass per Cubic Foot, Yield
3. AASHTO T 152 Air Content.
4. AASHTO T 22 Compressive Strength.
5. AASHTO T 277 Rapid Determination of the Chloride Permeability of Concrete, using the modified curing procedure according to 710.5.7 (2) herein.
6. AASHTO T 309 Temperature.
7. Water Cement Ratio.

(1C) The 28-day compressive strength must be greater than or equal to 4000 psi. The 28-day results of the permeability test must be less than or equal to 1500 coulombs.

Replace paragraph two with the following:

(2) Provide a minimum cementitious content of 470 pounds per cubic yard and a maximum cementitious content of 540 pounds per cubic yard. For all superstructure and substructure concrete, unless the engineer approves otherwise in writing, conform to one of the following:

1. Use class C fly ash or grade 100 or 120 slag as a partial replacement for Portland cement. For binary mixes use 15% to 30% fly ash or 20% to 30% slag. For ternary mixes use 15% to 30% fly ash plus slag in combination. Percentages are stated as percent by weight of the total cementitious material in the mix.
2. Use a type IP or IS blended cement.

92. Truck Mounted Attenuator, Item SPV. 0045.0001.

A Description

This special provision describes furnishing, maintaining and operating a Truck Mounted Attenuator (TMA) during moving operations and short term stationary work in a closed lane of traffic as shown on the plans or when deemed necessary by the engineer.

B Materials

B.1 General

The TMA shall be a model that has been approved by the Federal Highway Administration for meeting NCHRP 350 Test Level 3 Crashworthiness. The attenuator shall be mounted to a suitable truck in a manner meeting the manufacturer's specifications with a minimum total gross weight of 25,000 pounds.

C Construction

Place the TMA in the closed lane in advance of the equipment and personnel, located as recommended by the manufacturer and approved by the engineer. If the TMA is not available when the work requires its use, postpone the work until the TMA is available.

If utilized in a mobile operation, the TMA support vehicle shall shadow the mobile operation and maintain a consistent distance from the mobile operation as recommended by the manufacturer. An operator shall be provided and remain with the vehicle at all times during mobile operations.

D Measurement

The department will measure Truck Mounted Attenuator by the day. For this special provision, the number of days measured is defined as the number of calendar days that the truck, TMA and operator are used in moving operations or short-term stationary work. A calendar day begins with each deployment within a defined time period and exceeding two hours.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0045.0001	Truck Mounted Attenuator	DAY

Payment is full compensation for furnishing, maintaining and operating the TMA and its operator; and for furnishing all labor, tools, equipment, services, and incidentals necessary to complete the contract work.

SEF Rev. 13_0122

93. PCMS Remote Communications, SPV.0045.0002.

A Description

This special provision describes remote communications requirements for use with portable changeable message signs (PCMS) provided under the contract.

B Materials

Furnish an EV-DO cellular modem registered to a 3G or 4G cellular carrier. Ensure that the cellular modem includes 1 or more external antennas, 1 or more 10/100 Ethernet ports, and 1 or more db9 Serial RS-232 interfaces. Ensure that the device is able to handle -30° C to +75° C and is powered by a 12VDC power supply. Ensure that the cellular

modem has a built-in secure router with NAT, port forwarding and IP pass-through capabilities.

Provide management IP address, serial port setting, and password(s) for the cellular modem to the department. The department will notify contractor of message changes.

Furnish antenna cable without splices mounted at the highest practical location on the PCMS.

C Construction
Install a cellular modem in a lockable, weatherproof compartment in the PCMS trailer.

A minimum of 14 days before deployment, demonstrate to the department that the installed system is capable of communicating with Trans Suite software.

If remote communications are interrupted or temporarily unavailable, the department will direct the contractor to manually change the message.

D Measurement
The department will measure PCMS Remote Communications by the day, acceptably completed, measured as the number of calendar days that remote communications are available and functioning properly. The department will measure separately for each PCMS requiring remote communications that is available for exclusive use under the contract. The department will deduct one day for each calendar day remote communications are required but out of service for more than 2 hours.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0045.0002	PCMS Remote Communications	DAY

Payment is full compensation for providing remote communications capability, and for making message changes if remote communications are interrupted or temporarily unavailable.

94. Exposing Existing Utility Paved Area, Item SPV.0060.0002.

A Description
This work includes exposing existing utilities which are in direct conflict with proposed facilities. The location of existing utilities not in direct conflict with proposed construction is not included and shall be addressed using standard utility location procedures. The work includes exposing existing utilities under paved surfaces or within 6 feet of a paved surface, and providing both lateral and depth measurements for use in determining potential utility conflict solutions.

B Materials

B.1 Granular Backfill

Furnish granular backfill that conforms to standard spec 209.

B.2 Backfill Controlled Low Strength (BCLS)

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

C.1 General

Submit all requests for exposing existing utilities in writing to the engineer for approval prior to performing the work. Coordinate utility exposures with the engineer and notify the utility owner or their agents of this work 2 working days in advance so that they may be present when the work commences.

C.2 Excavation

Remove all paved surfaces at locations where the existing utility is being exposed. Saw or remove concrete and asphaltic pavements to the nearest joint. Remove all pavement surfaces in such a way that all existing edges consist of a true line having a perpendicular edge with no unraveling. Maintain drainage at all times in accordance to standard spec 205.3.3. Take precautions, including temporary shoring, in order to prevent any undermining of the existing roadway. Perform work in accordance to all applicable laws, ordinances, rules, regulations, and OSHA standards.

Expose all utility locations within a given location to a minimum depth of 18-inches below the bottom of each utility. Excavate in a manner that protects the integrity of the utilities and prevents any damage to wrappings or protective coatings such as by any mechanical method or hand digging. Notify the utility owner promptly if damage or

interruption of service occurs. Repair all damage caused to such utilities resulting from negligence or carelessness at own expense.

Take all lateral and depth measurements in US feet and tenths thereof. Identify horizontal locations of each exposed utility with a coordinate northing and easting referenced to the Wisconsin County Coordinate System (WCCS), Racine County, NAD 83 (97). Provide vertical elevations for each exposed utility and reference to NAVD 88 (91).

The utility location shall remain exposed and available for visual inspection until the completion of all work in a given location. If the utility shall remain exposed overnight or for prolonged periods of time, protect the location with traffic-rated steel plating, safety barriers, and all necessary traffic control devices that may be required under applicable standards or as directed by the engineer.

C.3 Backfilling

Upon completion of the utility exposure, restore the location in kind to its original condition. Use granular backfill, conforming to standard spec 209, to backfill the exposed utility locations to the subgrade elevation except for areas located within local streets. All granular material placed to an elevation of 18-inches above each exposed utility shall consist substantially of sand with all particles retained on a one-inch (25.0 mm) sieve removed. The remaining granular material shall conform to the specifications for backfill for trench excavation.

When exposed utility locations fall within local streets or city right-of-way, use BCLS to fill the entire location to the subgrade elevation. Produce BCLS 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.

Restore concrete pavement and concrete base course to the depth found in the existing roadway. Replace all locations that fall within live lanes of any roadway or pedestrian traffic with a high early-strength concrete pavement mix design having a depth equivalent to the existing pavement structure unless directed otherwise by the engineer. Locations that are closed to through traffic may use an approved concrete pavement mix conforming to standard spec 501. If directed by the engineer, tie concrete pavement and/or dowel it to the existing pavement according to the standard detail drawing for concrete pavement. All locations requiring asphaltic pavement shall consist of HMA

Pavement Type E-3 unless otherwise directed by the engineer. Place the HMA pavement in lifts to a depth as directed by the engineer. Apply tack coat to composite pavement structures and between lifts.

Place base aggregate dense between the subgrade surface and the bottom of the pavement.

C.4 Documentation
Provide documentation to the engineer and include the coordinates, elevations, and sketches of the utility locations tied to known features in the plans. Each utility shall be referenced to a proposed alignment with a station and offset. Where near a ramp, reference the ramp alignment. The size and/or diameter, composition, and a description of each utility shall be documented and the location of the elevation with respect to each utility noted. Supply digital photographs of the uncovered utility to the engineer in .jpeg format for future reference.

D Measurement
The department will measure Exposing Existing Utility, Paved Area as a unit for each location, acceptably completed. A location may have multiple utilities located within the same exposure area. An exposure area will include all utilities within 6 lateral feet of each other and payment will only be made for one unit regardless of the number of utilities exposed. If the distance from the existing ground elevation, located above the existing utility, to a point 18 inches below the exposed utility is between 0 and 6 feet, the department will measure each location as a single unit of work. If the distance from the existing ground elevation, located above the existing utility, to a point 18 inches below the exposed utility is greater than 6 feet and less than 12 feet, the department will pay for the item as two units of work. Exposures in depth greater than 12 feet are not covered under this item.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.0002	Exposing Existing Utility Paved Area	Each

Payment is full compensation for furnishing all excavation; for disposing of all materials; for locating all utilities within each respective location; for providing documentation and photographs of utility locations to the engineer; for furnishing all surveying associated with exposing existing utilities; for furnishing all maintenance of the location during construction; for furnishing all traffic control, safety barriers, and steel plating required; for designing the BCLS mix; supplying all materials; preparing the proportioned mix; hauling it to the construction site; placing the material; and protecting it from freezing; for temporary shoring, and all finishing items including, but not limited to, base aggregate dense, concrete pavement, HMA pavement, curb and gutter, and sidewalk located above the subgrade elevation.
SEF Rev. 13_0624

95. Traffic Control Local Road Lane Closures, Item SPV.0060.0003.

A Description

Furnish the labor and equipment required for closing and subsequently opening a local road lane or lanes in accordance to standard spec 643, the plans, and as directed by the engineer. Drums, barricades and signs may remain along the roadway when the local road is open to traffic. Make signs invisible to traffic when the local road is open. Drums, barricades, lights, arrow boards and signs will be paid for separately under the various traffic control items.

B (Vacant)

C (Vacant)

D Measurement

The department will measure Traffic Control Local Road Lane Closures by each individual local road lane or two-lane closure that is set up and subsequently removed in each traffic direction within a 24 hour time period, 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.0060.0003	Traffic Control Local Road Lane Closures	Each

Payment is full compensation for closing and subsequently opening a local road lane or lanes.

96. Exposing Existing Utility Unpaved Area Item SPV.0060.0004.

A Description

This work includes exposing existing utilities which are in direct conflict with proposed facilities. The location of existing utilities not in direct conflict with proposed construction is not included and shall be addressed using standard utility location procedures. The work includes exposing existing utilities under unpaved surfaces more than 6 feet outside a paved surface, and providing both lateral and depth measurements for use in determining potential utility conflict solutions.

B Materials

B.1 Granular Backfill

Furnish granular backfill that conforms to standard spec 209.

C Construction

C.1 General

Submit all requests for exposing existing utilities in writing to the engineer for approval prior to performing the work. Coordinate utility exposures with the engineer and notify

the utility owner or their agents of this work 2 working days in advance so that they may be present when the work commences.

C.2 Excavation
Remove all unpaved surfaces at locations where the existing utility is being exposed. Maintain drainage at all times in accordance to standard spec 205.3.3. Take precautions, including temporary shoring, in order to prevent any undermining of the existing roadway. Perform work in accordance to all applicable laws, ordinances, rules, regulations, and OSHA standards.

Expose all utility locations within a given location to a minimum depth of 18-inches below the bottom of each utility. Excavate in a manner that protects the integrity of the utilities and prevents any damage to wrappings or protective coatings such as by any mechanical method or hand digging. Notify the utility owner promptly if damage or interruption of service occurs. Repair all damage caused to such utilities resulting from negligence or carelessness at own expense.

Take all lateral and depth measurements in US feet and tenths thereof. Identify horizontal locations of each exposed utility with a coordinate northing and easting referenced to the Wisconsin County Coordinate System (WCCS), Racine County, NAD 83 (97). Provide vertical elevations for each exposed utility and reference to NAVD 88 (91).

The utility location shall remain exposed and available for visual inspection until the completion of all work in a given location. If the utility shall remain exposed overnight or for prolonged periods of time, protect the location with traffic-rated steel plating, safety barriers, and all necessary traffic control devices that may be required under applicable standards or as directed by the engineer.

C.3 Backfilling
Upon completion of the utility exposure, restore the location in kind to its original condition. Use granular backfill, conforming to standard spec 209, to backfill the exposed utility locations to the subgrade elevation except for areas located within local streets. All granular material placed to an elevation of 18-inches above each exposed utility shall consist substantially of sand with all particles retained on a one-inch (25.0 mm) sieve removed. The remaining granular material shall conform to the specifications for backfill for trench excavation. In grassy areas, place 6-inches of topsoil, sod or seed and mulch, and fertilizer. Alternate restoration methods may be used upon written approval from the engineer.

C.4 Documentation
Provide documentation to the engineer and include the coordinates, elevations, and sketches of the utility locations tied to known features in the plans. Each utility shall be referenced to a proposed alignment with a station and offset. Where near a ramp, reference the ramp alignment. The size and/or diameter, composition, and a description of each utility shall be documented and the location of the elevation with respect to each

utility noted. Supply digital photographs of the uncovered utility to the engineer in .jpeg format for future reference.

D Measurement

The department will measure Exposing Existing Utility, Unpaved Area as a unit for each location, acceptably completed. A location may have multiple utilities located within the same exposure area. An exposure area will include all utilities within 6 lateral feet of each other, and payment will only be made for one unit regardless of the number of utilities exposed. If the distance from the existing ground elevation, located above the existing utility, to a point 18 inches below the exposed utility is between 0 and 6 feet, the department will measure each location as a single unit of work. If the distance from the existing ground elevation, located above the existing utility, to a point 18 inches below the exposed utility is greater than 6 feet and less than 12 feet, the department will pay for the item as two units of work. Exposures in depth greater than 12 feet are not covered under this item.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.0004	Exposing Existing Utility Unpaved Area	Each

Payment is full compensation for furnishing all excavation; for disposing of all materials; for locating all utilities within each respective location; for providing documentation and photographs of utility locations to the engineer; for furnishing all surveying associated with exposing existing utilities; for furnishing all maintenance of the location during construction; for furnishing all traffic control, safety barriers, and steel plating required; and for temporary shoring.

SEF Rev. 13_0424

97. Erosion Control Filter Bags, Item SPV.0060.0009.

A Description

This special provision describes furnishing, installing, maintaining, and removing erosion control filter bags under other contract items at locations designated on the plans or as directed by the engineer, and in accordance to plan details and as hereinafter provided.

B Materials

Bags shall be made of synthetic net with a mesh size of 1/8-inches by 1/8-inches that is of sufficient strength to hold the aggregate and to be lifted vertically.

Fill material shall be clean, sound, hard, durable coarse aggregate meeting the approval of the engineer and conforming to the size and gradation requirements for Size No. 1 coarse aggregate as specified in standard spec 501.2.5.4.4.

C Construction
Furnish bags filled with fill material as specified, secured to prevent loss of fill material during transportation, placement, maintenance and removal operations as hereinafter described. Completed erosion control filter bags shall have minimum in-place filled dimensions of 24-inches long by 12-inches wide by 6-inches high.

Install the erosion control filter bags as directed by the engineer and per plan detail. Place erosion control filter bags before starting any construction operation that may cause sedimentation or siltation at the site of the proposed filter bags.

D Measurement
The department will measure Erosion Control Filter Bags by each individual erosion control filter bag, acceptably completed.

The department will not measure individual erosion control filter bags specified to be installed as part of silt fence drainage outlet protection. In those installations erosion control filter bags are part of and incidental to the appropriate bid items.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.0009	Erosion Control Filter Bags	Each

Payment is full compensation for furnishing all specified materials; for delivering, assembling, placing, maintaining, and removing and disposing erosion control filter bags; for removing and disposing of the accumulated sediments; for repairing and restoring damaged areas; and for furnishing all labor, tools, equipment, and incidentals necessary to complete the contract work.

The department will not pay for individual erosion control filter bags specified to be installed as part of silt fence drainage outlet protection. In those installations erosion control filter bags are part of and incidental to the appropriate bid items.
SEF Rev. 100106

98. Mobilizations Emergency Pavement Repair, Item SPV.0060.0016.

A Description
Furnish and mobilize personnel, equipment, traffic control, and materials to the project site to repair the existing pavement or Asphaltic Surface Temporary on an emergency basis as the engineer directs.

B (Vacant)

C Construction
Mobilize with sufficient personnel, equipment, traffic control, materials and incidentals on the jobsite within 4 hours of the engineer's written order to repair the existing pavement on an emergency basis.

An emergency is a sudden occurrence of a serious and urgent nature, beyond normal maintenance of the existing pavement or the Asphaltic Surface Temporary. Under this definition, an emergency mobilization requires immediate action to move necessary personnel, equipment, and materials to the emergency site followed by immediate repairs of the existing pavement or the Asphaltic Surface Temporary.

D Measurement
The department will measure Mobilizations Emergency Pavement Repair as each individual mobilization acceptably completed. The department will not include delivering and installing pavement repair or maintenance materials provided for in specific contract bid items. All traffic control items used for each Mobilization will be considered incidental to the Mobilization.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.0016	Mobilizations Emergency Pavement Repair	Each

Payment is full compensation for the staged moving of personnel, moving equipment, setting up and removing traffic control, traffic control materials, and moving materials. The department will pay separately for delivery and installation of pavement repair materials under the other bid items in this contract. The department will not pay separately for traffic control items and materials even though they may be included in other bid items in this contract and will consider them incidental to each Mobilization.
SEF Rev. 12_1008

99. Silt Fence Drainage Outlet Erosion Control Filter Bags, Item SPV.0060.0030.

A Description
This special provision describes construction of erosion control filter bags at openings/outlets in silt fence alignments where water may pond against the silt fence, to allow a path for water discharge while still maintaining erosion protection of the downstream/downslope area. Specifically the protection provided by the erosion control filter bags will apply to environmentally sensitive areas such as wetlands and stream tributaries.

B Materials
Bags shall be made of synthetic net with a mesh size of 1/8-inches by 1/8-inches that is of sufficient strength to hold the aggregate and to be lifted vertically.

Fill material shall be clean, sound, hard, durable coarse aggregate meeting the approval of the engineer and conforming to the size and gradation requirements for Size No. 1 coarse aggregate as specified in standard spec 501.2.5.4.4.

C Construction

Provide suitable erosion control filter bags to complete installations at locations shown on the plans or as the engineer directs.

Install erosion control filter bags at the silt fence outlets as directed by the engineer and per plan detail. Place erosion control filter bags immediately after the silt fence has been installed and before starting any construction operation that may cause sedimentation or siltation at the site of the proposed silt fence outlets.

Inspect all erosion control filter bags immediately after each rainfall and at least daily during prolonged rainfall. Immediately correct any deficiencies. In addition, make a daily review of the erosion control filter bags in areas where construction activity has changed the earth contour and drainage runoff to ensure that the bags are functioning properly. Where deficiencies exist, move or adjust existing erosion control filter bags or install additional erosion control filter bags as approved or directed by the engineer and at no additional cost to the department.

Remove sediment deposits when the deposits reach approximately one-half of the height of the erosion control filter bag(s), or as directed by the engineer. Dispose of the sediment outside of the right-of-way unless allowed by the engineer. Replace any bags that have been damaged.

Remove erosion control filter bags as part of the silt fence removal operation as specified in standard spec 628.3.4.1 and allowed by the engineer. Dispose of erosion control filter bags and any sediment outside of the right-of-way. Reshape the area where the bags were located, fill sumps and trenches, dispose of erosion control filter bags, sediment and any excess eroded material outside of the right-of-way, and restore the affected area to match the adjacent vegetation.

D Measurement

The department will measure Silt Fence Drainage Outlet, Erosion Control Filter Bags for each installation, acceptably completed.

Individual erosion control filter bags will not be measured.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.0030	Silt Fence Drainage Outlet Erosion Control Filter Bags	Each

Payment is full compensation for providing, installing and removing erosion control filter bags used at silt fence drainage outlets at project completion or as the engineer directs; for inspecting and maintaining the erosion control filter bags as specified; for repairing and restoring damaged areas; and for removing and disposing of all surplus and waste material.
SEF Rev. 12_0823

100. 24-Hour Baseline Vibration Monitoring, Item SPV.0060.0052; Daily Vibration Monitoring, Item SPV. 0060.0053.

A Description
This special provision describes developing a vibration monitoring plan, deploying seismographs, documentation, and reporting for the entire project work site.

B (Vacant)

C Construction
C.1 Equipment
Monitor the following operations with a seismograph meeting the requirements of Wisconsin Department of Safety and Professional Services SPS307.43.

- Bridge and sign bridge pile driving or bridge demolition
- Sheet pile installation and removal
- MSE wall compaction
- Asphalt compaction
- Pavement breaking
- All compaction activities utilizing large vibratory rollers
- Any other activities that may cause vibration damage to adjacent buildings, structures, or utilities.

C.2 Preconstruction Survey
The engineer will conduct preconstruction surveys of structures that may be potentially affected by vibration prior to any work. The engineer will visually inspect and record all existing defects in the structures before construction. Photographs and/or video may be used to assist in documentation.

The contractor has the option to conduct and document pre-construction surveys of any nearby buildings or structures that have a potential for vibration damage. Make these records available to the engineer for review. Any damage resulting from excessive vibration-causing operations is the responsibility of the contractor. The contractor may, at their own expense, monitor vibrations that are not part of the vibration monitoring plan for their own record keeping purposes.

C.3 Monitoring Plan
Submit a monitoring plan that includes the following:

- Copies of the contractor's pre-construction survey, if conducted, with discussion of findings.
- Location of each vibration inducing activity to be monitored.
- Locations at which the approved seismograph will be placed.
- Anticipated vibration levels at the closest building(s) or other sensitive facility.
- Monitoring duration for baseline and daily vibration monitoring.
- Maximum allowable vibration limits.
- Mitigation plan to reduce potentially excessive vibration levels to acceptable limits.

Obtain the engineer's acceptance seven calendar days before any vibration inducing activity for the project.

C.4 Monitoring and Recording

Ensure that a trained person who has been approved by the engineer performs vibration monitoring. Obtain approval of seismograph locations from the engineer. Monitor between the vibration-causing work and the closest structure or other sensitive facility subject to vibration damage, and as close as practical to the subject structure or facility. Monitor vibration levels in accordance to the figures 1 and 2 and SPS 307.43:

If any vibration levels exceed the nuisance levels shown in Figure 1 and Figure 2, immediately halt the vibration-causing work and notify the engineer.

Nuisance Limit		**Damage Limit**	
Frequency (Hz or CPS)	**Peak Velocity (In/Sec)**	**Frequency (Hz or CPS)**	**Peak Velocity (In/Sec)**
		1	0.18
2	0.5		
		4	0.75
5	0.35		
10	0.35		
		15	0.75
20	0.27		
30	0.21		
		35	2.0
40	0.21	40	2.0
50	0.21	50	2.0
60	0.2	60	2.0
		70	2.0
		80	2.0
		90	2.0
		100	2.0

Figure 1

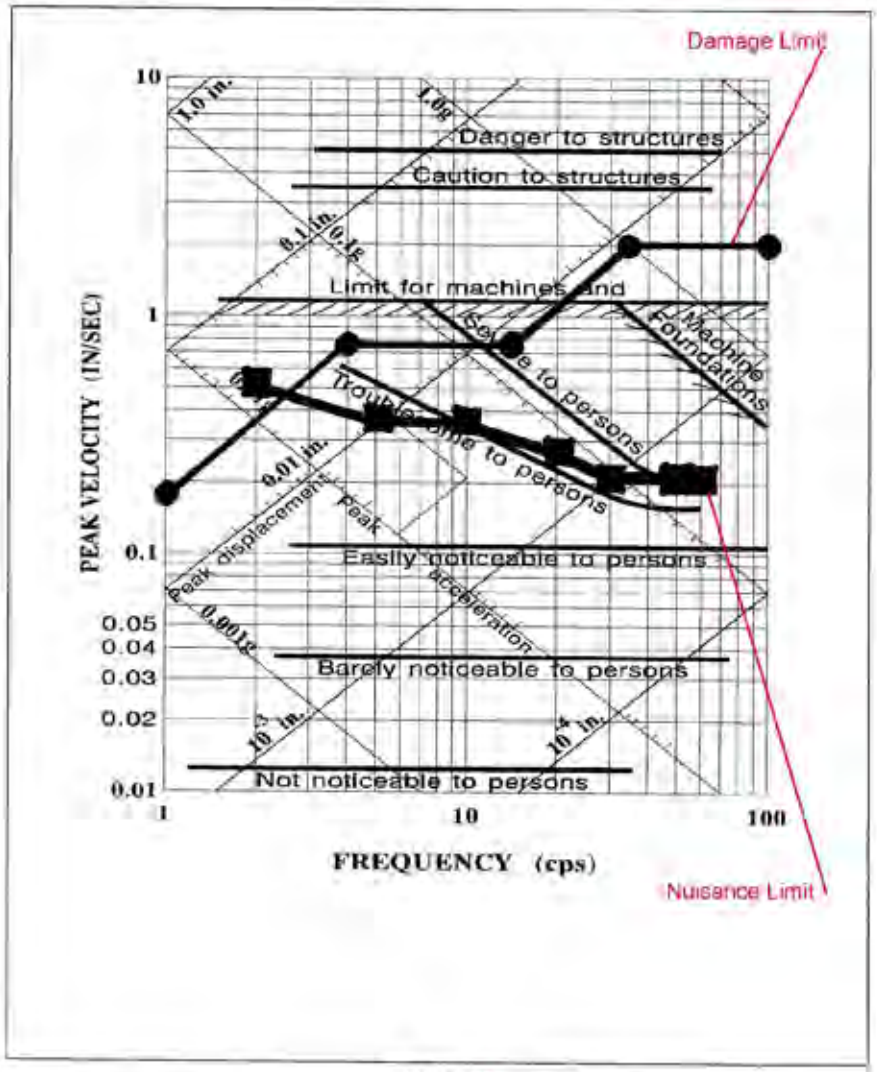

Figure 2
Amplitude of Vertical Vibrations

Perform 24-hour baseline vibration monitoring for the following construction operations at each seismograph recording location as described herein in accordance to the approved vibration monitoring plan to establish baseline vibrations:

- Bridge and sign bridge pile driving or bridge demolition
- Sheet pile installation and removal
- MSE wall compaction
- Asphalt compaction
- Pavement breaking
- All compaction activities utilizing large vibratory rollers
- Other activities not listed that may cause vibration damage to adjacent buildings, structures, or utilities

Compare the measured peak particle velocity and frequency data to the nuisance limits specified in Figures 1 and 2. Record peak particle velocity and frequency in three mutually perpendicular directions.

Furnish data recorded for each construction operation during the 24-hour baseline vibration monitoring to the engineer prior to the next vibration-causing workday. Include the following:

- Serial number of vibration monitoring instrument used and record of latest calibration.
- Description of contractor's equipment.
- Name of qualified observer and interpreter.
- Distance and direction of recording station from vibration-causing area.
- Type of ground, from boring log, at recording station and material on which the instrument is sitting.
- Principal frequency, amplitude and particle velocity in each component direction.
- Copy of records of seismograph readings, dated and signed by the person approved by engineer to perform vibration monitoring.
- Contractor documentation of any operational changes necessary to reduce
- Vibration levels below nuisance levels.

Identify the location(s) to begin or continue Daily Vibration Monitoring, and obtain approval from engineer prior to implementation. Complete Daily Vibration Monitoring following the recording and documentation procedure previously described for 24-hour baseline monitoring.

D Measurement

The department will measure 24 Hour Baseline Vibration Monitoring as each unit, acceptably completed.

The department will measure Daily Vibration Monitoring, as each unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV. 0060.0052	24-Hour Baseline Vibration Monitoring	Each
SPV. 0060.0053	Daily Vibration Monitoring	Each

Payment of the item 24-Hour Baseline Vibration Monitoring is full compensation for an approved vibration monitoring plan, monitoring and recording vibrations

Payment of the item Daily Vibration Monitoring is full compensation for monitoring and recording vibrations, and reporting. No payment for daily monitoring will be paid for without 24-hour baseline vibration monitoring approval.
SEF 13_0611

101. Baseline CPM Progress Schedule, Item SPV.0060.0070; CPM Progress Schedule Updates and Accepted Revisions, Item SPV.0060.0071.

Replace standard spec 108.4 with the following:

108.4 Critical Path Method Progress Schedule
108.4.1 Definitions
The department defines terms used in standard spec 108.4 as follows:

Activity
An administrative or construction task performed during the course of the project with a defined duration, and scheduled (or actual) start and finish dates.

Critical Path
The longest continuous chain of activities through the CPM schedule that establishes the minimum overall project duration.

Construction Activity
Construction activities are discrete work activities performed by the contractor, subcontractors, utilities, or third parties within the project limits.

CPM Progress Schedule
A Critical Path Method (CPM) Progress Schedule is a network of logically related activities. The CPM schedule calculates when activities can be performed and establishes the critical or longest continuous path or paths of activities through the project.

Float
Float, as used herein, is the total float of an activity; i.e., it is the amount of time between the date when an activity can start (the early start), and the date when an activity must start (the late start). In cases where the total float of an activity has a different value when calculated based on the finish dates, the lower (more critical) value will govern.

Forecast Completion Date
The completion date predicted by the latest accepted CPM Update, which may be earlier or later than the contract completion date, depending on progress.

Fragnet
A group of logically-related activities, typically inserted into an existing CPM schedule to model a portion of the project, such as the work associated with a change order.

Initial Work Plan
The initial work plan is a time-scaled CPM schedule showing detailed activities for the first 90 calendar days of work and summary level activities for the remainder of the project.

Intermediate Milestone Date
A contractually required date for the completion of a portion of the work, so that a subsequent portion of the work or stage of traffic phasing may proceed.

Master Program Schedule
The department's schedule for the overall Zoo Interchange Freeway Program, including intermediate milestone dates and contract completion dates, and containing codes for use as a template for the development of the contractor's schedule.

Master Project Schedule
The department's schedule for the contract work, developed during design, and provided to the contractor for informational purposes only.

Work Breakdown Structure (WBS)
A framework for organizing the activities that make up a project by breaking the project into successively greater detail by level. A WBS organizes the project work. It does not address the sequencing and scheduling of project activities.

108.4.2 Department's Master Schedules

108.4.2.1 Master Project Schedule

If requested by a bidder or by the contractor, the department will supply its Master Project Schedule for the contract work, developed during design. The Master Project Schedule is not a direction on how to perform the work. The Master Project Schedule reflects one possible approach to the work, consistent with the phasing requirements.

108.4.2.2 Master Program Schedule

Within five business days after award, the department will provide its current Master Program Schedule, containing intermediate milestone constraints, standard activity codes, and a standard WBS for the contractor to use to develop its schedule.

108.4.2.3 Use of Department's Master Schedules

The department's Master Schedules provide information to assist the contractor in preparing its schedule. The Master Schedules are not contract documents. The logic

contained in the Master Schedules is not intended to alter or supplement contract requirements for the phasing of the work, but to reflect those requirements.

108.4.3 Contractor's Scheduling Responsibilities

Prepare and submit a CPM progress schedule that accurately reflects the plan for the performance of the work, based on the physical requirements of the Work, and Traffic Phasing requirements. The CPM schedule is the contractor's committed plan to complete all work within the completion deadlines. Full responsibility is assumed for the prosecution of the work as shown. The CPM schedule is not part of the contract. Schedule the Work in the manner required to achieve the completion date and intermediate milestone dates specified in the Prosecution and Progress Special Provision.

Use the department-provided Master Program Schedule as a template to develop the Initial Work Plan and the Baseline CPM Progress Schedule. Use the Master Program Schedule's ID coding structure to categorize activities by Contract, Stage, Location, and Responsibility to ensure compatibility with the Master Program Schedule and with schedules prepared by other contractors. Add additional activity codes as necessary, but do not delete the coding structure provided.

To ensure compatibility with the Master Program Schedule, use the latest version of Primavera Project Planner (P6), by Primavera Systems, Inc., Bala Cynwyd, PA to prepare the Initial Work Plan, Baseline CPM Progress Schedule, and Monthly CPM Updates.

Designate a Project Scheduler who will be responsible for scheduling the Work and submit for approval a professional resume describing a minimum of three years of scheduling experience on urban, interstate-highway reconstruction work of similar size and complexity, including recent experience with P6.

108.4.4 Submittals

108.4.4.1 Initial Work Plan

Within ten business days after the Initial Work Plan Workshop, as scheduled in standard spec 103.10, submit an Initial Work Plan consisting of the following:

- Develop the Initial Work Plan using the Master Program Schedule as a template.

- Provide a detailed plan of activities to be performed within the first 90 calendar days of the contract. Provide construction activities with durations not greater than 28 calendar days (20 business days), unless the engineer accepts requested exceptions.

- Provide activities as necessary to depict administrative work, including submittals, reviews, and procurements that will occur within the first 90 calendar days of the contract. Activities other than construction activities may have durations greater than 28 calendar days (20 business days). Allow 21 calendar days (15 business days) for department review of submittals.

- Provide summary activities for the balance of the project. Summary activities may have durations greater than 28 calendar days (20 business days).

- Submit three copies of the Initial Work Plan in a compressed (XER) format on three separate CDs.

- The engineer will accept the contractor's Initial Work Plan or provide comments within five business days after receipt of the Initial Work Plan. Address comments and resubmit the Initial Work Plan as necessary. Do not begin work until the engineer accepts the Initial Work Plan. The department will use the initial work plan to monitor the progress of the work until the Baseline CPM Progress Schedule is accepted.

- Submit an updated version of the Initial Work Plan on a monthly basis until the engineer accepts the Baseline CPM Progress Schedule. With each update, include actual start dates, completion percentages, and remaining durations for activities started but not completed. Include actual finish dates for completed activities.

108.4.4.2 Baseline CPM Progress Schedule

Within 15 business days after the CPM Scheduling Workshop, as scheduled in standard spec 103.10, submit a Baseline CPM Progress Schedule and written narrative consisting of the following:

Supplement standard spec 108.4.4.2(1) with the following:

4. Submit a temporary drainage plan showing the interface between various stages of a project as well as the interface with adjacent projects.

1. Develop the Baseline CPM using the Master Program Schedule as a template. The Baseline CPM is the contractor's committed plan to complete the Work within the time frames required to achieve the contract completion date and Intermediate milestone dates. The department will use the schedule to monitor the progress of the work. Include the following:

    1.1 Provide a detailed plan of activities to be performed during the entire contract duration, including all administrative and construction activities required to complete the work as described in the contract documents. Provide construction activities with durations not greater than 28 calendar days (20 business days), unless the engineer accepts requested exceptions.

    1.2 Provide activities as necessary to depict administrative work, including submittals, reviews, procurements, inspections, and all else necessary to complete the work as described in the contract documents. Activities other than construction activities may have durations greater than 28 calendar days (20 business days). Allow 21 calendar days (15 business days) for department review of submittals.

1.3 Provide activities as necessary to depict third party work related to the contract.

1.4 Make allowance for specified work restrictions, non-working days, time constraints, calendars, and weather; and reflect involvement and reviews by the department, and coordination with adjacent contractors, utility owners, and other third parties.

1.5 With the exception of the Project Start Milestone and Project Completion Milestone, all activities must have predecessors and successors. The start of an activity shall have a Start-to-Start or Finish-to-Start relationship with preceding activities. The completion of an activity shall have a Finish-to-Start or Finish-to-Finish relationship with succeeding activities. Do not use Start-to-Finish relationships. Do not use Finish-to-Start relationships with a lag unless the engineer accepts requested exceptions.

1.6 Schedule all intermediate milestones in the proper sequence and input as either a "Start-no-Earlier-Than" or "Finish-no-Later-Than" date. Provide predecessors and successors for each intermediate milestone as necessary to model each Stage of the Work. Unless the engineer accepts a requested exception, the schedule should encompass all the time in the contract period between the starting date and the specified completion date.

1.7 Using the bid quantities and unit prices, develop an anticipated cash-flow curve for the project, based on the Baseline CPM.

2. Provide three hard copies of a hand-drawn or electronically drafted logic diagram depicting the CPM network. Organize the logic diagram by grouping related activities, based on the activity codes in the CPM.

3. Provide a written narrative with the baseline CPM explaining the planned sequence of work, as-planned critical path, critical activities for achieving intermediate milestone dates, traffic phasing, and planned labor and equipment resources. Use the narrative to further explain:

3.1 The basis for activity durations in terms of production rates for each major type of work (number of shifts per day and number of hours per shift), and equipment usage and limitations.

3.2 Use of constraints.

3.3 Use of calendars.

3.4 Estimated number of adverse weather days on a monthly-basis.

3.5 Scheduling of permit and environmental constraints, and coordination of the schedule with other contractors, utilities, and public entities.

4. Submit three copies of the Baseline CPM in a compressed (XER) format on three separate CDs.

Within ten business days of receiving the Baseline CPM, the engineer will provide comments and schedule a meeting for the contractor to present its Baseline CPM and answer questions raised in the engineer's review.

At the meeting scheduled by the engineer, provide a presentation of the Baseline CPM. In the presentation, include a discussion of the staging and sequencing of the work, understanding of traffic phasing, and application of labor and equipment resources to the Work. Address comments raised in the engineer's review.

Within five business days after the meeting, the engineer will accept the contractor's Baseline CPM schedule or provide comments. Address the engineer's comments and resubmit a revised Baseline CPM within ten business days after the engineer's request. If the engineer requests justification for activity durations, provide information that may include estimated labor, equipment, unit quantities, and production rates used to determine the activity duration.

The engineer will accept the Baseline CPM based solely on whether the schedule is complete as specified in this section. The engineer's acceptance of the schedule does not modify the contract.

The department will not consider requests for contract time extensions as specified in standard spec 108.10 or additional compensation for delay specified in standard spec 109.4.7 until the department accepts the Baseline CPM schedule.

108.4.4.3 Monthly CPM Updates

Submit CPM Updates on a monthly basis after acceptance of the Baseline CPM. With each CPM Update, include the following:

1. Actual start dates, completion percentages, and remaining durations for activities started but not completed, and actual finish dates for completed activities, through the final acceptance of the project.

2. Additional activities as necessary to depict additions to the contract by changes and logic revisions as necessary to reflect changes in the contractor's plan for prosecuting the work.

3. Include a narrative report that includes a brief description of monthly progress, changes to the critical path from the previous update, sources of delay, potential problems, work planned for the next 30 calendar days, and changes to the CPM schedule. Changes to the logic of the CPM schedule include the addition or deletion of activities and changes to activity descriptions, original durations, relationships, constraints, calendars, or previously recorded actual dates. Justify changes to the CPM schedule in the narrative by describing associated changes in the planned methods or manner of performing the work or changes in the work itself.

4. Submit three copies of each CPM Update in a compressed (XER) format electronically, as agreed to with the department.

5. If additions or changes were made to the CPM schedule since the previous update, submit an updated hard copy of the revised logic diagram.

6. Within five business days of receiving each CPM Update, the engineer will provide comments and schedule a meeting as necessary to address comments raised in the engineer's review. Address the engineer's comments and resubmit a revised CPM Update within five business days after the engineer's request.

108.4.4.4 Three-Week Look-Ahead Schedules

Submit Three-Week Look-Ahead Schedules on a weekly basis after NTP. The schedule can be hand drawn or generated by computer. With each Three-Week Look-Ahead include:

- Activities underway and as-built dates for the past week.

- Provide actual as-built dates for completed activities through final acceptance of the project.

- Planned work for the upcoming two-week period.

- The activities of the Three-Week Look-Ahead schedule shall include the activities underway and critical RFIs and submittals, based on the CPM schedule. The Three-Week Look-Ahead may also include details on other activities not individually represented in the CPM schedule.

- On a weekly basis, the department and the contractor shall agree on the as-built dates depicted in the Three-Week Look-Ahead schedule or document any disagreements. Use the as-built dates from the Three-Week Look-Ahead schedules for the month when updating the CPM schedule.

108.4.4.5 Weekly Production Data (WisDOT construction PM to provide input)

Provide estimated and actual weekly production rates for items of work on a weekly basis as follows:

1. Provide data on the following items by area or station:

    1.1 Retaining Walls
        a. Leveling Pads - LF
        b. Set Panels - SF
        c. Parapets - LF
        d. Wall Face - Bay
        e. Tie Backs – Each
        f. Anchor Slabs – LF
        g. Drilling - Each
        h. Coping – LF
        i. Footing - LF

    1.2 Bridge Construction
        a. Footings—Each
        b. Columns—Each
        c. Abutments—Each
        d. Pier Caps—Each
        e. Girder Spans – Each
        f. Decked Spans – Each
        g. Poured Spans – Each

    1.3 Roadway Excavation—CY per week

    1.4 Roadway Structural Section
        a. Grading/Subgrade Preparation—SY
        b. Base Material Placement—Ton
        c. Base Material Subgrade Preparation—SY
        d. Asphalt Pavement—Ton
        e. Concrete Pavement – SY

    1.5 Tunnels
        a. Drilled Shafts – Each
        b. Beam Seat/Cap - LF
        c. Girders - Each
        d. Deck – Percent

    1.6 Noise Walls
        a. Drill/Set Ground Mounted Posts - Each
        b. Install Ground Mounted Panels - Each
        c. Anchor/Set Structure Mounted Posts - Each
        d. Install Structure Mounted Panels - Each

2. For each item, indicate the actual daily production for the past week and the anticipated weekly production for the next week.

3. Submit the data in an electronic spreadsheet format at the same time the Three-Week Look-Ahead is submitted. On a weekly basis, the department and the contractor shall agree on the production data or document any disagreements.

108.4.5 Progress Review Meetings

Weekly Progress Review Meetings—After completing the weekly submittal of the Three-Week Look-Ahead and production data, attend a weekly meeting to review the submittals with the department. At the meeting, address comments as necessary, and document agreement or disagreement with the department.

Monthly Update Review Meetings—After submitting the monthly update and receiving the engineer's comments, attend a job-site meeting, as scheduled by the engineer, to review the progress of the schedule. At that meeting, address comments as necessary, and document agreement or disagreement with the department. The monthly meeting will be coordinated to take place on the same day and immediately before or after a weekly meeting, whenever possible.

108.4.6 CPM Progress Schedule Revisions

Revision by the contractor if necessary due to changes in the Work or project conditions and authorized by the engineer, a CPM Progress Schedule Revision may be submitted, although the next CPM Update is not yet due. Prepare the CPM Revision in the same format as required for CPM Updates, including justification for changes to the schedule. The process for comment and acceptance of a CPM Revision will be the same as for CPM Updates. If the CPM Revision is accepted, prepare the next monthly update based on the revised CPM. If the CPM Revision is rejected, prepare the next monthly update based on the previous month's update.

Engineer's Right to Request Revisions—The engineer will monitor the progress of the work and may request revisions to the CPM schedule. Revise the schedule as requested by the engineer, and submit a CPM Progress Schedule Revision within ten business days of the request. The process for comment and acceptance of a CPM Revision will be the same as for CPM Updates. The engineer may request that the contractor revise the CPM schedule for one or more of the following reasons:

- The forecast completion date is scheduled to occur more than 14 calendar days after the contract completion date.

- An intermediate milestone is scheduled to occur more than 14 calendar days after the date required by the contract.

- The engineer determines that the progress of the work differs significantly from the current schedule.

- A contract change order requires the addition, deletion, or revision of activities that causes a change in the contractor's work sequence or the method and manner of performing the work.

108.4.7 Documentation Required for Time Extension Requests

To request a time extension to an intermediate milestone date or the contract completion date associated with changes to the work, provide a narrative detailing the work added or deleted and the other activities affected, based on the latest accepted CPM Update. For added work, submit a proposed fragnet of activities to be added or revised in the CPM schedule, indicating how the fragnet is to be tied to the CPM schedule.

To request a time extension to an intermediate milestone date or the contract completion date associated with delays to the work, provide a narrative detailing the affected activities and the cause of the delay, based on the latest accepted CPM Update. Requests for time extensions due to delays should meet the following criteria:

1. For requests to extend the contract completion date, include a description of how the delay affected the project's critical path, based on the latest accepted CPM Update.

2. For requests to extend an intermediate milestone date, include a description of how the delay affected the controlling (longest) path to the milestone, based on the latest accepted CPM Update.

3. The department and the contractor agree that the float is not for the exclusive use or financial benefit of either party. Either party has the full use of the float on a first come basis until it is depleted.

108.4.8 Payment for CPM Progress Schedule

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.0070	Baseline CPM Progress Schedule	Each
SPV.0060.0071	CPM Progress Schedule Updates and Accepted Revisions	Each

The department will only make progress payments for the value of materials, as specified in standard spec 109.6.3.2.1, until the Baseline CPM schedule has been submitted. The department will retain ten percent of each estimate until the department accepts the Baseline CPM schedule.

Payment is full compensation for furnishing all work required under these bid items. The department will pay the contract unit price for the Baseline CPM schedule after the department accepts the schedule. Thereafter, the department will pay the contract unit price for each monthly CPM Update acceptably completed. The department will pay the contract unit price for CPM Revisions, if the department accepts the revision. The department will not pay for proposed revisions that are not accepted.

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102. Concrete Control Cabinet Bases Special, Item SPV.0060.1000.

A Description
This special provision describes furnishing and installing concrete control cabinet bases special, as shown in the plans.

B Materials
Materials shall confirm pertinent requirements of standard spec 654.2.

C Construction
Construction shall confirm pertinent requirement of standard spec 654.3. The concrete base size shall be as shown on the plans.

D Measurement
The department will measure Concrete Control Cabinet Bases Special by each individual unit, installed and 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.0060.1000	Concrete Control Cabinet Bases Special	Each

The payment shall be made as described in standard spec 654.5(2).

103. Lighting Control Cabinet Special, Item SPV.0060.1001.

A Description
The work under this item shall consist of furnishing and installing 100 Ampere 240/480 VAC lighting control cabinet special, as shown in the plans. To the extent possible, provide components from the same manufacturer. Conform to Section 651.2(4) regarding listed components. Electrical service, service entrance conductors, and concrete control cabinet base will be measured and paid separately. Two NEMA decals per installation, one for the meter pedestal and one for the cabinet door, to read DANGER 480 VOLTS, will each be paid as Plaques Sequence Identification.

B Materials
B.1 General
Furnish, deliver and install Lighting Control Cabinet Special 240/480 VAC from the department Qualified Product List to the project site. Notify the department Lighting Engineer Mr. Matt Pfeifer, (414) 750-2836 for approval before installation.

B.2 Contactors
The contactors shall be electrically held, specification grade, two-pole, with 30A contacts. Provide 1" high engraved plaque above each contactor indicating the circuit number in ½" text as appropriate.

B.3 Photocell
Provide photocell receptacle to accommodate NEMA twist-lock photocell. Provide openings on the side and back of housing to allow proper photocell operation. Cabinet door should open south.

B.4 HOA Switch
Provide a hand-off-auto switch that is accessible without opening dead-front door.

B.5 Panelboards
Provide a specification grade panelboard interior, Square D type NQ or equal. The panel shall be rated, sized, and configured as indicated on the attached drawings. Provide copper bus bars and copper ground and neutral bus bars. Provide thermal-magnetic circuit breakers that clearly indicate ON, OFF, or TRIPPED position in the panel.

Provide a separate or back-fed main circuit breaker.

B.6 Enclosures
The cabinet shall be of NEMA Type 3R rainproof construction and shall be UL listed as "Enclosed Industrial Control Equipment" (UL 508A). External construction shall comply with UL50 requirements. Cabinet dimensions shall be as indicated on the attached drawings.

Cabinet exterior shall be fabricated from 1/8" clear anodized 5052-H32aluminum.

All fasteners, latches and hardware shall be of stainless steel and all hinges shall be continuous piano type. No fasteners except sealing screws shall be removable by external access.

All edges and corners on both exterior and interior must be rounded and smooth to prevent injuries.

The distribution equipment compartment shall be behind an external lockable door with standard #2 key locking mechanism. A door keeper shall be provided to keep the door in the open position. Electrical equipment shall be located behind an internal dead-front door with a quarter turn securing latch and hinged to open a minimum of 120 degrees. The dead-front door shall be hinged on the same side as the customer door.

A metal print pocket shall be located on the inside of the customer door large enough to hold all circuit directories and instructions in a clear plastic 8"x10" weatherproof sleeve.

The cabinet mounting bolts shall not be externally accessible. Cabinet can be mounted to a concrete base with use of stainless steel anchors.

Cabinet shall be rated for operation at 22k minimum AIC amps interrupting. Series rating is acceptable.

All distribution and control equipment shall be factory wired using 600 volt wire.

Cabinet dimensions shall be as indicated on the attached drawings.

B.7 Field Wiring Termination Blocks
Provide quantity of channel mount NEMA rated, box lug, single terminal blocks as indicated on plans that are capable of holding #12 to #2 wire for power, neutral, and grounding connections. The terminal blocks shall be mounted on a mounting channel with end anchors and an end barrier. Each terminal block shall have a label indicating the appropriate circuit number, neutral ('N') or ground ('G') wire connected to block; handwritten numbers and letters are not acceptable means of identification.

B.8 Surge Protection Devices (SPD)
SPD for 240V or 240/480V Power: Install a Type 1 SPD on distribution panelboard on the load side of a dedicated 2-pole, 30A circuit breaker.

SPDs shall be UL Listed and labeled to UL 1449 Third Edition. SPDs shall be posted on VZCA at UL.com.

The following ratings shall not be exceeded on any mode of protection:

- Short Circuit Current Rating (SCCR): 200kA or the available short circuit current, whichever is greater
- Nominal Discharge Current Rating (In): 20kA
- Voltage Protection Rating (VPR): 700V
- Maximum Continuous Operating Voltage (MCOV): 150V
- Peak surge current rating: 50kA per phase (sum of L-N plus L-G)

SPD's SPDs shall include directly connected MOVs exceeding 32mm in diameter from L-N and either L-G, N-G, or both. SPD shall at a minimum be rated as NEMA 1.

The acceptable Lighting Control Cabinet Manufactures are as follows:
- Milbank Manufacturing
- Povolny Specialties
- State Manufacturing Corporation

B.9 Control Equipment
The stepdown transformer shall be 1.5KVA, single phase, 60Hz, encapsulated, NEMA 1 rated and UL listed. The primary voltage shall be 240V and secondary voltage shall be 120V with 5% tapping. The transformer shall be capable of mounting inside the cabinet.

SPST, 20 amp switch for the door shall be single pole single throw type heavy duty, temper resistant, rated for 125V, UL listed.

The incandescent lighting fixture shall be a 60Watt, 120V lamp, UL listed.

Control breaker shall be 15 amp, single pole 120V, bolt on, UL listed. The circuit breaker shall have 10K AIR rating at 120V, terminal for minimum wire size 14 AWG and maximum wire size 8 AWG.

C Construction
Use a UL 508 Listed Panel Builder to assemble the lighting control cabinet. Assemble the lighting control cabinet with all of its electrical components, wiring and parts in a neat and orderly fashion and as shown on the plans. Pretest the cabinet prior to shipment to the site. Panel Builder shall apply UL label inside cabinet.

Mount all equipment to panel in enclosure. Train the cables in straight horizontal and vertical directions, and parallel next to, and adjacent to other cables whenever possible. Install wiring in slotted raceway between terminal strip, contactor and panelboard. Secure all remaining wiring using screw attachment type straps; adhesive type will not be allowed.

Surge arresters shall be installed to allow LED indicator(s) to be readily visible when viewing inside of cabinet. Connect the surge arresters as indicated on the plans.

D Measurement
The department will measure Lighting Control Cabinet Special 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.0060.1001	Lighting Control Cabinet Special	Each

Payment is full compensation for furnishing and delivery of the lighting control cabinet.

104. Removing Electrical Service Meter Breaker Pedestal, Item SPV.0060.2000.

A Description
This special provision describes removing an existing electrical service meter breaker pedestal, disconnecting all connected power wires, and disposing of the equipment appropriately.

B Materials
Existing electrical service meter breaker pedestal.

C Construction
Coordinate for removal of the existing electrical service meter breaker pedestal with WE Energies.

Disconnect all connected power wires, remove the pedestal and dispose of all materials properly away from the project area.

D Measurement
The department will measure Removing Electrical Service Meter Breaker Pedestal by the unit, acceptably removed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.2000	Removing Electrical Service Meter Breaker Pedestal	Each

Payment is full compensation for coordination with WE Energies; for disconnection of wires; for removal and disposal of the pedestal.

105. Removing Controller Cabinet Base, Item SPV.0060.2010.

A Description
This special provision describes removing an existing controller cabinet concrete base.

B Materials
Existing controller cabinet base, including concrete masonry, ground rods, masonry anchors, and restoration materials such as topsoil, seeding, mulch, and fertilizer in accordance to the pertinent provisions of standard specs 201, 625, 627, 629, 630, 636, and 640.

C Construction
Remove and dispose of the concrete foundation and all other pertinent materials, and restore the disturbed area by placing 4-inches of topsoil, and fertilize, seed, and mulch all disturbed areas in accordance to the pertinent requirements of the standard specifications.

D Measurement
The department will measure Removing Controller Cabinet Base by each individual unit, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.2010	Removing Controller Cabinet Base	Each

Payment is full compensation for removing and disposing of a concrete controller cabinet base, including masonry anchors, ground rods, and concrete masonry; and for topsoil, fertilizer, seed and mulch.

106. Removing Controller Cabinet, Item SPV.0060.2020.

A Description

This special provision describes removing an existing controller cabinet.

B (Vacant)

C Construction

Remove controller cabinets at the locations shown on the plans, or as directed by the engineer. Salvage and store the cabinets and all contents for pick up by the department.

Do not remove the existing ITS control cabinets, or any other associated equipment until necessary, or as directed by the engineer. Carefully remove the existing cabinets from the concrete bases, together with all components in such a manner as to safeguard all parts and wiring from damage or loss. Salvage and store the cabinet and contents for pick up by the department.

Prior to removing the existing ITS control cabinets, remove all cables being terminated in the cabinet. Cut existing cables flush with cabinet base and cap existing conduits. Dispose of the cables properly away from the project area.

D Measurement

The department will measure Removing Controller Cabinet 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.0060.2020	Removing Controller Cabinet	Each

Payment is full compensation for removal and storage of the controller cabinet; disconnecting all associated wires and cables; for capping existing conduits.

107. Install Antenna, Item SPV.0060.2040.

A Description

This special provision describes installing a state-furnished Yagi or omni-directional spread spectrum radio antenna and above ground metallic conduit. The antenna has a pigtail for connection to the antenna cable. Provide stainless steel bands for mounting to a steel pole or sign structure. Provide 2” metallic conduit to house antenna cable.

B Materials

Antenna as provided by the state. Metallic Conduit, 2-Inch as required in standard spec 652.

C Construction
Connect the antenna drop cable to the antenna. The connection shall be fully sealed using methods and materials recommended by the radio manufacturer. Install the antenna so that it does not block the view of any microwave detector on the same pole.

Aim the antenna at the matching antenna, as shown in the plans. Use the signal strength indicator on the radio to find the optimum position.

D Measurement
The department will measure Install Antenna as each individual unit, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.2040	Install Antenna	Each

Payment is full compensation for testing and installing the antenna and connections; and for furnishing all metallic conduit, mounting hardware, and incidentals necessary to complete the work.

108. Install 900 MHz Radio, Item SPV.0060.2050.

A Description
This special provision describes installing a state-furnished 900 MHz serial or contact closure communications spread spectrum radio. The State will also furnish set-up software for the radio and a lightning protector for the antenna connection.

B Materials
Spread-spectrum radios and surge protectors as furnished by the State, and coaxial cable and connectors, and metallic conduit as supplied by the contractor.

Furnish ½-inch foam dielectric 50-Ohm coaxial cable meeting the following minimum requirements:

- 50 Ohms impedance (plus / minus 1 Ohm)
- Intended for a range of frequencies including 900 MHz
- Velocity of 88%
- Peak power rating of 40 kW
- DC resistance of 0.45 Ohms / 1000 feet for the inner conductor

- DC resistance of 0.58 Ohms / 1000 feet for the outer conductor
- DC breakdown of 4000 volts
- Jacket Spark of 8000 volts RMS
- Capacitance of 23.1 pF / foot
- Inductance of 0.058 µH / foot
- Copper outer conductor
- Copper-Clad Aluminum inner conductor
- Diameter over jacket 0.63 inches (nominal)
- Diameter over Copper Outer Conductor of 0.55 inches (nominal)
- Diameter of inner conductor of 0.189 inches (nominal)
- Minimum bending radius of 5-inches
- Attenuation of 2dB / 1000 feet (nominal) at 900 MHz
- Average power of 1.10 (nominal) at 900 MHz

Furnish cable connectors to fit between the coaxial cable and the state-furnished spread spectrum radio.

C Construction

Bond the surge protector to the cabinet grounding system.

Use the manufacturer's set-up software to configure the radio for its intended use.

Following installation of the radio, antenna, and cable, aim the antenna at the matching antenna, as shown on the plans. Use the signal strength indicator on the radio to find the optimum position of the antenna. Also perform a frequency analysis to determine the optimal hop pattern of the radios, and test the continuity of every link by polling the radios using the software provided by the manufacturer. The position of the antenna and the hop pattern shall be adjusted until the polls show at least 200 consecutive polling intervals have been successfully transmitted and received. Demonstrate to the engineer that the hop pattern selected corresponds to the optimal noise free frequencies identified in the frequency analysis. Deliver 3 copies of the final test results for signal strength, frequency analysis, and test polling.

Following the installation of the spread spectrum radio assembly, antennas, and cables, perform the following tests:

- **V.S.W.R test** from the connection at the radio, with a fully configured antenna system (antenna, cable, and all connections). The V.S.W.R. shall not exceed 1.5:1 at 900 MHz.
- **Bit error rate test**. Test at 5600 bps from the radio to the matching radio shown on the block diagram in the plans. Test for 4 hours at a 2048 bit pattern. The contractor shall provide a hard copy output of results of each test to the engineer. The maximum error rate shall be 1 erroneous bit every 1 million bits.

D Measurement
The department will measure Install 900 MHz Radio as each individual unit, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.2050	Install 900 MHz Radio	Each

Payment is full compensation for installing, setting up, configuring, and testing the spread spectrum radio, surge protector, cables, and connections; and for testing.

109. Refocus Portable Video Surveillance System, Item SPV.0060.2060.

A Description
This special provision describes moving a previously deployed portable video surveillance system to a new location as directed by the engineer or as made necessary by construction operations in the area.

B Materials
Portable video surveillance system and wireless Ethernet bridge previously deployed through other pay items in this contract.

C Construction
Coordinate all planned down-time of the portable video surveillance system with the STOC at (414) 227-2166. Notify the STOC an amount of time ahead of planned down-time equal to the planned down-time. Examples would be that a 4-hour temporary down-time of the system would require notification 4-hours ahead of time while an 8-hour planned down-time would require 8-hours of advance notification.

Per manufacturer's recommendations, prepare the surveillance system for towing, relocate to the new location, re-deploy, and make functional as directed by the engineer and as made necessary by construction operations.

No payment will be made for this work unless previously approved by the engineer. No payment will be made for this work for relocations made necessary by operations not previously planned with the engineer's approval.

D Measurement
The department will measure Refocus Portable Video Surveillance System by each individual unit, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.2060	Refocus Portable Video Surveillance System	Each

Payment is full compensation for taking the surveillance system down, moving to a new location, and re-deploying in a new location; and for re-integrating the wireless Ethernet bridge into the communications system.

110. Install Wireless Ethernet Bridge, Item SPV.0060.2070.

A Description
This special provision describes installing a state-furnished wireless Ethernet bridge access point or subscriber unit at a new or existing cabinet or new or existing pole.

B Materials
Materials will include state-furnished materials and contractor furnished materials.

State-furnished materials include the following:

- One wireless Ethernet bridge with integral antenna.
- One wireless Ethernet bridge power converter.
- One wireless Ethernet bridge mounting bracket.

Contractor-furnished materials include the following:

- Mounting hardware.
- Outdoor rated Category 6 communications cable.
- Inline network cable surge suppressor.

C Construction
Bond the surge suppressor to the cabinet grounding system.

Install the wireless Ethernet bridge in a point-to-point or point-to-multipoint configuration as shown on the plans and as directed by the engineer.

Use the manufacturer's set-up software to configure the Ethernet bridge radio for its intended use. Use the signal strength indicator on the radio to find the optimum position. Also perform a frequency analysis to determine the optimal hop pattern of the radios and

test the continuity of the link by polling the radios using the software provided. The position of the radio and the hop pattern shall be adjusted until the polls show at least 200 consecutive polling intervals have been successfully transmitted and received. Demonstrate to the engineer that the hop pattern selected corresponds to the optimal noise free frequencies identified in the frequency analysis. Deliver 3 copies of the final test results for signal strength, frequency analysis, and test polling.

D Measurement
The department will measure Install Wireless Ethernet Bridge as each individual unit, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.2070	Install Wireless Ethernet Bridge	Each

Payment is full compensation for installing, setting up, configuring, and testing the wireless Ethernet bridge radio, surge suppressor, cables, and connections.

111. Install Portable Video Surveillance System, Item SPV.0060.2080.

A Description
This special provision describes deploying a portable trailer-mounted video surveillance system as shown in the plans to provide continuous video surveillance of the project area during permanent CCTV sites downtime.

B Materials
Materials will be state-furnished and will be an all inclusive unit consisting of a cable erected pole with a direct IP CCTV camera, a solar power system, a wireless Ethernet bridge, and stability outriggers, all mounted on a trailer.

C Construction
Pick up the state-furnished video surveillance system at the department facility at 531 W Newhall Ave, Waukesha, WI.

Deploy the surveillance system in the initial location as shown on the plans and as directed by the engineer following all recommended procedures by the manufacturer.

Integrate the surveillance system with the new and existing communications system through the wireless Ethernet bridge. Installation of the backhaul end of the wireless Ethernet bridge will be compensated for with other pay items in this contract.

D Measurement
The department will measure Install Portable Video Surveillance System as each individual unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.2080	Install Portable Video Surveillance System	Each

Payment is full compensation for picking up the surveillance system in Waukesha; for deploying it in the project area; for making functional; and for testing.

112. Install Temporary Vehicle Detector Assembly, Item SPV.0060.2090.

A Description

This special provision describes assembling from a combination of state-furnished and contractor furnished materials a temporary vehicle detector assembly and installing, calibrating, and integrating the assembly into the existing system.

B Materials

Materials will include state-furnished materials and contractor furnished materials.

State-furnished materials include the following:

- One Electronic Integrated Systems, Inc. (EIS) Remote Traffic Microwave Sensor (RTMS) with integral 900 MHz serial radio.
- One solar power system consisting of 2-85W panels, 2-120 Amp-Hour batteries, a solar power controller, and one (1) solar power cabinet to house the batteries and controller.

Contractor furnished materials include the following:

- One (1) 40-foot type 4 or larger wood pole. The wood pole shall be western red cedar in accordance to ANSI standards 05.1. Pressure treatment shall be 5% pentachlorophenol with a minimum of 8 pounds per cubic foot net retention of the oil-borne preservative. Pole shall be shaved the entire length.
- Outdoor rated Power cable between solar power system output and state-furnished RTMS.
- Mounting hardware for solar power system and RTMS detector.

C Construction

RTMS Detector Installation:
Install the wood pole according to industry standards for supplied pole length.

Install the RTMS detector as required in standard spec 675. Additionally, integrate the integral serial communications radio with the radio installed at the field cabinet end. Installation of field cabinet radio is covered with other pay items in this contract.

Solar Power System Installation:
Install the solar panels facing south on the pole with the devices to be powered. If a compass is used, a correction must be made for the difference between magnetic north

and true north. Install the solar panels at a tilt angle of approximately 60 degrees. The tilt angle shall be considered the angle from horizontal to the front, or face of the solar panel.

Mount the cabinet to the pole by the two cast aluminum mounting brackets which are already attached to the back of the cabinet. The brackets shall be attached to the pole using stainless steel bands or U-bolts.

Install the cabling, ensuring that cables enter the cabinet only through the bottom, and that strain relief fittings are used to seal cable entrance points. Connect the panel to the charge controller, connecting the white wire to the positive (+) terminal and the black wire to the negative terminal (-).

D Measurement
The department will measure Install Temporary Vehicle Detector Assembly as each individual unit, with each assembly installed, focused on initial traffic lane configuration, functioning, and accepted in accordance to the contract.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.2090	Install Temporary Vehicle Detector Assembly	Each

Payment is full compensation for providing the contractor furnished materials, assembling the state-furnished and contractor furnished materials, installing the assembly, calibrating the detector, and making the assembly functional.

113. Ground Rod, Item SPV.0060.2100.

A Description
This special provision describes installing a ground rod and ground wire.

B Materials
Ground rod shall be copper clad steel with cladding 13 mils thick. The minimum diameter is 5/8-inch and the minimum length is eight feet. Ground wire shall be AWG # 6 bare, solid copper.

C Construction
Use exothermic welding to connect the ground wire to the rod. Install the rod vertically, or as close to vertical as conditions permit. Select locations with moist soil, if available. Place the rod at least six feet from all other ground rods.

D Measurement
The department will measure Ground Rod by each individual unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.2100	Ground Rod	Each

Payment is full compensation for installation of the ground rod and ground wire; welding and connections at both ends of the ground wire.

114. Pile Dynamic Analyzer (PDA) Testing, Item SPV. 0060.4100; Pile Dynamic Analyzer (PDA) Restrikes, Item SPV. 0060.4110.

A Description

These items consist of providing means to perform Pile Dynamic Analyzer (PDA) load testing by the engineer, as outlined in the contract plans and this special provision. This Dynamic Pile Load Testing is being done to set pile resistance criteria. Production piles will be driven in accordance to pile resistance criteria produced by the engineer after PDA testing at each substructure unit. PDA Restrikes will be needed as described in this special provision and/or as directed by the engineer.

The piles and pile driving will be paid for under the appropriate special provision for piles and pile driving contained within this contract. This applies to both piles installed using the PDA criteria and for production piles installed using the criteria developed by the engineer from the PDA installations.

Data collected during the testing described herein will form the basis for the final driving criteria to be applied to production piles in the substructure unit under consideration.

B (Vacant)

C Construction

C1 Test Locations

The engineer will perform dynamic pile load testing at the pile locations identified on the plans. These locations are referred to simply as ‘PDA Test Piles’ throughout the remainder of this specification. Piles noted as PDA Test Piles are a functional load-carrying part of the completed foundation unit and not solely used for testing.

C2 Driving Sequence

The engineer will perform PDA testing on the first piles installed in the substructure. PDA Test Piles shall be located as shown on the footing plan. No other piles in the substructure unit shall be used for PDA testing unless agreed to by the engineer. Do not drive any other piles in the unit until all required testing has been completed and accepted by the engineer and the final driving criteria for that substructure unit has been determined and issued to the contractor in writing.

C3 Pile Driving
Drive PDA Test Piles to penetration depths and/or penetration resistances as directed by the engineer. Drive PDA Test Piles using the accepted production driving equipment.

C4 Scheduling
Provide a written schedule to the engineer showing all required PDA Test Piles activities for the following week. Submit this schedule a minimum of 2 working days prior to the first day included in the schedule. Schedule the work so that PDA testing activities of any kind - installation tests, or restrike tests - will occur at no more than two locations at any given time. Schedule a minimum of one complete working day after PDA testing, (which includes restrike testing, see section C 6) is complete at a substructure unit for the engineer to provide final driving criteria for that location. If testing is complete at multiple substructure units, final driving criteria will be provided at the maximum rate of one substructure unit per one working day and in the order specified by the contractor in the testing schedule.

C5 Installation Testing
The engineer will take dynamic measurements following procedures set forth in ASTM D-4945 during the driving of piles designated as PDA Test Piles.

Prior to placement in the leads, make each designated PDA Test Pile available for predrilling the required instrument attachment holes. Support PDA Test Piles on blocking, and roll or re-position PDA Test Piles as required to facilitate the predrilling of attachment holes. The engineer will furnish the equipment, materials, and labor necessary for drilling holes in the piles. Allow a minimum of one hour per pile for this operation. Furnish vehicle access to the substructure unit to allow for PDA testing.

Attach and remove the instruments to and from the pile following the engineer's instructions. Take precautions and exercise care to ensure that gauges and sensors are not damaged during installation or pile movement. Check and reinstall gauges and sensors during pile driving operations at the direction of the engineer. The engineer has the option to access a pile in the leads prior to and during driving operations to ensure that the gauges and sensors have been properly installed. Make available to the engineer a safety line attached to the pile leads for the engineer's use. Provide the engineer with sufficient time to inspect, attach, and remove gauges and sensors on the pile, if it is necessary.

It is estimated that approximately one hour per pile will be needed for both instrument attachment and removal for a total of 2 hours per installation. Continuous PDA monitoring may require multiple installations of PDA testing equipment depending on the supplied pile length. If multiple pile lengths are used to produce the final installed pile, multiple PDA equipment installations will be required.

Furnish electric power for the dynamic test equipment. The power supply at the outlet shall be 10-amp, 115-volt, 55- to 60-cycle, alternating current (AC) only. Field generators used as the power source shall be equipped with functioning meters for monitoring voltage and frequency levels.

Pile-driving criteria for each substructure unit shall be determined from dynamic pile tests conducted on the total length of each pile noted for PDA Testing in the plans. Driving on these piles shall continue until the required driving resistance is achieved for 30 consecutive hammer blows. Mark penetration per 10 consecutive hammer blows as directed by the engineer. The engineer will utilize the dynamic test data to establish the following pile driving criteria: (1) a minimum driven length below cutoff level, and (2) a maximum penetration rate per 10 hammer blows for 30 consecutive blows. Drive all remaining piles in that unit in accordance to the established criteria. The engineer may alter driving criteria as necessary to assure development of adequate pile capacity. In any pile where pile capacity or integrity is suspect, the engineer may order PDA testing.

With the PDA testing equipment attached, drive the pile as directed by the engineer.

C6 Restrike Tests

An initial restrike test will be performed on all test piles as part of the initial dynamic pile load test as described in section C.5.

Wait a minimum of 6 hours, or a shorter time period as directed by the engineer, after initial pile installation is complete; then, restrike each test pile with the required dynamic testing instruments attached.

Warm the hammer before the restrike by applying at least 20 blows to a non-test pile, or by other means acceptable to the engineer.

The maximum amount of penetration required during the restrike test will be 6 inches, or the maximum number of hammer blows required will be 30, whichever occurs first.

The pre-approved pile-driving hammer used for restrike testing shall be capable of supplying enough energy to develop a minimum of twice the required driving resistance shown on the plans.

Required driving resistance for production piles will be determined by dynamic pile testing conducted by the engineer.

D Measurement

The department will measure Pile Dynamic Analyzer PDA Testing as a unit, in which one unit includes all PDA-related effort on one pile during the initial driving. The department will measure PDA Restrikes as a unit, in which one unit includes all of the restrike testing required each time the contractor sets up on a pile to do a restrike test.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.4100	Pile Dynamic Analyzer (PDA)Testing	Each
SPV.0060.4110	Pile Dynamic Analyzer (PDA) Restrikes	Each

Payment for PDA Testing is full compensation for facilitating the initial dynamic pile load test on a given pile, including the possible multiple sensor installations.

Payment for PDA Restrikes is full compensation for facilitating and doing one restrike test, including the sensor installation.

F Delays and Standby Time

The department will assess a penalty if the contractor is not ready when the department/engineer is requested to perform the PDA tests on piles, and the department is unable to begin PDA testing on the same working day as scheduled, due to contractor delay. The penalty will be $1500/day for all working days that PDA Testing is scheduled on the project site, but no PDA testing is completed due to the contractor not being ready to perform the scheduled monitoring/driving.

115. Anchor Slab Inlet Cover, Item SPV.0060.4120.

A Description

This special provision describes specialized inlet grates and frames cast in anchor slabs as detailed on the plans. Conform to standard specification 611, as modified in this special provision.

B (Vacant)

C Construction

Construct the specialized inlet grates and frames as detailed on the plans.

D Measurement

The department will measure Anchor Slab Inlet Cover as each individual unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.4120	Anchor Slab Inlet Cover	Each

Payment shall conform to standard spec 611.5. Concrete masonry and bar steel reinforcement for the anchor slab will be paid for separately.

116. Bar Steel Reinforcement HS Stainless Bridges, Item SPV.0085.4300.

A Description

This work consists of furnishing and placing stainless steel reinforcing bars as shown in the plans and as hereinafter provided.

B Materials

B.1 General

Conform to standard spec 505.2 except as modified in this special provision.

B.2 Grade and Type

The material shall conform to ASTM A 955 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.

B.3 Evaluation of Corrosion Resistance

Prior to fabrication, supply test results from an independent testing agency certifying that stainless steel reinforcement from the selected UNS designation meets the requirements of Annex A1 of ASTM A955. Corrosion performance for the selected UNS designation shall be redemonstrated if the processing method is significantly altered. Removal of mill scale or pickling processes used for stainless steel reinforcement supplied under this contract shall be the same as those used to prepare the samples tested per Annex A1 of ASTM A955.

B.4 Chemical Composition

Material shall conform to that specified in ASTM A276, Table 1, Chemical Requirements, for the given UNS designation.

B.5 Heat Treatment

Bars may be furnished in one of the heat treatment conditions listed in ASTM A955, and as needed to meet the requirements of this specification.

B.6 Finish

Supply bars that are free of dirt, mill scale, oil and debris by pickling to a bright or uniform light finish. Bars supplied with a tarnished or mottled finish are sufficient cause for rejection. Fabricate and bend bars using equipment that has been thoroughly cleaned or otherwise modified to prohibit contamination of the stainless steel from fragments of carbon steel or other contaminants.

Bars displaying rust/oxidation, questionable blemishes, or lack of a bright or uniform pickled surface are subject to rejection.

B.7 Bending and Cutting

Bend bars in accordance to standard spec 505.3.2 and ASTM A955. Use fabrication equipment and tools that will not contaminate the stainless steel with black iron particles.

To prevent such contamination, equipment and tools used for fabrication, including bending and cutting, shall be solely used for working with stainless steel. Do not use carbon steel tools, chains, slings, etc. when fabricating or handling stainless steel reinforcing bars.

B.8 Control of Material

All reinforcement bars or bar bundles delivered to the project site shall be clearly identified with tags bearing the identification symbols used in the Plans. The tags shall also include the UNS designation, heat treat condition, heat number, grade (corresponding to minimum yield strength level), and sufficient identification to track each bar bundle to the appropriate Mill Test Report.

Provide samples for department testing and acceptance in accordance to the CMM requirements for Concrete Masonry Reinforcement – Bar Steel (Uncoated).

Provide Mill Test Reports (MTR) for the project that:

1. Are from the supplying mill verifying that the stainless reinforcement provided has been sampled and tested and the test results meet ASTM A 955, ASTM A 276, Table 1 and the Contract requirements;

2. Include a copy of the chemical analysis of the steel provided, with the UNS designation, the heat lot identification, and the source of the metal if obtained as ingots from another mill;

3. Include a copy of tensile strength, yield strength and elongation tests per ASTM A955 on each of the sizes of stainless steel reinforcement provided;

4. Permit positive determination that the reinforcement provided is that which the test results cover;

5. Include a statement certifying that the materials meet standard spec 106 regarding material being melted and manufactured in the United States; and

6. Certify that the bars have been pickled to a bright or uniform light finish.

C Construction

C.1 General

Conform to the construction methods in standard spec 505.3 except as modified in this special provision:

Ship, handle, store, and place the stainless steel reinforcing bars according to the applicable provisions with the following additions and exceptions:

1. Prior to shipping, ensure that all chains and steel bands will not come into direct contact with the stainless steel reinforcing bars. Place wood or other soft materials (i.e., thick cardboard) under the tie-downs. Alternatively, use nylon or polypropylene straps to secure the stainless steel reinforcing bars.

2. When bundles of reinforcing steel and stainless steel reinforcing bars must be shipped one on top of the other, load the stainless steel reinforcing bars on top. Use wooden spacers to separate the two materials. Space supports sufficiently close to prevent sags in the bundles.

3. Outside storage of stainless steel reinforcing bars is acceptable. Cover the stainless steel reinforcing bars with tarpaulins.

4. Store stainless steel reinforcing bars off the ground or shop floor on wooden supports and separately from carbon steel reinforcement. Space supports sufficiently close to prevent sags in the bundles.

5. Do not use carbon steel tools, chains, slings, etc. when fabricating or handling stainless steel reinforcing bars. Only use nylon or polypropylene slings. Protect from contamination during construction operations including any cutting, grinding, or welding above or in the vicinity of the stainless steel bars. Flame cutting or welding of stainless steel reinforcing bars is prohibited.

6. Place all stainless steel reinforcing bars on bar chairs that are solid plastic or stainless steel. Fabricate stainless steel metal chairs and continuous metal stainless steel supports from stainless steel conforming to the same requirements and UNS designations as stainless steel reinforcing bar as listed in Section B, “Materials”. Use stainless steel chairs with plastic-coated feet above steel beams.

7. Use stainless steel tie wires to tie stainless steel reinforcing bars. Tie wires shall conform to the same requirements and UNS designations as stainless steel reinforcing bars as listed in Section B, “Materials”, dead soft annealed, annealed at size. The tie wire does not need to be of the same UNS designation as the bar reinforcement.

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Do not tie stainless steel reinforcing bars to, or allow contact with uncoated reinforcing bars, galvanized forming hardware or attachments, or galvanized conduits. Direct contact with these materials is not acceptable. When stainless steel reinforcing bars or dowels must be near uncoated steel reinforcing bars, galvanized forming hardware, or other galvanized metals, maintain a minimum 1-inch clearance between the two metals. Where insufficient space exists to maintain this minimum, sleeve the bars with a continuous 1/8-inch minimum thickness polyethylene or nylon tube extending at least 1 inch in each direction past the point of closest contact between the two dissimilar bars and bind them with nylon or polypropylene cable ties. Sleeves are not required between stainless steel reinforcing bars and welded girder shear studs. Stainless steel reinforcing bars are allowed to be in direct contact with undamaged epoxy-coated reinforcing bars.

Uncoated fasteners (such as used for static safety lines on beams), anchors, lifting loops, etc., that extend from the top flange of prestressed concrete beams into the bridge deck shall be completely removed or cut off flush with the top flange of the beam prior to casting the deck.

C.2 Splices

Splices shall be as shown in the plans. Substitution of stainless steel mechanical splices in lieu of lap slices shown on the plans may be permitted in certain situations subject to written approval by the engineer. Provide mechanical splices for stainless steel reinforcing bars made of stainless steel conforming to one of the UNS designations listed in section B, "Materials" and meeting the minimum capacity, certification, proof testing and written approval requirements of standard spec 550.3.3.4.

If it is necessary or the contractor elects to increase or alter the number or type of bar splices from those indicated in the plans, provide copies of plan sheets to the engineer showing the revised reinforcement layout, type, length and location of revised bar splices and revised bar lengths. The engineer must approve the location of new lap splices or substitution of mechanical bar couplers in lieu of bar lap splices prior to fabrication. New lap splices must be at least as long as those shown in the plans.

D Measurement

The department will measure Bar Steel Reinforcement HS Stainless Bridges by the pound acceptably completed. The department will compute the stainless steel bar weight using the standard weight per foot of equivalent size carbon steel reinforcing bars (ASTM A615) regardless of which stainless steel alloy is provided.

If the contractor is permitted to alter the reinforcement layout per C.2, no adjustment to the reinforcement bar quantity will be made for such alterations. Mechanical bar couplers that are provided but not shown in the plans are included in the item Bar Steel Reinforcement HS Stainless Bridges and will not be measured separately.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0085.4300	Bar Steel Reinforcement HS Stainless Bridges	LB

Payment is full compensation for providing, transporting and placing the stainless steel reinforcing bars with all component materials as described above.

If the contractor is permitted to alter the reinforcement layout per C.2, no additional compensation will be made for such alterations. Mechanical bar couplers that are provided, but not shown in the plans are included in the item Bar Steel Reinforcement HS Stainless Bridges and will not be paid for separately.

117. Concrete Barrier Temporary Precast Left-In-Place, Item SPV.0090.0001.

A Description

This special provision describes leaving in place temporary precast reinforced concrete barrier conforming to the shape, dimensions, and details the plans show and in accordance to the pertinent provisions of standard spec 603, these special provisions, and as hereinafter provided.

Concrete Barrier Temporary Precast Left-In-Place becomes property of the department after final acceptance by the engineer.

B (Vacant)

C (Vacant)

D Measurement

The department will measure Concrete Barrier Temporary Precast Left in Place by the linear foot, acceptably completed, measured along the base of the barrier after final installation in its left-in-place location.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.0001	Concrete Barrier Temporary Precast Left-In-Place	LF

Payment is full compensation for leaving Concrete Barrier Temporary Precast, transitions and connections between temporary and permanent barriers on the project site; and for anchoring to the pavement.

Initial delivery, subsequent deliveries and installations will be paid for separately under the bid items provided for in the contract.

118. Glare Screens Temporary, Item SPV.0090.0002.

A Description

The work under this item shall include furnishing, installing, maintaining, and removing a modular paddle glare guard system on concrete barrier temporary precast at the indicated locations in accordance to the plans and standard specifications, as directed by the engineer and as hereinafter provided.

B Materials

Glare guard units shall be modular units consisting of vertical blades, bases, and a horizontal base rail. The paddle devices shall be a minimum of 24-inches in height and be constructed of durable, impact resistant, non-warping flexible materials.

Units shall be modular in design to provide for portability, quick repair and easy installation. The cumulative nominal length of the modular units shall equal the length of the temporary barrier on which they are installed so that the joint between the barrier sections shall not be spanned by any one unit. Units shall not alter the design of the concrete barrier.

The relative connection strengths between various components of the assembly shall be designed to minimize the potential impact and debris hazard to approaching traffic and to simplify repairs. The modular units shall be fabricated in a manner to allow replacement of individual blades while the modular unit remains in place.

The blade, base and rail shall be made of high impact materials with sufficient strength to withstand three impacts from a horizontal steel bar traveling at 40 mph and impacting at mid-height of the blade. After three impacts, there shall be no evidence of cracking, splitting, delaminating or separation from the system.

The paddle glare guard provided shall be a material manufactured by Safe-Hit Corporation, 2405 IH 35 West, New Braunfels, Texas, 78130; Carsonite International, 2900 Lockhead Way, Carson City, Nevada, 89701; Flexstake Incorporated, 2150 Andrea Lane, Fort Myers, Florida, 33912; or equal.

C Construction

Attachment of the base rail to the top of the concrete barrier temporary precast shall be by means of a mechanical or adhesive system with a minimum pullout and shear of 3000 psi. All mounting hardware shall be as specified by the manufacturer.

D Measurement

The department will measure Glare Screens Temporary by the linear foot of paddle glare guard, 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.0090.0002	Glare Screens Temporary	LF

Payment is full compensation for furnishing, installing, maintaining and removing the Glare Screens Temporary.

119. Removing Pavement Markings Water Blasting, Item SPV.0090.0030.

A Description

Remove pavement markings using ultra-high pressure water. Remove pavement markings from locations shown on the plans or as the engineer directs.

B (Vacant)

C Construction
Provide a truck or vehicle mounted ultra high pressure pump and water tank capable of delivering a minimum of 30,000 psi and up to 40,000 psi to waterjet nozzles. Furnish a water blaster with a vacuum recovery system to provide a clean, almost dry surface, without the use of a secondary cleanup process.

Remove pavement markings through means of water blasting. Do not damage the pavement during removal process.

Furnish equipment with a storage system that allows for the storage of the wastewater while retaining the debris.

D Measurement
The department will measure Removing Pavement Markings Water Blasting by the linear foot of 4-inch wide line, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.0030	Removing Pavement Markings Water Blasting	LF

Payment for Removing Pavement Markings Water Blasting is full compensation for removal, repairing associated damage, and disposal of residue.
SEF Rev. 12_1211

120. Drain Slotted Vane Longitudinal, Item SPV.0090.0051.

A Description
This special provision describes furnishing and installing Drain Slotted Vane Longitudinal as shown on the plans, in accordance to standard specs 501, 505, 607, and 611, and as hereinafter provided.

B Materials
The pipe that the vane drain casting rests in shall be 15-inch diameter SDR-35 poly vinyl chloride, (PVC) sewer pipe.

C Construction
Prior to encasing the pipe in concrete, cover the upper end of the slotted drain as shown on the plans, or as approved by the engineer.

Prior to construction operations adjacent to the slotted area of the slotted vane drain pipe, cover the slots on the top of the drain. Remove any material entering the pipe at the contractor's expense.

Exercise care to avoid damage to the slotted vane drainpipe. If any section of pipe is damaged or is unsatisfactory as determined by the engineer, replace the drainpipe at contractor's expense.

D Measurement
The department will measure Drain Slotted Vane Longitudinal by the linear foot, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.0051	Drain Slotted Vane Longitudinal	LF

Payment is full compensation for furnishing all materials, including PVC pipe and end cap, slotted vane drain castings, concrete masonry and reinforcement; adjusting bricks; drilling inlet or manhole cover to accommodate connection bolts to vane drain; hauling and placing the pipe; making connections to existing inlets; cleaning out and restoring site of work; and for repairing opening of drainage structure.
SEF Rev. 12_0330

121. Concrete Curb and Gutter 4-Inch Sloped 60-Inch Type A, Item SPV.0090.0071.

A Description
Perform this work in accordance to the pertinent requirements of standard spec 601 and conform to the construction detail shown in the plans.

B Materials
Use materials as described in the construction detail shown in the plans and as described in standard spec 601.2.

C Construction
Perform work in accordance to standard spec 601.3.

D Measurement
The department will not measure Concrete Curb and Gutter 4-Inch Sloped 60-Inch Type A. The department will use pay plan quantity according to the Pay Plan Quantity article of these special provisions.

E Payment

The department will pay for plan quantities according to the Pay Plan Quantity article at the contract unit.

The department will pay for plan quantities according to the Pay Plan Quantity article at the contract unit at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.0071	Concrete Curb and Gutter 4-Inch Sloped 60-Inch Type A	LF

Payment is full compensation for preparing the foundation; all special construction required at driveway entrances or curb ramps; for providing all materials, including concrete, expansion joints, and tie bars in unhardened concrete; for placing, finishing, protecting, and curing concrete; and for sawing joints.

122. Fence Decorative Bridge, Item SPV.0090.4400; Fence Decorative Wall, Item SPV.0090.4410.

A Description

Fabricate, galvanize, paint, deliver and install decorative fencing on bridge superstructures and retaining walls.

B Materials

B.1 General

All materials shall meet the requirements as shown on the plans and the applicable provisions of the standard specifications as follows:

- Structural Steel: standard spec 506.2.2
- Steel Mesh: standard spec 505.2.5
- Painting: standard spec 517.2 and 517.3

After fabrication and prior to bolting and assembling the fence components, steel shall be blast cleaned per SSPC-SP 6 and galvanized according to ASTM A 123. All bolts, nuts and washers shall be supplied as factory galvanized according to ASTM A 153. Repair zinc coating damaged during fence assemblage as specified in standard spec 635.3.4. Grind the welded joints to a smooth finish where shown in the plans.

Steel preparation includes the chamfering of sharp edges. All sharp edges shall be flattened by a single pass of a grinder or suitable device along the sharp edge. 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 in accordance to AASHTO M 160 prior to blast cleaning.

The decorative silhouette inset plates shown on the plans shall be fabricated as indicated in the plans. The decorative silhouette shall be electro galvanized in accordance to ASTM A 591-01 (0.08 oz/square foot/surface) and then painted with an approved tie and topcoat as given in this special provision. The top coat shall be painted the same color as the rest of the decorative fencing. Electronic files of the decorative silhouette patterns are available from Wisconsin Department of Transportation, Josh LeVeque, P.E., 141 NW Barstow Street, Waukesha, Wisconsin 53187, (414) 220-5444

The fence fabric shall consist of 8 GA. 2 inch by 2 inch welded wire mesh galvanized to ASTM A 123 and then covered with a polymer-coating conforming to the following requirements:

Thickness of Polymer-Coating:	ASTM F668
Adhesion:	ASTM F668
Accelerated Aging Test:	ASTM F668, D1499
Mandrel Bend Test:	ASTM F668

The polymer coating shall be a dense impervious covering applied without voids, tears or cuts that reveal the galvanized mesh substrate. Excessive roughness, bubbles, blisters and flaking in the polymer coating will be a basis for rejection. The color of the polymer-coating shall be as specified in B3 and conform to the requirements of ASTM F934. The vertical wires of the mesh shall be placed on the inside (Pedestrian/Traffic side) face of the fence.

B.2 Painting

All galvanizing surfaces to be painted shall be cleaned per SSPC-SP1 to remove, chlorides, sulfates zinc salts, oil, dirt, organic matter and other contaminants. The cleaned surface should then be Brush Blast Cleaned per SSPC-SP7 to create a slight angular surface profile (1.0 – 1.5 mils suggested) for adhesion. Blasting should not fracture the galvanized finish or remove any dry film thickness.

After cleaning provide a tie coat from an approved coating system that is specifically intended to be used on a galvanized surface. The tie coat shall etch the galvanized rail and prepare the surface for the top coat. Apply a top coat matching the specified color. The tie and top coats should be of contrasting colors. Use a pre-approved top coat that is resistant to the effects of the sun, and is suitable for use in a marine environment. The various decorative fence components shall be painted with the tie and top coats before final assembly of the fence panels. Exercise care so as not to damage the painted surface during panel assembly or fence installation.

Use one of the qualified paint sources and products given below. An equivalent system may be used with the written approval of the engineer.

Producer	Coat	Products	Dry Film Minimum Thickness (mils)	Minimum Time Between Coats (hours)
Sherwin Williams 1051 Permeter Drive, Suite 710 Schaumburg, IL 60173 (847) 330-1562	Tie	Recoatable Epoxy Primer B67-5 Series/B67V5	2.0 to 4.0	6
	Top	Acrolon 218 HS Polyurethane , B65-650	2.0 to 4.0	NA
Carboline 350 Hanley Industrial St. Louis, MO 63144 (314) 644-1000	Tie	Rustbond Penetrating Sealer FC	1	36
	Top	Carboline 133 LH	4	NA
Wasser Corporation 4118 B Place NW Suite B Aubum, WA 98001	Tie	MC-Ferrox B 100	3.0 to 5.0	8
	Top	MC-Luster 100	2.0 to 4.0	NA

B.3 Color
The finished color for coating system for decorative fencing shall match Federal Color 20166.

C Construction
Provide shop drawings in accordance to the requirements of standard spec 506.3.2. Shop drawings shall contain material sizes and types, weld sizes and locations, and all necessary details, dimensions, and information to allow fabrication of the fence in conformance with the requirements of the contract. State the polymer-coating type, Class and color used on the mesh. Do not begin fabrication prior to shop drawing review and acceptance.

Provide a full sized painted 6-foot by 10-foot test panel for the fence. The test panel shall be ten feet long. The test panel shall be delivered to the job site within 60 days of the award of the contract. Unload and set up test panel in an area designated by the engineer. Do not begin fabrication of fences prior to the test panel acceptance.

During construction and at the time of delivery the engineer shall inspect the frame components. The engineer shall accept the product after the delivery is unloaded on the site. After the product is unloaded, the installation contractor will signify in writing that the fence was received in acceptable condition per the engineer's inspection. Any damage to the fence panels after the acceptable delivery will be the responsibility of the installation contractor.

All welding shall conform to the applicable requirements of standard spec 506. No field welding, field cutting, or drilling will be permitted without the approval of the engineer.

Take special care during construction to minimize the number and size of touch-up spots. Follow the manufacturer's recommendations for damaged area repairs. The engineer must approve the field paint appearance prior to final acceptance.

Provide the engineer with the name, address, and phone number of a representative of the fence fabricator for future coordination.

During handling, protect finish coating from damage. If damaged during handling the fencing may be rejected by the engineer or engineer may direct fabricator that the finish shall be repaired in accordance to the manufacturer's recommendations. Provide the engineer a copy of the manufacturer's recommended repair procedure and materials before repairing damaged coatings.

D Measurement
The department will measure Fence Decorative Bridge and Fence Decorative Wall 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.0090.4400	Fence Decorative Bridge	LF
SPV.0090.4410	Fence Decorative Wall	LF

Payment is full compensation for fabricating, polymer-coating welded wire mesh, galvanizing, painting, and delivering test panel to site; fabricating, furnishing, delivering and unloading fence panels, lighting access panels, posts; installing fence posts and panels and hardware; and for preparing shop drawings, painting, galvanizing metal fence components.

123. Field Office Fixed, Item SPV.0105.0001.

Replace standard spec 642 with the following:

A Description
Furnish, equip, and maintain field office facilities.

B Materials
B.1 General
The contractor is encouraged to provide a permanent/fixed facility for use as a field office that is an existing office building, or an existing building converted to office-type use, located not more than one mile from the project limits and approved by the engineer. In the case such a suitable permanent/fixed facility cannot be located, a temporary/modular facility shall be provided.

Supply a first aid kit in each field office provided under the contract. Ensure the kits are readily accessible to project personnel. Check and replenish the contents of each kit at least once a week. Ensure that each kit contains, at a minimum, a supply of latex-free examination gloves, CPR masks, adhesive tape, pressure and cling bandages, antiseptic wipes, bite/sting swabs, cold packs, and safety goggles.

Equip the facilities with Class A, B, and C fire extinguisher(s) conforming to all applicable codes and NFPA standards.

Minimum interior useable floor space shall be 2000 square feet, not including shared spaces, such as plan review areas, conference rooms, meeting areas, hallways, and restrooms.

Provide a suitably sized, open meeting area, including tables and folding chairs to accommodate regularly scheduled meetings of 50 people, as approved by the engineer.

Provide 20 workstations, including a lockable desk, shelf, and fireproof 4-drawer file cabinet. Provide 10 private rooms, equipped, in addition to the above, with a four-shelf bookcase, a large lockable metal storage cabinet, and a 48” x 36” whiteboard with dry-erase markers. These rooms shall have an interior door with a lockset.

Provide one ergonomically correct office chair in working condition, with, at a minimum, the following features, for each workstation:

- Five-legged base with casters.
- High backrest.
- Seat adjustable from 15 inches (381 mm) to 22 inches (558 mm) from the floor with a seamless waterfall, rounded front edge.
- Adjustable arms.

Provide the field office with 10 high-speed computer Internet connection(s) at a setting of no less than 1 MB. The high-speed Internet connection must consist of a “small office/ home networking” package. The package shall include a Dynamic IP Address (DHCP) and a Modem Router. The package must accommodate IPSec based VPN products.

Provide and install into the field office 11 two-line programmable touch-tone telephones and telephone exchanges with local and long distance service. At least one will be a cordless type operating at no less than 2.4 GHz. The voice exchanges are to be configured so that the incoming calls for any voice exchange utilize an open exchange. Furnish a voice mail answering service. The telephones and the communication services are for the sole use of the department staff.

Furnish a fax machine with a dedicated exchange service and the ability to copy, auto-feed, fax, and print on paper up to 11” x 17” in size.

Provide one new, leased, high-capacity color printer/photocopier/scanner capable of printing and copying up to 11" x 17" paper, with the ability to perform duplexing, sorting, stapling, and multiple sheet auto feeding, with a built-in scanner with the capability to scan black and white and color up to 11" x 17" at a minimum of 600 dpi, and with a network connection, as approved by the engineer.

Provide and maintain an adequate supply of bottled drinking water. Provide one 18 cubic foot minimum size refrigerator with freezer, microwave and one coat rack.

Maintain the field office equipment and provide supplies for the fax machine and photocopiers as requested by the engineer.

Provide for the professional cleaning of the field office during regular business hours twice monthly.

Provide clearly marked recycling and waste receptacles within the field office, and separate recycling and waste dumpsters near the field office. Cover outdoor containers to keep out rain, snow, and wind-driven debris. Provide regularly scheduled recycling and waste pick-up.

Equip these facilities with suitable artificial lighting and adequate heating and air conditioning equipment along with the necessary fuel to maintain a minimum temperature of 68F (20C) during the hours occupied.

The contractor may furnish, if the contract allows, the field offices jointly in cooperation with other contractors on designated projects.

Do not combine field offices, or combine them with, or attach them to, any buildings used by the contractor, unless the engineer allows in writing.

The field office shall remain available for department use for 60 calendar days beyond the contract completion date or until the engineer approves its closure or removal.

These field facilities are for the sole use of the department.

B.2 Permanent/Fixed Facility Field Office

Provide a permanent/fixed facility that is an existing office building, or an existing building converted to office-type use, meeting all applicable codes and standards, located not more than one-half-mile from the project limits and approved by the engineer.

Maintain interior sanitary facilities conforming to State and local health requirements, in clean and good working condition, and stock with sanitary supplies for the duration of the contract, as also approved by the engineer.

Include an adjacent, no-fee, lighted parking lot large enough to accommodate the needs of the field offices at peak usage, as approved by the engineer. Maintain the parking lot and egress, including snow removal.

Do not begin construction operations requiring the use of the field offices by the department until the required field offices are furnished, fully equipped, and made ready for use as the engineer directs.

B.3 Temporary/Modular Facility Field Office

Provide rented, modular field offices that are designed as mobile office units, no more than five years old, or other engineer-approved types that are floored, roofed, and weatherproofed, and have a minimum ceiling height of 8 feet-0 inches (2.44 m). Provide R-11 or better insulation in all walls, floors, and ceilings. Provide skirting around the perimeter of the mobile office units.

Equip these facilities with suitable artificial lighting and adequate central heating and cooling equipment designed to maintain a comfortable temperature during occupied hours, at the approval of the engineer.

Provide electrical power by connecting to the existing power grid.

Provide and maintain suitable interior or exterior sanitary facilities conforming to State and local health requirements, in clean and good working condition, and stock with sanitary supplies including hand sanitizer for the duration of the contract, at the approval of the engineer.

Provide a sufficient number and size of operable windows, located in order to promote effective cross ventilation, and equipped with required locks and metal screens. Windows are to be of the horizontal slider type. All rooms are to have at least one window.

The exterior doors shall be constructed of steel and equipped with heavy-duty locks with attached security plates. There shall be vandal-resistant exterior lights located at all exterior doors. Provide steps at all exterior doors.

Provide a level, graded CABC (at a minimum) site for field offices, including an adjacent, no-fee parking lot large enough to accommodate the needs of the field offices at peak usage, as approved by the engineer. Maintain the parking lot and egress, including snow removal.

Anchor or secure the field offices to prevent them from overturning by high velocity winds. Locate the field office in a dust-reduced and vibration-free environment.

Do not begin construction operations requiring the use of the field offices by the department until the required field offices are furnished, leveled, and secured in the approved locations, fully equipped, and made ready for use as the engineer directs.

C (Vacant)

D Measurement
The department will measure Field Office Fixed as a single lump sum unit of work for the entire field office(s), 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.0105.0001	Field Office Fixed	LS

Payment is full compensation for providing, equipping, securing, and maintaining the facility; and for providing all incidentals and sundries, including but not limited to utilities, fuel, security, toilet facilities, and office supplies as required, either independently or jointly, for the time specified in section B.1.
SEF-IH-94 North-South Rev. 12_1030

124. Remove Loop Detector Wire and Lead-in Cable, I-94 EB Ramps and STH 20, Item SPV.0105.0002.

A Description
This special provision describes removing loop detector wire and lead-in cable at the I-94 EB Ramps & STH 20. Removal will be in accordance with section 204 of the standard specifications, 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 the measured quantity at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.0002	Remove Loop Detector Wire and Lead-in Cable, I-94 EB Ramps & STH 20	LS

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

125. Traffic Signal Mitigation for Construction Staging, Item SPV.0105.0003.

A Description
This special provision describes the temporary modification of state-owned traffic signals to accommodate roadway closures and impacts during construction.

B (Vacant)

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

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

D Measurement
The department will measure Traffic Signal Mitigation for Construction as a single lump sum unit of work for each intersection, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.0003	Remove Loop Detector Wire and Lead-in Cable, I-94 EB Ramps & STH 20	LS

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

126. Pavement Cleanup Project 1033-02-72, Item SPV.0105.0005.

A Description
This special provision describes cleanup of dust and debris from pavements within and adjacent to the job site.

B Materials
B.1 Pavement Cleanup
Furnish a vacuum-type street sweeper equipped with a power broom, water spray system, and a vacuum collection system.

Vacuum equipment shall have a self-contained particulate collector capable of preventing discharge from the collection bin into the atmosphere.

Use a vacuum-type sweeper as the primary sweeper, except as specified herein or approved by the engineer.

C Construction

C.1 Pavement Cleanup

Keep all pavements, curb lanes and gutters both closed and open to public traffic within the job-site boundaries free of dust and debris generated from any activity under the contract. Keep all pavements, curb lanes and gutters adjacent to the project free of dust and debris that are affected by land disturbing, dust generating activities, as defined in the contractor's dust control implementation plan.

Provide surveillance to identify if material is being tracked from the jobsite. Clean up spillage and material tracked from the project within an hour of occurrence or as directed by the engineer. Perform cleanup operations in a safe manner.

Provide routine sweeping of all pavements, curb lanes and gutters on local street active haul routes a minimum of once a day as defined in the Dust Control Implementation Plan (DCIP) or as directed by the engineer. STH 20, CTH C, East Frontage Road and West Frontage Road.

In addition to routine sweeping, conduct sweepings as the engineer directs or approves, to deal with dust problems that might arise during off-work hours or emergencies. Provide the engineer with a contact person available at all times to respond to requests for emergency sweeping. Respond to emergency sweeping requests within 4 hours.

If the vacuum-type sweeper breaks down, a mechanical broom sweeper may be substituted for no more than 24 hours total elapsed time. Repair the vacuum-type sweeper within that 24 hours or substitute a vacuum-type sweeper.

Skid steers with mechanical power brooms may only be utilized on sidewalks and driveways whose pavements will not support the weight of a street sweeper, unless otherwise approved by the engineer.

D Measurement

The department will measure Pavement Cleanup Project 1033-02-72 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.0105.0005	Pavement Cleanup Project 1033-02-72	LS

Payment schedule for this item will be in accordance to the percentage of contract value earned.

Payment is full compensation for surveillance, mobilization, sweeping, disposing of materials and any other labor, tools or equipment necessary to complete the work.
SEF Rev. 12_1008

127. Survey Project 1033-02-72, Item SPV.0105.0051.

A Description
This special provision describes modifying standard specs 105.6 and 650 to define the requirements for construction staking for this contract.

Replace standard spec 105.6.2 with the following:

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

The survey includes establishing horizontal and vertical position for all aspects of construction including but not limited to storm sewer, subgrade, base, curb, gutter, curb and gutter, pipe culverts, structure layout, pavement, barriers (temporary and permanent), electrical installations, FTMS, utilities, traffic control items, fencing, etc.

The department may choose to perform quality assurance surveys during the project. These quality assurance surveys do not relieve the responsibility for performing all survey work required to lay out and construct the work under this contract.

Delete standard spec 650.1.

B (Vacant)

C Construction
Conform to standard spec 650.3 and as modified in this special provision.

Replace standard spec 650.3.3.1 with the following:

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

Replace standard spec 650.3.3.3.4.1 with the following:

The department will provide the contractor staking packet as described in the Construction and Materials Manual (CMM) 7.10. At any time after the contract is awarded, the available survey and design information may be requested. The department will provide that information within 5 business days of receiving the contractor's request.

The department incurs no additional liability beyond that specified in standard spec 105.6 or standard spec 650 by having provided this additional information.

Add the following to standard spec 650.3.3.3.6.2:

Record all subgrade elevation checks and submit a hard copy to the engineer at the completion of the project.

D Measurement
Replace standard spec 650.4 with the following:

The department will measure Survey Project 1033-02-72 as a separate single lump sum unit, acceptably completed.

E Payment
Replace standard spec 650.5 with the following:

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.0051	Survey Project 1033-02-72	LS

Payment is full compensation for performing all survey work required to lay out and construct all work under this contract. No additional payments will be made for re-staking due to construction disturbance and knock-outs.

SEF Rev. 12_0827

128. Underdeck Lighting Special (STH 20), Item SPV.0105.1001.

A Description
This special provision describes conduit, wire, luminaires, and junction boxes, and all parts and fittings for complete underdeck lighting special. The plans show that the amounts of select materials will vary by the bridge.

Certain aspects of the systems will be design-build. Submit six sets complete drawings and schedule of materials to the engineer for approval prior to any work or the purchase of material. It is required that the department approves the drawings and schedule of materials prior to the forming of the first bridge deck for pour.

The pay limit for these lump sum items will be all the work above ground as shown on plans unless noted otherwise. All PVC conduits, conduit fittings, and junction boxes embedded in bridge structure as shown on plans and details will be paid under structure pay items. Electrical wires running in embedded conduits and junction boxes will be part of these lump sum items.

B Materials

The system of hangers, rollers, expansion fittings, deck inserts, terminations, etc., shall be design-build per code and per manufacturer's recommendations and subject to the engineer's review and approval.

Included in shop drawing submittal, contractor shall include manufacturer's installation guide for exterior, above ground RTRC conduit installations. Manufacturer's documentation shall include the following:

- Conduit hanger construction and installation,
- The means to handle vibration,
- Manufacturer's maximum conduit support span calculations (annotated tables acceptable), and
- Design, installation, and spacing of expansion joints.

Shop drawing shall include cut sheet for all items required for installed solution; items to be submitted include all items in the conduit hanger assembly, deck inserts, junction boxes, conduit, conduit couplings, conduit adaptors, stop rings and expansion joints.

All Metal parts shall be stainless steel. Provide IPS-specification conduit.

Short lengths of Liquidtight Flexible Metallic Conduit are also required on the plans. Provide a grounding bushing at the junction box.

Material to form a sleeve through cast-in-place concrete pier diaphragms may be 2-inch PVC conduit sections, or any similar material as approved by the engineer. 2-inch conduit sleeve is included in structure pay items.

Underdeck Luminaires LED shall be 70 W or less with IESNA Type IV forward throw optics and be mounted on minimum 10 gauge stainless steel mounting plate with 3/8-inch stainless steel hanger rods from deck inserts. Provide vibration dampers in the suspension assembly.

Underdeck Luminaires LED shall be individually fused at 5 amperes FNQ, within the luminaire body.

Junction boxes shall be stainless steel. Where the plans do not specify a size, the contractor shall furnish a size of sufficient capacity per the code and as approved by the engineer.

Provide stainless steel whisker type bird guard to cover complete top surface of mounting plate.

C Construction

An RTRC certified person shall supervise installation of Type RTRC conduit. The design and installation shall allow for contraction and expansion without abrasion to the conduit. Upon initial installation, conduit shall not contact the surface of the pier cap sleeve.

Junction box splices shall conform to requirements for light pole handholes.

The fixture whip shall be tied to the hanger rods with UV-rated cable ties. The boxes into which it is splice shall be supported per Section 314.23(E) Wisconsin State Electrical Code.

Shim or otherwise mount abutment junction boxes for drainage behind.

Deck insert locations shall be design-build. Coordinate with bridge erectors. Deck drilling for anchors will not be allowed.

Conduit and other parts shall be plumb, level, and true to the lines of the structure.

Provide identification plaques on the junction providing power to the structure. The plaque shall identify the circuit or circuits powering the fixtures on the structure. The cost of the plaques shall be included in the cost of the underdeck lighting system.

D Measurement

The department will measure Underdeck Lighting Special (STH 20) as lump sum unit of work installed, acceptably completed for each bridge structure.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.1001	Underdeck Lighting Special (STH 20)	LS

Payment will be full compensation for design; for conduit, conduit bodies; wire, luminaires, deck inserts, junction boxes, suspension assemblies, and vibration dampers; and for furnishing all parts and fittings.

129. Lighting System Integrator, Item SPV.0105.1002.

A Description

These special provisions describe coordinating lighting with various parties; record keeping, and documentation. Where the department is responsible for freeway lighting operation, maintenance, or utility locates on existing systems or systems overlapping project boundaries, the contractor's freeway lighting integrator will serve as the contractor's liaison to the department's electrical operations unit.

B Personnel Qualifications

Assign personnel experienced in underground utility construction and department lighting specifications and practices.

C Construction

At any one time during the project, the contractor shall assign one individual person as the freeway lighting integrator.

The freeway lighting integrator shall:

1. Familiarize himself with the location and nature of existing lighting circuits. This familiarity shall include the extent of any lighting system that overlaps project limits.
2. Maintain a file of applicable permits or licenses issued to the contractor, and convey copies to the engineer.
3. Keep with him at all times a contact list of affected lighting personnel.
4. Maintain a record of tagouts and the clearance of tagouts.
5. Interface with department electrical personnel to determine how contract limits might affect maintenance or operation of existing systems.
6. Maintain ongoing contact with the department's Diggers' Hotline Coordinator to ensure that each of the two persons knows that all requested utility locates are marked in the field by the appropriate party. The intent here is to assure coordination. This special provision does not transfer additional utility locating responsibilities to the contractor, beyond those responsibilities already assigned to him by other provisions of the contract.
7. Inform the department of any lighting outages, including outside the project limits where a lighting system crosses the project boundary.
8. Maintain in any format real-time records of existing, removed and new lighting facilities. Include utility service extensions. Additional required records will include temporary connections and their ultimate removal.
9. Maintain records of tests, including: "meg" tests, amperage draw per circuit leg, voltage reading at the disconnect, and voltage reading at the furthest pole per circuit leg. Convey these records at time of acceptance or partial acceptance.
10. At the time of acceptance or partial acceptance, convey as-built drawings in both the following formats: plan redlines and .dgn electronic. Include utility service extensions.
11. Secure copies of operators manuals, tear sheets, etc. as may be provided by manufacturers of some lighting materials, and convey a minimum of three sets to the department.
12. Work with the engineer to notify department electrical personnel of acceptance or partial acceptance.
13. Perform related duties as may be needed to ensure continuity of freeway lighting during construction, and orderly transfer upon completion.

D Measurement

The department will measure Lighting System Integrator as one complete lump sum unit of work for all required coordination, record-keeping, and documentation, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.1002	Lighting System Integrator	LS

Payment will be full compensation for personnel costs.

130. Lighting System Survey, Item SPV.0105.1003.

A Description
These special provisions describe performing lighting system survey using Global Position System (GPS).

B (Vacant)

C Construction
Locate and survey using GPS all the lighting units and control cabinets. Maintain neat, orderly, and complete survey notes. Enter the coordinates into a Microsoft Excel 2007 spreadsheet along with other required fields as specified by WisDOT.

D Measurement
The department will measure Lighting System Survey for all lighting units and control cabinets as a single lump sum unit of work, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.1003	Lighting System Survey	LS

Payment will be full compensation for locating and surveying all the lighting units and control cabinets.

131. Longitudinal Grooving Bridge Deck, Item SPV.0165.4700.

A Description
Provide longitudinal deck grooves parallel to the centerline of the roadway prior to opening the bridge to traffic as directed by the engineer.

B Materials
The grooving machine to contain blades mounted on a multi-blade arbor on a self-propelled machine built for grooving hardened concrete surfaces.

The grooving machine to have a depth control device that detects variations in the deck surface and adjusts the cutting head height to maintain a specified depth of groove.

The grooving machine to have a guide device to control multi-pass alignment.

C Construction

Perform longitudinal grooving operation in a manner to preclude any damage to the concrete deck surface.

Longitudinal grooving operation to result in a uniformly grooved deck surface.

Cut grooves continuously across the deck width to within 18 inches of the barrier rail, curb line, or median divider. If metal floor drains extend more than 18 inches from the barrier rail, curb line, or median divider, all grooves on the bridge deck surface are to end within 6 inches of the floor drain perimeter.

At skewed metal edged expansion joints in the bridge deck surface, all grooves on the bridge deck surface are to end within 6 inches of the joint leaving no ungrooved surface adjacent to each side of the joint greater than 6 inches in width on the deck side of the expansion joints.

Produce grooves that are continuous across construction joints or other joints in the concrete deck surface less than ½-inch wide.

Grooves shall be 1/8-inch wide and 3/16-inch deep. The longitudinal groove shall be spaced at ¾ inches center-to-center. Tolerance for groove width shall be +1/16 inch to -0 inch. Tolerance for groove depth shall be ± 1/16 inch. Tolerance for groove spacing shall be ± 1/16 inch.

Collect, remove and dispose of solid material residue and liquid waste resulting from grooving operations by vacuuming in a manner satisfactory to the engineer.

D Measurement

The department will not measure Longitudinal Grooving Bridge Deck. The department will use pay plan quantity according to the Pay Plan Quantity article of these special provisions.

E Payment

The department will pay for plan quantities according to the Pay Plan Quantity article at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0165.4700	Longitudinal Grooving Bridge Deck	SF

Payment is full compensation for providing the required machinery and operators; and for grooving, for collecting, removing and properly disposing of all waste materials.

SEF Rev. 12_0330

132. Wall Concrete Panel Mechanically Stabilized Earth LRFD/QMP Pilot, Item SPV.0165.4710.

A Description

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

This special provision describes the quality management program (QMP) for 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 Mechanically Stabilized Earth Concrete Panel Wall Systems

The supplied wall system must be from the department's approved list of concrete panel mechanically stabilized earth wall systems.

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 Design Section. The department maintains a list of pre-approved systems of retaining walls. To be eligible for use on this project, a system must have been pre-approved and added to that list prior to the bid opening date. 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.

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 in accordance 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 Structures Design 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 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 shall be in compliance with the *AASHTO LRFD Bridge Design Specifications 5th Edition 2010*, (AASHTO LRFD) with latest interim specifications for Mechanically Stabilized Earth Walls, WisDOT's current *Standard Specifications for Highway and Structure Construction* (Standard Specifications), 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 in accordance to Table11.5.6-1 LRFD.

Design and construct the walls in accordance 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 contract 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 in accordance 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 Wall Concrete Panel Mechanically Stabilized Earth by the contractor shall consider the internal and compound stability of the wall mass in accordance 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.

Facing panels shall meet the design requirements of 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 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. 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 a minimum of six 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 steel 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 in accordance 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. Cutting or altering of the basic structural section of either the strip or grid at the site is prohibited unless

approved by the Structures Design Section. A minimum clearance of 3" shall be maintained between any obstruction and reinforcement unless otherwise approved by the Structures Design Section. Splicing steel reinforcement is not allowed, unless approved by the Structures Design.

MSE 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. Potential depth of frost penetration at the wall location shall not be considered in designing the wall for depth of leveling pad.

Submit the following to the engineer for review: complete design calculations, explanatory notes, supporting materials, specifications, and detailed plans and shop drawings for the proposed wall system. Sample analyses and hand output shall be submitted to verify the output by the software. The design calculations and notes shall clearly indicate the Capacity to Demand Ratios (CDR) for all internal stabilities as defined in AASHTO LRFD.

The wall submittal package shall be submitted electronically to the engineer and Structures Design Section. Submit all required information no later than 30 days prior to beginning construction of the wall. The detailed plans and shop drawings shall include all details, dimensions, quantities and cross-sections necessary to construct the walls.

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 General

The walls shall have 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 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 in accordance 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.

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.

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

The minimum embedment to the top of the leveling pad shall be 1 foot 6 inches or as given on the plan or given in AASHTO LRFD 11.10.2.2 whichever is greater. Step the leveling pad to follow the general slope of the ground line. 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.

B.3.2 Backfill

Furnish and place backfill for mechanically stabilized earth concrete panel walls as shown on the plans and as hereinafter provided.

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

Provide material conforming to the following gradation requirements as per AASHTO T27.

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	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.
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)

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. This certified report of test shall be less than 6 months old. Tests will be performed by a certified independent laboratory. Additional certified report of tests (except Angle of Internal Friction test) are required for every 2000 cubic yards of backfill used per wall. In addition, when backfill characteristics and/or sources change, a certified report of all tests will be provided for the new backfill material.

C Construction

C.1 Excavation and Backfill

Excavation will encompass preparing the leveling pad foundation and the area below the reinforcing strips in accordance 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.

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 density as determined by AASHTO T-99, Method C. Ensure that 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.

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 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.

C4 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.

C.4.2 Quality Control Personnel

Perform the quality control sampling, testing, and documentation required under this provision using HTCP certified technicians. Have a grading technician certified under HTCP at level I present at the each grading site during all wall backfill placement, compaction, and nuclear testing activities. Have a nuclear density technician certified under HTCP at level I 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 Quality Control (QC) Testing

Perform compaction testing on the backfill. Perform the quality control sampling, testing, and documentation required under this provision using HTCP certified technicians. Have a grading technician certified under HTCP at level I present at the site during all wall backfill operations, compaction, and nuclear testing activities. Have a nuclear density technician certified under HTCP at level I, or ACT certified technician, perform field density and field moisture content testing. Conform to CMM 8.15 for testing and gauge monitoring methods. The QC technician must retain a split sample for the region and deliver it to the region laboratory within 72 hours. Conduct testing at a minimum frequency of 1 test per 50 cubic yards of backfill, or major portion thereof. 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 and 5-point Proctor test every 750 cubic yards of fill and provide the region a split sample within 72 hours 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.4.5 Department Testing

C.4.5.1 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 2 business days after the department obtains the sample.

C.4.5.2 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 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 tests.

(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 split each QV sample, testing half for QV, and retaining the remaining half for 10 business days.

(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 this special provision, the department will take no further action. If QV test results are nonconforming, the area shall be reworked until the requirements of this special provision are met.

C.4.5.3 Independent Assurance (IA)

(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 C.4.5.4.

C.4.5.4 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 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 according to the Pay Plan Quantity article at the contract unit price under the following bid item:

at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0165.4710	Wall Concrete Panel Mechanically Stabilized Earth LRFD/QMP Pilot	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 and 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.

133. Temporary Wall Wire Faced Mechanically Stabilized Earth LRFD/QMP Pilot, Item SPV.0165.4720.

A Description

This special provision describes designing, furnishing materials and erecting a temporary earth retention system in accordance to the lines, dimension, elevations and details as shown on the plans and provided in the contract. The design life of the mechanically stabilized earth (MSE) wall and all wall components shall be 3 years minimum.

This special provision describes the quality management program (QMP) for 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 Wire Faced Mechanically Stabilized Earth Wall Systems

The supplied wall system must be from the department's approved list of Wire Faced Mechanically Stabilized Earth Wall systems (Wire Faced MSE Walls).

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 Design Section. The department maintains a list of pre-approved Wire Faced Mechanically Stabilized Earth (Wire Faced MSE) Wall systems. To be eligible for use on this project, a system must have been pre-approved and added to that list prior to the bid opening date. The name of the pre-approved proprietary wall system selected shall be furnished to the engineer within 25 days after the award of contract.

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 in accordance 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 Structures Design 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 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 Wire Faced MSE Walls shall be in compliance with the *AASHTO LRFD Bridge Design Specifications 5th Edition 2010*, (AASHTO LRFD) with latest interim specifications for Mechanically Stabilized Earth Walls, WisDOT's current *Standard Specifications for Highway and Structure Construction* (Standard Specifications), 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 in accordance to Table 11.5.6-1 LRFD.

Design and construct the walls in accordance to the lines, grades, heights and dimensions shown on the plans, as herein specified, and as directed by the engineer. 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 contract 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 in accordance 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 Wire Faced MSE Walls by the contractor shall consider the internal and compound stability of the wall mass in accordance 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.

The minimum embedment of the Wire Faced MSE wall shall be 1 foot 6 inches, or as given on the contract plan. Frost depth shall not be considered. The wall facings shall be designed in accordance to AASHTO 11.10.2.3. Geotextile filter fabric shall be used at the front face of the wall to retain the fines of the soil mass.

The nominal long term design strength to be used in steel reinforcement and connector design shall consider the corrosion losses and based upon conditions at the end of the design life. 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 a minimum of six 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 steel required for the reinforced soil zone shall be connected to the facings. The reinforcement and the reinforcement/facing connection strength shall be designed to resist maximum factored reinforcement loads in accordance to AASHTO LRFD Section 11.10.6. Facing connection strength shall be defined as the resistance factor times the failure load. 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 fabricated or designed to avoid piling, drainage structures or other obstacles in the fill without field modifications. Cutting or altering of the basic structural section of either the strip or grid at the site is prohibited unless approved by the Structures Design Section. A minimum clearance of 3" shall be maintained between any obstruction and reinforcement unless otherwise approved by the Structures Design Section. Splicing steel reinforcement is not allowed, unless approved by the Structures Design Section.

Submit the following to the engineer for review: complete design calculations, explanatory notes, supporting materials, specifications, and detailed plans and shop drawings for the proposed wall system. Sample analyses and hand output shall be submitted to verify the output by the software. The design calculations and notes shall clearly indicate the Capacity to Demand Ratios (CDR) for all internal stabilities as defined in AASHTO LRFD.

The wall submittal package shall be submitted electronically to the engineer and Structures Design Section. Submit all required information no later than 30 days prior to beginning construction of the wall. The detailed plans and shop drawings shall include all details, dimensions, quantities and cross-sections necessary to construct the walls.

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 Steel Components
Provide steel reinforcement that meets the following requirements:

B3.1.1 Welded Wire Fabric Soil Reinforcement
Provide shop fabricated welded wire reinforcement from cold drawn steel wire that has a yield stress of 65,000 psi and conforming to the minimum requirements of ASTM A-82 and be welded into the finished configuration in accordance 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.

B3.1.2 Steel Reinforcing Strips and Tie Strips
As an alternate to Welded Wire Reinforcing mesh, provide Steel Reinforcing strips or ladder Reinforcing strips or equal, hot-rolled from bars, to the required shape and dimensions meeting the requirements of ASTM A-572 Grade 65 minimum. Tie strips shall be shop fabricated of hot-rolled steel meeting the requirements of ASTM A-1011 Grade 50.

B3.1.3 Welded Wire Fabric Facing Panels
Provide welded wire fabric that is used to fabricate the facings of 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 in accordance 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.

B3.1.4 Fasteners
High strength bolts shall meet the requirements of AASHTO M164 or equivalent.

B3.1.5 Connector Pins and Mat Bars
Connector pins and mat bars fabricated from cold drawn steel wire shall meet the requirements of ASTM A-82..

B.3.2 Geotextile Filter Fabric
Use geotextile filter fabric as recommended by the wall manufacturer. If none is recommended, use Type DF (schedule B) as shown in standard spec 645 or as specified on the contract plans.

B.3.3 Backfill
Furnish and place backfill for Wire-Faced MSE wall as shown on the plans and as hereinafter provided.

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

Provide material conforming to the following gradation requirements as per AASHTO T27.

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	5 – 10.0
Sulfate content	AASHTO T-290	200 ppm max.
Chloride content	AASHTO T-291	100 ppm max.
Electrical Resistivity Organic Content	AASHTO T-288 AASHTO T-267	3000 ohm/cm min. 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)

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. This certified report of test shall be less than 6 months old. Tests will be performed by a certified independent laboratory. Additional certified report of tests (except Angle of Internal Friction test) are required for every 2000 cubic yards of backfill used per wall. In addition, when backfill characteristics and/or sources change, a certified report of all tests will be provided for the new backfill material.

C Construction

C.1 Excavation and Backfill

Excavation will encompass preparing the foundation and the area below the reinforcing strips in accordance 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 materials or large equipment within 10 feet of the back of the wall.

Stagger vertical joints in the welded wire facing.

C.2 Compaction

Compact all backfill behind the wall as specified in 207.3.6. Compact the backfill to 95.0% of maximum density as determined by AASHTO T-99, Method C. Ensure that 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 wall face. Compact the backfill to 95.0% of maximum density as determined by AASHTO T-99, Method C.

Erect welded wire 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. Place remaining courses in vertical or battered positions as shown on the contract plans.

The MSE reinforcement shall lay horizontally on 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 Tolerances

The overall vertical tolerance of the wall and the horizontal alignment tolerance shall not exceed 3 inches per 10 feet for temporary installations.

For battered wire facing, the final deviation from the design batter shall be within ±1 inch for each 10 feet of battered wall height.

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.

C.4.2 Quality Control Personnel

Perform the quality control sampling, testing, and documentation required under this provision using HTCP certified technicians. Have a grading technician certified under HTCP at level I present at the each grading site during all wall backfill placement, compaction, and nuclear testing activities. Have a nuclear density technician certified under HTCP at level I 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 Quality Control (QC) Testing

Perform compaction testing on the backfill. Perform the quality control sampling, testing, and documentation required under this provision using HTCP certified technicians. Have a grading technician certified under HTCP at level I present at the site during all wall backfill operations, compaction, and nuclear testing activities. Have a nuclear density technician certified under HTCP at level I, or ACT certified technician, perform field density and field moisture content testing. Conform to CMM 8.15 for testing and gauge monitoring methods. The QC technician must retain a split sample for the region and deliver it to the region laboratory within 72 hours. Conduct testing at a minimum frequency of 1 test per 50 cubic yards of backfill, or major portion thereof. 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 and 5-point Proctor test every 750 cubic yards of fill and provide the region a split sample within 72 hours 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.4.5 Department Testing

C.4.5.1 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 2 business days after the department obtains the sample.

C.4.5.2 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 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 tests.

(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 split each QV sample, testing half for QV, and retaining the remaining half for 10 business days.

(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 this special provision, the department will take no further action. If QV test results are nonconforming, the area shall be reworked until the requirements of this special provision are met.

C.4.5.3 Independent Assurance (IA)

(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 C.4.5.4.

C.4.5.4 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 Temporary Wall Wire Faced Mechanically Stabilized Earth LRFD/QMP Pilot 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 according to the Pay Plan Quantity article at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0165.4720	Temporary Wall Wire Faced Mechanically Stabilized Earth LRFD/QMP Pilot	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; constructing the retaining system and 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 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.

134. Geogrid Reinforcement, Item SPV.0180.0001.

A Description

This special provision describes furnishing and installing geogrids for subgrade stabilization, base reinforcement, or pavement structure applications in accordance to the plans, standard spec 645, and as hereinafter provided.

B Materials

Provide geogrid that consists of either single or joined multiple layers of a uniform rectangular grid of bonded, formed, or fused polymer tensile strands crossing with a nominal right angle orientation. The polymer shall consist of polyester, polypropylene, polyamide, or polyethylene. The grid shall maintain dimensional stability during handling, placing, and installation. The geogrid shall be insect, rodent, mildew, and rot resistant. Minimum geogrid width shall be 6.0 feet.

Provide geogrid that complies with the following physical properties:

Test	Method	Value [1]
Tensile Strength at 5% Strain, Both Principal Directions (lb/ft)	ASTM D 4595 [2]	450 min.
Flexural Rigidity Both Principal Directions (mg-cm)	ASTM D 1388 [3]	150,000 min.
Aperture Area (in^2)	Inside Measurement [4]	5.0 max
Aperture Dimension (in)	Inside Measurement [4]	0.5 min.

- [1] All numerical values represent minimum/maximum average roll values, i.e. the average minimum test results on any roll in a lot should meet or exceed the minimum specified value.

- [2] The tensile strength (T) of a joined multi-layered geogrid shall be computed using the following equation:

$$T = n(f)t$$

where

n = the number of individual layers in the joined multi-layered geogrid,

t = the tensile strength of a single layer of geogrid as determined using testing method ASTM D4595, and

f = reduction factor based on the number of layers comprising the multi-layered system and determined by the equation f=1.00 - [0.04(n - 1)].

- [3] Values shall be determined by Option "A" (Cantilever Test) of testing method ASTM D1388 using test specimens that are 36 inches ±0.04 inch long. Test specimen widths for differing geogrids shall be variable and equal to one element plus ½ the aperture width on both sides of that element. An element is defined as the minimum number of parallel strands that form a distinguishable repeating pattern.

- [4] Aperture Area and Aperture Dimension for joined multi-layer geogrids shall be determined based on measurement of a single layer of the geogrid.

Protect the geogrid from ultraviolet radiation and from damage due to shipping and handling. Keep the geogrid dry until it is installed. The geogrid rolls shall be clearly marked to identify the material contained.

Deliver a sample of the geogrid material to the engineer at least ten days prior to its incorporation into the work. At the same time, furnish a manufacturer's Certified Report of Test or Analysis that verifies that the geogrid delivered for use on the work meets the above requirements. Samples of geogrid for test purposes will be obtained from the job site for each 10,000 square yards or portions thereof used on the contract.

C Construction

Prior to placement of the geogrid, bring the indicated placement surface to the required lines, grades, and dimensions as shown on the plans. Smooth and shape the surface to eliminate any rocks, clods, roots, or other items that may cause damage to the geogrid during placement or covering.

Place the geogrid on the prepared surface at the locations and to the limits as shown on the plans. After placement, pull the geogrid taut and secure it using pins, clips, staples, or other devices to prevent movement or displacement. Place parallel strips of geogrid with a minimum overlap of 24 inches. Lap butt joints between roll ends a minimum of 12 inches. Fasten all lapped sections together by using ties, straps, clips, or other devices to develop a secure joint that meets the approval of the engineer. No vehicles or construction equipment shall be permitted to operate directly on the geogrid.

Cover small rips, tears, or defects in the geogrid with an additional section of geogrid; secure the additional geogrid in place so that it overlaps the damaged area by at least 3 feet in all directions. Remove and replace geogrid sections with large rips, tears, defects, or other damage at the direction of the engineer. Take responsibility for all costs to repair or replace damaged or defective geogrid.

After placement, cover the geogrid to the indicated depth with the type of material required on the plans or in the special provisions. Placing, spreading, and compacting of this material shall comply with the applicable sections of the standard specifications or special provisions except that the initial lift of material placed on the geogrid must be at least 4 inches. Place, spread, and compact the required backfill material so that the geogrid is not displaced or damaged. The engineer may require changes in equipment and/or operations to prevent such damage or displacement.

D Measurement

The department will measure Geogrid Reinforcement by the square yard of surface area upon which the geogrid has been placed, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0180.0001	Geogrid Reinforcement	SY

Payment is full compensation for furnishing, transporting, and installing the geogrid; furnishing and installing all devices and materials necessary to join or secure the geogrid in place.

135. Geotextile Fabric Type FF, Item SPV.0180.0002.

A Description
This special provision describes furnishing, installing and removing geotextile fabric and fabric hold down systems for filtering storm water, as shown in the plans and as hereinafter provided.

B Materials
Furnish type FF geotextile fabrics conforming to standard spec 645.2.1 except use a woven polypropylene fabric. Furnish type FF geotextile fabrics selected from the department's erosion control product acceptability list (PAL). Obtain copies of the erosion control PAL and prequalification procedure from the Bureau of Technical Services.

C Construction
Meet the pertinent requirements as set forth in standard spec 645.3 and as follows:

Install in accordance to the plan details for the intended use in such a manner to preclude ripping and tearing of the fabric, or otherwise rendering the fabric or assembly ineffective for its intended use.

D Measurement
The department will measure Geotextile Fabric, Type FF by the square yard of surface area of the fabric placed and accepted in accordance to 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.0180.0002	Geotextile Fabric, Type FF	SY

Payment is full compensation for furnishing, transporting, installing and removing the fabric and fabric hold down systems.

136. Removing Rumble Strips, Item SPV.0180.0004.

A Description
Remove existing rumble strips located in existing concrete shoulder along I-94 North/South Corridor, as shown on the plans, and in accordance to the pertinent

provisions of standard spec 204, and as hereinafter provided. The milled area shall be filled with asphaltic surface temporary.

B Materials
Furnish asphaltic surface temporary that is in accordance to the pertinent provisions of this contract and standard spec 465.

C Construction
The existing rumble strips shall be milled to a 0.75-inch minimum depth below the lowest corrugation. Clean the milled area prior to placement of tack coat. Fill the milled area with asphaltic surface temporary to provide a smooth driving surface as directed by the engineer. If the rumble strip ends at or near a concrete joint, mill out an additional 1 foot of concrete past the joint and fill with asphalt.

D Measurement
The department will measure Removing Rumble Strips by the square yard of existing rumble strip, prior to removal by milling, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0180.0004	Removing Rumble Strips	SY

Payment is full compensation for milling existing rumble strips; cleaning and tacking; furnishing, placing and compacting asphaltic surface temporary; and for disposal of all materials.

137. Concrete Pavement Repair Special, Item SPV.0180.0007.

A Description
This special provision describes the excavating, grading, compacting, and finishing necessary to accommodate Concrete Pavement Repair Special as shown on the plans and in accordance to the pertinent requirements of the standard specifications, and as hereinafter provided.

B Materials
Conform to standard spec 416.2.

C Construction
Conform to standard spec 416.3 and as modified in this special provision.

Backfill all subgrade voids beneath the repair area using compacted Base Aggregate Dense. Obtain approval of the engineer before using Backfill Controlled Low Strength. to backfill voids that cannot be compacted with standard equipment.

Adjust and reset any castings for all drainage structures within the repair area prior to the placement of the Concrete Pavement.

D Measurement
The department will measure Concrete Pavement Repair Special by the square yard acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0180.0007	Concrete Pavement Repair Special	SY

Payment for the Concrete Pavement Repair Special item is full compensation for furnishing, hauling, preparing, placing, curing, and protecting all materials; for removing and disposing of existing pavements and excavated materials; for repairing asphaltic shoulders; for sawing joints; for tie bars and dowel bars provided and placed in the repair area; for sawing existing pavement for removal; for adjusting castings; for preparing the foundation; for backfilling; and for testing concrete cylinders. The department will pay for individual repairs the width of the existing concrete lane or shoulder and less than 300 feet long as Concrete Pavement Repair Special.

The department will pay for Base Aggregate Dense and/or Backfill Controlled Low Strength separately under the respective bid items.
SEF Rev. 13_0614

138. Topsoil Special, Item SPV.0180.0008.

A Description
This special provision section describes furnishing, placing, spreading, and finishing humus-bearing soil, adapted to sustain plant life, commonly known as topsoil, from locations the contractor furnishes beyond the limits of the right-of-way.

This special provision also describes removing topsoil from the sites of proposed roadway excavations and embankments in amounts and depths available and necessary to cover the work slopes. This work also includes reclamation, placing, spreading, and finishing of this topsoil.

B Materials
Furnish material that is relatively free from large roots, sticks, weeds, brush, stones, litter, and waste products.

Furnish material, either obtained offsite, or material obtained within project limits, consisting of loam, sandy loam, silt loam, silty clay loam, or clay loam humus-bearing soils adapted to sustain plant life. Do not use surface soils from ditch bottoms, drained ponds, and eroded areas, or soils which are supporting growth of NR 40 listed plants and

noxious weeds or other undesirable vegetation. Ensure that the material conforms to the following:

Topsoil Requirements	Minimum Range	Maximum Range
Material Passing 2.00 mm (#10) Sieve*	90%	100%
PH Range	6.0	7.0
Organic Matter**	5%	20%
Clay	5%	30%
Silt	10%	70%
Sand and Gravel	10%	70%

*See standard spec 625.3.3 for sieve requirements when using either sod or seed mixture 40.

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

C Construction

C.1 Preparing the Roadway for Topsoil

Undercut or underfill all areas designated to receive topsoil to a degree that if covered to the required depth with topsoil the finished work conforms to the required lines, grades, slopes and cross sections the plans and drawings show.

C.2 Processing Topsoil

Mow topsoil procurement areas to a height of approximately 6 inches. Remove litter such as brush, rock, and other materials that will interfere with subsequent vegetation establishment.

Strip off the humus-bearing soil. Take care to minimize removing the underlying sterile soil. Then stockpile the topsoil on the right-of-way or place it directly on the designated areas.

Obtain topsoil from embankment areas outside the roadway foundation only if that additional material is required to cover the slopes, and conforms to the requirements of section B above. Utilize excess topsoil on the project or dispose of as specified in standard spec 205.3.12.

C.3 Placing Topsoil

After preparing and finishing the areas designated for topsoil to the required lines, grades, slopes and cross section, place and spread the topsoil to a uniform depth as the plans show or the contract requires. If no depth is shown, place and spread the topsoil to a minimum depth of 4 inches in rural areas and a minimum depth of 6 inches in urban areas, or as the engineer designates.

Break down all clods and lumps using appropriate equipment to provide a uniformly textured soil.

Where using either sod or seed mixture 40 ensure that, for the upper 2 inches, 100 percent of the material passes a one-inch sieve and at least 90 percent passes the No. 10 sieve.

Remove rocks, twigs, foreign material, and clods that cannot be broken down. Dress the entire surface to present a uniform appearance. The engineer will not require rolling.

If light sandy soils are covered with heavier clay bearing loam topsoil, then mix or blend the 2 types of soils to a more or less homogeneous mixture by using the appropriate equipment.

D Measurement

The department will measure Topsoil Special acceptably completed by the square yard, acceptably completed. The measured quantity shall equal the actual number of square yards of topsoiled area to the depth specified within the limits of construction designated on the plans, or in the contract, or as the engineer directs.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0180.0008	Topsoil Special	SY

Payment for Topsoil is full compensation for removing, stockpiling, reclaiming, providing, processing, excavating, loading, hauling, and placing this material; and for undercutting excavations, or underfilling embankments necessary to receive this material. The department will make no allowance, adjustment, or measurement for payment under the Excavation bid items for undercutting cut sections, underfilling embankments, or deductions for materials obtained from areas of cut sections.

If an area is damaged by erosion after partial acceptance, the department will pay for restoring topsoil in these areas at a unit price determined by multiplying the contract unit price bid for Topsoil multiplied by 3, The department will pay for restoration under the Restoration Post Acceptance Topsoil administrative item.

The department will not pay for removing topsoil from outside the roadway foundation in embankment areas unless that material is necessary to cover the slopes.

139. Concrete Pavement 12-Inch Special, Item SPV.0180.0009.

A Description

This special provision describes specialized material and construction requirements to utilize on the Zoo Interchange mainline pavement and shoulders.

Conform to standard specs 415 and 501 of the as modified in this special provision, and in accordance to special provision QMP Concrete Pavement Special Requirements.

Concrete pavement mixes from standard spec 501 may not be used. Provide an independent contractor developed mix design.

B Materials
B.1 Concrete
Add the following to standard spec 415.2.1

Furnish a cementitious material that does not contain more than 30% slag. Ensure that the combination of fly ash and slag does not exceed 30% of the total cementitious material.

B.2 Reinforcement
Replace standard spec 415.2.2 with the following:

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

Furnish dowel bars conforming to standard spec 505.2.6 except, for transverse joints in mainline concrete pavement, use non-corrosive high performance dowel bars. Use only one type of high performance bar for work under the contact. The following may be used:

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.

6. Use bars with a minimum outside diameter of 1.5-inches and a length of 18-inches for all non-corrosive high performance dowel bars.

B.3 Concrete Curing Compounds
Replace standard spec 415.2.4 with the following:

Furnish poly-alpha-methylstyrene membrane curing compound conforming to ASTM C 309 as modified below.

Total Solids (% by weight of compound)	42 Minimum
% Reflectance in 72 hours (ASTM E1347)	65 Minimum
Loss of Water, kg/m2 in 24 hours (ASTM C156)	0.15 Maximum
Loss of Water, kg/m2 in 72 hours (ASTM C156)	0.40 Maximum
VOC content (g/L)	350 Maximum
Infrared Spectrum, Vehicle	100% alpha methylstyrene

B.4 Coarse Aggregates
B.4.1 General
Replace standard spec 501.2.5.4.1 with the following:

Use clean, hard, durable crushed limestone with 100% fractured surfaces and free of an excess of thin or elongated pieces, frozen lumps, vegetation, deleterious substances or adherent coatings considered injurious.

Use virgin aggregates only.

B.5 Deleterious Substances
Replace standard spec 501.2.5.4.2(1) with the following:

The amount of deleterious substances shall not exceed the following percentages:

DELETERIOUS SUBSTANCE	PERCENT BY WEIGHT
Shale	1.0
Coal	1.0
Clay lumps	0.3
Soft fragments	3.0
Any combination of above	3.0
Thin or elongated pieces based on a 3:1 ratio	15.0
Materials passing the No. 200 (75 µm) sieve	1.5
Chert[1]	3.0

[1] Material classified lithologically as chert and having a bulk specific gravity (saturated surface-dry basis) of less than 2.45. Determine the percentage of chert by dividing the weight of chert in the sample retained on a 3/8-inch (9.5 mm) sieve by the weight of the total sample.

B.6 Physical Properties
Replace standard specs 501.2.5.4.3 (1) & (2) with the following:

The percent wear shall not exceed 30%.

The department will ensure that soundness testing conforms to AASHTO T 104, using five cycles in sodium sulfate solution on aggregate retained on the No. 4 (4.75 mm) sieve. The weighted loss shall not exceed 6 percent.

The department will ensure that freeze-thaw soundness testing confirms to AASHTO T 103. The weighted freeze-thaw average loss shall not exceed 15 percent.

B.7 QMP Testing Requirement Modification

B.7.1 Concrete Pavement Mixes

Testing referred to in this section pertains to concrete mix design approval and trial batch proving.

In addition to B.5.2.3.2 paragraph one of the QMP Concrete Pavement Special Requirements provision of this contract, use at least five pairs of beams and five pairs of cylinders to demonstrate the flexural strength of a mix design. Demonstrate that the 28-day flexural strength of the proposed mix will equal or exceed 650 psi. Ensure that the average flexural strength of any one pair of beams is not less than 490 psi.

B.7.2 Contractor Testing

B.7.2.1 General

Perform all quality control tests applicable to this special provision and as described in the quality control plan. Use the test methods identified below to perform the required tests:

Flexural strength……AASHTO T 97

The department may periodically observe contractor sampling and testing, and direct additional contractor sampling and testing for department evaluation. Ensure that all test results are available for the engineer's review at any time during normal working hours.

B.7.3 Flexural Strength

B.7.3.1 Sampling

Cast specimens for testing flexural strength in each lot tested under the QMP Concrete Pavement Special Requirements provision of this contract. Cast compressive strength and flexural strength test specimens from the same concrete mix sample.

Sample according to AASHTO T 141. Cast and cure the specimens according to AASHTO T 23.

Cast one set of three standard 6 x 6 inch beams to test the lot flexural strength.

B.7.3.2 Testing

Have a technician certified for flexural strength through the department’s HTCP, in a department-qualified laboratory, perform flexural strength testing and document the results.

Determine the 28-day strength in psi of each specimen according to the specified AASHTO standards for each required test. Test each specimen to failure. Use a machine that automatically records the date, time, rate of loading, and maximum load of each specimen. Include a printout of this information with the strength documentation for each specimen tested.

C Construction

C.1 Jointing

C.1.1 General

Add the following to standard spec 415.3.7.1:

Treat sawed surfaces of transverse and longitudinal joints with a silane joint sealant found on the departments approved products list for Concrete Protective Surface Treatments. Prepare surface by pressure washing all saw slurry from sawed joints and allow to dry thoroughly prior to application of silane sealer. Apply the product directly to the interior of the sawed joint. Do not use the broadcast spray method of application.

C.2 Surface Finishing

Replace standard spec 415.3.8.3.1 with the following:

Tine freshly placed pavement as soon as it is practical after floating.

Tine with a self-propelled tining machine. Where using a tining machine is not practical, tine by hand. Produce uniformly deep grooves approximately 1/8 to 3/16 inch (3 mm to 5 mm) deep. Provide a finished surface free of tining defects. Complete before tining tears or unduly roughens the concrete.

Tine surface longitudinally as specified in standard spec 415.3.8.3.2.

C.3 Curing Concrete

C.3.1 General

Replace standard spec 415.3.12.1 with the following:

Maintain adequate moisture throughout the concrete mass to support hydration until the concrete develops sufficient strength to open it to service. Cure all concrete by impervious coating as specified in standard spec 415.3.12.2 within 75 minutes from the time concrete is discharged from the truck.

If the concrete is not cured as specified in the subsection, the engineer may suspend concrete placement operations.

C.4 Extended Delivery Time

Delete paragraph one from standard spec 501.3.2.4.3.3.

C.5 Ready-Mixed Concrete

C.5.1 General

Replace standard spec 501.3.5.1 with the following:

Use central-mixed concrete for all work under this special provision. Central-mixed concrete is completely mixed in a stationary mixer and transported to the point of delivery with or without mechanical agitation in the transporting vehicle.

C.6 Hot Weather Concreting

C.6.1 General

Replace standard spec 501.3.8.2.1 with the following:

Take the following steps to ensure that the concrete will cure during hot weather conditions. Submit a written temperature control plan at or before the pre-pour meeting. In that plan, outline the actions to control concrete temperature if the concrete temperature at the point of placement exceeds 80° F (27° C). Do not place concrete without the engineer's written acceptance of that temperature control plan. Perform the work as outlined in the temperature control plan.

If the air temperature exceeds 80° F (27° C) ensure that the asphalt base is in a moist condition during concrete placement. Water the asphalt base, as required, not less than six hours before placing the concrete. If the asphalt base subsequently dries, moisten it by sprinkling water just before placing the concrete. Sprinkle the water to avoid forming pools.

If the concrete temperature at the point of placement exceeds 90° F (32° C), do not place concrete for items covered in this special provision.

Notify the engineer whenever conditions exist that might cause the temperature at the point of placement to exceed 80° F (27° C). If project information is not available, obtain information from similar mixes placed for other nearby work.

Any additive or action taken to control the temperature of concrete to within the limits of this special provision, including but not limited to the addition of ice to the concrete mix, is considered incidental to the work and will not be measured or paid for separately.

D (Vacant)

E Payment

Conform to standard spec 415.5 and as modified in this special provision.

Replace paragraph one of standard spec 415.5.1 with the following:.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0180.0009	Concrete Pavement 12-Inch Special	SY

E.1 Pay Adjustment for Compressive Strength
The department will adjust pay for each lot using percent within limits (PWL) of the 28-day sublot average strengths for that lot. The department will measure PWL relative to the lower specification limit of 4500 psi.
SEF Rev. 13_1210

140. Slope Paving Crushed Aggregate Special Item SPV.0180.4800.

A Description
Furnish, crush and place aggregate for slope paving and apply an epoxy resin binder with the aggregate, as shown in the plans, in accordance to the applicable provisions of standard spec 604, and as hereinafter provided.

B Materials
B.1 General
The epoxy resin binder shall be a low modulus, medium-viscosity, two-component epoxy resin.

Furnish evidence, to the satisfaction of the engineer, that the proposed product has been successfully used in a similar application.

Epoxy resin binder shall be clear to light amber when fully cured.

Crushed aggregate shall be native Wisconsin limestone with hues of tan, amber and gray. Crushed aggregate shall have 100% fractured faces.

Crushed aggregate shall conform to the following nominal requirements:

Sieve Size	Percent by Weight Passing
4-Inch	100
1-Inch	0-25

B.2 Minimum Requirements.
The epoxy resin binder shall conform to ASTM C-881 and AASHTO M-235 specifications and the following requirements:

- Total water absorption, ASTM D-570
  7 day, 1.3% (2 hour boil)
  14 day, 0.232% (24 hour immersion)
  Viscosity: 2,500 cps

C Construction

C.1 Application

The binder shall be applied in accordance to the manufacturer's directions, uniformly over the surface of the paving at a rate sufficient to assure penetration and binding of the particles in the upper 2 inches of the aggregate blanket. Application of the binder shall take place utilizing a two part sprayer with mixing completed at the nozzle.

Apply and mix epoxy resin binder under dry conditions only. Do not apply if rain is expected within 8 hours following epoxy resin application to crushed aggregate.

Air and surface temperature should be between 50 and 90 degrees Fahrenheit during and for 24 hours following application and mixing of the epoxy resin binder.

Protect installed crushed aggregate with epoxy resin binder from excessive dust exposure for the first 4 hours of curing.

C.2 Test Section

Prior to placing slope paving, prepare a test section utilizing the proposed aggregate and epoxy resin binder so the engineer will be able to assess the adequacy of the product and the application and mixing methods to yield the desired results. Test section to be 3-feet x 3-feet and a minimum of 4-inches thick. Notify the engineer no less than 24 hours in advance of preparing the test section to allow him time to arrange for witnessing the epoxy resin binder application and mixing with the aggregate. Test section shall be allowed to cure according to product manufacturer’s requirements before the engineer will accept the product for use on the final structures.

If the test section is not accepted, prepare another test section and repeat the process, using either a different aggregate or epoxy resin binder. Repeat this procedure until the engineer accepts the test section. Use the same aggregate and epoxy resin binder means and methods when installing the product under each structure that were used in preparing the accepted test section.

D Measurement

The department will not measure Slope Paving Crushed Aggregate Special. The department will use pay plan quantity according to the Pay Plan Quantity article of these special provisions.

E Payment

The department will pay for plan quantities according to the Pay Plan Quantity article at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0180.4800	Slope Paving Crushed Aggregate Special	SY

Payment is full compensation for furnishing, crushing and placing crushed aggregate; for furnishing, mixing and applying the epoxy resin binder to the aggregate; for preparing the subsurface; for cleaning any splatter of epoxy resin binder to adjacent pavement or structures; and for making and disposing of the test section.

141. Cold Patch, Item SPV.0195.0001.

A Description

This special provision describes furnishing, stockpiling, placing, and maintaining cold patch material. The cold patch material shall be used for short term maintenance purposes to fill potholes/voids in the existing pavement surface that the engineer deems necessary.

B Materials

B.1 General

Furnish cold patch that is a combination of course aggregate, natural sand and bituminous material MC-250. The mixture shall be designed to have a workability range of 15ºF-100º F without the addition of heat. The mixture shall have good adhesion to wet surfaces and be resistant to damage by water, salt and deicing products. The mixture shall be uniform and not require any mixing or special handling prior to use.

B.2 Gradations

Conform to the following gradation requirements:

SIEVE SIZE	PERCENT PASSING (by weight)
3/8 Inch (9.5mm)	96 - 100
No. 4 (4.75 mm)	76 - 82
No. 8 (2.38mm)	50 - 60
No. 50 (.297mm)	15 - 20
No. 200 (.074mm)	2 - 5
Bitumen	4.8 - 5.2

C Construction

C.1 General

Choose a smooth, firm, and well-drained area for an on-site stockpile that is cleared of vegetation and foreign material that may contaminate the cold patch. The stockpile shall be easily accessible and able to be maintained and replenished at any time during the duration of the project.

Application of the cold patch must be able to be accomplished by hand labor. Prior to filling any potholes/voids all ponded water and loose debris shall be removed. Place material into the pothole/void and compact flush with a tamper, roller, or vehicle tire. Traffic must be able to travel over the patch immediately after installation.

D Measurement
The department will measure Cold Patch by the ton stockpiled on site, 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.0195.0001	Cold Patch	Ton

Payment for cold patch is full compensation for the patch; furnishing and providing a stockpile of material; preparing the pothole/void for material placement, stockpiling, placing, compacting, and maintaining, and all incidentals necessary to complete the contract work.

The contractor shall be compensated for any unused stockpile quantities remaining on site at the completion of the project, thus the stockpile is not to exceed 10 tons on site at any given time unless approved by the engineer.

Any unused portions of the stockpile shall be removed and disposed of at the completion of the project unless otherwise directed by the engineer. This work shall be completed at no additional expense to the department.
SEF Rev. 12_0604

142. Asphaltic Pavement Repair Special, Item SPV.0195.0003.

A Description
This special provision describes the excavating, grading, compacting, and finishing necessary to accommodate Asphaltic Pavement Repair Special as shown on the plans and in accordance to the pertinent requirements of the standard specifications, and as hereinafter provided.

B Materials
Replace standard spec 460.2.8 with the following:

Submit a mix design under the Asphaltic Pavement Repair Special bid item. Furnish an asphaltic mixture meeting the requirements specified for either type E-10 under standard spec 460.2.

Provide asphaltic material PG 64-22 for this mix in accordance to standard spec 455.

Provide tack coat that is in accordance to standard spec 455.2.5.

C Construction
Conform to standard spec 315.3.1.

Backfill all subgrade voids beneath the repair area using compacted Base Aggregate Dense. Upon approval of the engineer, backfill voids that cannot be compacted with standard equipment with Backfill Controlled Low Strength.

Adjust and reset any castings for all drainage structures within the repair area prior to the placement of Asphaltic Pavement.

D Measurement
The department will measure Asphaltic Pavement Repair Special by the ton, 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.0195.0003	Asphaltic Pavement Repair Special	TON

Payment for the Asphaltic Pavement Repair Special item is full compensation for sawing joints, sawing existing pavement, for removing and disposing of existing pavements and excavated materials, preparing the foundation, adjusting castings, placing tack coat, providing and placing the asphaltic mixture (including asphaltic material), The department will pay for individual repairs the width of the existing lane or shoulder and less than 100 feet long as Asphaltic Pavement Repair Special.

The department will pay for Base Aggregate Dense and/or Backfill Controlled Low Strength separately under the respective bid items.
SEF Rev. 13_0613

143. HMA Longitudinal Joint Repair, Item SPV.0195.0004.

A Description
This special provision describes the milling, brooming, placing of HMA, and maintenance of the HMA Longitudinal Joint Repair item in accordance to the pertinent requirements of the standard specifications, and as hereinafter provided.

B Materials
Delete standard spec 460.2.8.

Submit a mix design under the Asphaltic Pavement Repair Special bid item. Furnish an asphaltic mixture meeting the requirements specified for either type E-10 under standard spec 460.2.

Provide asphaltic material PG 64-22 for this mix in accordance to standard spec 455.

Provide tack coat that is in accordance to standard spec 455.2.5.

C Construction

C.1 General

Mill out an area no less than 2.0 feet wide to a depth down to the existing concrete pavement. The length of the repair will be determined by the engineer.

Clean the existing exposed concrete pavement surface with a power broom or other suitable equipment to remove millings or other objectionable matter prior to placing any HMA.

Conform to standard spec 315.3.1 for placement of the HMA pavement.

C.2 Maintenance

Maintain work done under the HMA Longitudinal Joint Repair item for the duration of the contract. This includes remilling and replacement of additional HMA pavement if required as determined by the engineer.

D Measurement

The department will measure HMA Longitudinal Joint Repair by the ton, 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.0195.0004	HMA Longitudinal Joint Repair	TON

Payment for the HMA Longitudinal Joint Repair item is full compensation for milling the existing asphaltic surface, hauling and disposing of existing pavements, brooming the milled area prior to placing the HMA pavement, placing tack coat, providing and placing the asphaltic pavement mixture (including asphaltic material), and for maintaining the HMA Longitudinal Joint Repair.

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 __6__ *(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://www.dot.wisconsin.gov/business/engrserv/dbe-main.htm

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 at

http://app.mylcm.com/wisdot/Reports/WisDotUCPDirectory.aspx

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 at

http://www.dot.wisconsin.gov/business/engrserv/docs/dbe-trucking-notice.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://www.dot.wisconsin.gov/business/engrserv/docs/policyreplacingdbe.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 PROVISIONS 5

Fuel Cost Adjustment

A Description

Fuel Cost Adjustments will be applied to partial and final payments for work items categorized in Section B as a payment to the contractor or a credit to the department. ASP-5 shall not apply to any force account work.

B Categories of Work Items

The following items and Fuel Usage Factors shall be used to determine Fuel Cost Adjustments:

(1) Earthwork.		Unit	Gal. Fuel Per Unit
205.0100	Excavation Common	CY	0.23
205.0200	Excavation Rock	CY	0.39
205.0400	Excavation Marsh	CY	0.29
208.0100	Borrow	CY	0.23
208.1100	Select Borrow	CY	0.23
209.0100	Backfill Granular	CY	0.23
350.0102	Subbase	CY	0.28
350.0104	Subbase	Ton	0.14
350.0115	Subbase 6-Inch	SY	0.05
350.0120	Subbase 7-Inch	SY	0.05
350.0125	Subbase 8-Inch	SY	0.06
350.0130	Subbase 9-Inch	SY	0.07
350.0135	Subbase 10-Inch	SY	0.08
350.0140	Subbase 11-Inch	SY	0.09
350.0145	Subbase 12-Inch	SY	0.09

C Fuel Index

A Current Fuel Index (CFI) in dollars per gallon will be established by the Department of Transportation for each month. The CFI will be the price of No. 2 fuel oil, as reported in U.S. Oil Week, using the first issue dated that month. The CFI will be the average of prices quoted for Green Bay, Madison, Milwaukee and Minneapolis.

The base Fuel Index (BFI) for this contract is $2.90 per gallon.

D Computing the Fuel Cost Adjustment

The engineer will compute the ratio CFI/BFI each month. If the ratio falls between 0.85 and 1.15, inclusive, no fuel adjustment will be made for that month. If the ratio is less than 0.85 a credit to the department will be computed. If the ratio is greater than 1.15 additional payment to the contractor will be computed. Credit or additional payment will be computed as follows:

(1) The engineer will estimate the quantity of work done in that month under each of the contract items categorized in Section B.

(2) The engineer will compute the gallons of fuel used in that month for each of the contract items categorized in Section B by applying the unit fuel usage factors shown in Section B.

(3) The engineer will summarize the total gallons (Q) of fuel used in that month for the items categorized in Section B.

(4) The engineer will determine the Fuel Cost Adjustment credit or payment from the following formula:

$$FA = \left(\frac{CFI}{BFI} - 1 \right) x\ Q\ x\ BFI$$

(plus is payment to contractor; minus is credit to the department)

Where	FA	=	Fuel Cost Adjustment (plus or minus)
	CFI	=	Current Fuel Index
	BFI	=	Base Fuel Index
	Q	=	Monthly total gallons of fuel

E Payment

A Fuel Cost Adjustment credit to the department will be deducted as a dollar amount each month from any sums due to the contractor. A Fuel Cost Adjustment payment to the contractor will be made as a dollar amount each month.

Upon completion of the work under the contract, any difference between the estimated quantities and the final quantities will be determined. An average CFI, calculated by averaging the CFI for all months that fuel cost adjustment was applied, will be applied to the quantity differences. The average CFI shall be applied in accordance with the procedure set forth in Section D.

ADDITIONAL SPECIAL PROVISION 6

ASP 6 - Modifications to the standard specifications

Make the following revisions to the 2014 edition of the standard specifications:

101.3 Definitions

Replace the definition of semi-final estimate with the following effective with the December 2013 letting:

Semi-final estimate An estimate indicating the engineer has measured and reported all contract quantities and materials requirements.

105.11.1 Partial Acceptance

Replace paragraph two with the following effective with the December 2013 letting:

(2) Partial acceptance will relieve the contractor of maintenance responsibility for the designated portion of the work. By relieving the contractor of maintenance, the department does not relieve the contractor of responsibility for defective work or damages caused by the contractor's operations. Do not construe partial acceptance to be conditional final acceptance or final acceptance of any part of the project, or a waiver of any legal rights specified under 107.16.

105.11.2 Final Acceptance

Retitle and replace the entire text with the following effective with the December 2013 letting:

105.11.2 Project Acceptance

105.11.2.1 Inspection

105.11.2.1.1 General

(1) Notify the engineer when the project is substantially complete as defined in 105.11.2.1.3. As soon as it is practical, the engineer will inspect the work and categorize it as one of the following:

1. Unacceptable or not complete.
2. Substantially complete.
3. Complete.

105.11.2.1.2 Unacceptable or Not Complete

(1) The engineer will identify, in writing, work that is unacceptable or not complete. Immediately correct or complete that work. The engineer will assess contract time until the work is corrected or completed.

(2) Proceed as specified in 105.11.2.1.1 until the engineer determines that the work is complete.

105.11.2.1.3 Substantially Complete

(1) The project is substantially complete and the engineer will no longer assess contract time if the contractor has completed all contract bid items and change order work, except for the punch-list. As applicable, the following must have occurred:

1. All lanes of traffic are open on a finished surface.
2. All signage and traffic control devices are in place and operating.
3. All drainage, erosion control, excavation, and embankments are completed.
4. All safety appurtenances are completed.

(2) The engineer will provide a written punch-list enumerating work the contractor must perform and documents the contractor must submit before the the engineer will categorize the work as complete.

1. Punch-list work includes uncompleted cleanup work required under 104.9 and minor corrective work. Immediately correct or complete the punch-list work. The engineer may restart contract time if the contractor does not complete the punch-list work within 5 business days after receiving the written punch-list. The engineer and contractor may mutually agree to extend this 5-day requirement.
2. Punch-list documents include whatever contract required documentation is missing. The engineer may restart contract time if the contractor does not submit the punch-list documents within 15 business days after receiving the written punch-list. The engineer and contractor may mutually agree to extend this 15-day requirement.

(3) Proceed as specified in 105.11.2.1.1 until the work is complete.

105.11.2.1.4 Complete

(1) The project is complete when the contractor has completed all contract bid items, change order work, and punch-list work including the submission of all missing documentation.

105.11.2.2 Conditional Final Acceptance

(1) When the engineer determines that the project is complete, the engineer will give the contractor written notice of conditional final acceptance relieving the contractor of maintenance responsibility for the completed work.

105.11.2.3 Final Acceptance

(1) The engineer will grant final acceptance of the project after determining that all contract is work complete; all contract, materials, and payroll records are reviewed and approved; and the semi-final estimate quantities are final under 109.7.

(2) Failure to discover defective work or materials before final acceptance does not prevent the department from rejecting that work or those materials later. The department may revoke final acceptance if the department discovers defective work or materials after it has accepted the work.

105.13.3 Submission of Claim

Replace paragraph one with the following effective with the December 2013 letting:

(1) Submit the claim to the project engineer as promptly as possible following the submission of the Notice of Claim, but not later than final acceptance of the project as specified in 105.11.2.3. If the contractor does not submit the claim before final acceptance of the project, the department will deny the claim.

107.17.3 Railroad Insurance Requirements

Replace paragraph one with the following effective with the December 2013 letting:

(1) If required by the special provisions, provide or arrange for a subcontractor to provide railroad protective liability insurance in addition to the types and limits of insurance required in 107.26. Keep railroad protective liability insurance coverage in force until completing all work, under or incidental to the contract, on the railroad right of way or premises of the railroad and until the engineer determines that the work is complete as specified in 105.11.2.1.4.

107.26 Standard Insurance Requirements

Replace paragraph one with the following effective with the December 2013 letting:

(1) Maintain the following types and limits of commercial insurance in force until the engineer determines that the work is complete as specified in 105.11.2.1.4.

TABLE 107-1 REQUIRED INSURANCE AND MINIMUM COVERAGES

TYPE OF INSURANCE	MINIMUM LIMITS REQUIRED[1]
1. Commercial general liability insurance endorsed to include blanket contractual liability coverage.[2]	$2 million combined single limits per occurrence with an annual aggregate limit of not less than $4 million.
2. Workers' compensation.	Statutory limits
3. Employers' liability insurance.	Bodily injury by accident: $100,000 each accident Bodily injury by disease: $500,000 each accident $100,000 each employee
4. Commercial automobile liability insurance covering all contractor-owned, non-owned, and hired vehicles used in carrying out the contract.[2]	$1 million-combined single limits per occurrence.

[1] The contractor may satisfy these requirements with primary insurance coverage or with excess/umbrella policies.

[2] The Wisconsin Department of Transportation, its officers, agents, and employees shall be named as an additional insured under the general liability and automobile liability insurance.

108.14 Terminating the Contractor's Responsibility

Replace paragraph one with the following effective with the December 2013 letting:

(1) The contractor's responsibilities are terminated, except as set forth in the contract bond and specified in 107.16, when the department grants final acceptance as specified in 105.11.2.3.

109.2 Scope of Payment

Replace paragraph two with the following effective with the December 2013 letting:

(2) The department will pay for the quantity of work acceptably completed and measured for payment as the measurement subsection for each bid item specifies. Within the contract provide means to furnish and install the work complete and in-place. Payment is full compensation for everything required to perform the work under the applicable bid items including, but not limited to, the work elements listed in the payment subsection. Payment also includes all of the following not specifically excluded in that payment subsection:

1. Furnishing and installing all materials as well as furnishing the labor, tools, supplies, equipment, and incidentals necessary to perform the work.
2. All losses or damages, except as specified in 107.14, arising from one or more of the following:
    - The nature of the work.
    - The action of the elements.
    - Unforeseen difficulties encountered during prosecution of the work.
3. All insurance costs, expenses, and risks connected with the prosecution of the work.
4. All expenses incurred because of an engineer-ordered suspension, except as specified in 104.2.2.3.
5. All infringements of patents, trademarks, or copyrights.
6. All other expenses incurred to complete and protect the work under the contract.

109.6.1 General

Replace paragraphs three and four with the following effective with the December 2013 letting:

(3) The department's payment of an estimate before conditional final acceptance of the work does not constitute the department's acceptance of the work, and does not relieve the contractor of responsibility for:

1. Protecting, repairing, correcting, or renewing the work.
2. Replacing all defects in the construction or in the materials used in the construction of the work under the contract, or responsibility for damage attributable to these defects.

(4) The contractor is responsible for all defects or damage that the engineer may discover on or before the engineer's conditional final acceptance of the work. The engineer is the sole judge of these defects or damage, and the contractor is liable to the department for not correcting all defects or damage.

109.7 Acceptance and Final Payment

Replace paragraphs one and two with the following effective with the December 2013 letting:

(1) After the engineer grants conditional final acceptance of the work as specified in 105.11.2.2 and reviews required document submittals and materials test reports, the engineer will issue the semi-final estimate.

(2) Within 30 calendar days after receiving the semi-final estimate, submit to the engineer a written statement of agreement or disagreement with the semi-final estimate. For an acceptable statement of disagreement, submit an item-by-item list with reasons for each disagreement. If the contractor does not submit this written statement within those 30 days, the engineer will process the final estimate for payment. The engineer and the contractor can mutually agree to extend this 30-day submission requirement.

450.3.3 Maintaining the Work

Replace paragraph one with the following effective with the December 2013 letting:

(1) Protect and repair the prepared foundation, tack coat, base, paved traffic lanes, shoulders, and seal coat. Correct all rich or bleeding areas, breaks, raveled spots, or other nonconforming areas in the paved surface.

455.3.2.5 Maintaining Tack Coat

Replace paragraph one with the following effective with the December 2013 letting:

(1) Protect and repair the existing surface and the tack coat. Correct areas with excess or deficient tack material and any breaks, raveled spots, or other areas where bond might be affected.

460.2.2.3 Aggregate Gradation Master Range

Replace paragraph one with the following effective with the January 2014 letting:

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

TABLE 460-1 AGGREGATE GRADATION MASTER RANGE AND VMA REQUIREMENTS

SIEVE	PERCENTS PASSING DESIGNATED SIEVES						
	NOMINAL SIZE						
	37.5 mm	25.0 mm	19.0 mm	12.5 mm	9.5 mm	SMA 12.5 mm	SMA 9.5 mm
50.0-mm	100						
37.5-mm	90 –100	100					
25.0-mm	90 max	90 -100	100				
19.0-mm	___	90 max	90 -100	100		100	
12.5-mm	___	___	90 max	90 -100	100	90 - 97	100
9.5-mm	___	___	___	90 max	90 -100	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 E-3 mixes.

[2] 15.5 for E-3 mixes.

460.2.7 HMA Mixture Design

Replace paragraph one with the following effective with the January 2014 letting:

(1) For each HMA mixture type used under the contract, develop and submit an asphaltic mixture design according to the department's test method number 1559 as described in CMM 8-66 and conforming to the requirements of table 460-1 and table 460-2. The values listed are design limits; production values may exceed those limits. The department will review mixture designs and report the results of that review to the designer according to the department's test method number 1559.

TABLE 460-2 MIXTURE REQUIREMENTS

Mixture type	E - 0.3	E - 1	E - 3	E - 10	E - 30	E - 30x	SMA
ESALs x 10^6 (20 yr design life)	< 0.3	0.3 - < 1	1 - < 3	3 - < 10	10 - < 30	>= 30	___
LA Wear (AASHTO T96)							
100 revolutions(max % loss)	13	13	13	13	13	13	13
500 revolutions(max % loss)	50	50	45	45	45	45	40
Soundness (AASHTO T104) (sodium sulfate, max % loss)	12	12	12	12	12	12	12
Freeze/Thaw (AASHTO T103) (specified counties, max % loss)	18	18	18	18	18	18	18
Fractured Faces (ASTM 5821) (one face/2 face, % by count)	60 / __	65 / __	75 / 60	85 / 80	98 / 90	100/100	100/90
Flat & Elongated (ASTM D4791) (max %, by weight)	5 (5:1 ratio)	5 (5:1 ratio)	5 (5:1 ratio)	5 (5:1 ratio)	5 (5:1 ratio)	5 (5:1 ratio)	20 (3:1ratio)
Fine Aggregate Angularity (AASHTO T304, method A, min)	40	40	43	45	45	45	45
Sand Equivalency (AASHTO T176, min)	40	40	40	45	45	50	50
Gyratory Compaction							
Gyrations for N_{ini}	6	7	7	8	8	9	8
Gyrations for N_{des}	40	60	75	100	100	125	65
Gyrations for N_{max}	60	75	115	160	160	205	160
Air Voids, $\%V_a$ ($\%G_{mm}$ N_{des})	4.0 (96.0)	4.0 (96.0)	4.0 (96.0)	4.0 (96.0)	4.0 (96.0)	4.0 (96.0)	4.0 (96.0)
% G_{mm} N_{ini}	<= 91.5[1]	<= 90.5[1]	<= 89.0[1]	<= 89.0	<= 89.0	<= 89.0	___
% G_{mm} N_{max}	<= 98.0	<= 98.0	<= 98.0	<= 98.0	<= 98.0	<= 98.0	___
Dust to Binder Ratio[2] (% passing 0.075/P_{be})	0.6 - 1.2	0.6 - 1.2	0.6 - 1.2	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 - 78[4]	65 - 75[3] [4]	65 - 75[3] [4]	65 - 75[3] [4]	65 - 75[3] [4]	70 - 80
Tensile Strength Ratio (TSR) (ASTM 4867)							
no antistripping additive	0.70	0.70	0.70	0.70	0.70	0.70	0.70
with antistripping additive	0.75	0.75	0.75	0.75	0.75	0.75	0.75
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 9.5mm and 12.5 mm nominal maximum size mixtures, the specified VFB range is 70 - 76%.

[4] For 37.5mm nominal maximum size mixes, the specified VFB lower limit is 67%.

[5] For 25.0mm nominal maximum size mixes, the specified VFB lower limit is 67%.

460.2.8.2.1.5 Control Limits

Replace paragraph one with the following effective with the January 2014 letting:

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

ITEM	JMF LIMITS	WARNING LIMITS
Percent passing given sieve:		
37.5-mm	+/- 6.0	+/- 4.5
25.0-mm	+/- 6.0	+/- 4.5
19.0-mm	+/- 5.5	+/- 4.0
12.5-mm	+/- 5.5	+/- 4.0
9.5-mm	+/- 5.5	+/- 4.0
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
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.

(2) Warning bands are defined as the area between the JMF limits and the warning limits.

460.2.8.2.1.6 Job Mix Formula Adjustment

Replace the entire text with the following effective with the January 2014 letting:

(1) The contractor may request adjustment of the JMF according to the department's test method number 1559. Have an HTCP HMA technician certified at a level appropriate for process control and troubleshooting or mix design submit a written JMF adjustment request. Ensure that the resulting JMF is within specified master gradation bands. The department will have an HMA technician certified at level III review the proposed adjustment and, if acceptable, issue a revised JMF.

(2) The department will not allow adjustments that do the following:

- Exceed specified JMF tolerance limits.
- Reduce the JMF asphalt content unless the production VMA running average meets or exceeds the minimum VMA design requirement defined in table 460-1for the mixture produced.

(3) Have an HMA technician certified at level II make related process adjustments. If mixture redesign is necessary, submit a new JMF, subject to the same specification requirements as the original JMF.

520.3.8 Protection After Laying

Delete the entire subsection.

614.2.1 General

Replace paragraphs five and six with the following effective with the December 2013 letting:

(5) Furnish zinc coated wire rope and fitting conforming to the plans and galvanized according to ASTM A741.

(6) Before installation store galvanized components above ground level and away from surface run off. The department may reject material if the zinc coating is physically damaged or oxidized.

(7) Provide manufacturer's drawings, and installation and maintenance instructions when providing proprietary systems.

614.2.3 Steel Rail and Fittings

Replace paragraph one with the following effective with the December 2013 letting:

(1) Furnish galvanized steel rail conforming to AASHTO M180 class A, type II beam using the single-spot test coating requirements. Furnish plates, anchor plates, post mounting brackets, and other structural steel components conforming to 506.2.2.1 and hot-dip galvanized according to ASTM A123.

614.2.7 Crash Cushions

Replace paragraph one with the following effective with the December 2013 letting:

(1) Furnish permanent and temporary crash cushions from the department's approved products list. Use cushions as wide or wider than the plan back-width. Furnish transitions conforming to the crash cushion manufacturer's design and specifications. Submit manufacturer crash cushion and transition design details to engineer before installing.

616.3.1 General

Replace paragraph six with the following effective with the December 2013 letting:

(6) Remove and dispose of all excess excavation and surplus materials from the fence site.

618.3.3 Restoration

Replace paragraph one with the following effective with the December 2013 letting:

(1) Upon termination of hauling operations and before conditional final acceptance, restore all haul roads, including drainage facilities and other components, to the equivalent of pre-hauling conditions.

627.3.1 General

Replace paragraph four with the following effective with the December 2013 letting:

(4) Maintain the mulched areas and repair all areas damaged by wind, erosion, traffic, fire or other causes.

637.3.2.1 General

Delete paragraph three effective with the December 2013 letting.

670.3.4.2 Post-Construction Work

Replace paragraph one with the following effective with the December 2013 letting:

(1) Submit 5 copies of ITS documentation including but not limited to the following:

- Operator's manual: for contractor furnished equipment, submit a manual containing detailed operating instructions for each different type or model of equipment and or operation performed.
- Maintenance procedures manuals: for contractor furnished equipment, submit a manual containing detailed preventive and corrective maintenance procedures for each type or model of equipment furnished.
- Cabinet fiber optic wiring diagram: submit a cabinet wiring diagram, identified by location for each cabinet. Include both electrical wiring and fiber optic conductor and cable connections. Place one copy of the fiber optic wiring diagram in a weatherproof holder in the cabinet. Deliver the other copies to the engineer.
- As-built drawings: submit final as-built drawings that detail the final placement of all conduit, cabling, equipment, and geometric modifications within the contract. Provide all documentation in an electronic format adhering to the region’s ITS computer aided drafting standards and according to the department’s as-built requirements. The department will review the as-built drawings for content and electronic format. Modify both the content and format of as-built drawings until meeting all requirements.
- Equipment inventory list: submit an inventory list including serial number, make, model, date installed, and location installed of all equipment installed under the contract.

Errata

Make the following corrections to the 2014 edition of the standard specifications:

415.3.14 Protecting Concrete

Correct errata by referencing the opening to service specification.

(1) Erect and maintain suitable barricades and, if necessary, provide personnel to keep traffic off the newly constructed pavement until it is opened for service as specified in 415.3.15. Conform to 104.6 for methods of handling and facilitating traffic.

501.2.9 Concrete Curing Materials

Correct errata by changing AASHTO M171 to ASTM C171.

(2) Furnish sheeting conforming to ASTM C171 for white opaque polyethylene film, except that the contractor may use clear or black polyethylene for cold weather protection.

607.2 Materials

Correct errata by changing AASHTO M198 to ASTM C990.

(1) Use materials conforming to the requirements for the class of material named and specified below.

Composite pipe, couplings, fittings and joint materials	ASTM D2680
Annular rubber and plastic gaskets for flexible, watertight joints	ASTM C990
External rubber gaskets, mastic, and protective film	ASTM C877
Mortar	519.2.3

637.2.1.3 Sheet Aluminum

Correct errata by changing ASTM B449 to B921 and eliminating the specification for coating thickness.

(4) Degrease, etch, and coat the sign blank on both sides with a chromate treatment conforming to ASTM B921, class 2.

637.3.3.4 Performance

Correct errata to reference to 105.11.2.3 as revised to implement changes to the finals process.

(1) Under 105.11.2.3 the department may revoke acceptance and direct the contractor to repair or replace previously accepted sign installations if the department subsequently discovers evidence of defective materials or improper installation. Deficiencies that warrant department action include but are not limited to the following:

- Sign posts more than five degrees out of plumb.
- Signs twisted by more than 5 degrees from plan orientation.
- Signs with delaminated or warped plywood.
- Signs with bubbling, fading, delaminating, or buckling sheeting.

646.3.3.4 Proving Period

Correct errata to reference to 105.11.2.3 as revised to implement changes to the finals process.

(4) Replace all marking within sections with a percent failing more than 10% and repair or replace all markings that, in the engineer's assessment, show evidence of improper construction. If post-acceptance inspections uncover evidence of defective materials or improper construction, the department may revoke acceptance under 105.11.2.3.

ADDITIONAL SPECIAL PROVISION 7

A. Reporting 1st Tier and DBE Payments During Construction

1. Comply with reporting requirements specified in the department's Civil Rights Compliance, Contractor's User Manual, Sublets and Payments.
2. Report payments to all DBE firms within 10 calendar days of receipt of a progress payment by the department or a contractor for work performed, materials furnished, or materials stockpiled by a DBE firm. Report the payment as specified in A(1) for all work satisfactorily performed and for all materials furnished or stockpiled.
3. Report payments to all first tier subcontractor relationships within 10 calendar days of receipt of a progress payment by the department for work performed. Report the payment as specified in A(1) for all work satisfactorily performed.
4. All tiers shall report payments as necessary to comply with the DBE payment requirement as specified in A(2).
5. 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.

ASP-8 **January 8, 2009**

I-94 North-South Corridor
EEO/AA Requirements for Contractors and Subcontractors
(OFFICE OF FEDERAL CONTRACT COMPLIANCE PROGRAMS, US DEPARTMENT OF LABOR)

1. Prime Contractor(s) and subcontractors awarded a construction contract in excess of $10,000 at any tier for construction work under the contract **shall comply** with the requirements of **Executive Order 11246 as amended, Section 503 of The Rehabilitation Act of 1973 as amended and the Vietnam Era Veterans' Readjustment Assistance Act of 1974 as amended (38 U.S.C. 4212).**

2. The contractor shall provide written notification to the District Director, Office of Federal Contract Compliance Programs (OFCCP), U.S. Dept. of Labor/ESA, 310 West Wisconsin Avenue, Suite 1115, Milwaukee, WI 53202 - phone: (414) 297-3822, fax: (414) 297-4038, within 10 working days of the award of any construction contract (subcontract) in excess of $10,000 at any tier for construction work under the contract resulting from this solicitation. This notification shall include name, address and telephone number of the subcontractor, employer identification number (EIN), dollar amount of the contract, and the estimated starting and completion date. This notification provision applies to 2nd and 3rd tier subcontractors, etc. as well as the prime contractor.

3. The prime contractor and each subcontractor are required to complete a monthly Utilization Report. The report will include the total number of work hours broken out by construction trade and classification (supervisor, journey or apprentice), race and gender. The report will also include the number of employees within each trade and classification by race and gender. These reports will be entered into the Civil Rights Compliance System(CRCS) in accordance with WisDOT requirements. However, if USDOL is denied access to the CRCS, the contractor will be notified by USDOL. The contractor will submit directly to USDOL at the address above, the Utilization Report and number of employees as described earlier in this paragraph.

4. The prime contractor and each subcontractor are to provide a list of employees who worked on this project by name, race, sex, trade, classification (foreman/supervisor, journey, apprentice, trainee), if the person was a TrANS grad, and date of hire into the prime or subcontractor's workforce. This will be sent to the U. S. Department of Labor, OFCCP when the last work hours are reported for the project by each contractor.

5. The **Prime Contractor** is required to **appoint an EEO/Affirmative Action (EEO/AA) Manager for the project.** Each **subcontractor is required to appoint an EEO/AA Project Coordinator.** The EEO/AA Manager shall have overall responsibility for the

monitoring of EEO/AA compliance by the prime contractor and by all subcontractors working on this project (for all construction work originated by the Prime Contractor).

6. The prime contractor shall establish a **Special Project Affirmative Action Oversight Committee (SPAAOC)** comprised of OFCCP, and other representatives from state/local Civil Rights Enforcement/Development Agencies, labor unions, community constituents representing minority and female groups and other government and non-government agencies as needed. The first meeting will be held as soon as possible prior to the start of the project. Thereafter, the SPAAOC shall meet periodically throughout the course of the contract to discuss EEO/AA issues.

7. A designated EEO representative of each contractor on the project must attend a technical assistance seminar sponsored by OFCCP to understand their obligations under Executive Order 11246 as amended, Section 503 of The Rehabilitation Act of 1973 as amended and the Vietnam Era Veterans' Readjustment Assistance Act of 1974 as amended (38 U.S.C. 4212). If the contractor's EEO representative has attended an OFCCP technical assistance seminar during the previous 12 calendar months, they will be exempt from this requirement.

8. The EEO/AA goals (good faith effort) for this contract are:

Nation wide:	6.9% for Females of total work hours by trade
Milwaukee County:	8.0% for Minorities of total work hours by trade
Racine County:	8.4% for Minorities of total work hours by trade
Kenosha County:	3.0% for Minorities of total work hours by trade

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://roadwaystandards.dot.wi.gov/hcci/labor-wages-eeo/index.shtm

(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://roadwaystandards.dot.wi.gov/hcci/labor-wages-eeo/crc-basic-info.pdf

REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS

I. General
II. Nondiscrimination
III. Nonsegregated Facilities
IV. Davis-Bacon and Related Act Provisions
V. Contract Work Hours and Safety Standards Act Provisions
VI. Subletting or Assigning the Contract
VII. Safety: Accident Prevention
VIII. False Statements Concerning Highway Projects
IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
X. Compliance with Governmentwide Suspension and Debarment Requirements
XI. Certification Regarding Use of Contract Funds for Lobbying

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of $10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding $10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under

this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are

applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurance Required by 49 CFR 26.13(b):

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor

will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of $10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding $2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 “Contract provisions and related matters” with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages

a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH–1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b.(1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or

will notify the contracting officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b.(1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g. , the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH–347 is available for this purpose from the Wage and Hour Division Web site at http://www.dol.gov/esa/whd/forms/wh347instr.htm or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency..

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH–347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

6. Subcontracts. The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility.

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The following clauses apply to any Federal-aid construction contract in an amount in excess of $100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of $10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.

3. Withholding for unpaid wages and liquidated damages. The FHWA or the 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.

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.

DECEMBER 2013

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://roadwaystandards.dot.wi.gov/standards/cmm/cm-02-28.pdf#cm2-28.5

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://roadwaystandards.dot.wi.gov/standards/forms/ws4567.doc

Effective with September 2004 Letting

WISCONSIN DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS AND TRANSPORTATION FACILITIES

SUPPLEMENTAL REQUIRED CONTRACT PROVISIONS

I. Wage Rates, Hours of labor and payment of Wages
II. Payroll Requirements
III. Postings at the Site of the Work
IV. Affidavits
V. Wage Rate Redistribution
VI. Additional Classifications

I. WAGE RATES, HOURS OF LABOR AND PAYMENT OF WAGES

The schedule of "Minimum Wage Rates" attached hereto and made a part hereof furnishes the prevailing wage rates that have been determined pursuant to Section 103.50 of the Wisconsin Statutes. These wage rates are the minimum required to be paid to the various laborers, workers, mechanics and truck drivers employed by contractors and subcontractors on the construction work embraced by the contract and subject to prevailing hours and wages under Section 103.50, Stats. If necessary to employ laborers, workers, mechanics or truck drivers whose classification is not listed on the schedule, they shall be paid at rates conformable to those listed for similar classifications. Apprentices shall be paid at rates not less than those prescribed in their state indenture 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
RACINE COUNTY

Compiled by the State of Wisconsin - Department of Workforce Development
for the Department of Transportation
Pursuant to s. 103.50, Stats.
Issued on September 1, 2013

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	35.58	19.20	54.78
Carpenter	32.93	19.81	52.74
Future Increase(s): Add $.75/hr on 6/3/2013. Add $1.25/hr on 6/2/2014. Premium Pay: DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.			
Cement Finisher	28.50	19.72	48.22
Future Increase(s): Add $1.87 on 6/1/13; Add $1.87 on 6/1/14; Add $1.87 on 6/1/15; 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	31.54	21.14	52.68
Fence Erector	28.00	4.50	32.50
Ironworker	31.31	21.99	53.30
Line Constructor (Electrical)	31.29	15.34	46.63
Painter	29.22	16.69	45.91
Pavement Marking Operator	29.22	16.82	46.04
Piledriver	26.78	25.14	51.92
Roofer or Waterproofer	29.40	15.05	44.45
Teledata Technician or Installer	24.65	15.47	40.12
Tuckpointer, Caulker or Cleaner	34.35	15.38	49.73
Underwater Diver (Except on Great Lakes)	37.45	19.45	56.90
Heavy Equipment Operator - ELECTRICAL LINE CONSTRUCTION ONLY	33.35	14.21	47.56
Light Equipment Operator -ELECTRICAL LINE CONSTRUCTION ONLY	29.64	16.17	45.81
Heavy Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	25.94	13.57	39.51

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
	$	$	$
Light Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	24.08	12.96	37.04
Groundman - ELECTRICAL LINE CONSTRUCTION ONLY	21.75	11.90	33.65
TRUCK DRIVERS			
Single Axle or Two Axle	33.22	18.90	52.12
Three or More Axle	23.31	17.13	40.44
Future Increase(s): Add $1.85/hr on 6/1/2013. 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	27.77	19.90	47.67
Future Increase(s): Add $2/hr on 6/1/13; Add $1.75/hr on 6/1/14. 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://roadwaystandards.dot.wi.gov/hcci/labor- wages- eeo/ index. shtm.			
Pavement Marking Vehicle	23.84	14.92	38.76
Shadow or Pilot Vehicle	33.22	18.90	52.12
Truck Mechanic	22.50	16.19	38.69
LABORERS			
General Laborer	23.70	19.15	42.85
Future Increase(s): Add $1.70/hr on 6/1/2013; Add $1.60/hr on 6/1/2014. Premium Pay: Add $.10/hr for topman; Add $.15/hr for air tool operator, joint sawer and filler (pavement), vibrator or tamper operator (mechanical hand operated), chain saw operator and demolition burning torch laborer; Add $.26/hr for bottomman; Add $.35/hr for bituminous worker (raker and luteman), formsetter (curb, sidewalk and pavement), strike off man; Add $.32/hr for and line and grade specialist; Add $.65/hr for blaster and powderman; Add $.75/hr for pipelayer. / DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr for work on projects involving temporary traffic control setup, for lane and shoulder closures, when work under artificial illumination conditions is necessary as required by the project provisions (including prep time prior to and/or cleanup after such time period).			
Asbestos Abatement Worker	18.00	0.00	18.00
Landscaper	23.70	19.15	42.85
Future Increase(s): Add $1.70/hr on 6/1/13; Add $1.60/hr on 6/1/14. 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	21.88	18.40	40.28
Future Increase(s): Add $1.70/hr on 6/1/2013; Add $1.60/hr on 6/1/2014. 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 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.			
Fiber Optic Laborer (Outside, Other Than Concrete Encased)	17.24	15.03	32.27
Railroad Track Laborer	14.50	4.96	19.46

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY $	HOURLY FRINGE BENEFITS $	TOTAL $
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 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 $2/hr on 6/1/13; Add $1.75/hr on 6/1/14. 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://roadwaystandards.dot.wi.gov/hcci/labor- wages- eeo/ index. shtm.	35.22	19.90	55.12
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 $2/hr on 6/1/13; Add $1.75/hr on 6/1/14. 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://roadwaystandards.dot.wi.gov/hcci/labor- wages- eeo/ index. shtm.	34.72	19.90	54.62
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 $2/hr on 6/1/13; Add $1.75/hr on 6/1/14.	34.22	19.90	54.12

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY $	HOURLY FRINGE BENEFITS $	TOTAL $
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://roadwaystandards.dot.wi.gov/hcci/labor- wages- eeo/ index. shtm.			
Belting, Burlap, Texturing Machine; Broom or Sweeper; Compactor (Self-Propelled or Tractor Mounted, Towed & Light Equipment); Concrete 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.	33.96	19.90	53.86
Future Increase(s): Add $2/hr on 6/1/13; Add $1.75/hr on 6/1/14.			
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://roadwaystandards.dot.wi.gov/hcci/labor- wages- eeo/ index. shtm.			
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.	33.67	19.90	53.57
Future Increase(s): Add $2/hr on 6/1/13; Add $1.75/hr on 6/1/14.			
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://roadwaystandards.dot.wi.gov/hcci/labor- wages- eeo/ index. shtm.			
Fiber Optic Cable Equipment.	20.00	7.88	27.88
Work Performed on the Great Lakes Including Diver; Wet Tender or Hydraulic Dredge Engineer.	37.45	19.45	56.90
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.	37.45	19.45	56.90
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.	27.75	19.15	46.90
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.	27.75	19.15	46.90

SUPERSEDES DECISION WI20120010
U. S. DEPARTMENT OF LABOR
(DAVIS-BACON ACT, MINIMUM WAGE RATES)

STATE: Wisconsin
GENERAL DECISION NUMBER: WI130010
DATE: December 20, 2013
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	$25.12	18.15
Group 2: Air Tool Operator; Joint Sawer and Filler (Pavement); Vibrator or Tamper Operator (Mechanical Hand Operated); Chain Saw Operator; Demolition Burning Torch Laborer	25.27	18.15
Group 3: Bituminous Worker (Raker and Luteman); Formsetter (Curb, Sidewalk, and Pavement); Strike Off man	25.47	18.15
Group 4: Line and Grade Specialist	25.44	18.15
Group 5: Blaster and Powderman	25.77	18.15
Group 6: Flagman; traffic control person	22.26	18.15

CLASSES OF LABORER AND MECHANICS

Bricklayer	35.11	16.83
Piledriverman	24.47	19.46
Carpenter	30.52	14.41
Ironworker	30.52	23.47
Cement Mason/Concrete Finisher	28.50	19.72
Electrician		See Page 3
Line Construction		
Lineman	38.25	18.00
Heavy Equipment Operator	34.43	16.71
Equipment Operator	30.60	15.41
Heavy Groundman Driver	26.78	14.11
Light Groundman Driver	24.86	13.45
Groundsman	21.04	12.16
Millwrights (E. of Hwy 75)	25.17	13.78
Millwrights (W. of Hwy 75)	25.32	13.78
Painter, Brush , Roller	30.30	18.14
Painter, Spray and Sandblaster	31.30	18.14
Painter, Steel	17.70	4.80
Well Drilling:		
Well Driller	16.52	3.70

Truck Drivers:	Basic Hourly Rates	Fringe Benefits
1 & 2 Axles	23.82	18.32
Three or More Axles; Euclids, Dumptor & Articulated, Truck Mechanic	23.97	18.32

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 4, 2013; Modification #1 dated February 1, 2013; Modification #2 dated June 7, 2013; Modification #3 dated July 19, 2013; Modification #4 dated August 23, 2013; Modification #5 dated September 13, 2013; Modification #6 dated September 27, 2013; Modification #7 dated December 20, 2013.

SUPERSEDES DECISION WI20120010
U. S. DEPARTMENT OF LABOR
(DAVIS-BACON ACT, MINIMUM WAGE RATES)

STATE: Wisconsin
GENERAL DECISION NUMBER: WI130010
DATE: December 20, 2013
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	$36.72	$20.10
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.	$36.22	$20.10
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.	$35.72	$20.10
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.	$35.46	$20.10
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.	$35.17	$20.10
Group 6: Off – road material hauler with or without ejector	$29.27	$20.10

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: WI130010
DATE: December 20, 2013
DESCRIPTION OF WORK: Highways and Airport Runway and Taxiway Construction

LABORERS CLASSIFICATION:	Rates	Benefits
Electricians		
Area 1	$28.40	16.676
Area 2:		
Electricians	29.13	17.92
Area 3:		
Electrical contracts under $130,000	26.24	16.85
Electrical contracts over $130,000	29.41	16.97
Area 4:	28.10	17.24
Area 5	28.61	16.60
Area 6	35.25	19.30
Area 8		
Electricians	30.60	24.95% + 10.33
Area 9:		
Electricians	32.94	18.71
Area 10	28.97	19.55
Area 11	31.91	23.60
Area 12	32.87	19.23
Area 13	32.82	22.51
Teledata System Installer		
Area 14		
Installer/Technician	21.89	11.83
Sound & Communications		
Area 15		
Installer	16.47	14.84
Technician	24.75	16.04

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.

CONTRACT: 20140211007 PROJECT(S): 1033-02-72 FEDERAL ID(S): WISC 2014041

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
	SECTION 0001 ROADWAY					
0010	201.0105 CLEARING	2.000 STA		.		.
0020	201.0120 CLEARING	67.000 ID		.		.
0030	201.0205 GRUBBING	2.000 STA		.		.
0040	201.0220 GRUBBING	67.000 ID		.		.
0050	203.0100 REMOVING SMALL PIPE CULVERTS	12.000 EACH		.		.
0060	203.0200 REMOVING OLD STRUCTURE (STATION) 0001. 862+44.2	LUMP	LUMP			.
0070	203.0200 REMOVING OLD STRUCTURE (STATION) 0002. 862+31.0	LUMP	LUMP			.
0080	203.0200 REMOVING OLD STRUCTURE (STATION) 0003. 890+83.23	LUMP	LUMP			.
0090	203.0210.S ABATEMENT OF ASBESTOS CONTAINING MATERIAL (STRUCTURE) 0001. B-51-23	LUMP	LUMP			.
0100	204.0100 REMOVING PAVEMENT **P**	96,019.000 SY		.		.

CONTRACT: 20140211007 PROJECT(S): 1033-02-72 FEDERAL ID(S): WISC 2014041

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0110	204.0120 REMOVING ASPHALTIC SURFACE MILLING	37,750.000 SY		.		.
0120	204.0150 REMOVING CURB & GUTTER **P**	953.000 LF		.		.
0130	204.0157 REMOVING CONCRETE BARRIER **P**	13,547.000 LF		.		.
0140	204.0165 REMOVING GUARDRAIL **P**	1,112.000 LF		.		.
0150	204.0170 REMOVING FENCE **P**	8,881.000 LF		.		.
0160	204.0180 REMOVING DELINEATORS AND MARKERS	85.000 EACH		.		.
0170	204.0195 REMOVING CONCRETE BASES	1.000 EACH		.		.
0180	204.0220 REMOVING INLETS	39.000 EACH		.		.
0190	204.0245 REMOVING STORM SEWER (SIZE) 0001. 12-INCH **P**	140.000 LF		.		.
0200	204.0245 REMOVING STORM SEWER (SIZE) 0002. 15-INCH **P**	116.000 LF		.		.
0210	204.0245 REMOVING STORM SEWER (SIZE) 0003. 18-INCH **P**	228.000 LF		.		.

CONTRACT: 20140211007 PROJECT(S): 1033-02-72 FEDERAL ID(S): WISC 2014041

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0220	204.0245 REMOVING STORM SEWER (SIZE) 0004. 24-INCH **P**	4,031.000 LF		.		.
0230	204.0245 REMOVING STORM SEWER (SIZE) 0005. 30-INCH **P**	156.000 LF		.		.
0240	204.9090.S REMOVING (ITEM DESCRIPTION) 0001. UNDERDRAIN	4,793.000 LF		.		.
0250	205.0100 EXCAVATION COMMON **P**	164,444.000 CY		.		.
0260	206.1000 EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 0001. B-51-129	LUMP	LUMP			.
0270	206.1000 EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 0002. B-51-130	LUMP	LUMP			.
0280	206.1000 EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 0003. B-51-131	LUMP	LUMP			.
0290	206.3000 EXCAVATION FOR STRUCTURES RETAINING WALLS (STRUCTURE) 0001. R-51-44	LUMP	LUMP			.
0300	206.3000 EXCAVATION FOR STRUCTURES RETAINING WALLS (STRUCTURE) 0002. R-51-45	LUMP	LUMP			.
0310	206.6000.S TEMPORARY SHORING	6,840.000 SF		.		.

CONTRACT: 20140211007 PROJECT(S): 1033-02-72 FEDERAL ID(S): WISC 2014041

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0320	208.0100 BORROW **P**	39,688.000 CY		.		.
0330	208.1100 SELECT BORROW	35,629.000 CY		.		.
0340	209.0100 BACKFILL GRANULAR	430.000 CY		.		.
0350	210.0100 BACKFILL STRUCTURE **P**	885.000 CY		.		.
0360	213.0100 FINISHING ROADWAY (PROJECT) 0001. 1033-02-72	1.000 EACH		.		.
0370	305.0110 BASE AGGREGATE DENSE 3/4-INCH	619.000 TON		.		.
0380	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH **P**	87,049.000 TON		.		.
0390	311.0110 BREAKER RUN	2,200.000 TON		.		.
0400	312.0110 SELECT CRUSHED MATERIAL **P**	74,748.000 TON		.		.
0410	315.0100 ASPHALTIC BASE **P**	18,709.000 TON		.		.
0420	335.0100 RUBBLIZING	11,840.000 SY		.		.

CONTRACT: 20140211007 PROJECT(S): 1033-02-72 FEDERAL ID(S): WISC 2014041

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0430	415.0070 CONCRETE PAVEMENT 7-INCH **P**	118.000 SY		.		.
0440	415.0105 CONCRETE PAVEMENT 10 1/2-INCH **P**	9,055.000 SY		.		.
0450	415.0410 CONCRETE PAVEMENT APPROACH SLAB	1,042.000 SY		.		.
0460	416.1010 CONCRETE SURFACE DRAINS **P**	3.700 CY		.		.
0470	440.4410.S INCENTIVE IRI RIDE	32,424.000 DOL	1.00000		32424.00	
0480	455.0115 ASPHALTIC MATERIAL PG64-22	253.000 TON		.		.
0490	455.0120 ASPHALTIC MATERIAL PG64-28	696.000 TON		.		.
0500	455.0605 TACK COAT	1,691.000 GAL		.		.
0510	460.1110 HMA PAVEMENT TYPE E-10	15,780.000 TON		.		.
0520	465.0125 ASPHALTIC SURFACE TEMPORARY	1,543.000 TON		.		.
0530	502.0100 CONCRETE MASONRY BRIDGES **P**	867.000 CY		.		.

CONTRACT: 20140211007 PROJECT(S): 1033-02-72 FEDERAL ID(S): WISC 2014041

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0540	502.3200 PROTECTIVE SURFACE TREATMENT **P**	1,640.000 SY		.		.
0550	503.0146 PRESTRESSED GIRDER TYPE I 45W-INCH **P**	6,059.000 LF		.		.
0560	504.0500 CONCRETE MASONRY RETAINING WALLS **P**	699.000 CY		.		.
0570	504.0900 CONCRETE MASONRY ENDWALLS **P**	56.000 CY		.		.
0580	505.0405 BAR STEEL REINFORCEMENT HS BRIDGES	11,610.000 LB		.		.
0590	505.0605 BAR STEEL REINFORCEMENT HS COATED BRIDGES	629,570.000 LB		.		.
0600	505.0615 BAR STEEL REINFORCEMENT HS COATED RETAINING WALLS	108,905.000 LB		.		.
0610	506.2605 BEARING PADS ELASTOMERIC NON-LAMINATED **P**	116.000 EACH		.		.
0620	506.4000 STEEL DIAPHRAGMS (STRUCTURE) 0001. B-51-129 **P**	36.000 EACH		.		.
0630	506.4000 STEEL DIAPHRAGMS (STRUCTURE) 0002. B-51-130 **P**	36.000 EACH		.		.
0640	506.4000 STEEL DIAPHRAGMS (STRUCTURE) 0003. B-51-131 **P**	32.000 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
0650	516.0500 RUBBERIZED MEMBRANE WATERPROOFING **P**	360.000 SY		.		.
0660	517.1010.S CONCRETE STAINING (STRUCTURE) 0001. B-51-129 **P**	12,720.000 SF		.		.
0670	517.1010.S CONCRETE STAINING (STRUCTURE) 0002. B-51-130 **P**	10,585.000 SF		.		.
0680	517.1010.S CONCRETE STAINING (STRUCTURE) 0003. B-51-131 **P**	10,145.000 SF		.		.
0690	517.1010.S CONCRETE STAINING (STRUCTURE) 0004. R-51-42 **P**	21,600.000 SF		.		.
0700	517.1010.S CONCRETE STAINING (STRUCTURE) 0005. R-51-43 **P**	4,335.000 SF		.		.
0710	517.1010.S CONCRETE STAINING (STRUCTURE) 0006. R-51-44 **P**	2,225.000 SF		.		.
0720	517.1010.S CONCRETE STAINING (STRUCTURE) 0007. R-51-45 **P**	2,595.000 SF		.		.
0730	517.1050.S ARCHITECTURAL SURFACE TREATMENT (STRUCTURE) 0001. R-51-42 **P**	1,150.000 SF		.		.
0740	517.1050.S ARCHITECTURAL SURFACE TREATMENT (STRUCTURE) 0002. R-51-43 **P**	400.000 SF		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0750	517.1050.S ARCHITECTURAL SURFACE TREATMENT (STRUCTURE) 0003. R-51-44 **P**	250.000 SF		.		.
0760	517.1050.S ARCHITECTURAL SURFACE TREATMENT (STRUCTURE) 0004. R-51-45 **P**	250.000 SF		.		.
0770	520.8000 CONCRETE COLLARS FOR PIPE	43.000 EACH		.		.
0780	522.0130 CULVERT PIPE REINFORCED CONCRETE CLASS III 30-INCH	107.000 LF		.		.
0790	522.1015 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 15-INCH	2.000 EACH		.		.
0800	522.1018 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 18-INCH	2.000 EACH		.		.
0810	522.1024 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH	13.000 EACH		.		.
0820	522.1030 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 30-INCH	4.000 EACH		.		.
0830	522.1036 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 36-INCH	2.000 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
0840	522.1060 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 60-INCH	2.000 EACH		.		.
0850	523.0534 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL 34X53-INCH	3.000 EACH		.		.
0860	550.1120 PILING STEEL HP 12-INCH X 53 LB	10,530.000 LF		.		.
0870	550.2146 PILING CIP CONCRETE 14 X 0.375-INCH	4,710.000 LF		.		.
0880	601.0551 CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE A **P**	3,841.000 LF		.		.
0890	601.0555 CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE A **P**	151.000 LF		.		.
0900	603.1142 CONCRETE BARRIER TYPE S42 **P**	16,922.000 LF		.		.
0910	603.1442 CONCRETE BARRIER TYPE S42C **P**	987.000 LF		.		.
0920	603.8000 CONCRETE BARRIER TEMPORARY PRECAST DELIVERED	50,864.000 LF		.		.
0930	603.8125 CONCRETE BARRIER TEMPORARY PRECAST INSTALLED	76,376.000 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
0940	604.0400 SLOPE PAVING CONCRETE **P**	102.000 SY		.		.
0950	606.0200 RIPRAP MEDIUM	55.000 CY		.		.
0960	608.0315 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 15-INCH	568.000 LF		.		.
0970	608.0318 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 18-INCH	189.000 LF		.		.
0980	608.0324 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 24-INCH	7,056.000 LF		.		.
0990	608.0330 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 30-INCH	361.000 LF		.		.
1000	608.0336 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 36-INCH	221.000 LF		.		.
1010	608.0342 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 42-INCH	161.000 LF		.		.
1020	608.0348 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 48-INCH	16.000 LF		.		.
1030	608.0360 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 60-INCH	361.000 LF		.		.
1040	608.0512 STORM SEWER PIPE REINFORCED CONCRETE CLASS V 12-INCH	480.000 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
1050	610.0134 STORM SEWER PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 34X53-INCH	740.000 LF		.		.
1060	611.0530 MANHOLE COVERS TYPE J	9.000 EACH		.		.
1070	611.0535 MANHOLE COVERS TYPE J-SPECIAL	9.000 EACH		.		.
1080	611.0642 INLET COVERS TYPE MS	5.000 EACH		.		.
1090	611.0654 INLET COVERS TYPE V	117.000 EACH		.		.
1100	611.2004 MANHOLES 4-FT DIAMETER	6.000 EACH		.		.
1110	611.2005 MANHOLES 5-FT DIAMETER	22.000 EACH		.		.
1120	611.2006 MANHOLES 6-FT DIAMETER	6.000 EACH		.		.
1130	611.2008 MANHOLES 8-FT DIAMETER	12.000 EACH		.		.
1140	611.2055 MANHOLES 5X5-FT	2.000 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
1150	611.3003 INLETS 3-FT DIAMETER	32.000 EACH		.		.
1160	611.3004 INLETS 4-FT DIAMETER	60.000 EACH		.		.
1170	611.3902 INLETS MEDIAN 2 GRATE	2.000 EACH		.		.
1180	611.8110 ADJUSTING MANHOLE COVERS	2.000 EACH		.		.
1190	611.8115 ADJUSTING INLET COVERS	2.000 EACH		.		.
1200	611.9800.S PIPE GRATES	5.000 EACH		.		.
1210	612.0106 PIPE UNDERDRAIN 6-INCH	12,396.000 LF		.		.
1220	612.0206 PIPE UNDERDRAIN UNPERFORATED 6-INCH	527.000 LF		.		.
1230	612.0208 PIPE UNDERDRAIN UNPERFORATED 8-INCH	450.000 LF		.		.
1240	612.0210 PIPE UNDERDRAIN UNPERFORATED 10-INCH	450.000 LF		.		.
1250	612.0212 PIPE UNDERDRAIN UNPERFORATED 12-INCH	450.000 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
1260	612.0406 PIPE UNDERDRAIN WRAPPED 6-INCH	1,805.000 LF		.		.
1270	612.0700 DRAIN TILE EXPLORATION	150.000 LF		.		.
1280	612.0806 APRON ENDWALLS FOR UNDERDRAIN REINFORCED CONCRETE 6-INCH	3.000 EACH		.		.
1290	614.0150 ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	5.000 EACH		.		.
1300	614.0395 GUARDRAIL MOW STRIP CONCRETE	374.000 SY		.		.
1310	614.0800 CRASH CUSHIONS PERMANENT	1.000 EACH		.		.
1320	614.0905 CRASH CUSHIONS TEMPORARY	22.000 EACH		.		.
1330	614.2300 MGS GUARDRAIL 3	3,119.000 LF		.		.
1340	614.2500 MGS THRIE BEAM TRANSITION **P**	112.000 LF		.		.
1350	614.2610 MGS GUARDRAIL TERMINAL EAT	10.000 EACH		.		.
1360	614.2620 MGS GUARDRAIL TERMINAL TYPE 2	2.000 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
1370	616.0100 FENCE WOVEN WIRE (HEIGHT) 0001. 4-FT	7,365.000 LF		.		.
1380	616.0700.S FENCE SAFETY	600.000 LF		.		.
1390	618.0100 MAINTENANCE AND REPAIR OF HAUL ROADS (PROJECT) 0001. 1033-02-72	1.000 EACH		.		.
1400	619.1000 MOBILIZATION 0001. 1033-02-72	1.000 EACH		.		.
1410	620.0300 CONCRETE MEDIAN SLOPED NOSE **P**	200.000 SF		.		.
1420	621.0100 LANDMARK REFERENCE MONUMENTS	9.000 EACH		.		.
1430	623.0200 DUST CONTROL SURFACE TREATMENT	300,000.000 SY		.		.
1440	624.0100 WATER	1,643.000 MGAL		.		.
1450	627.0200 MULCHING	100,862.000 SY		.		.
1460	628.1104 EROSION BALES	60.000 EACH		.		.
1470	628.1504 SILT FENCE	12,161.000 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
1480	628.1520 SILT FENCE MAINTENANCE	6,081.000 LF		.		.
1490	628.1905 MOBILIZATIONS EROSION CONTROL	3.000 EACH		.		.
1500	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL	3.000 EACH		.		.
1510	628.2004 EROSION MAT CLASS I TYPE B	8,352.000 SY		.		.
1520	628.2027 EROSION MAT CLASS II TYPE C	13,225.000 SY		.		.
1530	628.7005 INLET PROTECTION TYPE A	85.000 EACH		.		.
1540	628.7010 INLET PROTECTION TYPE B	48.000 EACH		.		.
1550	628.7015 INLET PROTECTION TYPE C	84.000 EACH		.		.
1560	628.7504 TEMPORARY DITCH CHECKS	247.000 LF		.		.
1570	628.7555 CULVERT PIPE CHECKS	6.000 EACH		.		.
1580	628.7560 TRACKING PADS	6.000 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
1590	628.7570 ROCK BAGS	75.000 EACH		.		.
1600	629.0210 FERTILIZER TYPE B	139.000 CWT		.		.
1610	630.0120 SEEDING MIXTURE NO. 20	5,971.000 LB		.		.
1620	630.0200 SEEDING TEMPORARY	2,987.000 LB		.		.
1630	631.1100 SOD EROSION CONTROL	150.000 SY		.		.
1640	633.0100 DELINEATOR POSTS STEEL	91.000 EACH		.		.
1650	633.0500 DELINEATOR REFLECTORS	533.000 EACH		.		.
1660	633.1000 DELINEATOR BRACKETS	398.000 EACH		.		.
1670	633.5200 MARKERS CULVERT END	27.000 EACH		.		.
1680	634.0614 POSTS WOOD 4X6-INCH X 14-FT	13.000 EACH		.		.
1690	634.0616 POSTS WOOD 4X6-INCH X 16-FT	18.000 EACH		.		.

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1700	634.0618 POSTS WOOD 4X6-INCH X 18-FT	21.000 EACH		.		.
1710	634.0885 POSTS TUBULAR STEEL 2X2-INCH X 8.5-FT	9.000 EACH		.		.
1720	636.0100 SIGN SUPPORTS CONCRETE MASONRY **P**	18.000 CY		.		.
1730	636.1000 SIGN SUPPORTS STEEL REINFORCEMENT HS	2,160.000 LB		.		.
1740	637.1220 SIGNS TYPE I REFLECTIVE SH	435.000 SF		.		.
1750	637.2210 SIGNS TYPE II REFLECTIVE H	526.620 SF		.		.
1760	637.2230 SIGNS TYPE II REFLECTIVE F	68.000 SF		.		.
1770	638.2102 MOVING SIGNS TYPE II	9.000 EACH		.		.
1780	638.2601 REMOVING SIGNS TYPE I	2.000 EACH		.		.
1790	638.2602 REMOVING SIGNS TYPE II	93.000 EACH		.		.
1800	638.3000 REMOVING SMALL SIGN SUPPORTS	82.000 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
1810	638.3100 REMOVING STRUCTURAL STEEL SIGN SUPPORTS	4.000 EACH		.		.
1820	638.4000 MOVING SMALL SIGN SUPPORTS	3.000 EACH		.		.
1830	641.1200 SIGN BRIDGE CANTILEVERED (STRUCTURE) 0001. S-51-27	LUMP	LUMP			.
1840	641.1200 SIGN BRIDGE CANTILEVERED (STRUCTURE) 0002. S-51-28	LUMP	LUMP			.
1850	643.0200 TRAFFIC CONTROL SURVEILLANCE AND MAINTENANCE (PROJECT) 0001. 1033-02-72	580.000 DAY		.		.
1860	643.0300 TRAFFIC CONTROL DRUMS	91,219.000 DAY		.		.
1870	643.0420 TRAFFIC CONTROL BARRICADES TYPE III	10,579.000 DAY		.		.
1880	643.0500 TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS	50.000 EACH		.		.
1890	643.0600 TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER BASES	50.000 EACH		.		.
1900	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A	21,113.000 DAY		.		.
1910	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C	16,100.000 DAY		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1920	643.0800 TRAFFIC CONTROL ARROW BOARDS	1,643.000 DAY		.		.
1930	643.0900 TRAFFIC CONTROL SIGNS	28,667.000 DAY		.		.
1940	643.0910 TRAFFIC CONTROL COVERING SIGNS TYPE I	19.000 EACH		.		.
1950	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II	15.000 EACH		.		.
1960	643.1000 TRAFFIC CONTROL SIGNS FIXED MESSAGE	690.500 SF		.		.
1970	643.1050 TRAFFIC CONTROL SIGNS PCMS	738.000 DAY		.		.
1980	643.2000 TRAFFIC CONTROL DETOUR (PROJECT) 0001. 1033-02-72	1.000 EACH		.		.
1990	643.3000 TRAFFIC CONTROL DETOUR SIGNS	44,607.000 DAY		.		.
2000	645.0120 GEOTEXTILE FABRIC TYPE HR **P**	165.000 SY		.		.
2010	645.0140 GEOTEXTILE FABRIC TYPE SAS	194.000 SY		.		.
2020	646.0103 PAVEMENT MARKING PAINT 4-INCH	187,477.000 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
2030	646.0106 PAVEMENT MARKING EPOXY 4-INCH	112,874.000 LF		.		.
2040	646.0123 PAVEMENT MARKING PAINT 8-INCH	2,567.000 LF		.		.
2050	646.0126 PAVEMENT MARKING EPOXY 8-INCH	5,546.000 LF		.		.
2060	646.0600 REMOVING PAVEMENT MARKINGS **P**	40,364.000 LF		.		.
2070	646.0841.S PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH **P**	12,430.000 LF		.		.
2080	646.0843.S PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH **P**	6,072.000 LF		.		.
2090	647.0166 PAVEMENT MARKING ARROWS EPOXY TYPE 2	6.000 EACH		.		.
2100	647.0356 PAVEMENT MARKING WORDS EPOXY	2.000 EACH		.		.
2110	647.0566 PAVEMENT MARKING STOP LINE EPOXY 18-INCH	20.000 LF		.		.
2120	647.0576 PAVEMENT MARKING STOP LINE EPOXY 24-INCH	84.000 LF		.		.

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2130	647.0746 PAVEMENT MARKING DIAGONAL EPOXY 24-INCH	867.000 LF		.		.
2140	649.0400 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH	2,929.000 LF		.		.
2150	649.2100 TEMPORARY RAISED PAVEMENT MARKERS	672.000 EACH		.		.
2160	650.8500 CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS (PROJECT) 0001. 1033-02-72	LUMP	LUMP			.
2170	652.0125 CONDUIT RIGID METALLIC 2-INCH	15.000 LF		.		.
2180	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	7,156.000 LF		.		.
2190	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH	20.000 LF		.		.
2200	652.0325 CONDUIT RIGID NONMETALLIC SCHEDULE 80 2-INCH	25.000 LF		.		.
2210	652.0605 CONDUIT SPECIAL 2-INCH	700.000 LF		.		.
2220	652.0615 CONDUIT SPECIAL 3-INCH	175.000 LF		.		.
2230	652.0700.S INSTALL CONDUIT INTO EXISTING ITEM	1.000 EACH		.		.

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2240	652.0800 CONDUIT LOOP DETECTOR	70.000 LF		.		.
2250	653.0135 PULL BOXES STEEL 24X36-INCH	13.000 EACH		.		.
2260	653.0140 PULL BOXES STEEL 24X42-INCH	2.000 EACH		.		.
2270	653.0220 JUNCTION BOXES 18X6X6-INCH	2.000 EACH		.		.
2280	653.0905 REMOVING PULL BOXES	25.000 EACH		.		.
2290	654.0105 CONCRETE BASES TYPE 5	2.000 EACH		.		.
2300	655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG	7,745.000 LF		.		.
2310	655.0525 ELECTRICAL WIRE TRAFFIC SIGNALS 6 AWG	240.000 LF		.		.
2320	655.0620 ELECTRICAL WIRE LIGHTING 8 AWG	1,080.000 LF		.		.
2330	655.0640 ELECTRICAL WIRE LIGHTING 1 AWG	18.000 LF		.		.
2340	655.0700 LOOP DETECTOR LEAD IN CABLE	500.000 LF		.		.

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2350	655.0800 LOOP DETECTOR WIRE	375.000 LF		.		.
2360	656.0200 ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 0001. HL-51-RZ	LUMP	LUMP			.
2370	656.0400 ELECTRICAL SERVICE MAIN LUGS ONLY METER PEDESTAL (LOCATION) 0001. CCTV-51-0065	LUMP	LUMP			.
2380	656.0500 ELECTRICAL SERVICE BREAKER DISCONNECT BOX (LOCATION) 0001. CCTV-51-0065	LUMP	LUMP			.
2390	657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE	2.000 EACH		.		.
2400	657.0322 POLES TYPE 5-ALUMINUM	2.000 EACH		.		.
2410	659.0802 PLAQUES SEQUENCE IDENTIFICATION	4.000 EACH		.		.
2420	670.0100 FIELD SYSTEM INTEGRATOR	LUMP	LUMP			.
2430	670.0200 ITS DOCUMENTATION	LUMP	LUMP			.
2440	671.0132 CONDUIT HDPE 3-DUCT 2-INCH	5,025.000 LF		.		.

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2450	671.0300 FIBER OPTIC CABLE MARKER	13.000 EACH		.		.
2460	672.0250 BASE CAMERA POLE 50-FT	1.000 EACH		.		.
2470	673.0105 COMMUNICATION VAULT TYPE 1	9.000 EACH		.		.
2480	673.0225.S INSTALL POLE MOUNTED CABINET	1.000 EACH		.		.
2490	674.0200 CABLE MICROWAVE DETECTOR	5,230.000 LF		.		.
2500	674.0300 REMOVE CABLE	4,290.000 LF		.		.
2510	675.0300 INSTALL MOUNTED CONTROLLER MICROWAVE DETECTOR ASSEMBLY	4.000 EACH		.		.
2520	675.0400.S INSTALL ETHERNET SWITCH	1.000 EACH		.		.
2530	677.0100 INSTALL CAMERA POLE	1.000 EACH		.		.
2540	677.0200 INSTALL CAMERA ASSEMBLY	1.000 EACH		.		.
2550	677.0300.S INSTALL VIDEO ENCODER	1.000 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
2560	677.9051.S REMOVING 50-FOOT CAMERA POLE	1.000 EACH		.		.
2570	677.9200.S REMOVING CCTV CAMERA	1.000 EACH		.		.
2580	678.0006 INSTALL FIBER OPTIC CABLE OUTDOOR PLANT 6-CT	2,970.000 LF		.		.
2590	678.0300 FIBER OPTIC SPLICE	6.000 EACH		.		.
2600	678.0400 FIBER OPTIC TERMINATION	6.000 EACH		.		.
2610	678.0500 COMMUNICATION SYSTEM TESTING	LUMP	LUMP			.
2620	690.0250 SAWING CONCRETE	6,627.000 LF		.		.
2630	ASP.1T0A ON-THE-JOB TRAINING APPRENTICE AT $5.00/HR	800.000 HRS	5.00000		4000.00	
2640	ASP.1T0G ON-THE-JOB TRAINING GRADUATE AT $5.00/HR	3,000.000 HRS	5.00000		15000.00	
2650	SPV.0035 SPECIAL 4000. HPC MASONRY STRUCTURES **P**	2,211.000 CY		.		.
2660	SPV.0045 SPECIAL 0001. TRUCK MOUNTED ATTENUATOR	150.000 DAY		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2670	SPV.0045 SPECIAL 0002. PCMS REMOTE COMMUNICATIONS	738.000 DAY		.		.
2680	SPV.0060 SPECIAL 0002. EXPOSING EXISTING UTILITY PAVED AREA	40.000 EACH		.		.
2690	SPV.0060 SPECIAL 0003. TRAFFIC CONTROL LOCAL ROAD LANE CLOSURES	25.000 EACH		.		.
2700	SPV.0060 SPECIAL 0004. EXPOSING EXISTING UTILITY UNPAVED AREA	40.000 EACH		.		.
2710	SPV.0060 SPECIAL 0009. EROSION CONTROL FILTER BAGS	45.000 EACH		.		.
2720	SPV.0060 SPECIAL 0016. MOBILIZATION EMERGENCY PAVEMENT REPAIR	4.000 EACH		.		.
2730	SPV.0060 SPECIAL 0030. SILT FENCE DRAINAGE OUTLET EROSION CONTROL FILTER BAGS	30.000 EACH		.		.
2740	SPV.0060 SPECIAL 0052. 24-HOUR BASELINE VIBRATION MONITORING	52.000 EACH		.		.
2750	SPV.0060 SPECIAL 0053. DAILY VIBRATION MONITORING	26.000 EACH		.		.
2760	SPV.0060 SPECIAL 0070. BASELINE CPM PROGRESS SCHEDULE	1.000 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
2770	SPV.0060 SPECIAL 0071. CPM PROGRESS SCHEDULE UPDATES AND ACCEPTED REVISIONS	50.000 EACH		.		.
2780	SPV.0060 SPECIAL 1000. CONCRETE CONTROL CABINET BASES SPECIAL	1.000 EACH		.		.
2790	SPV.0060 SPECIAL 1001. LIGHTING CONTROL CABINET SPECIAL	1.000 EACH		.		.
2800	SPV.0060 SPECIAL 2000. REMOVING ELECTRICAL SERVICE METER BREAKER PEDESTAL	2.000 EACH		.		.
2810	SPV.0060 SPECIAL 2010. REMOVING CONTROLLER CABINET BASE	2.000 EACH		.		.
2820	SPV.0060 SPECIAL 2020. REMOVING CONTROLLER CABINET	2.000 EACH		.		.
2830	SPV.0060 SPECIAL 2040. INSTALL ANTENNA	1.000 EACH		.		.
2840	SPV.0060 SPECIAL 2050. INSTALL 900 MHZ RADIO	1.000 EACH		.		.
2850	SPV.0060 SPECIAL 2060. REFOCUS PORTABLE VIDEO SURVEILLANCE SYSTEM	4.000 EACH		.		.
2860	SPV.0060 SPECIAL 2070. INSTALL WIRELESS ETHERNET BRIDGE	1.000 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
2870	SPV.0060 SPECIAL 2080. INSTALL PORTABLE VIDEO SURVEILLANCE SYSTEM	2.000 EACH		.		.
2880	SPV.0060 SPECIAL 2090. INSTALL TEMPORARY VEHICLE DETECTOR ASSEMBLY	2.000 EACH		.		.
2890	SPV.0060 SPECIAL 2100. GROUND ROD	4.000 EACH		.		.
2900	SPV.0060 SPECIAL 4100. PILE DYNAMIC ANALYZER (PDA) TESTING	20.000 EACH		.		.
2910	SPV.0060 SPECIAL 4110. PILE DYNAMIC ANALYZER (PDA) RESTRIKES	20.000 EACH		.		.
2920	SPV.0060 SPECIAL 4120. ANCHOR SLAB INLET COVER	4.000 EACH		.		.
2930	SPV.0085 SPECIAL 4300. BAR STEEL REINFORCEMENT HS STAINLESS BRIDGES	5,100.000 LB		.		.
2940	SPV.0090 SPECIAL 0001. CONCRETE BARRIER TEMPORARY PRECAST LEFT IN PLACE	6,379.000 LF		.		.
2950	SPV.0090 SPECIAL 0002. GLARE SCREENS TEMPORARY	21,413.000 LF		.		.
2960	SPV.0090 SPECIAL 0030. REMOVING PAVEMENT MARKINGS WATER BLASTING	44,156.000 LF		.		.

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2970	SPV.0090 SPECIAL 0051. DRAIN SLOTTED VANE LONGITUDINAL	60.000 LF		.		.
2980	SPV.0090 SPECIAL 0071. CONCRETE CURB AND GUTTER 4-INCH SLOPED 60-INCH TYPE A **P**	887.000 LF		.		.
2990	SPV.0090 SPECIAL 4400. FENCE DECORATIVE BRIDGE	422.000 LF		.		.
3000	SPV.0090 SPECIAL 4410. FENCING DECORATIVE WALL	186.000 LF		.		.
3010	SPV.0105 SPECIAL 0001. FIELD OFFICE FIXED	LUMP	LUMP			.
3020	SPV.0105 SPECIAL 0002. REMOVE LOOP DETECTOR WIRE AND LEAD IN CABLE I-94 EB RAMPS & STH 20	LUMP	LUMP			.
3030	SPV.0105 SPECIAL 0003. TRAFFIC SIGNAL MITIGATION FOR CONSTRUCTION STAGING	LUMP	LUMP			.
3040	SPV.0105 SPECIAL 0005. PAVEMENT CLEANUP PROJECT 1033-02-72	LUMP	LUMP			.
3050	SPV.0105 SPECIAL 0051. SURVEY PROJECT 1033-02-72	LUMP	LUMP			.
3060	SPV.0105 SPECIAL 1001. UNDERDECK LIGHTING SPECIAL (STH 20)	LUMP	LUMP			.

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3070	SPV.0105 SPECIAL 1002. LIGHTING SYSTEM INTEGRATOR	LUMP	LUMP			.
3080	SPV.0105 SPECIAL 1003. LIGHTING SYSTEM SURVEY	LUMP	LUMP			.
3090	SPV.0165 SPECIAL 4700. LONGITUDINAL GROOVING BRIDGE DECK **P**	45,480.000 SF		.		.
3100	SPV.0165 SPECIAL 4710. WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP PILOT **P**	26,235.000 SF		.		.
3110	SPV.0165 SPECIAL 4720. TEMPORARY WALL WIRE FACE MECH STABILIZED EARTH LRFD/QMP PILOT **P**	1,195.000 SF		.		.
3120	SPV.0180 SPECIAL 0001. GEOGRID REINFORCEMENT	4,000.000 SY		.		.
3130	SPV.0180 SPECIAL 0002. GEOTEXTILE FABRIC TYPE FF	200.000 SY		.		.
3140	SPV.0180 SPECIAL 0004. REMOVING RUMBLE STRIPS	3,106.000 SY		.		.
3150	SPV.0180 SPECIAL 0007. CONCRETE PAVEMENT REPAIR SPECIAL	1,620.000 SY		.		.
3160	SPV.0180 SPECIAL 0008. TOPSOIL SPECIAL	100,862.000 SY		.		.

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3170	SPV.0180 SPECIAL 0009. CONCRETE PAVEMENT 12-INCH SPECIAL **P**	96,775.000 SY		.		.
3180	SPV.0180 SPECIAL 4800. SLOPE PAVING CRUSHED AGGREGATE SPECIAL **P**	220.000 SY		.		.
3190	SPV.0195 SPECIAL 0001. COLD PATCH	20.000 TON		.		.
3200	SPV.0195 SPECIAL 0003. ASPHALTIC PAVEMENT REPAIR SPECIAL	674.000 TON		.		.
3210	SPV.0195 SPECIAL 0004. HMA LONGITUDINAL JOINT REPAIR	1,686.000 TON		.		.
	SECTION 0001 TOTAL					.
	TOTAL BID					.

PLEASE ATTACH SCHEDULE OF ITEMS HERE