HIGHWAY WORK PROPOSAL

Proposal Number: Ø 3

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

COUNTY	STATE PROJECT ID	FEDERAL PROJECT ID	PROJECT DESCRIPTION	HIGHWAY
Dane	1007-10-73		Illinois State Line - Madison SB Bridges/B-13-0707 B-13-0710	IH 39
Dane	1007-10-79		Illinois State Line - Madison Maple Grove Rd to East Church Rd	IH 39

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, $ 470,000.00 Payable to: Wisconsin Department of Transportation	Attach Proposal Guaranty on back of this PAGE.
Bid Submittal Due Date: February 9, 2016 Time (Local Time): 9:00 AM	Firm Name, Address, City, State, Zip Code **SAMPLE** **NOT FOR BIDDING PURPOSES**
Contract Completion Time April 14, 2017	
Assigned Disadvantaged Business Enterprise Goal 0 %	This contract is exempt from federal oversight.

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

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

Subscribed and sworn to before me this date _____

(Signature, Notary Public, State of Wisconsin)

(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 Grading, embankment, base aggregate, concrete pavement, HMA pavement, Structures B-13-706, B-13-707, B-13-710, C-13-3078, S-13-399, S-13-400, culvert pipe, storm sewer, concrete curb and gutter, permanent signing and marking, and ITS.	
Notice of Award Dated	Date Guaranty Returned

PLEASE ATTACH
PROPOSAL GUARANTY HERE

Effective with November 2007 Letting

PROPOSAL REQUIREMENTS AND CONDITIONS

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

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

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

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

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

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

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

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

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

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

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

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

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

Effective with August 2015 Letting

BID PREPARATION

Preparing the Proposal Schedule of Items

A General

(1) Obtain bidding proposals as specified in section 102 of the standard specifications prior to 11:45 AM of the last business day preceding the letting. Submit bidding proposals using one of the following methods:

1. Electronic bid on the internet.
2. Electronic bid on a printout with accompanying diskette or CD ROM.
3. Paper bid under a waiver of the electronic submittal requirements.

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

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

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

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

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

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

(6) Contractors are responsible for checking on the issuance of addenda and for obtaining the addenda. Notice of issuance of addenda is posted on the department's web site at:
http://wisconsindot.gov/Pages/doing-bus/contractors/hcci/bid-let.aspx

or by calling the department at (608) 266-1631. Addenda can ONLY be obtained from the departments web site listed above or by picking up the addenda at the Bureau of Highway Construction, Room 601, 4802 Sheboygan Avenue, Madison, WI, during regular business hours.

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

B Submitting Electronic Bids

B.1 On the Internet

(1) Do the following before submitting the bid:

1. Have a properly executed annual bid bond on file with the department.
2. Have a digital ID on file with and enabled by Info Tech Inc. Using this digital ID will constitute the bidder's signature for proper execution of the bidding proposal.

(2) In lieu of preparing, delivering, and submitting the proposal as specified in 102.6 and 102.9 of the standard specifications, submit the proposal on the internet as follows:

1. Download the latest schedule of items reflecting all addenda from the Bid Express web site.
2. Use Expedite™ software to enter a unit price for every item in the schedule of items.
3. Submit the bid according to the requirements of Expedite™ software and the Bid Express™ web site. Do not submit a bid on a printout with accompanying diskette or CD ROM or a paper bid. If the bidder does submit a bid on a printout with accompanying diskette or a paper bid in addition to the internet submittal, the department will disregard the internet bid.
4. Submit the bid before the hour and date the Notice to Contractors designates.
5. Do not sign, notarize, and return the bidding proposal described in 102.2 of the standard specifications.

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

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

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

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

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

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

Bidder

Name

BN00

Proposals: 1, 12, 14, & 22

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

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

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

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

C Waiver of Electronic Submittal

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

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

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

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

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

PROPOSAL BID BOND

Wisconsin Department of Transportation

DT1303 1/2006

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

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

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

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

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

PRINCIPAL

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

(Signature and Title)

(Company Name)

(Signature and Title)

(Company Name)

(Signature and Title)

(Company Name)

(Signature and Title)

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

(Signature of Attorney-in-Fact)

NOTARY FOR PRINCIPAL

(Date)

State of Wisconsin)
) ss.
_____ County)

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

(Signature, Notary Public, State of Wisconsin)

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

(Date Commission Expires)

Notary Seal

NOTARY FOR SURETY

(Date)

State of Wisconsin)
) ss.
_____ County)

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

(Signature, Notary Public, State of Wisconsin)

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

(Date Commission Expires)

Notary Seal

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

CERTIFICATE OF ANNUAL BID BOND

Wisconsin Department of Transportation

DT1305 8/2003

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

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

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

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

(Signature of Authorized Contractor Representative) (Date)

March 2010

LIST OF SUBCONTRACTORS

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

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

Name of Subcontractor	Class of Work	Estimated Value

DECEMBER 2000

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

Instructions for Certification

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Special Provisions

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SPECIAL PROVISIONS

1. General.

Perform the work under this construction contract for Project 1007-10-73, Illinois State Line – Madison, SB Bridges/B-13-0707 B-13-0710, IH 39, and Project 1007-10-79, Illinois State Line – Madison, Maple Grove Rd to East Church Rd IH 39, both projects in Dane County, Wisconsin as the plans show and execute the work as specified in the State of Wisconsin, Department of Transportation, Standard Specifications for Highway and Structure Construction, 2016 Edition, as published by the department, and these special provisions.

If all or a portion of the plans and special provisions are developed in the SI metric system and the schedule of prices is developed in the US standard measure system, the department will pay for the work as bid in the US standard system.
100-005 (20150630)

2. Scope of Work.

The work under this contract shall consist of grading, embankment, base aggregate, concrete pavement, HMA pavement, Structures B-13-706, B-13-707, B-13-710, C-13-3078, S-13-399, S-13-400, culvert pipe, storm sewer, concrete curb and gutter, permanent signing and marking, ITS, 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. The contract time for completion is based on an expedited work schedule and may require extraordinary forces and equipment.

The completion of November 18, 2016 prior to suspension of operations in the fall of 2016 is based on the expedited work schedule and may require extraordinary forces and equipment.

Provide the start date to the engineer in writing within a month after executing the contract but at least 14 calendar days before the preconstruction conference. Upon approval, the engineer will issue the notice to proceed within 10 calendar days before the approved start date.

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

The contract time for completion is based on an expedited work schedule and may require extraordinary forces and equipment. Included in this Prosecution and Progress article are interim and final completion dates. These dates indicate that work efforts will possibly require multiple or concurrent controlling operations to occur at the same time. This information is included to assist the contractor and its subcontractors and shall not be interpreted as a demonstration of specified means and methods or work periods other than intermediate and completion dates.

The contractor is advised that there may be multiple mobilizations for such items as erosion control, traffic control, detours, signing items, temporary pavement markings and other incidental items related to the staging. The department will make no additional payment for said mobilizations.

IH 39/90 is an oversize-overweight (OSOW) route. Maintain access for all OSOW movements during all stages of construction.

Conform the schedule of operations to the construction staging as shown in the traffic control plans and as described herein unless modifications to the schedule are approved in writing by the engineer.

When engaged in roadway cleaning operations, use equipment having vacuum or water spray mechanisms to eliminate the dispersion of particulate matter into the atmosphere. If vacuum equipment is employed, it must have suitable self-contained particulate collectors to prevent discharge from the collection bin into the atmosphere.

Sequence of Operations
The department anticipates 5 primary stages on project 1007-10-79 as shown in the traffic control plans, unless modifications are approved in writing by the engineer. The project 1007-10-73 work is included in the stages of project 1007-10-79.

1007-10-79:
Stage 1

1. Mill and overlay rumble strips.
2. Construct pavement outside shoulder IH 39/90 northbound and southbound.
3. Construct pavement in median IH 39/90 northbound and southbound.
4. Remove existing Maple Grove Rd Structure B-13-173.
5. Begin construction USH 51 northbound and southbound entrance ramps.
6. Begin construction IH 39/90 southbound Structure B-13-707 at USH 51.
7. Begin construction IH 39/90 southbound Structure B-13-710 at East Church Rd.

Stage 2A

1. Construct temporary asphalt median USH 51.

Stage 2B

1. Construct pavement in median IH 39/90 southbound south of Maple Grove Rd.
2. Construct USH 51 southbound exit and entrance ramps.
3. Construct concrete pavement outside shoulder and two outside lanes IH 39/90 southbound.
4. Construct concrete pavement crossover at northern limits.
5. Continue construction IH 39/90 southbound Structure B-13-707.
6. Continue construction IH 39/90 southbound Structure B-13-710.
7. Begin construction Maple Grove Rd Structure B-13-706.

Stage 2C

1. Construct pavement outside shoulder IH 39/90 southbound.
2. Construct USH 51 southbound exit and entrance ramps.
3. Construct concrete pavement outside shoulder and two outside lanes IH 39/90 southbound.
4. Construct concrete pavement crossover at northern limits.
5. Continue construction IH 39/90 southbound Structure B-13-707.
6. Continue construction IH 39/90 southbound Structure B-13-710.
7. Continue construction Maple Grove Rd Structure B-13-706.

Stage 3

1. Construct concrete pavement outside shoulder and two outside lanes IH 39/90 southbound.
2. Construct concrete pavement median shoulder and inside lane IH 39/90 southbound.
3. Continue construction IH 39/90 southbound Structure B-13-707.
4. Continue construction IH 39/90 southbound Structure B-13-710.
5. Remove existing IH 39/90 southbound over East Church Rd Structure B-13-168.
6. Construct East Church Rd.

Stage 4

1. Construct concrete pavement median shoulder and inside lane IH 39/90 southbound.
2. Continue construction Maple Grove Rd Structure B-13-706.
3. Construct pavement in median IH 39/90 southbound.
4. Remove existing IH 39/90 southbound over USH 51 Structure B-13-171.

Stage 5

1. Continue construction Maple Grove Rd Structure B-13-706.

All grading work associated with Ramp EKN shall be completed prior to placement of girders for Structure B-13-707.

Do not switch traffic over to the next construction stage unless all signing, pavement marking, reflectors, tubular marker posts, and traffic control drums for the stage are in place, and conflicting pavement markings and signs are removed as shown in the traffic control

plans and as directed by the engineer. Allowable exceptions to this specification are crossover and intersection areas where traffic control cannot be placed until the switch is made.

Work Restrictions
Do not close traffic lanes on IH 39/90 outside of Permitted Lane Closure Times specified in the Traffic article. Assessment per the Lane Rental Fee Assessment article will be charged for lane closures outside of the Permitted Lane Closure Times.

Do not install culvert pipes, install or remove bridge deck false work or remove existing bridge decks over, or directly adjacent to, live lanes of traffic, and provide a 6-foot minimum lateral buffer between these work zones and live lanes of traffic.

A 2 foot minimum paved shoulder shall be maintained on IH 39/90 at all times adjacent to travel lane. No aggregate shoulders shall be permitted adjacent to travel lanes at any time. During the night time lane closure for shoulder work on IH 39/90, the existing shoulder pavement within 2 feet of the travel lane shall not be removed until the shoulder can be paved within the same night.

Contractor Coordination
The prime contractor shall have a superintendent or designated representative on the job site during all controlling work operations, including periods limited to only subcontractor work operations, to serve as a primary contact person and to coordinate all work operations.

Hold progress meetings once a week for Projects 1007-10-73 and 1007-10-79. These meetings will take place at 111 Interstate Blvd, Edgerton, WI. The contractor's superintendent or designated representative and subcontractor's representatives for ongoing subcontract work or subcontractor work expected to begin within the next two weeks shall attend and provide a written schedule of the next week(s)' operations. Include begin and end dates of specific prime and subcontractor work operations including lane closures and traffic switches. Invite utilities, Town of Albion, Township of Christiana, and Dane County Sheriff representatives to attend the progress meetings. Agenda items at the meeting will include review of the contractor's schedule and subcontractors' schedule, utility conflicts and relocation schedule, evaluation of progress and pay items, and making revisions if necessary. Plans and specifications for upcoming work will be reviewed to prevent potential problems or conflicts between contractors.

The contractor shall coordinate work according 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.

Coordinate any excess waste material from projects 1007-10-79 with adjacent projects 1007-10-78 and 1005-10-71/72 for potential reductions in embankment quantities.

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

Based on the progress meeting, if the engineer requests a new revised schedule, submit it within seven calendar days. Failure to submit a new schedule within seven days shall result in the engineer holding pay requests until received.

Migratory Birds
Swallow and other migratory birds' nests have not been observed on or under the existing bridges, but conditions to support nesting exist. All active nests (when eggs or young are present) of migratory birds are protected under the federal Migratory Bird Treaty Act.

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

Northern Long-eared Bat (*Myotis septentrionalis*)
Northern Long-eared Bats (NLEB) have the potential to inhabit the project limits because they roost in trees and structures (bridges, culverts, buildings). Roosts may not have been observed on this project, but conditions to support the species exist. The species and all active roosts are protected by the Federal Endangered Species Act.

The department has contracted with others to cut all trees for this project prior to construction. Remove any downed trees and grub the stumps and any remaining vegetation within the identified grubbing limits.

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

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

Notify the Project Leader 14 days in advance of any work on box culverts or bridges between April 1 and September 30 to allow time for department to complete the Bat Presence Structure Inspection Form.

If bats or evidence of bats are not found during the inspection, construction may proceed.

If bats or evidence of bats are found during the inspection, construction activities affecting the structure's roosting potential must stop until the WisDOT Regional Environmental Coordinator completes consultation with the Wisconsin Department of Natural Resources (WDNR) and/or United States Fish and Wildlife Service (USFWS).

ITS

Stage the construction operations to ensure that there are no more than seven days of downtime between the existing roadside Dynamic Message Sign (DMS) and the temporary roadside DMS.

Stage the construction operations to ensure that there are no more than seven days of downtime between temporary roadside DMS and the final overhead DMS.

Overhead DMS shall be fully operational 1 month prior to project completion date with the ability to access data and post messages remotely at the following locations:

1. IH 39/90 at Maple Grove Road (DMS-13-0027)

Stage the construction operations to ensure that there are no more than seven days of downtime while relocating the ramp closure gates.

Stage the construction operations to ensure that there are no more than seven days of downtime while replacing the power cables to CCTV-13-0102.

Interim Liquidated Damages

The NB Exit and Entrance Ramps at the 51 North Interchange may be closed and detoured to complete the ramp reconstruction, structure B-13-707, removing old structure B-13-171, and shall re-open to traffic prior to 12:01 AM September 30, 2016.

If the contractor fails to reopen the NB exit and entrance ramps at the 51 North interchange to traffic prior to 12:01 AM September 30, 2016, the department will assess the contractor $5,000 in interim liquidated damages for each calendar day that the ramps remains closed after 12:01 AM, September 30, 2016. An entire calendar day will be charged for any period of time within a calendar day that the ramps remain closed beyond 12:01 AM.

Complete construction operations on the project, including all work except for Concrete Staining B-13-706 and open it to through traffic prior to 12:01 AM November 19, 2016.

If the contractor fails to complete all work except for Concrete Staining B-13-706 prior to 12:01 AM November 19, 2016, the department will assess the contractor $8,000 in interim liquidated damages for each calendar day that the work remains incomplete (except for Concrete Staining B-13-706) after 12:01 AM, November 19, 2016. An entire calendar day will be charged for any period of time within a calendar day that the work remains incomplete (except for Concrete Staining B-13-706) beyond 12:01 AM.

Final Liquidated Damages
Replace standard spec 108.11 paragraph (3) as follows:

The department will assess the contractor $8000 in liquidated damages for each calendar day that work remains uncompleted. An entire calendar day will be charged for any period of time within a calendar day that the work remains uncompleted beyond 12:01 AM. These liquidated damages reflect the cost of engineering, supervision, and a portion of road user costs.

4. Traffic.

General
Accomplish the construction sequence, including the associated traffic control as detailed in the Construction Staging section of the plans, and as described in this article.

Do not begin or continue any work that closes traffic lanes outside the allowed time periods specified in this article.

Any revisions to traffic control plans shall adhere to article Notice to Contractor, Revisions to Traffic Control Plans.

IH 39/90 shall remain open to through traffic at all times for the duration of this project except for approved lane closures or rolling closures as approved by the engineer. Single lane operation on IH 39/90 is only allowed during Permitted Lane Closure Times with approval of the engineer. Lane closures shall be according to the traffic control plans and shall have the approval of the engineer and the Statewide Traffic Operations Center, (414) 227-2142.

The contractor is responsible for coordinating with the following school districts to ensure that bus routes are maintained and accessible throughout construction.

Edgerton School District
Riteway Transportation (608) 884-8114

The contractor is also responsible for coordinating with the following post offices to ensure that mail delivery is maintained for residents along the project:

Edgerton
104 Swift Street
Edgerton, WI 53534
(608) 884-6442

Traffic operations during all stages

- Maintain two lanes of traffic in each direction at all times on IH 39/90**.
- Maintain mainline traffic on IH 39/90 on a paved concrete or hot mix asphalt surface at all times.
- Maintain a minimum lane width of 12-feet on IH 39/90 (16-foot minimum clear width when restricted to one lane).
- Maintain a minimum lane width of 12-feet on USH 51 (13-foot minimum clear width when restricted to one lane).
- Maintain local access to residences.

*** Except during lane closures allowed as specified in the Lane Closures section.*

Coordinate and stage all construction activities within the areas of local traffic routes, as required to maintain a traveled way conforming to all above requirements.

Use drums and barricades to direct local vehicular and pedestrian traffic in the work zone and to protect and delineate hazards such as open excavations, abrupt drop-offs, and exposed manholes, inlets, hydrants, etc. The use of such devices shall be incidental to the operation which creates the hazard.

Place roadway and pavement marking as detailed on the plans and in conformance to the Manual on Uniform Traffic Control Devices (MUTCD), latest edition. Traffic control shall be completely in place by the end of the working day of a traffic switch.

Do not deliver or store materials and equipment within open travel lanes or open side roads during any stage of construction.

Conduct operations in a manner that will cause the least interference to traffic movements. Maintain vehicle and pedestrian access at all times to buildings within the limits of construction.

Definitions

The following definitions apply to this contract:

Lane Closures

Single lane and shoulder closures on IH 39/90 may be permitted during permitted lane and shoulder closure times for work required to complete HMA pavement and installation and removal of bridge falsework. During the times when one lane is allowed to be closed, a minimum clear width of 16 feet, including the adjacent shoulder, shall be maintained at all times. Times listed for lane closure restrictions include setup and breakdown of any equipment and traffic control devices.

Request approval from the engineer for all lane closures according to the "Wisconsin Lane Closure System Advanced Notification" section of these special provisions. Include justification for the lane closure and the anticipated duration in the request. A request does not constitute approval. Terminate single lane closures at the end of the Permitted Lane

Closure Times. Failure to obtain approval or reopen closed lanes at the required time shall be subject to assessments specified under the article "Lane Rental Fee Assessment".

Shoulders may be closed if required by the work operation, but the right and left shoulder may not be closed in the same area at the same time nor closed at the same time with an opposite side lane closure.

All lane and shoulder closures shall be removed when work is not in progress.

Provide arrow boards for use during all single lane closures according to the MUTCD. Arrow boards for single lane closures will be paid for under the item Traffic Control Arrow Boards for each day with a single lane closure where an arrow board is in use.

Lane and Shoulder Closure Times
Shoulder closures on IH 39/90 are allowed for the duration of the project with the exception of southbound on Sundays from 12:00 PM – 6:00 PM and northbound on Fridays from 2:00 PM – 6:00 PM.

IH 39/90 lane closures are allowed only at the times in the following tables and text. At all other times all lanes shall be fully open to traffic.

The engineer will have the ability to suspend work activities during the periods listed below in the event that undesirable traffic congestion develops that has the potential to cause lengthy motorist delay or unsafe working conditions.

Permitted Lane Closure Times

DAY OF THE WEEK	IH 39/90
Monday - Thursday	12:00 AM – 5:00 AM 8:00 PM – 11:59 PM
Friday	12:00 AM – 5:00 AM 10:00 PM – 11:59 PM
Saturday	12:00 AM – 7:00 AM 8:00 PM – 11:59 PM
Sunday	12:00 AM – 9:00 AM 10:00 PM – 11:59 PM

For all freeway closures, a maximum of one lane or one shoulder may be closed at any one time at a specific location.

Lane closures should be continuous when possible. A two mile minimum spacing is required where continuous lane closures are not feasible or desirable.

Coordinate lane closures with the State Patrol through Jeff Gustafson of the Wisconsin Department of Transportation Madison Office at (608) 516-6400 or jeffrey.gustafson@dot.wi.gov.

Roadway Closures
Maintain traffic in each direction at all times on IH 39/90, as shown in the Construction Staging section of the plans except as follows:

During girder placement and removal operations arrange for 15 minute rolling closures to be utilized for 4 nights. This will involve slowing or stopping freeway traffic for a brief period and then allowing it to proceed behind a line of state patrol cars that will coordinate the procession with the construction crew at the site. The time for these stoppages shall be restricted between 11:00 PM Monday, Tuesday, Wednesday, and Thursday evening to 5:00 AM the following morning, with the exception of holiday work restrictions.

Closure of the IH 39/90 northbound Exit and Entrance Ramps at the USH 51 North Interchange will be required during various stages of construction with limitations as outlined in the Work Restrictions and Interim Liquidated Damages sections of the Prosecution and Progress article. Detour signing is provided in the plans and shall be in place in advance of the scheduled ramp closures. No other northbound Exit and Entrance Ramp closures shall be permitted outside of the specified timeframe in the Interim Liquidated Damages section.

Contractor operations shall not require state patrol cars to stop IH 39/90 traffic for more than the time described above. All vehicles from the 15 minute rolling closure queue shall be cleared prior to the start of subsequent 15 minute rolling closures. The department will allow this procedure for no more than the time specified above. The necessary flag persons, advanced signing and law enforcement personnel are required to be on site prior to and during this operation. Make arrangements for implementing the rolling stops and closures on IH 39/90 through Jeff Gustafson at the Southwest Region Madison Office at (608) 516-6400, with the Southwest Region Office of the Wisconsin State Patrol and the Dane County Sheriff's department at least 14 days prior to any stoppage.

Failure to reopen the roadway at the required times shall be subject to assessments specified under the article "Lane Rental Fee Assessment".

Place Traffic Control Signs Portable Changeable Message for all lane and roadway closures as shown on the plans at least seven days prior to the lane or roadway closure. Install all signing and devices for detour routes. Obtain approval from the department for all messages for the Traffic Control Signs Portable Changeable Message. The engineer shall contact Jeff Gustafson at the Southwest Region Madison Office, (608) 516-6400. All lane closures are subject to the approval of the Region traffic engineer.

Property Access

Maintain access to properties along the project for local residents, businesses, and emergency vehicles. Access to all driveways and parking lots where alternative access is not available shall remain open at all times, except when it is absolutely necessary to close them for underground construction. Keep business entrances open by partial driveway construction or by closing only one access at a time for properties with multiple driveways. Construct temporary commercial entrances including a crushed aggregate surface within 24 hours of removal. Combine temporary commercial entrances wherever practical to minimize the number of access locations.

On Maple Grove Road and East Church Road, maintain a clearly delineated, suitable driving surface of at least a 10-foot driving lane for residents, businesses, school busses, and emergency vehicles throughout construction. A suitable driving surface is defined as a material capable of withstanding a fully loaded quad axle truck without yielding as approved by the engineer. The 10-foot lane shall be graded to drain and rolled with a smooth drum vibratory roller or other alternate compaction equipment that produces a smooth driving surface.

The contractor shall provide the engineer and local law enforcement with a 24-hour, 7 days/week contact person responsible for the maintenance of the 10-foot driving lane for residents.

Contact farmers and businesses operating along Maple Grove Road and East Church Road to coordinate their specific needs for agricultural equipment usage and deliveries along the corridor with the contractor's work operations.

Employ such flaggers, signs, barricades, and drums as may be necessary to safeguard local traffic at all locations affected by construction operations. Make arrangements and be responsible for the prompt replacement of damaged or dislocated traffic control or guidance devices, day or night.

Inform all adjacent property owners two working days prior to closing their access(es).

Advance Notification

Notify Dane County, the Town of Albion, the Town of Christiana, and Dane County Sheriff's Department 48 hours in advance of the start of work, closures of existing streets, and prior to traffic control changes. Notifications must be given by 4:00 PM on Thursday for any such work to be done on the following Monday.

Notify Edgerton School District two weeks prior to construction. Also notify them one week prior to traffic switches and lane closures.

Advance notification as described above is considered incidental to the Traffic Control (Project) bid item.

Clear Zone Working Restrictions
Do not leave any slopes steeper than 3:1 within the clear zone or any drop offs at the edge of the traveled way greater than 2 inches which are not protected by temporary precast barrier. The clear zone for IH 39/90 is 30 feet.

Do not perform heavy equipment work in the IH 39/90 median or adjacent to the shoulder at any time unless protected by concrete barrier in both directions except during night work with permitted lane closures.

Store materials or park equipment a minimum of 30 feet from the edge of the IH 39/90 traveled way. Equipment may be parked in the median if it is protected by concrete barrier.

If the contractor is unsure whether an individual work operation will meet the safety requirements for working within the clear zone, review the proposed work operation with the engineer before proceeding with the work.

Portable Changeable Message Signs – Message Prior Approval
After coordinating with department construction field staff, notify Jeff Gustafson at the Southwest Region Madison Office, (608) 516-6400, 3 weeks prior to deploying or changing a message on a PCMS to obtain approval of the proposed message. The department will review the proposed message and either approve the message or make necessary changes.

Wisconsin Lane Closure System Advanced Notification
Provide the following minimum advance notification to the engineer for incorporation in the Wisconsin Lane Closure System (LCS).

TABLE: CLOSURE TYPE AND REQUIRED MINIMUM ADVANCE NOTIFICATION

Closure type with height, weight, or width restrictions (available width, all lanes in one direction ≤16')	MINIMUM NOTIFICATION
Lane and shoulder closures	14 calendar days
Full roadway closures	14 calendar days
System and service ramp closures	14 calendar days
Full system and service ramp closures	14 calendar days
Detours	14 calendar days

Closure type without height, weight, or width restrictions (available width, all lanes in one direction >16')	MINIMUM NOTIFICATION
Lane and shoulder closures	14 calendar days
System and service ramp closures	14 calendar days
Modifying all closure types	14 calendar days

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

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

The department has the authority to disallow any requested closures or width restrictions.

Protection of Bridge Pier Columns
Bridge pier columns are to remain protected at all times throughout construction with concrete barrier temporary precast or guardrail.

Construction Access
Restrict work on IH 39/90 within closed shoulders as allowed by the plans or engineer. All construction access is subject to approval of the engineer.

Construction traffic cannot travel counter-directional adjacent to IH 39/90 traffic except behind temporary concrete barrier.

General Access
U-Turns at existing maintenance crossovers or temporary crossovers between IH 39/90 northbound and southbound will be allowed for construction vehicles when lane closures are in place for inside northbound and southbound passing lanes.

Construction operations affecting the traveling public's safety on IH 39/90 will not be allowed during snow and ice conditions, or any other adverse weather conditions, unless approved by the engineer.

Delivery of equipment to IH 39/90 requiring the use of a semi tractor and trailer shall only occur during those hours identified as Permitted Lane Closure Times.

Delivery and removal of materials and equipment via IH 39/90 shall only take place during Permitted Lane Closure Times when a lane closure is in place.

5. Holiday Work Restrictions.

Do not perform work on, nor haul materials of any kind along or across any portion of the highway carrying IH 39/90 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 27, 2016 to 6:00 AM Tuesday, May 31, 2016 for Memorial Day;
- From noon Friday, July 1, 2016 to 6:00 AM Tuesday July 5, 2016 for Independence Day;
- From noon Friday, September 2, 2016 to 6:00 AM Tuesday, September 6, 2016 for Labor Day;
- From 12:00 AM to 11:59 PM Monday, October 10, 2016 for Columbus Day;
- From noon Friday, November 18, 2016 to 6:00 AM Monday, November 21, 2016;
- From noon Wednesday, November 23, 2016 to 6:00 AM Monday, November 28, 2016 for Thanksgiving;
- From noon Friday, December 23, 2016 to 6:00 AM Monday, January 2, 2017 for Christmas and New Year's;
- From noon Friday, April 14, 2017 to 6:00 AM Monday, April 17, 2017 for Easter.

107-005 (20050502)

6. Utilities.

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

There are underground and overhead utility facilities located within the project limits. The contractor shall coordinate their construction activities with a call to Diggers Hotline or a direct call to the utilities that have facilities in the area as required per statutes. The contractor shall use caution to ensure the integrity of the underground facilities and shall maintain code clearances from overhead facilities at all times.

Utilities (ID 1007-10-73)
Alliant Energy (WPL) – Electric
Alliant Energy – Electric has existing poles and overhead facilities located on both the north and south sides of East Church Road. Existing poles on the south side of East Church Road located approximately at Stations 51+00'CH' RT, 54+00'CH' RT, 56+50'CH' RT, and 59+50'CH' RT will be removed. The existing overhead line located between Stations 47+65'CH' 80' RT and 59+50'CH' RT will also be de-energized and removed. The existing pole located at Station 47+65'CH' 80' RT will remain in place; a new guy wire and anchor will be installed with the pole and anchor being outside of the proposed slope intercepts. The contractor shall use caution when working around this pole and the overhead conductors.

The existing poles and overhead lines located on the north side of East Church Road will remain in place; all of these existing poles are outside of the proposed slope intercepts. The contractor shall use caution when working around these poles and overhead conductors. An existing overhead crossing of East Church Road (approximately Station 47+40'CH') will remain energized between the existing poles located at Station 47+15'CH' 90' LT and 47+65'CH' 80' RT; the contractor shall use caution when working near this overhead conductor.

The work began on January 20, 2015 and was completed on January 21, 2015. The field contact for Alliant Energy – Electric is Jason Hogan, 4902 N. Biltmore Lane, Madison, WI 53718, telephone (608) 458-4871, mobile (608) 395-7395, email JasonHogan@alliantenergy.com.

Charter Communications

Charter Communications has facilities in the project area but there are no anticipated conflicts with highway construction. Diggers Hotline shall be contacted so that these facilities can be located in the field prior to any highway construction occurring. The field contact for Charter Communications is David Moldenhauer, 1348 Plainfield Avenue, Janesville, WI 53545, telephone (608) 373-7538, mobile (608) 206-0494, email david.moldenhauer@charter.com.

Frontier Communications

Frontier Communications has facilities in the project area that will be deactivated and left in place. The existing underground telephone cable (25 pair – copper) located approximately between Station 47+50'CH' RT. to Station 57+50'CH' RT. will be deactivated and left in place.

New underground telephone cable will be installed by boring in the following approximate locations:

- Station 47+60'CH' 75' RT. to Station 47+70'CH' 40' RT. (12-feet deep)
- Station 47+70'CH' 40' RT. to Station 57+50'CH' 40' RT. (14-feet deep)
- Station 57+50'CH' 40' RT. to Station 58+00'CH' 30' RT. (12-feet deep)

The work will start September 1, 2015 and be completed by December 30, 2015. The field contact for Frontier Communications is Russ Ryan, 315 Oak Street, Oakfield, WI 53065, telephone (920) 583-3275, mobile (920) 737-9662.

Utilities (ID 1007-10-79)

Alliant Energy (WPL) – Electric

Alliant Energy – Electric has existing poles and overhead facilities located on both the north and south sides of Maple Grove Road. Existing poles on the north side of Maple Grove Road located approximately at Stations 44+85'MG' LT., 46+87'MG' LT., 48+76'MG' LT., 51+10'MG' LT, 53+58'MG' LT, and 56+15'MG' LT will be removed. The existing overhead line located between Stations 44+85'MG' LT and 56+15'MG' LT will also be de-energized and removed. New poles with guy wires and anchors will be installed at approximately Stations 44+00'MG' 45' LT and 56+40'MG' 35' LT with the poles, guy wires, and anchors being outside of the proposed slope intercepts. The contractor shall use caution when working around this pole and the overhead conductors.

New underground cable will be installed between the new poles located at Stations 44+00'MG' 45' LT and 56+40'MG' 35' LT; this cable will be located approximately 5-feet inside of the right-of-way line and will be buried a minimum of 36-inches below the proposed grade elevation. The contractor shall use caution when working around this buried cable.

A pad mounted transformer will be installed at approximately Station 46+19'MG' 108' RT. Buried cable will be placed from the new pole located at Station 44+00'MG' 45' LT, heading south beneath Maple Grove Road for approximately 115', then easterly for approximately 210', then southeasterly for approximately 20' to the pad mounted transformer. This cable will be buried a minimum of 36-inches below the proposed grade elevation. The contractor will need to use caution when working around this buried cable.
An existing overhead crossing of Maple Grove Road (approximately Station 42+85'MG') will remain energized between the existing poles located at Station 42+95'MG' LT and 42+75'MG' RT; the contractor shall use caution when working near this overhead conductor. A new overhead crossing of Maple Grove Road will be constructed at approximately Station 57+20'MG'; the overhead conductor will run between a new pole located at 56+40'MG' LT and an existing pole at Station 58+20'MG' RT.

During highway construction, the utility company will install a new electrical service to the existing Dynamic Message Sign (DMS) located at approximately Station 47+50'MG' LT; the contractor shall coordinate with Alliant Energy - Electric to ensure that the contractor is aware of where that new electrical service is located.

The work to be done prior to highway construction will start October 1, 2015 and be completed by December 30, 2015. The field contact for Alliant Energy – Electric is Jason Hogan, 4902 N. Biltmore Lane, Madison, WI 53718, telephone (608) 458-4871, mobile (608) 395-7395, email JasonHogan@alliantenergy.com.

Charter Communications
Charter Communications has exsiting buried fiber optic between approximately Stations 40+00'MG' LT and 44+25'MG' LT; this buried cable crosses beneath Maple Grove Road at approximately Station 44+25'MG' and then continues on the south side of Maple Grove Road between Station 44+25'MG' RT and Station 46+95'MG' RT. This existing fiber optic line will be de-energized and left in place.

New fiber optic line will be installed on Alliant Energy – Electric poles between approximately Stations 41+30'MG' LT and 44+00'MG' LT; the new underground crossing of Maple Grove Road (joint crossing with Alliant Energy – Electric will be at approximately Station 44+00'MG'. This new fiber optic line will extend approximately 115 feet to the south, and then approximately 210 feet to the east to a vault located at approximately Station 46+15'MG' 105' RT. This segment of underground fiber optic line will be located approximately 5-feet inside the new right-of-way line and will be buried a minimum of 36-inches below the proposed grade elevation. The contractor will need to use caution while working around this fiber optic line.

This work will be done in conjunction with the utility relocation work being done by Alliant Energy – Electric; this work will be completed no later than seven business days after the work by Alliant Energy – Electric has been completed. The field contact for Charter Communications is David Moldenhauer, 1348 Plainfield Avenue, Janesville, WI 53545, telephone (608) 373-7538, mobile (608) 206-0494, email david.moldenhauer@charter.com
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Frontier Communications
Frontier Communications has facilities in the project area that will be deactivated and left in place. The existing underground fiber optic and telephone cable located approximately between Station 40+00'MG' LT to Station 44+00'MG' LT and Station 44+00'MG' RT to Station 47+00'MG' RT will be deactivated and left in place. The existing underground service from Station 44+00'MG' RT to fire #985 will be abandoned and left in place.

New underground cable will be installed between Station 40+77'MG' RT to Station 44+00'MG' RT by boring; this new cable will be located approximately 5-feet from the south right-of-way line and 5-feet deep. The contractor shall use caution when working near this cable.

The work will start October 1, 2015 and be completed by March 15, 2016. The field contact for Frontier Communications is Russ Ryan, 315 Oak Street, Oakfield, WI 53065, telephone (920) 583-3275, mobile (920) 737-9662, email russell.w.ryan@ftr.com.

Wisconsin Department of Transportation – Communication Line
The Wisconsin DOT has an existing Dynamic Message Sign (DMS-13-0027) that is located in the NW quadrant of the IH 39 / Maple Grove overhead. This is the dynamic message sign that Alliant Energy – Electricity must maintain power to at all times, prior to the new DMS being put into service. The field contact for the Wisconsin Department of Transportation – Communication Line is Jeff Madson, Suite 300, 433 W. St. Paul Avenue, Milwaukee, WI 53203-3007, telephone (414) 225-3723, email Jeffrey.Madson@dot.wi.gov.

7. Contract Award and Execution.

Supplement standard spec 103 as follows:

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

Workshop	Timeframe
Initial Work Plan (IWP)	Prior to Notice to Proceed (NTP)
Cost Reduction Incentive and Submittals	Prior to preconstruction meeting
Utility Coordination	Prior to preconstruction meeting
Baseline CPM Progress Schedule	After NTP and submittal of Baseline CPM Progress Schedule
Work Force Opportunities	Day of preconstruction meeting

The workshop dates will be scheduled by the engineer after contract award. The engineer may modify the original workshop schedule to ensure attendance by the necessary department and contractor personnel. Workshops may be scheduled earlier than specified if

agreed to by all parties. Workshops may be deleted and/or combined depending on the complexity and requirements of the project.

103.9.2 Workshops
103.9.2.1 Initial Work Plan
103.9.2.1.1 General
The 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 103.9.2.1.2. 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.
- Contractor presentation of the conceptual work plan for the project.
- Department and contractor discussion of the level of detail and features in the Initial Work Plan Schedule and the Baseline CPM Progress Schedule.

103.9.2.1.2 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).

Attach a copy of your Preliminary Schedule indicating your approach to achieving the substantial completion schedule.

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.

Construction
Provide the approach (resources, equipment, suppliers, number of crews, and where required ground support systems) for the following activities:

- Retaining wall construction by type of work
- Bridge demolition
- Roadway structural section
- Roadway excavation
- Underground construction
- Office and yard facilities

103.9.2.2 Cost Reduction Incentives and Submittals
The Cost Reduction Incentive (CRI) and Submittals workshop will have two primary topics outlined below:

Cost Reduction Incentives
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 workshops that were not introduced at the CRI workshop.

Submittals
The Submittals 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:

- MSE Retaining Walls
- Temporary Shoring
- Falsework and Formwork
- Girder Shop Drawings
- Steel Transportation, Delivery, and Erection
- Structure Demolition Plans
- Pile Hammers and High Capacity Piling
- Concrete/ Asphalt
- Materials
- ITS / Lighting
- Traffic Signals
- Sanitary Sewer and Water
- Permits

3. Develop a schedule for submittals.

103.9.2.3 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.

- Department's Utility Coordinator
- Contractor's Project Manager, Foreman, Supervisor
- Designer Team's Utility Coordinator
- Key Utility Company Representative(s)

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

- Summary of all required utility relocations on the project
- Special provisions addressing utility work
- Sharing of contact information
- Scheduling of work for utility relocation(s) including critical milestones and staging for the work
- Contractor's work schedule and anticipated conflicts with the utility's construction schedule.

103.9.2.4 Baseline CPM Scheduling

At the Baseline CPM Scheduling workshop, provide a presentation of the Baseline CPM Schedule. In the presentation, include a discussion of the construction 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.

103.9.2.5 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 subcontractors, 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:

1. Review contractor hiring processes for general labor positions.

2. Review and listen to presentation provided by TrANS providers regarding the training program including details regarding how contractors can hire TrANS graduates.

3. Review TrANS graduate availability for working on project.

4. Meet one-on-one for at least two minutes with each TrANS graduate in attendance at the meeting.

8. Other Contracts.

Coordinate work according 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 county and town personnel may be required at certain times concurrently with work being done under this contract

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

Project 1005-10-71/72
This project involves reconstruction of northbound and southbound IH 39/90 from Knutson Road to the north Rock County line, Rock County in 2016 through 2018. Traffic control coordination with this project will be required.

Project 1007-10-78
This project involves temporary widening of southbound IH 39/90 from the South Dane County Line to Maple Grove Road, which will be constructed in 2016. Traffic control coordination with this project will be required.

9. Timely Decision Making Manual.

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

participation of the contractor and its principal subcontractors throughout the term of the contract.

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

Timely Decision Making Manual (TDM)

10. Erosion Control.

Supplement standard spec 107.20 with the following:

Unless otherwise directed by the engineer at the end of each day, drive a tracked vehicle up and down all untracked or newly graded slopes to reduce the erosive potential of the slopes. The tracks shall be roughly perpendicular to the direction of stormwater runoff flow down the slopes. Upslope tracking is incidental to the cost of grading.

Delete the last sentence of standard spec 107.20(7) and replace it with the following:

Provide the permanent erosion control measures within 24 hours after performing grading operations, unless temporary erosion control measures are specified or authorized by the engineer.

11. 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 Jennifer Grimes at (608) 884-1147.
107-054 (20080901)

12. 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)

13. Environmental Protection, Treatment of Water Adjacent to Wetlands or Waterways.

Spoil material shall be stockpiled on uplands an adequate distance from a stream, wetland, and/or any open water created by excavation. Filter fabric silt fence shall be installed between spoil material and the stream or wetland, and between the entire disturbed area and the waterway.

If dewatering is required for any reason, the water must be pumped into a properly sized and constructed settling basin before the clean/filtered water is allowed to enter any waterway or wetland. The “clean/filtered” water must be free of suspended solids and contaminants. A properly designed and constructed settling basin will take into consideration the amount of space for construction, desired pumping speed, number/size of pumps likely to be used, and the sedimentation rate of soils to be encountered. See DNR Technical Standard 1061 for method selection by soil type.

14. Notice to Contractor, Asbestos Containing Materials on Structure.

James Gondek, License Number AII-108099 and Angela Voit, License Number 112673, inspected Structure B-13-169 and B-13-172 for asbestos on December 5-7, 2005. Regulated Asbestos Containing Material (RACM) was found on these structures in the following locations and quantities:

Bridge: B-13-169, IH 90 westbound over East Church Road
Type/Location: 1.75% nonfriable asbestos in gray caulk in parapet expansion joints

Bridge: B-13-172, IH 90 westbound over USH 51 northbound
Type/Location: 2.86% nonfriable asbestos in gray caulk in parapet expansion joints

A copy of the inspection report is available from: Wayne Chase, (608) 246-3859. Locations of asbestos containing material are noted on the plan set. Do not disturb any asbestos containing material. Should asbestos containing material be disturbed, stop work immediately, notify the engineer, and the engineer will notify the department's Bureau of Technical Services at (608) 266-1476 for an emergency response according to standard spec 107.24. Keep material wet until it is abated.
107-120 (20120615)

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

James Gondek, License Number AII-108099 and Angela Voit, License Number 112673, inspected Structure B-13-170 for asbestos on December 5-7, 2005. No regulated Asbestos Containing Material (RACM) was found on this structure. A copy of the inspection report is available from: Jennifer Grimes, (608) 884-1147.

According to NR447 and DHS159, ensure that DNR or DHS receives a completed Notification of Demolition and/or Renovation (DNR Form 4500-113 (R 4/11), or subsequent revision) via U.S. mail, hand-delivery, or using the online notification system at least 10 working days prior to beginning any construction or demolition. Pay all associated fees. Provide a copy of the completed 4500-113 form to Jennifer Grimes, WisDOT SW Region, 2101 Wright Street, Madison, WI 53704 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-13-171, IH 90 eastbound over USH 51 northbound
Site Address: Lat: 42°55'15"N, Long: 89°05'07"W
Section 04 Town 5N Range 12E Town-Albion
Ownership Information: WisDOT Transportation SW Region, 2101 Wright Street, Madison, WI 53704-2583
Contact: Wayne Chase
Phone: (608) 246-3859
Age: 54 years old. This structure was constructed in 1961, deck work in 1984
Area: 6179 SF of deck

Site Name: Structure B-13-168, IH 90 eastbound over East Church Rd
Site Address: Lat: 42°57'08"N, Long: 89°05'52"W
Section 29 Town 6N Range 12E Town-Christiana
Ownership Information: WisDOT Transportation SW Region, 2101 Wright Street, Madison, WI 53704-2583
Contact: Wayne Chase
Phone: (608) 246-3859
Age: 54 years old. This structure was constructed in 1961, deck work in 1984
Area: 4858 SF of deck

Insert the following paragraph in Section 6.g.:

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

107-125 (20120615)

16. Abatement of Asbestos Containing Material Structure B-13-173, Item 203.0210.S.001.

A Description

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

B (Vacant)

C Construction

James Gondek, License Number AII-108099 and Angela Voit, License Number 112673, inspected Structure B-13-173 for asbestos on December 5-7, 2005. Regulated Asbestos Containing Material (RACM) was found on this structure in the following locations and quantities: Grey gaskets at guardrail attachments contain 2% and 3% nonfriable asbestos.

The RACM on this structure must be abated by a licensed abatement contractor. A copy of the inspection report is available from Jennifer Grimes, (608) 884-1147. According to NR447 and DHS159, ensure that DNR or DHS receives a completed Notification of Demolition and/or Renovation (DNR Form 4500-113 (R 4/11), or subsequent revision) via U.S. mail, hand-delivery, or using the online notification system at least 10 working days prior to beginning any construction or demolition. Pay all associated fees. Provide a copy of the completed 4500-113 form and the abatement report to Jennifer Grimes, (608) 884-1147 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-13-0173, Maple Grove Rd over IH 90-USH 51
Site Address: Lat: 42°54'48"N, Long: 89°05'08"W
Section 9 Town 5N Range 12E Town-Albion
Ownership Information: WisDOT Transportation SW Region, 2101 Wright Street, Madison, WI 53704-2583
Contact: Wayne Chase
Phone: (608) 246-3859
Age: 54 years old. This structure was constructed in 1961, deck repair in 1993 and 2011.
Area: 6090 SF of deck

Insert the following paragraph in Section 6.g.:

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

D Measurement

The department will measure Abatement of Asbestos Containing Material (Structure), completed according to the contract and accepted, as a single complete unit of work.

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.001	Abatement of Asbestos Containing Material Structure B-13-173	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)

17. Debris Containment B-13-173, Item 203.0225.S.001.

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

B (Vacant)

C Construction
Prior to starting work, submit a debris containment plan to the engineer for review. Incorporate engineer-requested modifications. Do not start work over IH 39/90 until the engineer approves the debris containment plan.

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

D Measurement
The department will measure Debris Containment B-13-173 as a single lump sum unit of work for each structure, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
203.0225.S.001	Debris Containment B-13-173	LS

Payment is full compensation for furnishing, installing, maintaining, and removing a debris containment system.
203-010 (20080902)

18. Notice to Contractor - New or Revised Temporary Construction Access to IH 39/90.

Traffic control and staging plans/details contained within the project plans shall be followed by the contractor. The contractor's use of any construction access point(s) to IH 39/90 which is/are not shown in the plans is prohibited without the prior written approval from FHWA

and the department. To obtain written approval for temporary access to IH 39/90 during construction, the contractor shall provide the following:

Details on existing or new project plan sheets that show:

- The location, dimensions, grades, and slopes for any new/revised temporary construction access point(s) to IH 39/90.
- Traffic control measures that are required to manage this access change.
- Traffic control measures that are required to secure/close any new/revised construction access points when not in use
- Erosion control measures required to manage this change, including the location(s) of any tracking pad(s).

Written summary of proposed temporary construction access change including:

- Timeframe to construct, duration in place, and time to remove.
- Cost of proposed temporary access including grading, traffic control, erosion control, and all other items and incidentals to implement and remove the access.
- Benefits in implementing the change (i.e. cost or time savings, ease of construction, increased safety to workers and the motoring public).
- Signed Construction Permit if temporary access traverses private property.

The above information shall be provided to the engineer a minimum of 14 calendar days prior to the contractor's anticipated implementation of the new/revised temporary construction access to IH 39/90. The request will be reviewed, and if warranted, concurred with designated IH 39/90 CMT Traffic and Project staff, the engineer, and WisDOT Central Office Field Construction Coordinator (if warranted). If these parties concur with the request, it will be forwarded to FHWA for review and processing a minimum of 7 calendar days in advance of the contractor's anticipated implementation.

The engineer will correspond with the following FHWA and department staff for concurrence:

- Johnny Gerbitz, FHWA, Johnny.Gerbitz@dot.gov
- Rich Cannon, I-39 CMT Traffic, Richard.Cannon@dot.wi.gov
- Jeff Gustafson, I-39 CMT Traffic, Jeffrey.Gustafson@dot.wi.gov

In the event of an emergency situation the above review process, including the extent of information required to be submitted and approval timeframes, can be modified if agreed upon by all parties.

19. Notice to Contractor - Revisions to Traffic Control Plans.

The traffic control and staging plans/details contained within the project plans have been developed from an FHWA approved Transportation Management Plan (TMP). According to TMP requirements, the department may revise the TMP during construction if conditions warrant. This specification shall be followed to obtain concurrence for implementation of any proposed changes to construction phasing/staging that will affect the traffic patterns depicted in the plans.

Submit traffic control revision(s) to the engineer a minimum of 21 calendar days prior to the anticipated implementation of the proposed change(s). Include the following:

Detail on existing or new project plan sheets that show:

- The revised traffic pattern, widths, grades, temporary pavement, signs, traffic control devices, pavement marking, flaggers, time of day, width restrictions, and any other details required to convey a new or revised traffic control design.
- Erosion control measures required, including the location(s) of any tracking pad(s).

Written summary of proposed traffic control change including:

- Benefits to implementing the change (i.e. cost or time savings, ease of construction, increased safety to workers and the motoring public).
- Timeframe to construct, duration in place, and time to remove.

The request will be reviewed, and if warranted, concurred with designated IH 39/90 Corridor Management Team (CMT) staff, the engineer, and WisDOT Central Office Field Construction Coordinator (if warranted). If the request is approved, it will be forwarded to FHWA for review and processing a minimum of seven (7) calendar days in advance of the contractor's anticipated implementation.

The engineer will correspond with the following FHWA and department staff to obtain concurrence:

- Johnny Gerbitz, FHWA, Johnny.Gerbitz@dot.gov
- Rich Cannon, I-39 CMT Traffic, Richard.Cannon@dot.wi.gov
- Jeff Gustafson, I-39 CMT Traffic, Jeffrey.Gustafson@dot.wi.gov

20. Notice to Contractor - Airport Operating Restrictions - General.

A temporary permit is not required from the Federal Aviation Administration (FAA) for the permanent or temporary installations that are included in the plans as long as the contractor uses equipment that will not exceed 200 feet above ground level. The contractor shall submit FAA Form 7460-1, Notice of Proposed Construction or Alteration, to the FAA a minimum of 45 days before beginning construction operations that propose to use equipment that will exceed 200 feet above ground level.

If required, the FAA will return FAA Form 7460-2, Notice of Actual Construction or Alteration, with a determination. The contractor shall complete and send FAA Form 7460-2, Part 1 to the FAA at least 48 hours prior to starting the actual construction or alteration of a structure. Additionally, the contractor shall submit Part 2 no later than 5 days after the structure has reached its greatest height.

Contact Justin Hetland, Airspace Safety Program Manager, Bureau of Aeronautics at (608) 267-5018 (Justin.Hetland@dot.wi.gov) with any questions. Refer to the following FAA website for instructions to complete the form and the required information.

http://oeaaa.faa.gov/oeaaa/external/portal.jsp

21. Notice to Contractor - Project Storage and Staging Areas.

Supplement standard spec 106.4(2) and standard spec 107.9 with the following:

To accommodate stage construction of the department planned contracts for the IH 39/90 Corridor program, the department will implement a review and approval process for use of storage and staging areas within the right-of-way and adjacent to the project.

Equipment and materials can be stored within the slope intercepts shown on the plan and within the footprint of the roadway or structures within the project limits. Storage of equipment and materials will not be allowed in areas which are restricted by traffic and other requirements provided in the special provisions.

Make any requests for storage and staging areas located outside of the slope intercepts or outside of the proposed roadway and structure footprints to the engineer. The request should include the anticipated date for occupying the area, the anticipated date for vacating the area, and a proposed restoration plan for the area. Review by the department does not constitute approval.

22. Notice to Contractor - Construction Safety.

Description
This specification describes minimum occupational safety and health requirements for the prime contractor and their subcontractors performing work on this project. The fundamental objective of these requirements is to eliminate construction related injuries and incidents so that their associated impacts to workers and the public, budgets and schedules are avoided or minimized.

Definitions
Certified Crane Operator. To be certified a crane operator one must pass both written and practical tests offered by a nationally accredited testing organization, such as the National Commission for the Certification of Crane Operators (NCCCO) or the Operating Engineers Certification Program (OECP).

Competent Person. One who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

Critical Lift. A critical lift applies to, but is not limited to the following: any crane lift or hoisting operation that exceeds 75 percent of the rated capacity of the crane, requires the use of more than one crane or hoisting device, involves barge-mounted cranes, where the center of gravity could change, lifts where existing outriggers cannot be fully extended due to site constraints, lifts involving multiple lift rigging assemblies or other non-routine/difficult rigging arrangements.

Project Safety Officer (PSO). The person or persons designated by the department to coordinate implementation of a construction safety management system, including risk assessment, training, evaluating effectiveness, corrective/preventive action, and management review.

Qualified Person. One who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training and experience, has successfully demonstrated his/her ability to solve or resolve problems relating to the subject matter, the work, or the project.

Safety Representative (SR). A person designated by the contractor to develop and implement the company's health and safety plan, assess job hazards, and identify and carry out corrective and preventive actions.

General Requirements
Notify the department immediately of any agency compliance inspections, including but not limited to the Occupational Safety and Health Administration (OSHA).

Report all project-related fatalities and OSHA-recordable injuries and illnesses that result in inpatient hospitalizations within 8 hours to the Project Safety Officer (PSO). Report all other project-related OSHA-recordable injuries and illnesses monthly to the PSO.

Safety Representative Requirements
Provide at least one Safety Representative (SR). Each SR shall perform inspections, safety observations and other safety-related duties on-site on a weekly basis, at a minimum. Provide an alternate SR in the event of illness or other unforeseen circumstances.

Each SR and alternate SR shall have training, knowledge and experience in construction safety and health, including but not limited to a current OSHA 10-hour Occupational Safety and Health Training Course in Construction Safety and Health. Provide evidence of SR certifications, qualifications and training to the PSO.

Each SR and alternate SR shall attend a 2-hour Construction Safety Awareness Training provided by the department at the beginning of the project and at least once every two years. The SR shall communicate and distribute materials provided in the 2-hour Construction Safety Awareness Training to their site workers prior to starting site construction activities.

Requirements for Construction Health and Safety Programs
In addition to implementing programs to meet the requirements of OSHA Construction Safety and Health standards, develop a written safety plan for the work to be performed. Note: General guidance is provided in Section 1-35.1.2 of the Construction and Materials Manual.

Traffic Control and Vehicle Collision Prevention/Risk Reduction
All vehicles and mobile equipment shall use high-intensity rotating, flashing, oscillating, or strobe lights according to Section 6G.02 of the Manual of Uniform Traffic Control Devices (FHWA, 2009).

Provide crash cushions or truck (or trailer)-mounted attenuators (TMAs) on shadow vehicles to protect workers, vehicles, and mobile equipment from vehicle collisions according to the Manual of Uniform Traffic Control Devices (FHWA, 2009, Section 6F.86). Coordinate with the engineer at least 72 hours before placing a TMA in service.

Personal Protective Equipment (PPE)
Minimum Requirement Personal Protective Equipment (PPE) to be worn in Construction Work Areas:

ASTM F2413-11 safety-toed boots rated for impact and puncture resistance (PR) shall be worn.

ANSI Z-87+ impact-resistant safety glasses with sideshields shall be worn. Requirements for faceshields, goggles, welding shades, etc. shall be determined by the SR.

ANSI Z-89.1 Class G or E hard hats where there is potential for impact or injury to the head.

Daytime Work: ANSI/ISEA 107-2004 Class 2 or 3 high visibility vests at all times and Type E pants for flaggers and other personnel working on the traffic side of concrete barriers (yellow/lime).

Nighttime Work: ANSI/ISEA 107-2004 Class 2 or 3 retro-reflective safety vests (yellow/lime) and Type E pants (Type 3 ensemble) and a hard-hat-mounted LED light ("miner's lamp").

Hearing protection shall be used, if the work site noise exceeds 90 decibels (dBA), as 8-hour average exposure measurements. [29 CFR 1926.52 and .101]

Walking and Working Surfaces
Keep all accessible work areas and passageways free from debris, obstructions and other slip, trip and fall hazards.

Excessive Driving Hours/Extended Work Shifts
Distribute a one-page handout to each truck driver accessing the work zone to increase their awareness of hazards related to extended work shifts. The department will make the handout available electronically.

Cranes and Hoists.
Ensure that all crane operators have been certified by the National Commission for the Certification of Crane Operators (NCCCO) or by the Operating Engineer Certification Program (OECP) if they will be operating a 10-Ton or greater capacity crane or if they are involved in critical lifts.

Provide critical lift plans to the department at least 72 hours prior to a critical lift. The contractor is responsible for all submittals, assumptions, calculations, and conclusions. 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 design, signed and sealed by the same professional engineer verifying the design, to the engineer.

Crane operators shall safely terminate hoisting operations in the event of wind conditions that exceed the original equipment manufacturer's specifications for safe operation.

Documentation and Records

Maintain documents and records and ensure that they are readily available upon request. At a minimum this includes:

a. Written Safety Plan for Work Activities to be Performed.
b. Names of Safety Representatives and copies of their OSHA 10-Hour Occupational Safety and Health Training Course in Construction Safety and Health training cards.
c. Names of Competent Persons and Qualified Persons (if required by OSHA for the work performed).
d. Reports of inspections of the job sites, materials, and equipment [29 CFR 1926.20(b)(2)].
e. Documentation that the SR has communicated and distributed materials from the Construction Safety Awareness Training to their site workers. At a minimum this will include a dated sign-in sheet with the names and signatures of the workers trained. The department will provide a sign-in sheet template electronically.
f. Project site OSHA 300 Log (no worker names)[29 CFR 1904.29]
g. Project site OSHA 301 Incident Report (no worker names) [29 CFR 1904.29]
h. Hazard Communication Program [29 CFR 1926.59]
    i. Hazardous Chemical Inventory,
    ii. Location of Safety Data Sheets (SDSs)
    iii. Hazard Warning Symbols
    iv. Information and training requirements.
i. Exposure Monitoring results (if monitoring is required under a specific OSHA standard-no worker names)
j. Crane operator certifications (if applicable)
k. Fall Protection Plan (if applicable) [29 CFR 1926.500-.503 and 1926.104]
l. Confined Space Entry Procedures (if applicable). [29 CFR 1926.1200-.1213]
m. Lockout/Tagout Procedures (if applicable). [29 CFR 1926.417 and .702]
n. Respiratory Protection Program (if applicable) [29 CFR 1926.103 and 1910.134(c)]
o. Emergency Action Plan [29 CFR 1926.35]
    v. Emergency escape procedures and emergency escape route assignments
    vi. Procedures to be followed by employees who remain to operate critical equipment before they evacuate
    vii. Procedures to account for all employees after emergency evacuation has been completed

viii. Rescue and medical duties for those employees who are to perform them;
- First Aid and Medical Treatment Procedures [29 CFR 1926.50]
- Equipment and Supplies
- Names of persons certified in first aid
- Location of the nearest medical facility.

ix. The preferred means of reporting fires and other emergencies

x. Prime contractor's alarm system

xi. Names or regular job titles of persons who can be contacted for further information or explanation of duties under the plan.

p. Fire Protection Program (if applicable) [29 CFR 1926.150]

q. Fire Prevention Plan and Hot Work Permit procedures (if applicable) [29CFR 1926.352]

23. Lane Rental Fee Assessment.

A Description

This special provision describes Lane Rental Fee Assessment to enforce compliance of lane restrictions and discourage unnecessary closures.

A.1 General

The contract designates some lane closures to perform the work. No Lane Rental Fee Assessments will be charged for closing lanes during the permitted lane closure times. If a lane is closed outside of the permitted lane closure times, the contractor will be subject to Lane Rental Fee Assessments. If a lane is obstructed at any time due to contractor operations, it is considered a closure.

If the contractor closes lanes of traffic prior to or fails to open lanes of traffic by the specified times, then a reduction based upon 15 minute increments will be assessed to the contractor. The total reductions assessed to the contractor will be cumulative based on an escalating scale of 15 minute increments and will be the summation of separate reductions for each traffic lane and each direction of traffic in violation.

The contractor will incur a Lane Rental Fee Assessment for each lane closure outside of the permitted lane closure times. The contractor will not incur a Lane Rental Fee Assessment for closure of lanes during the permitted lane closure times. The permitted lane closure times are during the working hours shown in the Traffic article.

The contractor shall submit the dates of the proposed lane, ramp, and roadway restrictions to the engineer as part of the progress schedule. The contractor will coordinate lane, ramp, and roadway closures with any concurrent operations on adjacent roadways within 3 miles of the project.

If other projects are in the vicinity of this project, the contractor shall coordinate lane closures to run concurrent with lane closures on adjacent projects when possible. When lane closures on adjacent projects extend into the limits of this project, Lane Rental Fee Assessments will only occur if the closure facilitates work under this contract.

A.2 Lane Rental Fee Assessment

The Lane Rental Fee Assessment incurred for each lane closure, each ramp closure, and each full closure of a roadway, per direction of travel, is as follows:

Time Period in excess of specified time	Assessment per lane of traffic and per direction of traffic	Cumulative assessment per lane of traffic and per direction of traffic
1st 15 minutes	$1,500	$1,500
2nd 15 minutes	$3,000	$4,500
3rd 15 minutes	$4,500	$9,000
4th 15 minutes	$6,000	$15,000

If the contractor fails to open lanes of traffic after 60 minutes from the specified times, a constant reduction of $6,000 for each additional 15 minute increment, for each lane and each direction of traffic, will be assessed until lanes are open to traffic.

The total reduction from monies due to the contractor shall be the summation of the separate reductions for each work restriction violation.

The Lane Rental Fee Assessment represents the average cost of the interference and inconvenience to the road users for each closure. The Lane Rental Fee Assessment will be measured in 15-minute increments. All lane, roadway, or ramp closure event increments less than 15 minutes will be assessed as a 15-minute increment.

Lane Rental Fee Assessments 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 Fee Assessment.

Lane Rental Fee Assessments will not be assessed for closures due to crashes, accidents, or emergencies not initiated by the contractor.

B (Vacant)

C (Vacant)

D Measurement

The department will assess Lane Rental Fee Assessment by the dollar under the administrative item Failing to Open Road to Traffic. The total dollar amount of Lane Rental Fee Assessment will be computed by multiplying the Lane Rental Assessment Rate by the number of 15-minute increments of each lane closure event as described above.

Lane Rental Fee Assessment will be in effect from the time of the Notice to Proceed until the department issues final acceptance.

E (Vacant)

24. Clearing and Grubbing.

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.
- Includes all horticultural cultivars of these species.

(Note: blue ash twigs are 4-sided. All other Wisconsin ash trees have round stems.)

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 flagging tied around the trunk perimeter (florescent lime is suggested as it isn't identified with other project activities).

Follow and obey the following DATCP order:

ATCP 21.17 Emerald Ash Borer, Import Controls and Quarantine

1. Importing or moving regulated items from infested areas; prohibition.

Except as provided in sub. (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.

2. Regulated items.

The following are regulated items for purposes of sub. (2):

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

b) Ash trees.

c) Ash limbs, branches, and roots.

d) Ash logs, slabs or untreated lumber with bark attached.

e) Cut firewood of all non-coniferous species.

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

g) 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 disposal:

Chipped ash trees

1) 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.

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

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

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

25. Embankment Construction.

Replace standard spec 205.3.2(4) with the following:

If placing embankment on side slopes 10-feet high or higher and steeper than one vertical to 3 horizontal, cut a minimum 2 foot horizontal bench into the existing embankment every 2 feet of vertical fill height.

26. Roadway Excavation.

Supplement standard spec 205.5.2(1) to include the following:

Provide the department with an earth flow diagram within 30 calendar days of receiving the contract Notice to Proceed.

Identify on the earth flow diagram, all excavation material within the project; material shrinkage and swell factors; acceptable on-site material available for use as embankment within the project; anticipated off-site material that will be required for use as embankment within the project (if applicable); and anticipated material to be disposed of off-site (if applicable). It is the sole responsibility of the contractor to prepare their individual investigation and testing program to establish material shrinkage and swell factors.

27. Borrow.

Replace standard spec 208.1(1) with the following:

This section describes constructing embankments and other portions of the work consistent with the earthwork summary and defines the contract requirements for embankment material if required by the plans or if the contractor elects to utilize off-site material to complete the roadway embankments.

Delete standard spec 208.2.2(2).

Supplement standard spec 208.3 to include the following:

The contractor shall be responsible for complying with all permit requirements in obtaining embankment materials.

Replace standard spec 208.4 with the following:

The department will not measure embankment material from its source.

Replace standard spec 208.5 with the following:

The department will not pay directly for work specified under this section. This work is incidental to the Roadway Embankment bid item.

28. QMP Base Aggregate.

A Description

A.1 General

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

(2) Conform to standard spec 301, standard spec 305, and standard spec 310 as modified here in this special provision. Apply this special provision to material placed under all of the Base Aggregate Dense and Base Aggregate Open Graded bid items, except do not apply this special provision to material classified as reclaimed asphaltic pavement placed under the Base Aggregate Dense bid items.

(3) Do not apply this special provision to material placed under the Aggregate Detours, Salvaged Asphaltic Pavement Base, Breaker Run, Select Crushed, Pit Run, Subbase, or Riprap bid items.

(4) Provide and maintain a quality control program, defined as all activities related to and documentation of the following:

1. Production and placement control and inspection.
2. Material sampling and testing.

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

http://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 standard spec 310 for each base aggregate size, source or classification, and type. Set control and warning limits based on the standard specification gradation limits as follows:

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

B.6.2 Fracture

(1) Test fracture conforming to CMM 8.60. The engineer will waive fractured particle testing on quarried stone.

(2) Maintain a separate fracture control chart for each base aggregate size, source or classification, and type. Set the lower control limit at the contract specification limit, either specified in another special provision or in table 301-2 of standard spec 301.2.4.5. Set the lower warning limit 2 percent above the lower control limit. There are no upper limits.

B.6.3 Liquid Limit and Plasticity

(1) Test the liquid limit and plasticity according to AASHTO T 89 and T 90.

(2) Ensure the material conforms to the limits specified in standard spec table 301-2.

B.7 Corrective Action

B.7.1 General

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

B.7.2 Placement Corrective Action

(1) Do not blend additional material on the roadbed to correct gradation problems.

(2) Notify the engineer whenever the running average exceeds a warning limit. When 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)

29. Base Aggregate Dense 3/4 –Inch.

Revise standard spec 301.2.4.3 as follows:

Furnish aggregate classified as crushed stone for ¾-inch base when used in the top 3 inches of the unpaved portion of the shoulder or for unpaved driveways and field entrances.

30. Base Aggregate Dense 1 ¼-Inch.

Revise standard spec 305.2.2.1 as follows:

Use 1 ¼-Inch base aggregate that conforms to the following gradation requirements.

SIEVE	PERCENT PASSING BY WEIGHT
1 1/4 inch	95 - 100
1 inch	---
3/4 inch	70 - 90
3/8 inch	45 - 75
No. 4	30 - 60
No. 10	20 - 40
No. 40	7 - 25
No. 200	2 - 12 *[1], [2]*

[1] Limited to a maximum of 8.0 percent for base placed between old and new pavement.

[2] 3 - 10 percent passing when base is ³ 50% crushed gravel

31. QMP Base Aggregate Dense 1 1/4-Inch Compaction, Item 371.1000.S.

A Description

(1) This special provision modifies the compaction and density testing and documentation requirements of work done under the Base Aggregate Dense 1 1/4-Inch bid items. Conform to standard spec 305 as modified in this special provision and to the contract QMP Base Aggregate article.

(2) Provide and maintain a quality management program. A quality management program is defined as all activities, including process control, inspection, sampling and testing, and necessary adjustments in the process related to construction of dense graded base which meets all the requirements of this provision.

(3) 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

(4) This special provision applies to Base Aggregate Dense 1 1/4-Inch material placed on the mainline traveled way and adjacent mainline shoulders according to the typical finished sections. Unless otherwise specified by the contract, all Base Aggregate Dense 1 1/4-Inch material placed on side roads, private and public entrances, ramps, tapers, turn lanes, and other locations not described as the mainline traveled way and its adjacent mainline shoulders is exempt from the compaction and density requirement modifications and testing contained within this special provision.

B (Vacant)

C Construction

C.1 General

(1) The engineer shall approve the grade prior to placement of the base. Approval of the grade shall be according to applicable provisions of the Standard Specifications.

Add the following to standard spec 305.3.2.2:

(3) Compact the 1 1/4-Inch dense graded base to a minimum of 93.0% of the material target density. Ensure that adequate moisture is present during placement and compaction operations to prevent segregation and to help achieve compaction.

(4) The material target density will be identified using one of the following methods:

1. For 1 1/4-Inch dense graded base composed of ≤20% reclaimed asphaltic pavement (RAP) or crushed concrete (RCA), as determined by classification of material (aggregate or RAP and/or RCA) and percentage by weight of each material type retained on the No. 4 Sieve: maximum dry density according to AASHTO T-180, Method D, with correction for coarse particles as determined by AASHTO T224, and modified to require determination of Bulk Specific Gravity (G_m) according to AASHTO T 85. Bulk Specific Gravities determined according to standard spec 106.3.4.2.2 for aggregate source approval may be utilized

2. For 1 1/4-Inch dense graded base composed of >20% RAP or RCA, as determined by classification of material (aggregate or RAP and/or RCA) and percentage by weight of each material type retained on the No. 4 Sieve, the contractor may choose from the following options:
    a. Maximum dry density as determined by AASHTO T-180, Method D, with correction for coarse particles as determined by AASHTO T224,and modified to require determination of Bulk Specific Gravity (G_m) according to AASHTO T 85.

    b. Maximum wet density as determined by AASHTO T-180, Method D, modified to define *Maximum Density* as the wet density in pounds per cubic foot of soil at optimum moisture content using Method D specified compaction, with correction for coarse particles as determined by AASHTO T224, and modified to require determination of Bulk Specific Gravity (G_m) according to AASHTO T 85.

    c. Average of 10 random control strip wet density measurements as described in section C.2.5.1.

(4) Base Aggregate Dense 1 1/4-Inch will be accepted for compaction on a target density lot basis.

(5) Field density tests on materials using contractor elected target density methods C.1(3).2.b or C.1(3).2.c will not be considered for lot acceptance on the basis of compaction under the requirements of this provisions until the moisture content of the in-place material is less than 2.0 percentage points above the maximum wet density optimum moisture or 2.0 percentage points of the average moisture content of the 10 density tests representing a control strip, respectively.

C.2 Quality Management Program

C.2.1 Quality Control Plan

(1) Submit a comprehensive written quality control plan to the engineer no later than 10 business days before placement of material. Do not place any dense graded base before the engineer reviews and accepts the plan. Construct the project as the plan provides.

(2) Do not change the quality control plan without the engineer's review and acceptance. Update the plan with changes as they become effective. Provide a current copy of the plan to the engineer and post in the contractor's laboratory as changes are adopted. Ensure that the plan provides the following elements:

1. An organizational chart with names, telephone numbers, current certifications and/or titles, and roles and responsibilities of QC personnel.
2. The process used to disseminate QC information and corrective action efforts to the appropriate persons. Include a list of recipients, the communication process that will be used, and action time frames.
3. A list of source locations, section and quarter descriptions, for all aggregate materials requiring QC testing.
4. Descriptions of stockpiling and hauling methods.
5. An outline for resolving a process control problem. Include responsible personnel, required documentation, and appropriate communication steps.
6. Location of the QC laboratory, retained sample storage, and other documentation.
7. A summary of the locations and calculated quantities to be tested under this provision.
8. A description of placement methods and operations. Including, but not limited to: staging, construction of an initial working platform, lift thicknesses, and equipment.

C.2.2 Pre-Placement Meeting

A minimum of two weeks prior to the start of placement of Base Aggregate Dense 1 1/4-Inch material, hold a pre-placement meeting at a mutually agreed upon time and location. Present the Quality Control Plan at the meeting. Attendance at the pre-placement meeting is mandatory for the project superintendent, quality control manager, project inspection and testing staff, all appropriate contractor personnel involved in the sampling, testing, and quality control including subcontractors, and the engineer or designated representatives.

C.2.3 Personnel

(1) Perform the quality control sampling, testing, and documentation required under this provision using technicians certified by the department's Highway Technician Certification Program (HTCP). Have a HTCP Nuclear Density Technician I, or ACT certified technician, perform field density and field moisture content testing.

(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.

C.2.4 Equipment

(1) 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.

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

(3) Ensure that the nuclear 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.

(4) For all target density methods, conform to ASTM D 6938 and CMM 8.15 for wet density testing and gauge monitoring methods.

(5) For the specified target density determined using method C.1(3).1, compute the dry densities for the compacted dense graded base, composed of ≤20% RAP or RCA, according to ASTM D 6938.

(6) For contractor elected target density method C.1(3).2.a compute dry densities of dense graded base composed of >20% RAP or RCA using a moisture correction factor and the nuclear wet density value. Determine the moisture correction value, for each Proctor produced under the requirements of C.2.5, using the moisture bias as shown in CMM 8.15.12.1 and 8.15.12.2, except the one-point Proctor tests of the five random tests is not required. Conduct a moisture bias test for every 9000 tons of Base Aggregate Dense 1 ¼ -Inch placed. Determine natural moistures in the laboratory.

(7) Perform nuclear gauge measurements using gamma radiation in the backscatter or direct transmission position on the same date of placement of the Base Aggregate Dense 1 ¼-Inch material. Backscatter may be used only if the material being tested cannot reliably maintain an undistorted direct transmission test hole. Direct transmission tests must be performed at the greatest possible probe depth of 2 inches, 4 inches, or 6 inches, but not to exceed the depth of the compacted layer being tested. Perform each test for 4 minutes of nuclear gauge count time.

C.2.5 Contractor Testing

(1) Perform compaction testing on the mainline dense graded base material, as defined by A.(4). Perform the quality control sampling, testing, and documentation required under this provision using HTCP certified technicians as required in C.2.3. Conform to CMM 8.15 for testing and gauge monitoring methods.

(2) Select test sites randomly using ASTM Method D3665. Do not test less than 1 ½ feet from the unsupported edge of the dense graded base layer. Test sites must be located within the mainline traveled way or the traveled way's adjacent mainline shoulder.

C.2.5.1 Contractor Required Quality Control (QC) Testing

(1) Conduct testing at a minimum frequency of one test per lot. A lot will consist of each 1500 tons for each layer with a minimum lift thickness of 2" of Base Aggregate Dense 1 1/4-Inch material placed, regardless of the location of placement. Each lot of in-place mainline, as defined by A.(4), Base Aggregate Dense 1 1/4- Inch material compacted will be accepted when the lot field density meets the required minimum 93.0% of target density. Lots that don't achieve 93.0% of target density must be addressed and approved according to C.2.7.

(2) Notify the engineer, if a lot field density test falls below the required minimum value. Document and perform corrective actions according to C.2.7. Deliver documentation of all compaction testing results to the engineer at the time of testing.

C.2.5.1.1 Target Density Determination

C.2.5.1.1.1 Density Control Strip Method

(1) For contractor elected target density method C.1(3).2.c, construct a control strip for each layer of placement to identify the target wet density for the base aggregate dense material. The control strip construction and density testing will occur under the direct observation and/or assistance of the department QV personnel.

(2) Unless the engineer approves otherwise, construct control strips to a minimum dimension of 300 feet long and one full lane width.

(3) Completed control strips may remain in-place to be incorporated into the final roadway cross-section.

(4) Construct additional control strips, at a minimum, when:

1. The four point moving average gradation on any one sieve differs from the original gradation test result for that sieve by more than 10 percentage points. The original gradation test is defined as the gradation of the material used to construct the control strip. A previously determined Proctor value will remain valid for any material with gradation for all sieves within 10.0 percentage points of that Proctor's original gradation test.

2. The source of base aggregate changes.

3. The four point moving average percentage of blended recycled materials, from classification of material retained on the No. 4 sieve in the original gradation test, differs by more than 10 percentage points. The original gradation test is defined as the gradation of the material used to construct the control strip. A previously determined Proctor value will remain valid for any material with gradation for all sieves within 10.0 percentage points of that Proctor's original gradation test.
4. The layer thickness changes more than 2.0 inches.

5. The percent target density exceeds 103.0% on two consecutive density measurements.

(5) Construct control strips using equipments and methods representative of the operations to be used to place and compact the remaining 1 1/4–Inch Base Aggregate Dense material. Wet the base, as mutually agreed upon by the contractor and engineer, to obtain and/or maintain adequate moisture content to ensure proper compaction. Discontinue water placement if the base begins to exhibit signs of saturation or instability.

(6) After compacting the control strip with a minimum of 2 passes, mark and take density measurements at 3 random locations, at least 1 ½ feet from the edge of the base. Subsequent density measurements will be taken at the same 3 locations.

(7) After each subsequent pass of compaction equipment over the entirety of the control strip, take density measurements at the 3 marked locations. Continue compacting and testing until the increase in density measurements is less than 2.0 lb/ft^3, or the density measurements begin to decrease.

(8) Upon completion of control strip compaction, take 10 randomly located density measurements within the limits of the control strip, at least 1 ½ feet from the edge of the base. The final measurements recorded at the 3 locations under article C.2.4.1.1.1(6) may be included as 3 of the 10 measurements. Average the 10 measurements to obtain the control strip target density and target moisture for use in contractor elected method C.1(3).2.c.

C.2.5.1.1.2 Maximum Wet and/or Dry Density Methods

(1) For contractor elected target density methods C.1(3).2.a, C.1(3).2.b, and contractually specified target density method C.1(3).1; perform one gradation and 5-point Proctor test before placement of 1 1/4-Inch dense graded base. Perform additional gradations every 3000 tons. If sampling requirements are identical, samples/testing performed for the QMP Base Aggregate specification may be used to fulfill the gradation testing requirements of this specification.

(2) Perform additional 5-point Proctor tests, at a minimum, when:

1. The four point moving average gradation on any one sieve differs from the original gradation test result for that sieve, by more than 10 percentage points. The original gradation test is defined as the gradation of the material used to create a 5-point Proctor. Each 5-point Proctor test will remain valid for any material with gradation for all sieves within 10.0 percentage points of that Proctor's original gradation test.

2. The source of base aggregate changes.

3. The four point moving average percentage of blended recycled materials ; from classification of material retained on the No. 4 sieve; in the original gradation test, differs by more than 10 percentage points. The original gradation test is defined as the gradation of the material used to construct the control strip. A previously determined Proctor value will remain valid for any material with gradation for all sieves within 10.0 percentage points of that Proctor's original gradation test

4. Percent target density exceeds 103.0% on two consecutive density tests.

(3) Provide Proctor test results to the engineer within 48 hours of sampling. Provide gradation test results to the engineer within 24 hours of sampling.

(4) Split each contractor QC Proctor sample and identify it according to CMM 8.30. Deliver the split to the engineer within one business day for department QV Proctor testing.

(5) Split each non-Proctor 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.

C.2.5.2 Optional Contractor Assurance (CA) Testing

(1) CA Testing is optional and is conducted to further validate QC testing. The contractor may submit recorded CA data to provide additional information for the following:

1. Process control decisions
2. Troubleshooting possible sampling, splitting, or equipment problems.

C.2.6 Department Testing

C.2.6.1 General

(1) The department will conduct verification testing to validate the quality of the product and independent assurance testing to evaluate the sampling and testing. The department will provide the contractor with a listing of names and telephone numbers of all QV and IA personnel for the project, and provide test results to the contractor within 2 business days after the department obtains the sample.

C.2.6.2 Quality Verification (QV) Testing

(1) The department will have an HTCP technician, or ACT working under a certified technician, perform QV sampling and testing. Department verification testing personnel must meet the same certification level requirements specified in C.2.3 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 gradation, density and Proctor contractor tests.

(3) The department will utilize contractor's QC Proctor results for determination of the material target density. The department will verify QC Proctor values by testing QC Proctor split sample. The department will use QC Proctor value as a target density if the QC and QV Proctor test results meet the tolerance requirements specified in section 2.6.2.(7).

(4) The department will locate gradation and nuclear density test samples, at locations independent of the contractor's QC work, collecting one sample at each QV location. The department will split each QV sample, test half for QV, and retain the remaining half for seven calendar days.

(5) 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.

(6) The department will utilize control strip target density testing results in lieu of QV Proctor sampling and testing when the contractor elected C.1 (3).2.c target density method is used.

(7) 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, take corrective actions according to C.2.7 until the requirements of this special provision are met. Differing QC and QV nuclear density values of more than 2.0 pcf will be investigated and resolved. Differing QC and QV Proctor values of more than 3.0 pcf will be investigated and resolved.

C.2.6.3 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. 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.2.6.4.

C.2.6.4 Dispute Resolution

(1) The engineer and contractor should make every effort to avoid conflict. If a dispute between some aspect of the contractor's and the engineer's testing program does occur, seek a solution mutually agreeable to the project personnel. The department and contractor shall review the data, examine data reduction and analysis methods, evaluate sampling and testing methods/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 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.2.7 Corrective Action

(1) Lots not achieving 93.0% of target density may be addressed and accepted for compaction according to the requirements of this section. Unless otherwise stated, the actions taken to address an unacceptable lot must be applied to the entire lot.

Passing CA test results according to section C.2.5.2 will reduce the limits of lot investigations and/or corrective actions.

(2) At no additional cost to the department, investigate the moisture content of material in an unacceptable lot. Moisture content testing/samples collected under the QC and/or QV testing articles of this specification may be used to complete this investigation. Obtain moisture content readings according to ASTM D 6938. For material composed of >20% RAP or RCA, correct the moisture content with the moisture correction value using the moisture bias, as shown in CMM 8.15.12.1 and 8.15.12.2, except the one-point Proctor tests of the 5 random tests is not required.

(3) Lots with moisture contents within 2.0 percentage points of optimum moisture for target density methods C.1(3).1, C.1(3).2.a, or C.1(3).2.b, or within 2.0 percentage points of the target moisture content for target density method C.1(3).2.c, and exhibiting no signs of deflection when subjected to loading by the heaviest roller used in the placement and compaction operations, shall be, at no additional cost to the department, compacted a minimum of one more pass using equipment and methods representative of the operations used to place and compact the Base Aggregate Dense 1 1/4–Inch, and density tested at the same location (station and offset) as the failing QC and/or QV density tests. If the change in density exceeds 2.0 lb/ft^3 continue subsequent compactive efforts and density testing on that lot, at no additional cost to the department. If the change in density is less than or equal to 2.0 lb/ft^3, the lot is accepted as satisfying the compaction requirements of this provision.

(4) Lots with moisture contents within 2.0 percentage points of optimum moisture for target density methods C.1 (3).1, C.1 (3).2.a, or C.1 (3).2.b, or within 2.0 percentage points of the target moisture content for target density method C.1 (3).2.c, and exhibiting signs of deflection when subjected to loading by the heaviest roller used in the placement and compaction operations, will be reviewed by the engineer. The engineer may request subgrade improvement methods, such as excavation below subgrade (EBS), installation of geotextile fabrics, installation of breaker run material or others to be completed and paid for as specified in standard spec 301.5, or may request, at no additional cost to the department, an additional pass of compactive effort using equipment and methods representative of the operations used to place and compact the base aggregate dense and density test.

If, after an additional pass, the change in density at the same location (station and offset) as the failing QC and/or QV density tests exceeds 2.0 lb/ft^3 in a lot continue subsequent compactive efforts and density testing on that lot, at no additional cost to the department. If the change in density at the same location (station and offset) as the failing QC and/or QV density tests is less than or equal to 2.0 lb/ft^3, and subgrade improvement methods are not requested by the engineer, the lot is accepted as satisfying the compaction requirements of this provision.

If subgrade improvement methods are requested by the engineer, upon completion, including compaction of the restored base material, conduct a density test within the improved subgrade limits. This density test result will replace the prior field density value. If the lot field density equals or exceeds 93.0% of target density the lot is accepted as satisfying the compaction requirements of this provision. If the lot field density fails to achieve 93.0% of target density, at no additional cost to the department, compact the lot a minimum of one more pass using equipment and methods representative of the operations used to place and compact the base aggregate dense; and density test at the same location (station and offset) as the failing QC and/or QV density tests. If the change in density exceeds 2.0 lb/ft^3 continue subsequent compactive efforts and density testing on that lot, at no additional cost to the department. If the change in density is less than or equal to 2.0 lb/ft^3, the lot is accepted as satisfying the compaction requirements of this provision.

(5) Unacceptable lots, with moisture contents in excess of 2.0 percentage points above or below optimum moisture for target density methods C.1(3).1, C.1(3).2.a, or C.1(3).2.b; or in excess of 2.0 percentage points above or below the target moisture content for target density method C.1(3).2.c; shall receive contractor performed and documented corrective action; including additional density testing; at no additional cost to the department.

(6) Density tests completed subsequent to any corrective action will replace previous field density test results for that lot. Continue corrective actions until 93.0% of target density is achieved, or an alternate compaction acceptance criteria is met according to this section.

(7) Field moisture contents of materials tested using contractor elected target density methods C.1(3).2.b or C.1(3).2.c cannot exceed 2.0 percentage points of the optimum moisture content or 2.0 percentage points of the target moisture content, respectively. Density tests on materials using contractor elected target density methods C.1(3).2.b or C.1(3).2.c will not be considered for lot compaction acceptance until the moisture content of the corresponding density test of the in-place material is less than 2.0 percentage points above of the optimum moisture content or 2.0 percentage points of the target moisture content, respectively.

D Measurement

(1) The department will measure QMP Base Aggregate Dense 1 1/4-Inch Compaction by the ton acceptably completed. The measured tons of QMP Base Aggregate Dense 1 1/4-Inch Compaction equals the tons of Base Aggregate Dense 1 1/4-Inch, acceptably completed, regardless of placement location and density testing eligibility.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
371.1000.S	QMP Base Aggregate Dense 1 1/4-Inch Compaction	TON

(2) Payment is full compensation for performing compaction testing; for sampling and laboratory testing; and for developing, completing, and documenting the compaction quality management program. The department will pay separately for providing the aggregate under the Base Aggregate Dense 1 1/4-Inch bid item.

370-010 (20150630)

32. Concrete Pavements.

This special provision describes specialized material requirements for aggregates used in Concrete Pavements. Conform to standard specs 415 and 501, as modified in this special provision. Conform to standard spec 715 for QMP Concrete Pavement and Structures.

Replace standard spec 501.2.5.4.1with the following:

501.2.5.4.1 General

(1) Use clean, hard, durable crushed gravel or crushed limestone free of an excess of thin or elongated pieces, frozen lumps, vegetation, deleterious substances, or adherent coatings considered injurious.

(2) Use virgin aggregates only.

Replace the first paragraph of standard spec 501.2.5.4.2 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]	2.0

[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.

Replace the first paragraph of standard spec 501.2.5.4.3 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 40, the weighted soundness loss must not exceed 9 percent, and the weighted freeze-thaw average loss must not exceed 12 percent.

33. Slip-Formed Pavement.

Add the following to standard spec 415.3.6.2:

(6) Treat sawed surfaces of transverse and longitudinal joints with a silane joint sealant found on the department 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.

No surface treatment is required for Concrete Pavement 10-Inch on IH 39/90 from Station 1947+58'TSB' to 1960+63.97'TSB'.

34. Rout and Seal, Item 415.6000.S.

A Description

This special provision describes routing, cleaning, drying, and sealing the longitudinal edge of pavement joints in new asphaltic pavement shoulders immediately adjacent to the edge of the concrete mainline pavement. The work shall conform to the plan details and as hereinafter provided.

B Materials

Furnish material that conforms to the requirements of the Specifications for Joint Sealants, Hot-Poured, for Concrete and Asphalt Pavements, ASTM Designation: D 6690, Type II, modified to require that the bond strength test be run at -20 degrees F. (The unmodified ASTM D 6690, Type II allows this test to be run at either 0 degrees F or -20 degrees F.)

Deliver each lot or batch of sealing compound to the jobsite in the manufacturer's original sealed container. Mark each container with the manufacturer's name, batch or lot number, and the safe heating temperature. Present the manufacturer's certification stating that the compound meets the requirements of this specification. Prior to applying the sealant, furnish to the engineer a certificate of compliance and a copy of the manufacturer's recommendations on heating and applying the sealant.

C Construction

C.1 Equipment

Heat the sealing compound to the pouring temperature recommended by the manufacturer in an approved kettle or tank, constructed as a double boiler, with the space between the inner and outer shells filled with oil or other satisfactory heat transfer medium. If and when using the heating kettle on concrete or asphaltic pavement, properly insulate the heating kettle to ensure heat is not radiated to the pavement surface.

Make rout cuts in a single pass. Two-pass cutting will not be allowed. Use a self-propelled mechanical router capable of routing the bituminous pavement to provide a 1.0:1.0 depth to width ratio of all routed cracks. The router blade or blades shall be of such size and configuration to cut the desired joint reservoir in one pass. No spacers between blades shall be allowed unless the contractor can demonstrate to the engineer that the desired reservoir and rout cut can be obtained with them. Either wet or dry routing will be permitted provided the above conditions are met. Use a pressure distributor for applying sealing material through a hand-operated wand or nozzle according to sealant manufacturer's instructions.

C.2 Methods

Conduct the operation so that the routing, cleaning, and sealing are continuous operations. Traffic shall not be allowed to knead together or damage the routed joints. Rerout, if necessary, routed joints not sealed before traffic is allowed on the pavement when routing and sealing operations resume at no additional cost to the department. Do not perform rout cutting, cleaning, and sealing, within 48 hours of the placement of the shoulder's surface course.

Rout the longitudinal joint to a minimum width of ¾-inches and a minimum depth of ¾-inches. Use a power vacuum or equivalent to immediately remove any routing slurry, dirt, or deleterious matter adhering to the joint walls or remaining in the joint cavity, or both. Prior to sealing, dry the cleaned joints either by air-drying or by using a high capacity torch. Immediately prior to sealing, blow out the dried crack with a blast of compressed air, 80-psi minimum. Continue cleaning until the joint is dry, and until all dirt, dust, or deleterious matter is removed from the joint and adjacent pavement to the satisfaction of the engineer. If the air compressor produces dirt or other residue in the joint cavity, the contractor shall be required to clean the joint again.

If cleaning operations could cause damage to, or interfere with, traffic in adjacent lanes, or both, provide protective screening that is subject to the approval of the engineer to the cleaning operation.

Following cleaning, dry the routed joints and warm them with a hot air lance. Take care not to burn the pavement surface. Under no circumstances shall more than two minutes elapse between the time the hot air lance is used and the sealant is placed.

Provide positive temperature control and mechanical agitation. Do not heat the sealant to more than 20 degrees F below the safe heating temperature. The safe heating temperature can be obtained from the manufacturer's shipping container. Provide a direct connecting pressure type extruding device with nozzles shaped for insertion into the joint. Immediately remove sealant spilled on the surface of the pavement.

Seal the joints when the sealant material is at the pouring temperature recommended by the manufacturer. Fill the joint such that after cooling, the sealant is flush with the adjacent pavement surface. Do not overfill the joint; the engineer may allow a very slight overband. Sand shall not be spread on the sealed joints to allow for opening to traffic. Before opening to traffic, the sealant shall be tack free.

D Measurement
The department will measure Rout and Seal in length by the linear foot, completed according 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
415.6000.S	Rout and Seal	LF

Payment is full compensation for rout cutting; cleaning the joint; furnishing and installing all materials, including sealant.
415-100 (20140630)

35. HMA Pavement Modification.

This special provision describes specialized material requirements for HMA Pavements. Conform to standard spec 460, as modified in this special provision.

Replace Table 460-2 under standard spec 460.2.7 with the following:

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)	40	40	40	40	40	40	40
Soundness (AASHTO T104) (sodium sulfate, max % loss)	9.0	9.0	9.0	9.0	9.0	9.0	9.0
Freeze/Thaw (AASHTO T103) (specified counties, max % loss)	12	12	12	12	12	12	12
Fractured Faces (ASTM 5821) (one face/2 face, % by count)	60 / __	65 / __	75 / 60	85 / 80	98 / 90	100/100	100/90
Flat and 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 (3:1 ratio)
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

Mixture type	E - 0.3	E - 1	E - 3	E - 10	E - 30	E - 30x	SMA
Voids filled with Binder (VFB or VFA, %)	70 - 80 [4] [5]	65 - 78[4]	65 - 75[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 nominal maximum size mixtures, the specified VFB range is 73 - 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%.

36. QMP HMA Pavement Nuclear Density.

A Description

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

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

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

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

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

http://www.atwoodsystems.com/mrs

B Materials

B.1 Personnel

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

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

B.2 Testing

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

B.3 Equipment

B.3.1 General

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

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

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

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

B.3.2 Correlation of Nuclear Gauges

B.3.2.1 Correlation of QC and QV Nuclear Gauges

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

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

(3) Calculate the average of the difference in density of the 5 test sites between the QC and QV gauges. Locate an additional 5 test sites if the average difference exceeds 1.0 lb/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)

37. Ice Hot Weather Concreting, Item 501.1000.S.

Conform to standard spec 501.3.8.2 except the department will pay for ice at the contract unit price under the Ice Hot Weather Concreting bid item. This special provision only applies to work done under the following contract bid items:

Concrete Masonry Bridges	Concrete Masonry Retaining Walls
Concrete Masonry Bridges HES	Concrete Masonry Retaining Walls HES
Concrete Masonry Culverts	Concrete Masonry Endwalls
Concrete Masonry Culverts HES	Concrete Masonry Overlay Decks

High Performance Concrete (HPC) Masonry Structures

Replace standard spec 501.4 and standard spec 501.5 with the following:

501.4 Measurement

(1) The department will measure Ice Hot Weather Concreting by the pound, acceptably completed, measured only if the conditions prescribed in standard spec 501.3.8.2 are met.

501.5 Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
501.1000.S	Ice Hot Weather Concreting	LB

(2) Payment for Ice Hot Weather Concreting is full compensation for ice used to cool concrete placed in hot weather as specified in standard spec 501.3.8.2.

(3) The department will not pay directly for the concrete specified under this section. Concrete is incidental to the various bid items using it. Payment under those bid items includes providing all materials, including aggregates and associated aggregate source testing, cement, fly ash, slag, and admixtures; for preparing, transporting, storing, protecting and curing concrete; and for contractor requirements related to testing specified in standard spec 501.3.10.

(4) If required to remove and replace any concrete damaged by lack of proper protection. Perform this work at no expense to the department.

501-010 (20150121)

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

A Description

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

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

B Materials

B.1 General

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

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

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

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

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

B.2 Fabrication

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

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

B.3 Control of Material

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

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

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

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

C Construction

C.1 General

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

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

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

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

C.2 Splices

Splice as the plans show. Provide stainless steel couplers conforming to the minimum capacity, certification, proof testing, and written approval requirements of standard spec 550.3.3.4. The contractor may substitute stainless steel couplers for lap slices the plans show if the engineer approves in writing.

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

D Measurement

The department will not measure Bar Steel Reinforcement HS Stainless Structures. The department will use pay plan quantity conforming to standard spec 109.1.1.2. Quantities were computed from the nominal weights of corresponding sizes for carbon steel deformed bars in AASHTO M31 regardless of stainless steel alloy provided. The department will not measure extra material used if the contractor alters the reinforcement layout as allowed under C.2, extra material for splices or couplers the plans do not show, or the weight of devices used to support or fasten the steel in position.

The department will measure the Bar Couplers Stainless bid items as each individual coupler acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
505.0800.S	Bar Steel Reinforcement HS Stainless Structures	LB

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

Payment for the Bar Couplers Stainless bid items is full compensation for providing couplers; including bar steel that is part of the coupler and not detailed in the plan; for threading reinforcing bars; for installing and coating the splice; and for supplying and testing 3 couplers.

39. Concrete Staining B-13-706, Item 517.1010.S.001; Concrete Staining B-13-707, Item 517.1010.S.002.

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 according 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 Concrete Stain Solid Color Water Based by Sherwin-Williams

C Construction

C.1 General

Furnish, prepare, apply, cure, and store all materials according 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 according 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 according 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 according to the plan.

D Measurement
The department will not measure Concrete Staining (Structure). The department will use pay plan quantity conforming to standard spec 109.1.1.2.

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

ITEM NUMBER	DESCRIPTION	UNIT
517.1010.S.001	Concrete Staining B-13-706	SF
517.1010.S.002	Concrete Staining B-13-707	SF

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

40. Cover Plates Temporary, Item 611.8120.S.

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

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

C (Vacant)

D Measurement
The department will measure Cover Plates Temporary, acceptably completed in place, as units.

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

ITEM NUMBER	DESCRIPTION	UNIT
611.8120.S	Cover Plates Temporary	Each

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

The steel plates shall become the property of the contractor when no longer needed in the contract work.
611-006 (20030820)

41. 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)

42. Blue Specific Service Signs.

Add the following to standard spec 638.3.4:

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, Interstate Logos - Wisconsin, is responsible for these signs. Contact Interstate Logos - Wisconsin at (844) 496-9163 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 (20150630)

43. Traffic Control Signs.

Add the following to standard spec 643.2.9.1(5):

Provide associated advanced signing, including portable traffic control signing, according to the MUTCD. Mount all portable traffic control sign at a minimum height of 5 feet, measured from the bottom of the sign, above the edge of pavement.

44. Traffic Control Flexible Tubular Marker Posts; Traffic Control Flexible Tubular Marker Bases.

A General

This special provision describes ownership of Traffic Control Flexible Tubular Marker Posts and Traffic Control Flexible Tubular Marker Bases upon completion of the work. Conform to standard spec 643, as modified in this special provision.

B (Vacant)

C Construction

Add the following to standard spec 643.3.1(8):

Traffic Control Flexible Tubular Marker Posts and Traffic Control Flexible Tubular Marker Bases placed on I-39/90 permanent median crossovers will become the department's property upon completion of the work.

Replace standard spec 643.3.4.1(1) with the follows:

Under the Traffic Control Flexible Tubular Marker Posts bid item, furnish, install, and maintain flexible tubular marker posts with reflective sheeting.

Replace standard spec 643.3.4.2(1) with the follows:

Under the Traffic Control Flexible Tubular Marker Bases bid item, furnish, install, and maintain bases for flexible tubular marker posts.

Replace standard spec 643.3.4.2(3) with the follows:

Leave in place Traffic Control Flexible Tubular Marker Bases upon completion of the work.

D Measurement
Replace standard spec 643.4.3(4) with the follows:

The department will measure Traffic Control Flexible Tubular Marker Posts and Traffic Control Flexible Tubular Marker Bases as each individual installation, acceptably completed. The department will measure replacing damaged posts and bases by each post and base replaced.

E Payment
Replace standard spec 643.5.4(8) with the follows:

Payment for Traffic Control Flexible Tubular Marker Posts is full compensation for providing, installing, and maintaining the flexible tubular marker posts.

Replace standard spec 643.5.4(9) with the follows:

Payment for Traffic Control Flexible Tubular Marker Bases is full compensation for providing, installing, maintaining the flexible tubular marker bases, and for repairing damaged pavements. The department will not pay to replace bases inadequately secured to the pavement.

45. 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)

46. Pavement Marking Grooved Wet Reflective Contrast Tape 4-Inch, Item 646.0841.S, Pavement Marking Grooved Wet Reflective Contrast Tape 8-Inch, Item 646.0843.S.

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

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

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

C Construction
C.1 General
For quality assurance, provide the engineer and the region's Marking Section evidence of manufacturer training in the proper placement and installation of pavement marking contrast tape.

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

C.2 Groove Depth
Cut the groove to a depth of 120 mils ± 10 mils from the pavement surface or, if tined, from the high point of the tined surface. To measure the depth, the contractor may use a depth plate placed in the groove and a straightedge placed across the plate and groove, or the

contractor may use a straightedge placed perpendicular to the groove. The department may periodically check groove depths.

C.3 Groove Width – Longitudinal Markings
Cut the groove one-inch wider than the width of the tape.

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

C.5 Groove Cleaning
C.5.1 Concrete
Cooling the cutting head with water may be necessary for some applications and equipment. If cooling water is necessary, flush the groove immediately with high-pressure water after cutting to remove any build-up of cement dust and water slurry. If this is not done, the slurry may harden in the groove.

If water is used in the grooving process, allow the groove to dry a minimum of 24 hours after groove cleaning, and prior to pavement marking application. The groove surface shall be clean and dry before applying the adhesive, and the pavement marking tape. Use a high-pressure air blower with at least 185 ft^3/min air flow and 120 psi air pressure to clean the groove; use of the air blower does not decrease the amount of time required for the groove to dry.

C.5.2 New Asphalt
Groove pavement five or more days after paving.

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

C.5.3 Existing Asphalt
Check for structural integrity in supporting grooving operations. If the structural integrity of the asphalt pavement is inadequate to support grooving operations, immediately notify the engineer.

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

C.6 Tape Application
Apply the tape when both the air and surface temperature are 40 degrees F and rising.

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

1) For the Southeast Region and the ozone non-attainment Northeast Region counties of Sheboygan, Manitowoc, and Kewaunee:

   · Apply SPA-60 during May 1 to September 30, both dates inclusive due to Volatile Organic Compound Limitations.

   · Apply P-50 during October 1 to April 30, both dates inclusive.

2) For the remainder counties:

   · Apply either adhesive.

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

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

D Measurement

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

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
646.0841.S	Pavement Marking Grooved Wet Reflective Contract 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)

47. Intelligent Transportation Systems (ITS) – Control of Materials.

Standard spec 106.2 – Supply Source and Quality
Supplement standard spec 106.2 with the following:

The department will furnish a portion of equipment to be installed by the contractor. This department-furnished equipment includes the following:

Department-Furnished Items
(1) Overhead DMS
(1) DMS Controller
(1) Base Mounted Cabinet
(1) RS-900 Ethernet Switch

Contact Dean Beekman, State Traffic Operations Center (STOC), at (414) 227-2154 to obtain a copy of the manufacturer list and contact names for department-furnished equipment.

Pick-up small department-furnished equipment, such as communications devices and controllers from the department's 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 the department's STOC at (414) 227-2166 to coordinate pick-up of equipment.

Large department-furnished equipment will be delivered by the supplier to a contractor-controlled site within Dane County. Delivery will not necessarily be in a "just in time" manner. Store the equipment until field installation. Provide location details and a contact for delivery coordination upon receiving the contract's Notice to Proceed.

Transportation of the equipment between the electric shop and the field or interim location(s) shall be the responsibility of the contractor.

Standard spec 106.3 – Approval of Materials
Supplement standard spec 106.3 with 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.

Shop drawings will be required for, but not limited to the following:

1. Mounting detail for dynamic message signs.
2. Any contractor-designed structure or foundation.

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.

48. Intelligent Transportation Systems – General Requirements.

A Description

A.1 General

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

Unusual aspects of this project include:

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

A.2 Surge Protection

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

B Materials

B.1 General

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

All electrical equipment shall conform to the standards and requirements of the Wisconsin Electrical Code, the National Electrical Manufacturers Association (NEMA), National Electric Safety Council (NESC), Underwriter's Laboratory Inc. (UL) or the Electronic Industries Association (EIA), when applicable. All materials and workmanship shall conform to the requirements of the National Electrical Code (NEC), Rural Electrification

Administration (REA), Standards of the American Society for Testing and Materials (ASTM), American Association of State Highway and Transportation Officials (AASHTO), requirements of the plans these special provisions, the standard specifications, and to any other codes, standards, or ordinances that may apply. All system wiring, conduit, grounding hardware and circuit breakers shall be in conformance with the National Electrical Code. Whenever reference is made to any of the standards mentioned, the reference shall be considered to mean the code, ordinance, or standard that is in effect at the time of the bid advertisement.

B.2 Outdoor Equipment

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

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

B.3 Custom Equipment

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

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

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

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

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

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

B.4 Environmental Conditions

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

1. **Vibration and Shock:** Vehicle speed and classification sensors and any other equipment mounted atop poles or on structures shall not be impaired by the continuous vibration caused by winds (up to 90 mph with a 30 percent gust factor) and traffic.
2. **Duty Cycle:** Continuous
3. **Electromagnetic Radiation:** The equipment shall not be impaired by ambient electrical or magnetic fields, such as those caused by power lines, transformers, and motors. The equipment shall not radiate signals that adversely affect other equipment.
4. **Electrical Power:**
    a. **Operating power:** The equipment shall operate on 120-volts, 60-Hz, single-phase unless otherwise specified. It shall conform to its specified performance requirements when the input voltage varies from 89 to 135 volts and the frequency varies +3 Hz.
    b. **High frequency interference:** The equipment operation shall be unaffected by power supply voltage spikes of up to 150 volts in amplitude and 10 microseconds duration.
    c. **Line voltage transients:** The equipment operation shall be unaffected by voltage transients of plus or minus 20 percent of nominal line voltage for a maximum duration of 50 milliseconds. Equipment in the field shall meet the power service transient requirements of NEMA Standard TS-2 when connected to the surge protectors in the cabinets.
5. **Temperature and Humidity:**
    a. **Field equipment:** Equipment in the field shall meet the temperature and humidity requirements of NEMA Standard TS-2. Liquid crystal displays shall be undamaged by temperatures as high as 165 degrees F, and shall produce a usable display at temperatures up to 120 degrees F.
    b. **Equipment in Controlled Environments** shall operate normally at any combination of temperatures between 50 degrees F and 100 degrees F, and humidity's between 5 percent and 90 percent, non-condensing, and with a temperature gradient of 9 degrees F per hour.

B.5 Patch Cables and Wiring

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

B.6 Surge Protection

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

1. The protectors shall suppress a peak surge current of up to 10k amps.
2. The protectors shall have a response time less than one nanosecond.
3. The protector shall clamp the voltage between the two wires at a voltage that is no more than twice the peak signal voltage, and clamp the voltage between each wire and ground at 50 volts.
4. The first stage of protection shall be a three-element gas discharge tube, and the second stage shall consist of silicon clamping devices.
5. The protector shall also contain a resettable fuse (PTC) to protect against excessive current.
6. There shall be no more than two pairs per protector.
7. It shall be possible to replace the protector without using tools.

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

C Construction

C.1 Thread Protection

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

C.2 Cable Installation

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

C.3 Wiring

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

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

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

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

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

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

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

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

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

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

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

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

49. Intelligent Transportation Systems – Conduit.

Add the following to standard spec 671.2:

671.2.4 Locate Wire
Furnish and install a No. 14 AWG stranded copper wire for future locate purposes through each conduit run. Connect the locate wire by using a wire nut at each pull box, manhole, or other access point. Alternatively, use a single wire through the access points. All material furnished under this item shall meet the requirements of standard spec 655.
671-005 (20150630)

50. 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 one 2-inch conduit. Use metallic conduit according to standard spec 652.

Furnish the identification plaques as the plans show.

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.

Install identification plaques as the plans show.

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; and all identification plaques.

51. 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)

52. Install Overhead Freeway DMS Full Matrix, Item 678.0100.S.

A Description

This special provision describes installing a department-furnished dynamic message sign on a new sign structure.

B Materials

The department will provide the sign, controller, and the control cable. The control cable will be multi-mode fiber optic cable.

Use an AWG #6 copper wire or equivalent bonding straps to bond the sign and cabinet to the structure. Use an AWG #6 solid, bare copper wire to bond the sign structure to the ground rod(s).

1. For the three wires carrying 120/240 VAC power from the cabinet to the sign, use single conductor, stranded copper, 120/240 VAC, XLP insulated, USE rated wire. Size the wire to carry the maximum amperage permitted by the main breakers in the sign.

Provide a 100-amp 120/240-VAC load center in the controller cabinet, along with breakers recommended by the sign manufacturer.

C Construction

Install the load center so that the main breakers control all power to the sign and cabinet. Provide at least three branch circuits, one for the sign, one for the controller and communication equipment, and one for all cabinet accessories, such as fan, light, and heater. Only protect the branch serving the controller and communication equipment with the second stage of the surge protector. Connect the power and control cables according to the manufacturer's recommendations. Run the cables in rigid metallic conduit or flexible metallic conduit, or combination of these, within the sign structure.

Bond the bottom of the sign structure to one or more ground rods. Use exothermic welding at each end of the ground wire, unless the steel structure has a suitable grounding lug. Use a device that measures resistance to ground using the three-point fall-of-potential method to ensure that the resistance from the sign's ground bar to ground does not exceed 4 ohms. Add more ground rods if necessary to achieve this requirement.

D Measurement

The department will measure Install Overhead Freeway DMS Full Matrix by each sign, acceptably installed and tested.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
678.0100.S	Install Overhead Freeway DMS Full Matrix	Each

Payment is full compensation for installing and testing the sign and controller; providing cables, conduits, and fittings; for testing the sign; and for transporting materials.
678-010 (20100630)

53. Roadway Embankment, Item SPV.0035.001.

Conform to standard spec 207 unless modified by this special provision.

A Description

Replace standard spec 207.1(1) with the following:

This section describes placing, in embankments and in miscellaneous backfills, material obtained under the bid items in the roadway and drainage excavation, or excavation for structure sections; and material obtained under Borrow as specified in standard spec 208 and modified under these special provisions.

B Materials

Conform to standard spec 207.2.

C Construction

Conform to standard spec 207.3.

D Measurement

Replace standard spec 207.4(1) with the following:

The department will measure Roadway Embankment by the cubic yard acceptably completed in its final location using the method of average end areas, with no correction for curvature or settlement, except as follows:

1. The engineer and contractor mutually agree to an alternative volume calculation method;

2. The method of average end areas is not feasible.

If it is not possible to compute volumes of the various classes of roadway and drainage embankment by the method of average end areas due to erratic location of isolated deposits, the department may compute the volumes by alternative methods involving three-dimensional measurements.

The department will not measure embankment material beyond the limits of the required slopes as shown on the plans.

E Payment
Replace standard spec 207.5(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.0035.001	Roadway Embankment	CY

Payment is full compensation for forming, compacting, shaping, sloping, trimming, finishing, and maintaining the embankments.

The department will pay for erosion control, fertilizing, and seeding of borrow sites and associated areas separately as specified for borrow sites and material disposal sites in standard spec 628.5.1.

54. High Performance Concrete (HPC) Masonry Structures, Item SPV.0035.701.

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. Conform to standard spec 715 for QMP Concrete Pavement and Structures.

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 35, the weighted soundness loss must not exceed 6 percent, and the weighted freeze-thaw average loss must not exceed 12 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 the entire text with the following:

(1) 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 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.

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

(4) The department will pay $0.75 per pound for the quantity of ice required to reach a target temperature of 75 F if the following conditions are met:

1. The un-iced concrete temperature exceeds 80 F.

2. The contractor has performed the actions outlined in the contractor’s accepted temperature control plan.

3. The contractor elects to use ice.

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. 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.

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.

502.3.5.4 Superstructures
Delete paragraph six.

502.3.7.8 Floors
Delete paragraphs thirteen, fourteen and fifteen.

Add the following to the end as paragraphs nineteen, twenty and twenty-one.

(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) Hand finishing, except for the edge of deck, must be kept to a minimum. The finishing machine must be equipped 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.

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, sidewalks and raised medians 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.

(3) Set up and test the fogging system before each bridge deck, raised median and sidewalk pour. The fogging system must remain set up and in operating condition 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 standard spec 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.0035.701	HPC Masonry Structures	CY

710.5 Sampling and Testing
Add the following subsection:

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) Permeability samples for AASHTO T 277 testing must be stripped of their molds and wet cured to an age of 7 days in a standard moist room or water tank. After 7 days, submerge the samples in water heated to 100° F until an age of 28 days. Upon completion of the curing process, obtain one sample from each cylinder and test 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.

55. Baseline CPM Progress Schedule, Item SPV.0060.001; CPM Progress Schedule Updates and Accepted Revisions, Item SPV.0060.002.

Replace standard spec 108.4 with the following:

108.4 Critical Path Method Progress Schedule

108.4.1 Software

Use the latest version of Oracle (Primavera) Project Manager (P6) version 7.0 or newer to prepare the Initial Work Plan Schedule, Baseline CPM Progress Schedule, and all Monthly CPM Updates.

108.4.2 Personnel

Designate a Project Scheduler who will be responsible for scheduling the Work and submit for department approval a professional resume describing a minimum of three years of developing and managing specific CPM scheduling experience on major (interstate) highway reconstruction projects or projects of similar size and complexity. This includes recent experience using Oracle P6 software.

108.4.3 Definitions

The department defines terms used in standard spec 108.4 as follows:

Activity

A task, event or other project element on the schedule, during the course of the project that contributes to completing the project. Activities have a description, scheduled (or actual) start and finish dates, duration and one or more logic ties.

Critical Path

The longest continuous path of activities through the project that has the least amount of total float. In general, a delay on the critical path will extend the scheduled completion date.

Critical Path Method (CPM)

A network based planning technique using activity durations and the relationships between activities to mathematically calculate a schedule for the entire project.

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.

Data Date
The earliest work period after the date through which a schedule is current. Everything occurring earlier than the data date is "as-built" and everything on or after the data date is "as-planned."

Department's Preliminary Construction Schedule
The department's schedule for the contract work, developed during design, and provided to the contractor for informational purposes only.

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(s) predicted by the latest accepted CPM Update, which may be earlier or later than the contract completion date(s), 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 or delay impact.

Initial Work Plan Schedule
The Initial Work Plan (IWP) Schedule 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 I-39/90 Corridor Management Program, including intermediate milestone dates contract completion dates and codes.

Work Breakdown Structure (WBS)
A framework for organizing the activities that makes 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.

108.4.4 Department's Preliminary Construction Schedule
The department's Preliminary Construction Schedule was developed during the design phase of the contract. Its purpose was to illustrate work areas per Stage/Phase of construction. Durations and resource availability are department estimates only. Contractor

is solely responsible for its use of means and methods and as such is fully responsible for determining durations based on own estimate of production and available resources. The suggested use of the department's Preliminary Construction Schedule is ease of identification of work availability during each Stage/Phase and the logical relationship between the Stages/Phases. The Preliminary Construction Schedule reflects one possible approach to completing the work, consistent with the traffic phasing requirements and the interim/final completion date(s) contained in the contract. The logic contained in the Preliminary Construction Schedule is not intended to alter or supplement contract requirements for the phasing of the work, but to reflect those requirements. Any reliance on the department's Preliminary Construction Schedule is at the sole risk of the contractor.

108.4.5 Contractor's Scheduling Responsibilities

The CPM Schedule shall be a tool capable of forward planning and monitoring the Project. The schedule will further be used as a communication tool between the contractor and the department. It will be used to illustrate the plan, develop what-if scenarios, and analyze impacts. The accuracy and completeness of the CPM Schedule will benefit both the contractor and the department. The CPM schedule is the contractor's committed plan to complete all work within the completion deadlines.

The contractor shall submit to the department initial and monthly update schedules, each consistent in all respects with the time and order of work requirements of the contract. The project work shall be executed in the sequence indicated on the current accepted schedule. Schedules shall show the order in which the contractor proposes to carry out the work with logical links between activities, and calculations made using the critical path method to determine the controlling operation or operations. The contractor is responsible for assuring that each schedule shows a coordinated plan for complete performance of the work. Schedule the Work in the manner required to achieve the completion date and intermediate milestone dates specified in the Prosecution and Progress Special Provision.

Contactor project management personnel shall actively participate in the schedule development, the monthly updating of progress, and all schedule revisions throughout the entire duration of the contract. Subcontractors and suppliers working on the project shall also contribute in developing and maintaining an accurate schedule.

108.4.6 Submittals

108.4.6.1 Initial Work Plan Schedule

Submit an Initial Work Plan (IWP) Schedule consisting of the following:

1. Provide a detailed plan of activities to be performed during 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.

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).

3. Provide activities as necessary to depict third-party work related to the contract.

4. Provide summary activities for the balance of the project beyond the first 90 calendar days of the project. Summary activities may have durations greater than 28 calendar days (20 business days).

5. Submit three copies of the IWP Schedule, including the P6 native data file (XER) and an electronic file (PDF) on three separate CD-ROM's. Submit the P6 native data file (XER) and an electronic file (PDF) to the following DOT email boxes; DOTDTSDSWMEGASCHEDULERS@dot.wi.gov and I39project@dot.wi.gov.

6. Following department receipt of the IWP Schedule, allow ten business days for department review and return of comments. Within five business days of receiving the IWP Schedule, the department will schedule a workshop for the contractor to present the IWP Schedule and to answer questions raised during the department's review. Provide formal responses to the comments and resubmit the IWP Schedule as necessary. A notice to proceed will not be issued until the engineer accepts the IWP Schedule. The department will use the IWP Schedule to monitor the progress of the work until the Baseline CPM Progress Schedule is accepted.

7. Submit an updated version of the IWP Schedule on a bi-monthly basis (every other week) 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.

108.4.6.2 Baseline CPM Progress Schedule

Within ten business days of receiving an approved IWP Schedule, as required in the contract, submit a Baseline CPM Progress Schedule and written narrative consisting of the following:

1. Develop the Baseline CPM schedule. 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).

1.3 Provide activities as necessary to depict third-party work related to the contract. Third-party work activities may include but is not limited to Railroads, Utilities, Real Estate and local government agencies.

1.4 Make allowance for specified work restrictions, non-working days, time constraints, calendars, and potential or approved weather delays; reflect involvement and reviews by the department; and coordination efforts 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. Predecessors and successors shall not be linked to the same activity with different relationship types.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 or overlap unless the engineer accepts requested exceptions. Include and discuss request for exceptions in the schedule narrative provided with each schedule submittal.

1.6 Schedule activities shall include the following:

a. A clear and legible description. The use of abbreviations shall be limited. Descriptions shall include an action verb describing the work performed, a basic description of the materials used, and, where applicable, a general location of the work.
b. Codes for Contract ID / WisDOT Project ID, Responsibility, Stage, and Area. The department may provide additional codes for use within department reporting.
c. Activities shall carry a single Responsibility assignment.

1.7 Schedule all intermediate milestones in the proper sequence and input as either a “Start on or After” or “Finish on or Before” date. Do not use other constraint types, within the software, without prior approval by the engineer. Do not apply date constraints on any work tasks without prior approval by the engineer. 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 shall encompass all the time in the contract period between the starting date and the specified completion date.

1.8 Develop an anticipated cash-flow curve for the project, based on the Baseline CPM schedule by assigning cost values to selective work tasks within the CPM schedule that total the value of the contract.

1.9 Provide budgeted quantities consistent with the bid quantities on selective construction tasks within the CPM schedule. The engineer will provide a summarized list of 30 generalized quantity items that will be identified and applied by the contractor using the P6 software application.

2. Provide three hard copies (11" x 17") of the CPM schedule 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 schedule including the P6 native data file (XER) and an electronic file (PDF) on three separate CD-ROM's. Submit the P6 native data file (XER) and an electronic file (PDF) to the following dot email boxes; DOTDTSDSWMEGASCHEDULERS@dot.wi.gov and I39project@dot.wi.gov.

Within ten business days of receiving the Baseline CPM schedule, the department will schedule a workshop, review the submittal, and return review comments.

Within five business days after the Baseline CPM scheduling workshop, the department will either accept the contractor's Baseline CPM schedule or provide additional comments. Within five business days, address the department's comments and resubmit a revised Baseline CPM, including formal responses to the department's review comments. If the engineer requests justifications 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 and meets the requirements of the contract. The engineer's acceptance of the schedule does not modify the contract and does not relieve the contractor from meeting the contract requirements.

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.

108.4.6.3 Monthly CPM Schedule Updates

Submit CPM Schedule updates on a monthly basis after acceptance of the Baseline CPM Schedule. With each CPM Schedule 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 potential delay, work planned for the next 30 calendar days, and all changes to the CPM Schedule. Changes to the CPM Schedule include the addition or deletion of activities, changes to activity descriptions, original durations, relationships, overlap (lag/lead), 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 Schedule update, including the P6 native data file (XER) and an electronic file (PDF) on three separate CD-ROM's. Submit the P6 native data file (XER) and an electronic file (PDF) to the following dot email boxes; DOTDTSDSWMEGASCHEDULERS@dot.wi.gov and I39project@dot.wi.gov.

5. Within ten business days of receiving each CPM Schedule update, the engineer will provide formal review comments and schedule a meeting, if necessary, to address comments raised in the department's review. Address the department's comments and resubmit a revised CPM Schedule update within five business days after the department's request.

108.4.6.4 Three-Week Look-Ahead Schedules

Submit Three-Week Look-Ahead Schedules on a weekly basis after NTP. The schedule shall be prepared by computer. Provide three hard copies (11" x 17") to the engineer. With each Three-Week Look-Ahead include:

1. Activities underway and as-built dates for the past week.

2. Actual as-built dates for completed activities through final acceptance of the project.

3. Planned work for the upcoming three-week period.

4. 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.

5. 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.

108.4.6.5 Weekly Production Data

Provide estimated and actual weekly production curves for items of work on a weekly basis for applicable items of work as requested by the department including but not limited to the following:

1. Provide data on the following items by the units specified:
   1.1 Underground Facilities – LF per week

   1.2 Retaining Walls – SF per week
   - MSE Walls
   - Other Wall Types

   1.3 Bridge Construction
   - Foundation Pile – EACH per week
   - Foundation/Substructure Concrete – CY per week
   - Structural Steel Girders – EACH per week
   - Prestressed Concrete Girders – EACH per week
   - Deck Formwork – SF per week

   1.4 Roadway Excavation – CY per week

   1.5 Roadway Embankment – CY per week

1.6 Roadway Structural Section

- Grading/Subgrade Preparation – SY per week
- Base Material Placement – TON per week
- Base Material Subgrade Preparation – SY per week
- Asphaltic Base – TON per week
- Asphaltic and HMA Pavements – TON per week
- Concrete Pavement – SY per week
- Concrete Pavement – CY per week

1.7 Finishing Items – SY per week

Note: Base material shall include all breaker run, base aggregate, subbase items or other base items included in the contract. Provide production information for each individual base material item.

For each item, indicate the actual daily production for the past week and the anticipated weekly production for the next week. Also include cumulative production curves showing the production information for each item to date.

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.

108.4.7 Progress Review Meetings

After completing the weekly submittal of the Three-Week Look-Ahead Schedules and production data, attend a weekly progress review meeting to review the submittals with the department. At the meeting, address comments as necessary, and document agreement or disagreement with the department.

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.

108.4.8 CPM Progress Schedule Revisions

A CPM Progress Schedule Revision may be submitted, prior to the next CPM Monthly Update, if necessary due to changes in the Work or project conditions as authorized by the engineer. Prepare the CPM Revision in the same format as required for CPM Monthly 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 Monthly 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.

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 Monthly Updates. The engineer may request that the contractor revise the CPM schedule for one or more of the following reasons:

1. The forecast completion date is scheduled to occur more than 14 calendar days after the contract completion date.

2. An intermediate milestone is scheduled to occur more than 14 calendar days after the date required by the contract.

3. The engineer determines that the progress of the work differs significantly from the current schedule.

4. 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.

108.4.9 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 Monthly 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 Monthly Update. Requests for time extensions due to delays shall meet the following criteria:

1. For requests to extend the contract completion date, include a detailed description of how the delay, or additional work, affected the project's critical path, based on the latest accepted CPM Monthly Update.

2. For requests to extend an intermediate milestone date, include a description of how the delay, or additional work, affected the controlling (longest) path to the milestone, based on the latest accepted CPM Monthly 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.

108.4.10 Measurement for CPM Progress Schedule
The department will measure Baseline CPM Progress Schedule for each required submittal acceptably completed.

The department will measure CPM Progress Schedule Updates and Accepted Revisions for each required submittal, acceptably completed.

108.4.11 Payment for CPM Progress Schedule
The department will pay for measured quantities at the contract unit price under the following bid items:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.001	Baseline CPM Progress Schedule	Each
SPV.0060.002	CPM Progress Schedule Updates and Accepted Revisions	Each

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 Progress Schedule after the department accepts the schedule. Thereafter, the department will pay the contract unit price for each monthly CPM Progress Schedule 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.

Failure to provide satisfactory schedule submittals within the times specified will result in liquidated damages being assessed and may result in the department managing to the contractor's latest accepted schedule until such time as the contractor submits an updated or revised schedule.

If the contractor does not provide satisfactory progress schedule submittals, updates and revisions, within the time specified by these specifications, the department will assess liquidated damages. The department will deduct the amount of $500 per calendar day due to the contractor for every calendar day that the submission of the Initial Work Plan Schedule, Baseline CPM Progress Schedule, Revised CPM Progress Schedule, and the Monthly Progress Schedule is delinquent.

If the Initial Work Plan Schedule, Baseline CPM Progress Schedule, Revised CPM Progress Schedule, and the Monthly Progress Schedule update submittals are not received by the department within 10 business days after the submittal time specified, the department will only make progress payments for the value of materials, as specified in standard spec 109.6.3.2.1, until the schedule is submitted.

56. Access Gate 6-Foot, Item SPV.0060.003.

A Description
This special provision describes furnishing and erecting access gates per the plan detail at locations shown on the plans or as directed by the engineer, and as hereinafter provided.

B Materials
Provide a round steel pipe tubing gate that has a minimum of six horizontal rails. Overall dimensions shall be a minimum of 48-inches tall and a minimum of 66-inches wide. Dimensions between horizontal rails, overall vertical height, and overall horizontal width can vary slightly from the plan detail if approved by the engineer.

Gate will have round, heavy steel pipe tubing with a minimum outside diameter of 1-3/4 -inches constructed of a minimum 20 gauge thickness. Steel pipe tubing shall be painted. The paint color shall be either green or gray.

Provide Grade "A" Concrete Masonry according to standard spec 501 to set 6-inch diameter x 8-foot treated wood gate posts.

Provide zinc-coated bolts, nuts and washers that are according to ASTM Designation A325.

C Construction
All field welded surfaces shall have all paint removed and be properly cleaned prior to welding. After welding is complete, surface shall be primed with premixed rustproof paint followed by two field coats of enamel paint.

D Measurement
The department will measure Access Gate 6-Foot as each individual unit, acceptably installed and 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.0060.003	Access Gate 6-Foot	Each

Payment is full compensation for furnishing and installing all materials including the gate, welding, hardware, latch chain, gate posts, concrete masonry. The department will supply the keyed lock.

57. Removing Billboards, Item SPV.0060.004.

A Description
This special provision describes removing existing billboards and supports in accordance with the applicable sections of standard spec 638 and as hereinafter provided.

B (Vacant)

C Construction
Remove the complete billboard unit including signs, supports, footings, ladders, walkways, electrical systems and all appurtenances from the locations designated on the plans. Excavate to remove the footings and provide adequate backfill and compaction of the removal area to eliminate settling. Restore the surface around the location to the same

condition as surrounding area and as directed by the engineer. Billboards with multiple supports and signs at the same location, but not necessarily connected, will be considered one complete unit.

Coordinate with electric utility owner for disconnection of the power service prior to removal of the billboard and billboard supports, if applicable.

D Measurement
The department will measure Removing Billboards as each individual complete billboard unit removed, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.004	Removing Billboards	Each

Payment is full compensation for removing the signs, supports, footings, ladders, walkways, electrical systems and all appurtenances associated with the billboard; for removal from the project site; for backfilling any necessary areas; coordination with utilities and following utility and OSHA removal requirements; and all incidental items necessary to complete the work. Removed items are property of the contractor.

58. Traffic Control Barricades Type III with Sign, Permanent, Item SPV.0060.103.

A Description
This special provision describes work performed according to standard spec 643, except as herein after modified. The barricades, base supports, signs, and tires shall become the department's property at the completion of the project.

B Materials
Furnish new signs as shown in the plan and conforming to standard spec 643.

Deliver barricades to the location provided below including the base supports, and signs. The barricades shall be 8 feet long and a minimum of 5 feet tall. The horizontal pieces on the barricades shall be constructed with corrugated plastic. The upright pieces and base supports on the barricades shall be constructed using hot rolled high carbon steel. The base support dimensions shall be 5 feet long and be constructed with a square tube receiver that is of adequate size to fit the upright pieces. The upright pieces and base supports are to be painted.

The tires shall be sidewalls cut from existing tires. The sidewalls shall weigh a minimum of 20 pounds per each sidewall. Tires shall have a minimum inside diameter of 12 inches and a maximum outside diameter of 36 inches.

C Construction
Attach each sign prior to delivery to the project as shown in the plan and according to standard spec 643. Provide half of the barricades with the rail stripes and signs set up for barricades placed on the left side of the roadway and provide the remaining half of the barricades with the rail stripes and signs set up for the barricades placed on the right side of the roadway.

Deliver all items pre-assembled to the Rock County Storage Shed located at 3715 Newville Road, Janesville, WI 53545. Notify Neil Pierce at (608) 295-2614 at least one week prior to delivery of the material. Deliver base supports and tires at the same time the pre-assembled barricades are delivered.

D Measurement
The department will measure Traffic Control Barricades Type III with Sign, Permanent in units for each barricade, acceptably delivered. Each barricade consists of the barricade with uprights, two base supports, one sign, and four tire sidewalls.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.103	Traffic Control Barricades Type III with Sign, Permanent	Each

Payment is full compensation for furnishing and delivering to the specified location; the barricades, base supports, signs, and tires.

59. Fiber Tracer Marker Post, Item SPV.0060.401.

A Description
This special provision describes furnishing and installing a fiber tracer marker post.

B Materials
Furnish fiber tracer marker post constructed from high-impact polycarbonate, with stainless steel hardware, five standard terminals, terminal enclosure for cathodic protection, an anchor bar, white and orange in color, fade resistant, ultraviolet stable, a minimum of 62 inches long, 3.5 inch outside diameter, vandalism resistant, and labeled with WARNING FIBER OPTIC CABLE BELOW on the top of the marker molded into the marker and not separately surface applied.

Furnish conduit rigid non-metallic 1-inch for connection into the communications vault.

C Construction
Provide installation at locations shown on the plans and as directed by the engineer. Install so that marker cannot be pulled out or removed manually.

Install conduit rigid non-metallic 1-inch into the communications vault. Connect locate wire to fiber tracer maker post terminal. Follow all manufacturer's recommended installation procedures.

D Measurement
The department will measure Fiber Tracer Marker Post as each individual fiber tracer marker post, 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.0060.401	Fiber Tracer Marker Post	Each

Payment is full compensation furnishing and installing the fiber tracer marker posts.

60. Install Cellular Modem, Item SPV.0060.402.

A Description
This special provision describes installing a cellular modem assembly salvaged from the project.

B Materials
The cellular modem assembly will be salvaged from the project.

Provide all necessary cables and connectors between the cellular modem assembly and other communication devices.

C Construction
Install the cellular modem assembly as indicated on the plans. Make connections between the cellular modem and antenna as well as other communication devices. The contractor shall mount the antenna in a way that maximizes signal strength.

D Measurement
The department will measure Install Cellular Modem as each individual cellular modem, 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.0060.402	Install Cellular Modem	Each

Payment is full compensation for installation of the cellular modem assembly, furnishing and installing all necessary hardware, making all necessary connections, testing the cellular modem, and making the cellular modem fully operational.

61. Remove Poles Wood, Item SPV.0060.403.

A Description

This special provision describes removing an existing wood pole and all attached equipment (that is not being salvaged or relocated by the project).

B Materials

Provide all tools and equipment necessary to remove the existing wood pole and all attached equipment (that is not being salvaged or relocated by the project).

C Construction

Carefully remove the existing wood pole and all attached equipment (that is not being salvaged or relocated by the project) at the location indicated on the plans.

Dispose of removed materials off of department right-of-way.

D Measurement

The department will measure Remove Poles Wood as each individual wood pole, 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.0060.403	Remove Poles Wood	Each

Payment is full compensation for removing the wood pole and all attached equipment (that is not being salvaged or relocated by the project).

62. Remove Electrical Service Meter Breaker Pedestal, Item SPV.0060.404.

A Description

This special provision describes removing an existing electrical service meter breaker pedestal.

B Materials

Provide all tools and equipment necessary to remove the existing electrical service meter breaker pedestal.

C Construction

Prior to removing the electrical service meter breaker pedestal, contact Kyle Hemp of the WisDOT SW Region at (608) 246-5367 to arrange for disconnection of the electrical service.

Carefully remove the existing electrical service meter breaker pedestal.

Dispose of removed materials off of department right-of-way.

D Measurement
The department will measure Remove Electrical Service Meter Breaker Pedestal as each individual electrical service meter breaker pedestal, 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.0060.404	Remove Electrical Service Meter Breaker Pedestal	Each

Payment is full compensation for removing the electrical service meter breaker pedestal.

63. Grouted Bar Couplers, Item SPV.0060.701.

A Description
Furnish and install grouted bar couplers at the interface of the cast-in-place concrete pier footings and the precast concrete pier columns and at the interface of the precast concrete pier columns to the precast concrete pier caps.

B Materials
B.1 Submittals
Submit an independent test report confirming the compliance of the coupler, for each supplied coupler size, with the following requirements:

- Develop 100 percent of the specified ultimate tensile strength (Fu) of the attached Grade 60 reinforcing bar. This equates to 90 ksi bar stress for an ASTM A-615 bar.

- The amount of time to achieve a minimum of 100 percent of the specified yield strength of the attached reinforcing bars which corresponds to the expected ambient temperature at installation. This value shall be used to develop the assembly plan timing. This data shall be the result of lab testing as performed by an approved testing laboratory.

Submit the specification requirements for the grout including required strength gain to develop the specified minimum yield strength of the connected reinforcing bar.

B.2 Material Requirements
Use grouted splice couplers to join cast-in-place concrete pier footings to precast concrete pier columns and precast concrete pier columns to the precast concrete pier caps as shown on the plans.

Provide couplers that use cementitious grout placed inside a steel casting.

Threaded connections may be used for the portions of the coupler that are placed within the precast element if the strength of the coupler meets or exceeds the requirements of this specification.

The following grouted bar couplers are acceptable for use provided that the requirements of this specification are met.

NMB Splice Sleeve
Splice Sleeve North America, Inc.
192 Technology Drive, Suite J,
Irvine, California 92618-2409

Dayton Superior Sleeve-Lock Grout Sleeve
Dayton Superior
Corporate Headquarters
7777 Washington Village Dr., Ste. 130
Dayton, OH 45459

Erico Lenton Interlok
ERICO United States
34600 Solon Road
Solon, Ohio 44139

Use grouted bar couplers that are epoxy coated and can join epoxy coated reinforcing steel without removal of the epoxy coating on the spliced bar. Any exposed areas of reinforcing steel bars or grouted bar coupler sleeves where the epoxy coating has been damaged shall be touched up per the manufacturer requirements and according to standard spec 505.

Use grouted bar couplers that can provide 100 percent of the specified minimum tensile strength of the connecting Grade 60 reinforcing bar. This equates to 90 ksi for reinforcing conforming to ASTM A-615.

Supply grout for the inside of the couplers from the coupler manufacturer. The grout must match the certified test report for the coupler. Do not substitute any other grout in the couplers unless additional certified test reports are submitted for the grout/coupler system.

C Construction

C.1 Quality Assurance

The performance of grouted splice couplers is related to the embedment length of the bars and the compressive strength of the grout. The following requirements for grouted splice couplers shall be met:

- The length of rebar anchor dowel must meet the minimum embedment specified in the manufacturer's manual.

- The reinforcing extensions between the precast elements must be within the manufacturers recommended tolerances.

- Grout mixing, water to grout ratio, mixing time, and shelf life of the grout must conform with the manufacturers written instructions.

- All sleeves must be completely filled with grout.

- Make four sets of three - 2 inch grout cubes utilizing heavy brass molds with cover plates for testing according to AASHTO T 106. Cure the specimens according to AASHTO T 106. Test one set of cubes for compressive strength at a minimum of 24 hours (or to determine when to release bracing) and 28-days. Store extra sets for longer term testing, if necessary. Tests shall be according to ASTM C-109 and C-942.

- Protect all sleeves from any vibration, shock, or other excessive movement until temporary bracing is removed.

- The temperature of the sleeve at the time of grouting and during curing must exceed 50°F.

C.2 General Procedure for Making Connection using Grouted Bar Couplers

Use personnel that are familiar with installation and grouting of splice couplers that have completed at least two successful projects in the last two years. Provide documentation proving these requirements have been met. Training of new personnel within three months of installation by a manufacturer's technical representative is an acceptable substitution for this experience.

Remove and clean all debris from the joints prior to application of non-shrink grout.

Keep bonding surfaces free from laitance, dirt, dust, paint, grease, oil, or any contaminants other than water.

All joint surfaces must be Saturate Surface Dry (SSD) prior to connecting the precast elements.

Use heaters to maintain a minimum temperature of 50°F for the grouted bar couplers. Monitor the temperature of the covered sleeves until the temporary bracing is removed.

Follow the recommendations of the manufacturer for the installation and grouting of the couplers. The general procedures are as follows:

1. Determine the thickness of shims to provide the specified elevation within tolerance.

2. Prepare, mix and apply the non-shrink grout according to the supplier's recommendations.

3. Place non-shrink grout on the interface between the cast-in-place concrete pier footings and the precast concrete pier columns and at the interface of the precast concrete pier columns to the precast concrete pier caps. Crown the thickness of the grout toward the center of the joint so that the grout can be displaced outward as the precast element is lowered onto the joint. Take precautions to prevent the non-shrink grout from entering the coupler above (e.g. grout dams or seals).

4. Set the precast element in place. Engage all couplers in the joint. Allow the non-shrink grout to seep out of the joint.

5. Trowel off excess non-shrink grout to form a neat joint once the precast element is set, plumbed, and aligned. Pack grout into any voids around the joint perimeter.

6. Flush out the coupler with clean potable water.

7. Mix the coupler grout according to the manufacturer's recommendations for methods and proportions of mix and water.

8. Make four sets of three 2-inch cube specimens for testing, as described in section C.1

9. A minimum temperature of 50°F must be maintained in the grouted bar coupler during placing and curing until the full compressive strength of the grout is achieved, per the manufacturer requirements.

10. Pump the coupler grout into the coupler that is cast into the precast element. Start from the lower port. Pump until the grout is flowing freely from the upper port.

11. Cap the upper port first and then remove the nozzle to cap the lower port. Proceed to the next coupler in a defined sequence.

12. Cure the joint according to the non-shrink grout manufacturer's recommendations.

D Measurement

The department will measure Grouted Bar Couplers 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.0060.701	Grouted Bar Couplers	Each

Payment for Grouted Bar Couplers is full compensation for furnishing and installing grouted bar couplers and supplying all materials including grout; and for making and testing grout cube specimens.

64. Concrete Barrier Temporary Precast Left In Place, Item SPV.0090.200.

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 according to the pertinent provisions of standard spec 603, these special provisions, and as hereinafter provided.

Concrete Barrier Temporary Precast Contractor Left In Place becomes property of the department after final acceptance by the engineer. Anchor pins, when used, become property of the department.

Concrete barrier shall be new at initial delivery. Ownership identification shall include the department (DOT).

B Materials

New materials shall be furnished.

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.0090.200	Concrete Barrier Temporary Precast Left In Place	LF

Payment is full compensation for leaving Concrete Barrier Temporary Precast on the project site.

Furnishing concrete barrier temporary, initial delivery, installation, reinstallation, trucking between worksites, transitions between temporary and permanent barriers, and anchoring will be paid for separately under the bid items provided for in the contract.

65. Traffic Control Gawk Screen Furnished, Item SPV.0090.202; Traffic Control Gawk Screen Installed, Item SPV.0090.203.

A Description

This special provision describes furnishing and installing traffic control gawk screen on concrete barrier as a traffic control device and removal upon completion of the project.

B Materials

Furnish rectangular shaped screen for temporary mounting on top of concrete barrier.

Furnish a polymer, polyethylene, or UV protected thermoplastic, or similar lightweight product that will not shatter when impacted and is proven crashworthy.

Submit shop drawings a minimum of two weeks prior to the proposed use of Traffic Control Gawk Screen.

Requirements:

1. 24-inches in height.
2. The same length as the concrete barrier on which it will be mounted, without splicing, except account for longitudinal overhang between the concrete barrier as shown in the plans.
3. Mounted with two poles, at the spacing shown in the plan, attached to the mounting plate with the mounting plate drilled into the top of the concrete barrier.
4. Secured with a chain and pin, or other approved method, to the mounting pole.
5. Capable of being securely connected to the adjacent screen section using polyethylene brackets, or similar approved fasteners, made of non-metallic materials.
6. Capable of expanding without buckling.
7. Capable of contracting without creating gaps in the screening and while remaining securely fastened to the adjacent screen.
8. Gray in color and opaque.
9. Has finished faces on both sides of the screen.
10. Capable of remaining in place from traffic gusts, wind gusts, and other outdoor elements that may move or displace the screen.

Furnish and install mounting pipe and hardware according to manufacturer's / suppliers directions.

Installations and removals of the gawk screen to/from its supports on the jobsite shall not require any tools.

C Construction

Furnish and deliver traffic control screen to worksites within the project. Install the screen according to manufacturer's recommendations at contract-identified locations or as the engineer directs. Fasten screen sections together.

Provide surveillance and maintenance as specified in standard spec 643.3.2. Repair or replace any portion of the screen that is damaged as directed by the engineer at no additional cost. Replace any screen standard specs that buckle, deform, shrink, or have any other material or installation failure, as determined by the engineer, at no additional cost.

Remove screen when no longer needed at the installation site, during winter when directed by the engineer, and upon project completion. In permanent concrete barrier, concrete parapet, and department owned temporary concrete barrier, remove mounting hardware to below the concrete surface. Encapsulate all exposed metal and fill all holes left by anchorage methods with an epoxy from the department's approved products list. Fill holes as the screen is removed.

D Measurement

The department will measure Traffic Control Gawk Screen Furnished by the linear foot, acceptably delivered to the project site.

The department will measure Traffic Control Gawk Screen Installed by the linear foot, acceptably completed, along the base of the screen for each contract-identified or engineer-directed initial installation. The department will also measure subsequent contract-identified or engineer-directed reinstallations. The department will not measure installations made solely to accommodate the contractor's means and methods or to accommodate winter shutdowns or winter work not in the plans. Moving the screen from one barrier to another, removing and reinstalling the screen on the same barrier, or moving to storage and then moving to a barrier are included in the initial installation and will not be measured separately for payment.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.202	Traffic Control Gawk Screen Furnished	LF
SPV.0090.203	Traffic Control Gawk Screen Installed	LF

Payment for Traffic Control Gawk Screen Delivered is full compensation for furnishing traffic control screen, mounting posts, and mounting and fastening hardware; initial delivery; and storage until installation.

Payment for Traffic Control Gawk Screen Installed is full compensation for each installation; moving/trucking to another worksite within the project, unloading, and reinstalling; screen surveillance, maintenance, repair, and replacement; removing; disposal; and concrete barrier repair due to screen installation and after screen removal.

66. Precast Pier Columns, Item SPV.0090.701; Precast Pier Caps, Item SPV.0090.702.

A Description

This special provision describes the manufacture, transportation, storage, installation and bracing as required for precast pier columns and precast pier caps according to this special provision in conformity with the lines, grades, design, and dimensions shown on the plans.

Precast materials shall meet the specifications of the PCI Manual for Quality Control for Plants and Production of Precast Prestressed Concrete Products, MNL-116.

The work governed by this specification shall also include the furnishing and installation of any appurtenant items necessary for transportation, handling, storage and erection.

Conform to standard spec 501, 502 and 503 as further modified in this special provision.

If the substructure elements are to be cast in a commercial precast plant, the plant shall be on the WisDOT approved list of Precast Concrete Certified Producers.

Alternately, the bridge contractor may elect to precast the substructure elements in their yard or at the project site. If this option is used, inspection by the project staff shall be required, and concrete shall be required to meet all QMP requirements in the standard specifications.

B Materials

The contractor shall make all arrangements to fabricate, supply, and install the precast pier columns and precast pier caps including all necessary incidentals for construction of the proposed superstructure.

B.1 Concrete

The contractor/supplier shall submit a concrete mix design, according to standard spec 503.2.2, to the engineer for approval. Obtain approval from the engineer for the mix design prior to starting production of the elements. The contractor/supplier shall allow for a 14-day review period by the engineer after the submittal of the concrete mix design.

Concrete for the precast pier columns and precast pier caps shall conform to standard spec 501, in addition to the following requirements for the concrete:

- 3,500 psi, minimum final design strength at 28 days, and before shipping.
- 3/4-inch maximum aggregate size.
- 6%-8% air entrainment.
- 0.40 maximum w/c ratio.

Ensure concrete attains the required strengths above per standard spec 503.2.2.

B.2 Mild Reinforcing Steel

Furnish mild bar reinforcing steel complying to standard spec 505.

B.3 Non-Shrink Grout

Use structural, gray, non-shrink grout for joints between pier footing and pier column, pier column and pier cap and for joints between pier cap units (if applicable), as shown on the plans. Non-shrink grout shall be quick-setting, rapid strength gain, high-bond strength grout. Grout shall not contain calcium chloride or admixture containing calcium chloride or other ingredient in sufficient quantity to cause corrosion to steel reinforcement. Grout shall be nonmetallic. Mix grout just prior to use according to the manufacturer's instructions. Use grout supplied by the coupler manufacturer or a product from WisDOT's approved product list.

Follow manufacturer's recommendation for dosage of corrosion inhibitor admixture.

Use structural non-shrink grout that meets a minimum compressive strength of 4,000 psi within 24 hours when tested as specified in AASHTO T 106. Meet all the requirements of AASHTO T160 with the exception that the contractor-supplied cube molds shall remain intact with a top firmly attached throughout the curing period. Use structural non-shrink grout with no expansion after seven days. Refer to Table 1 for structural non-shrink grout requirements.

Table 1 - Structural Non-Shrink Grout Requirements

***Property:**	**Requirement (ASTM / AASHTO)**
Accelerated Weathering:	As Specified in ASTM or AASHTO (C666 / T260)
Compressive Strength:	>5,000 psi @ 28 days (T106)
Accepted Bond Strengths:	>1,000 psi @ 24 Hours (C882)
Test Medium:	<3% Sodium Chloride (T161)
Accepted Weight Loss:	<15% @ 300 Cycles (T161)
Length Change:	No expansion after 7 days (T160)

B.4 Pier Column and Pier Cap Manufacturing

Fabricate precast pier columns and pier caps to the following tolerances:
Length = ±1/2 inch
Width = ±1/4 inch
Depth = ±1/4 inch
Cover = +1/4, -0 inch
Sweep = ±1/4 inch
Variation from specified plan end squareness or skew = ± 1/4 inch

B.5 Grouted Bar Couplers

Provide grouted bar couplers used to provide a moment connection to the cast-in-place concrete footings and at the interface of the precast concrete pier columns to the precast concrete pier caps according to the bid item "Grouted Bar Couplers, Item SPV.0060.701".

C Construction

C.1 Sequence of Work

Develop the detailed sequence of work tasks to be performed and submit them with the shop drawings. The engineer shall obtain the work plan and all project-related approvals before the existing bridge can be removed (if applicable).

C.2 Lifting Anchors

The precast fabricator shall submit lifting locations and lifting anchor details for approval by the engineer prior to use. The top of the lifting anchors shall be recessed 1/2" minimum from the surface of the precast element. The lifting anchors shall be hot-dipped galvanized. Lifting anchors cast into the precast elements shall be used for lifting and moving the precast elements at the fabrication plant and in the field. The angle between the top surface of the precast elements and the lifting line shall not be less than 60 degrees, when measured from the top surface of the precast elements to the lifting line. Damage caused to any precast elements shall be repaired at the expense of the contractor to the satisfaction of the engineer.

C.3 Handling, Storage, and Shipping

The contractor may provide additional reinforcement to ensure crack-free pier column and pier cap installation, which is incidental to the cost of the precast pier columns and precast pier caps. It is the responsibility of the contractor to handle, store, ship, and erect the pier columns and pier caps in a crack-free manner. “Crack-free” is defined as not having more than one crack every 25 square feet, the width of which does not exceed 0.008”.

All precast elements shall be removed from the forms in such a manner that no damage occurs to the element. Any materials forming blockouts in the precast elements shall be removed such that damage does not occur to the precast elements or the blockout.

All storage of precast pier columns and precast pier caps, either before shipment to the bridge site or at the bridge site, shall be such that they are supported in a manner that will minimize deflection but also in a manner that will not induce forces that cause cracking. During storage for long periods of time (longer than one month), all precast elements shall be checked at least once per month to ensure creep-induced deformation does not occur.

The engineer will inspect the finished columns and cap for cracking and evaluate the severity of the cracks prior to on-site placement. Repair cracks as directed by the engineer. Crack repair is at the expense of the contractor. This inspection is independent of the inspections required by standard spec 502 and 503.

C.4 Shop Drawings

Submit detailed shop drawings, which include, but are not limited to:

1. Complete description of the details covering each of the precast pier columns and precast pier caps units. This shall include:

- Complete geometric layouts for each precast segment, including mild reinforcement layout.
- Step by step erection procedure of precast pier columns and precast pier caps, including method and timing of column and cap bracing and temporary support.
- Detailed methods for column and cap handling and transporting to/at the site.
- Detailed locations and methods of installation of the grouted bar couplers used to provide a moment connection to the cast-in-place concrete footings and at the interface of the precast concrete pier columns to the precast concrete pier caps.
- Detailed methods of forming for grout filling on site.
- Safety procedures to be followed.

2. Calculations for supplemental reinforcement for handling, erection, and operation. The contractor may request to modify the precast section or unit size, pier cap grouted bar coupler details, or joint details from that listed in the plans. However, the contractor must submit shop drawings accurately portraying these revisions for approval, complying with the below requirements:

- All modifications must take into account revisions to handling, storage, shipping, and erection stresses, and consequently possible revisions in the mild steel reinforcement.
- The materials, devices, systems, and operations shall comply with all conditions in this special provision and the design criteria as indicated on the plans.
- If the design does not comply with the above requirements, calculations and correspondence prepared by a registered Professional Engineer in the State of Wisconsin shall be submitted to the engineer for approval justifying the areas of non-compliance.
- The modification shall result in no net increase in cost to the Owner, or result in an extension of the construction schedule.

Submit all information sufficiently in advance of the start of construction to allow the engineer an average 45-calendar day review period, but not less than a 30-calendar day review period. The review period shall begin on the day of receipt of the submittal in the office of the engineer. All submittals not approved and requiring resubmittal shall be subject to the above review time periods, with the review time beginning anew for each such submittal. Coordinate all submittals between various subordinates (contractors, suppliers, and engineers) to allow for a reasonable distribution of the review effort required by the engineer at any given time. Receive final approval before any fabrication begins. Furnish all shop drawings as per all applicable requirements of standard spec 506.3.2. Supply manufacturer's literature where applicable. All shop drawings are to accurately detail the actual methods, materials, equipment, etc., that the contractor will be using in the field on the project. Do not deviate unless approved by the engineer.

C.5 Grouted Bar Couplers

Filling

Complete the installation of the grouted bar couplers according to the bid item "Grouted Bar Couplers, Item SPV.0060.701" of these special provisions.

Create matching templates for precisely locating/orientating the bar couplers and provide them to the contractor for aligning/orientating reinforcing bars in the cast-in-place concrete footings.

C.6 Erection

Erect the precast pier columns and pier caps to the following tolerances:

- Erection tolerance on elevation = ±1/4 inch
- Erection tolerance on beam seat elevation = ±1/8 inch (May be set high and ground to specified elevation)

D Measurement

The department will not measure Precast Pier Columns and Precast Pier Caps. The department will use pay plan quantity according to standard spec 109.1.1.2.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.701	Precast Pier Columns	LF
SPV.0090.702	Precast Pier Caps	LF

Payment is full compensation for furnishing all labor, materials, and equipment required to detail, fabricate, construct and erect the proposed precast pier columns and precast pier caps. Payment also includes shop drawings and any supplemental or alternate calculations, handling, shipping and placing; and reinforcing steel. All materials and work shall meet the requirements detailed in the contract plans and in this special provision.

67. Fence Chain Link Polymer-Coated 6-Ft., Item SPV.0090.703.

A Description

This special provision describes furnishing and installing a new polymer-coated fence system on structures according to the pertinent plan details, as directed by the engineer and as hereinafter provided. The color of all components in this fence system shall be the same and shall be as specified on the plans.

B Materials

All materials for this fence system shall be new stock, free from defects impairing strength, durability, and appearance. Fabric shall be produced by methods recognized as good commercial practice. Wire used in the manufacture of the fabric shall be capable of being woven into fabric without the polymer-coating cracking or peeling. Pipes used in framework shall be straight, true to section and free of defects. All burrs at the ends of pipes shall be removed before galvanizing. The polymer-coating shall be a dense impervious covering, applied without voids, tears or cuts that reveal the substrate. Excessive roughness, bubbles, blisters and flaking in the polymer-coating will be a basis for rejection.

B.1 Fabric

Provide steel chain link fence fabric that conforms to the requirements of ASTM F668, Class 2b, a polymer-coating fused and adhered to wire that is zinc-coated. Provide fabric woven from 9-gage wire using plan specified mesh size, diamond pattern, with both the top and bottom selvages knuckled. The minimum breaking strength of the wire shall be 1290 lbs. The color of polymer-coating shall conform to the requirements of ASTM F934.

B.2 Framework

Provide steel rails, posts and post sleeves conforming to the requirements of ASTM F1083, Standard Weight Pipe (Schedule 40) of the size (O.D.) and weight as shown on the plans. The minimum yield strength shall be 30,000 psi and the minimum tensile strength shall be 48,000 psi. These components shall be zinc-coated inside and outside by the hot-dip process as stated in ASTM F1083. Provide polymer-coating over zinc-coating that conforms to ASTM F1043. The color of polymer-coating shall conform to the requirements of ASTM F934, and match the color of the other fence components. Weld base plate to posts or post sleeves and complete any additional welding of components before galvanizing.

B.3 Fittings

Provide end post caps, line post caps, top rail sleeves, rail ends, line rail clamps, brace bands, tension bands, tension bars, and tie wires that are steel and conform to the requirements of ASTM F626. Tie wires shall be round and 9-gage wire. These components (excluding tie wires) shall be zinc-coated by the hot-dip process as stated in ASTM F626. Provide polymer-coating over zinc-coating on components (excluding tie wires) that conforms to the requirements of ASTM F626. For tie wires, provide polymer-coating on wire that is zinc-coated using the same procedure as used for the wires in the fence fabric. End post caps and line post caps shall fit tightly over posts to prevent moisture intrusion. Supply dome style caps for end posts and loop type caps for line posts. The color of polymer-coating shall conform to the requirements of ASTM F934, and match the color of the other fence components.

B.4 Bolts

All bolts are to be supplied with lock washers and nuts. Use galvanized steel bolts, nuts and washers per plan details.

B.5 Tests

B.5.1 Fabric and Tie Wire

Breaking Strength:	ASTM A370
Zinc-Coating Requirements	
Weight of Zinc-Coating:	ASTM A90
Polymer-Coating Requirements	
Thickness of Polymer-Coating:	ASTM F668
Adhesion:	ASTM F668
Accelerated Aging Test:	ASTM F668, D1499
Mandrel Bend Test:	ASTM F668

B.5.2 Framework

Tensile and Yield Strength:	ASTM E8
Zinc-Coating Requirements	
Weight of Zinc-Coating:	ASTM A90
Polymer-Coating Requirements	
Thickness of Polymer-Coating:	ASTM E376
Adhesion:	ASTM F1043
Accelerated Aging Test:	ASTM F1043, D1499

B.5.3 Fittings

Zinc-Coating Requirements		
Weight of Zinc-Coating:	ASTM A90	
Polymer-Coating Requirements		
Thickness of Polymer-Coating:	ASTM F626	
Adhesion:	ASTM F1043	(same test as for framework)
Accelerated Aging Test:	ASTM F1043, D1499	(same test as for framework)

B.6 Submittals

In addition to the engineer, send submittals listed in this section to the name below for informational purposes:

David Nelson
WisDOT (Bureau of Structures)
4802 Sheboygan Ave. (Room 601)
PO Box 7916
Madison, WI 53707

B.6.1 Shop Drawings

Submit shop drawings showing the details of fence construction. Show the fence height, post spacing, rail location, and all dimensions necessary for the construction of the chain link fence. Label the end posts, line posts, rails, post sleeves, top rail sleeves, bolts and fittings. State the polymer-coating type used on the fabric, framework and fittings and the Class of coating used on the fabric. State the color of polymer-coating to be used on the fence components. For the fabric, state the wire gage, mesh size, and type of selvages used. For the framework, state the size (O.D.) and unit weight for the posts and rails. For the fittings, state the size for top rail sleeves, brace bands, tension bands, tension bars, line rail

clamps, size and type of bolts, and the tie wire gage. State the material type used for fabric, framework, and fittings. Also give the breaking strength for the fabric wire and the tensile and yield strength properties for the framework.

B.6.2 Specification Compliance
Submit certification of compliance with material specifications. Provide material certification and test documentation for fabric, framework, fittings and hardware that shows that all materials meet or exceed the specifications of this contract and the tests in B5. This document shall provide the name, address and phone number of the manufacturer, and the name of a contact person.

C Construction

C.1 Delivery, Storage and Handling

Deliver material to the site in an undamaged condition. Upon receipt at the job site, all materials shall be thoroughly inspected to ensure that no damage occurred during shipping or handling and condition of materials is in conformance with these specifications. If polymer-coating is damaged, contractor shall repair or replace components as necessary to the approval of the engineer at no additional cost to the Owner. Carefully store material off the ground to ensure proper ventilation and drainage and to provide protection against damage caused by ground moisture. Handle all polymer-coated material with care.

C.2 Touch-up and Repair

For minor damage caused by shipping, handling or installation to polymer-coated surfaces, touch-up the finish in conformance with the manufacturer's recommendations. Provide touch-up coating such that repairs are not visible from a distance of 6-feet. If damage is beyond repair, the fencing component shall be replaced at no additional cost to the Owner. The contractor shall provide the engineer with a copy of the manufacturer's recommended repair procedure and materials before repairing damaged coatings.

C.3 General

Install the chain link fence according to ASTM F567 and the manufacturer's instructions. The contractor shall provide staff that is thoroughly familiar with the type of construction involved and materials and techniques specified. Chain link fabric shall be installed on the side of the posts indicated on the plans. Fabric shall be attached to the end posts with tension bars and tension bands. It shall be attached to rails, and posts without tension bands, with tie wires. The fabric shall be installed and pulled taut to provide a smooth and uniform appearance free from sag, without permanently distorting the fabric diamond or reducing the fabric height. Install top rail to pass through line post caps and form a continuous brace between end posts. Minimum length of top rail between splices shall be 20-feet. Splice top rail at joints with sleeves for a rigid connection. Locate splices near ¼ point of post spacing. Heads of bolts shall be on the side of the fence adjacent to pedestrian traffic.

D Measurement

The department will measure Fence Chain Link Polymer-Coated 6-Ft. 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.0090.703	Fence Chain Link Polymer-Coated 6-Ft.	LF

Payment is full compensation for fabricating, galvanizing and polymer-coating all fence components, and transporting to jobsite; and for erecting components to create a polymer-coated fence system, including any touch-up and repairs.

68. Concrete Pavement Joint Layout, Item SPV.0105.001.

A Description

This special provision describes designing the joint layout and staking the location of all joints on the project, including mainline, ramps and intersections to accommodate the concrete paving operation.

B (Vacant)

C Construction

Design the joint layout and stake the location of all joints on the project, including mainline, ramps and intersections (traditional and roundabouts), to accommodate the concrete paving operation. Plan and set all points necessary to establish the horizontal position of the transverse and longitudinal joints in the concrete pavement according to the plans, the American Concrete Pavement Association Intersection Joint Layout Guidelines, and as directed by the engineer. Establish the joint layout in a manner to best-fit field conditions, construction staging, the plan, and as directed by the engineer.

D Measurement

The department will measure Concrete Pavement Joint Layout, completed according to the contract and accepted, as a single complete lump sum unit of work.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.001	Concrete Pavement Joint Layout	LS

Payment is full compensation for designing the joint layout on the mainline, ramps and all traditional and roundabout intersections; for completing all surveying work necessary to locate all transverse and longitudinal joints; and for making adjustments to match field conditions and construction staging.

69. Survey Project 1007-10-73, Item SPV.0105.002; Survey Project 1007-10-79, Item SPV.0105.004.

A Description

Standard spec 105.6 and standard spec 650 are modified to define the requirements for construction staking for this contract.

Add the following to standard spec 105.6.1:

Horizontal and vertical control points, provided by the department, are generally at 1-mile intervals for horizontal control and at ½-mile intervals for vertical control. Control points will be provided in a hard copy and ASCII electronic format.

Replace standard spec 105.6.2 with the following:

The department will not perform any construction staking for this contract. The contractor shall perform all survey required to layout 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, supplemental control, slope stakes, ponds, ITS, FTMS, ramp gates, parking lots, utilities, landscaping elements, irrigation system layout, installation of community sensitive design elements, traffic control items, fencing, etc.

The department may choose to perform quality assurance survey during construction. This quality assurance survey does not relieve the contractor of the responsibility for furnishing all survey work required under this contract.

Delete standard spec 650.1.

B (Vacant)

C Construction

Survey required under this item shall be according to all pertinent requirements of standard spec 650 and shall include all other miscellaneous survey required to layout and construct all work under this contract.

D Measurement

The department will measure Survey Project (ID) 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.0105.002	Survey Project 1007-10-73	LS
SPV.0105.004	Survey Project 1007-10-79	LS

Payment is full compensation for performing all survey work required to layout and construct all work under this contract.

70. Relocate Solar-Powered Bluetooth Sensor, Item SPV.0105.401.

A Description

This special provision describes relocating an existing solar-powered Bluetooth sensor as indicated on the plans.

B Materials

Provide all tools and equipment necessary to relocate the existing solar-powered Bluetooth sensor.

Provide all tools and equipment necessary to convert the existing solar-powered Bluetooth sensor to a hardwired Bluetooth sensor.

C Construction

Prior to relocating, the Field System Integrator must determine if the solar-powered Bluetooth sensor is fully functional. If any part of the solar-powered Bluetooth sensor is found to not meet original manufacturer's specifications, contact Kyle Hemp of the WisDOT SW Region at (608) 246-5367.

Carefully relocate the existing solar-powered Bluetooth sensor as indicated on the plans. Relocate all mounting hardware and cables/wires associated with the solar-powered Bluetooth sensor. Remount the antenna to maximize signal strength. Convert the solar-powered Bluetooth sensor to a hardwired Bluetooth Sensor.

Relocate and make operational the Bluetooth sensor within seven days.

Deliver ITS equipment that will not be reinstalled to Dale Roth at the WisDOT SW Region, 2101 Wright Street, Madison, WI 53704 at a mutually agreed upon time during normal state office hours. Contact Dale Roth at (608) 516-6435 to coordinate delivery of equipment.

Storage of materials during the relocation or delivery process is the responsibility of the contractor and is incidental to this item.

Any materials which are damaged during the relocation or delivery process will be repaired or replaced at the expense of the contractor.

D Measurement
The department will measure Relocate Solar-Powered Bluetooth Sensor, completed according to the contract and accepted, as a single complete lump sum unit of work.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.401	Relocate Solar-Powered Bluetooth Sensor	LS

Payment is full compensation for relocating the solar-powered Bluetooth sensor and wood pole.

71. Relocate Ramp Closure Gate (G-13-08), Item SPV.0105.402; (G-13-09), Item SPV.0105.403.

A Description
This special provision describes relocating a ramp closure gate and all associated equipment as indicated on the plans.

B Materials
Provide all tools and equipment necessary to relocate the ramp closure gate and all associated equipment. Associated equipment includes all existing items at the ramp closure gate site, including but not limited to, poles type 5, gate arm, power supply cabinet, transformer bases, mounting hardware, gate flashers, and cables/wires.

C Construction
Prior to relocating, WisDOT Southwest Region Traffic must determine if the ramp closure gate is fully functional. If any part of the ramp closure gate is found to not meet original manufacturer's specifications, contact WisDOT Southwest Region Traffic at (608) 246-5360.

Carefully relocate the existing ramp closure gate and associated equipment as indicated on the plans. Furnish and install ground rods, wiring, and other components per National Electric Code.

Relocate and make operational the ramp closure gate within seven days.

Storage of relocated materials during the relocation process is the responsibility of the contractor and is incidental to this item.

Any relocation materials which are damaged during the relocation process will be repaired or replaced at the expense of the contractor.

D Measurement
The department will measure Relocate Ramp Closure Gate, completed according to the contract and accepted, as a single complete lump sum unit of work.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.402	Relocate Ramp Closure Gate (G-13-08)	LS
SPV.0105.403	Relocate Ramp Closure Gate (G-13-09)	LS

Payment is full compensation for relocating the ramp closure gate and associated equipment.

72. Salvage Roadside DMS, Item SPV.0105.404.

A Description
This special provision describes salvaging a roadside DMS and all associated equipment as indicated on the plans.

B Materials
Provide all tools and equipment necessary to salvage the roadside DMS and all associated equipment. Associated equipment includes all existing items at the roadside DMS site, including but not limited to, pole-mounted cabinet, DMS controller, cellular modem, mounting hardware, conduit, gate flashers, and cables/wires.

C Construction
Prior to salvaging, the Field System Integrator must determine if the DMS and associated equipment is fully functional. If any part of the DMS or associated equipment is found to not meet original manufacturer's specifications, contact Kyle Hemp of the WisDOT SW Region at (608) 246-5367.

Carefully salvage the existing ITS equipment at the location indicated on the plans. Salvage all mounting hardware and cables/wires associated with the ITS equipment.

Reinstallation of the ITS equipment, as indicated on the plans or as directed by the engineer, including any new materials required (cables or mounting hardware for example) will be paid for under other bid items.

Deliver ITS equipment that will not be reinstalled to Dale Roth at the WisDOT SW Region, 2101 Wright Street, Madison, WI 53704 at a mutually agreed upon time during normal state office hours. Contact Dale Roth at (608) 516-6435 to coordinate delivery of equipment.

Storage of materials prior to reinstallation and/or delivery is the responsibility of the contractor and is incidental to this item.

Any materials which are damaged during the salvaging, delivery, or reinstallation process will be repaired or replaced at the expense of the contractor.

D Measurement
The department will measure Salvage Roadside DMS, completed according to the contract and accepted, as a single complete lump sum unit of work.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.404	Salvage Roadside DMS	LS

Payment is full compensation for salvaging the roadside DMS and associated equipment.

73. Longitudinal Grooving Bridge Deck, Item SPV.0165.701.

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 ± /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 pay plan quantity according to standard spec 109.1.1.2.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0165.701	Longitudinal Grooving Bridge Deck	SF

Payment in full compensation for providing the required machinery and operators; for grooving, for collecting, removing and properly disposing of all waste materials.

74. Emulsified Asphalt Median Treatment, Item SPV.0180.001.

A Description
This special provision describes paving median areas between concrete barrier. Place the material at the locations and to the elevations, lines, grades, depth, and cross sections indicated on the plans and directed by the engineer.

B Materials
Furnish materials according to the pertinent requirements of standard spec 604.2 for slope paving crushed aggregate.

C Construction
Perform work according to the pertinent requirements of standard spec 604.3.

Supplement standard spec 604.3.2 to include the following:

Construct to a minimum depth of 6 inches.

D Measurement
The department will measure Emulsified Asphalt Median Treatment by the square yard 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.0180.001	Emulsified Asphalt Median Treatment	SY

Payment is full compensation for furnishing and placing emulsified asphalt median treatment.

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
SPV.0035.001	Roadway Embankment	CY	0.23

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 $1.90 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 standard specifications:

550.5.2 Piling

Add the following as paragraph three effective with the December 2015 letting:

(3) The department will not entertain a change order request for a differing site condition under 104.2.2.2 or for a quantity change under 104.2.2.4.3 for the Piling bid items. Instead the department will adjust pay under the Piling Quantity Variation administrative item if the total driven length of each size is less than 85 percent of, or more than 115 percent of the contract quantity as follows:

Percent of Contract Length Driven	Pay Adjustment
< 85	(85% contract length - driven length) x 20% unit price
> 115	(driven length - 115% contract length) x 5% unit price

643.2.1 General

Replace paragraph two with the following effective with the December 2015 letting:

(2) Use reflective sheeting from the department's approved products list on barricades, drums, and flexible tubular marker posts.

Errata

Make the following corrections to the standard specifications:

641.2.9 Overhead Sign Supports

Correct errata adding back accidentally deleted paragraphs one through three.

(1) Provide commercially fabricated overhead sign supports conforming to AASHTO design and fabrication standards for structural supports for highway signs, luminaires, and traffic signals. Use a design life of 50 years with a wind importance factor of 1.00. Design to withstand a 3 second gust wind speed of 90 mph. Do not use the methods of appendix C of those AASHTO standards.

(2) Design structures, listed as applicable structure types in the AASHTO standards, to the fatigue category criteria as follows:

1. Structures carrying variable message signs:
   - Category I criteria for structures over all roadway types.
2. Structures carrying type II or III signs:
   - Category I criteria for structures used over highways and free flow ramps.
   - Category II criteria for structures with arms greater than 30 feet used over local roads and city streets.
   - Category III criteria for structures with arms 30 feet or less used over local roads and city streets.

(3) Use the posted speed limit of the roadway beneath the structure for truck-induced gusts.

(4) Submit shop drawings identified by structure number, design computations, and material specifications, to the engineer before erecting sign supports. Provide tightening procedures for mast arm or luminaire arm to pole shaft connections on the shop drawings. Have a professional engineer registered in the state of Wisconsin sign, seal, and date the shop drawings and certify that the design conforms to AASHTO standards and the contract.

(5) Provide steel pole shafts and mast arms zinc coated according to ASTM A123. Provide tapered pole and arm shafts with a minimum taper of 0.14 inch per foot for single-member vertical and single-member horizontal structure components. Provide bolts and other hardware conforming to 641.2.2.

ADDITIONAL SPECIAL PROVISION 7

A. Reporting 1st Tier and DBE Payments During Construction

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

B. Costs for conforming to this special provision are incidental to the contract.

ADDITIONAL SPECIAL PROVISION 9
Electronic Certified Payroll Submittal

(1) Use the department's Civil Rights Compliance System (CRCS) to submit certified payrolls electronically. Details are available online through the department's highway construction contractor information (HCCI) site on the Labor, Wages, and EEO Information page at:

http://wisconsindot.gov/Pages/doing-bus/civil-rights/labornwage/default.aspx

(2) Ensure that all tiers of subcontractors, as well as all trucking firms, submit their weekly certified payrolls electronically through CRCS. These payrolls are due within seven calendar days following the close of the payroll period. Every firm providing physical labor towards completing the project is a subcontractor under this special provision.

(3) Upon receipt of contract execution, promptly make all affected firms aware of the requirements under this special provision and arrange for them to receive CRCS training as they are about to begin payrolls. The department will provide training either in a classroom setting at one of our regional offices or by telephone. Contact Tess Mulrooney at 608-267-4489 to schedule the training.

(4) The department will reject all paper submittals of forms DT-1816 and DT-1929 for information required under this special provision. All costs for conforming to this special provision are incidental to the contract.

(5) Firms wishing to export payroll data from their computer system into CRCS should have their payroll coordinator send several sample electronic files to Tess two months before a payroll needs to be submitted. Not every contractor's payroll system is capable of producing export files. For details, see pages 17-22 of the CRCS System Background Information manual available online on the Labor, Wages, and EEO Information page at:

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

Effective August 2015 letting

BUY AMERICA PROVISION

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

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

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

http://wisconsindot.gov/rdwy/worksheets/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

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
DANE COUNTY

Compiled by the State of Wisconsin - Department of Workforce Development
for the Department of Transportation
Pursuant to s. 103.50, Stats.
Issued on May 1, 2015

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	32.09	18.04	50.13
Carpenter	32.72	16.00	48.72
Future Increase(s): Add $1.42/hr on 6/1/2015; Add $1.42/hr on 6/1/2016.			
Premium Pay: DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.			
Cement Finisher	35.18	16.78	51.96
Future Increase(s): 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	33.93	22.77	56.70
Premium Pay: DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year’s Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.			
Fence Erector	18.00	6.09	24.09
Ironworker	31.50	20.01	51.51
Line Constructor (Electrical)	39.50	17.73	57.23
Painter	26.65	13.10	39.75
Pavement Marking Operator	29.22	25.90	55.12
Piledriver	33.24	16.00	49.24
Future Increase(s): Add $1.44/hr on 6/1/2015; Add $1.44/hr on 6/1/2016.			
Premium Pay: DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.			
Roofer or Waterproofer	29.40	11.31	40.71
Teledata Technician or Installer	22.25	12.24	34.49
Tuckpointer, Caulker or Cleaner	23.60	7.10	30.70

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
	$	$	$
Underwater Diver (Except on Great Lakes)	35.40	15.90	51.30
Heavy Equipment Operator - ELECTRICAL LINE CONSTRUCTION ONLY	35.55	15.57	51.12
Light Equipment Operator -ELECTRICAL LINE CONSTRUCTION ONLY	31.60	15.29	46.89
Heavy Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	27.65	13.44	41.09
Light Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	25.68	12.83	38.51
Groundman - ELECTRICAL LINE CONSTRUCTION ONLY	21.73	12.17	33.90
TRUCK DRIVERS			
Single Axle or Two Axle	25.18	18.31	43.49
Future Increase(s): Add $1.15/hr on 6/1/2015. 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.			
Three or More Axle	25.28	18.31	43.59
Future Increase(s): Add $1.15/hr on 6/1/2015. Premium Pay: DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.			
Articulated, Euclid, Dumptor, Off Road Material Hauler	30.27	21.15	51.42
Future Increase(s): Add $1.25/hr on 6/1/2015; Add $1.30/hr on 6/1/2016; Add $1.25/hr on 6/1/2017. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: http:/ / www.dot.wi.gov/ business/ civilrights/ laborwages/ pwc. htm.			
Pavement Marking Vehicle	23.16	21.13	44.29
Shadow or Pilot Vehicle	24.37	17.77	42.14
Truck Mechanic	24.52	17.77	42.29
LABORERS			
General Laborer	30.41	15.14	45.55
Future Increase(s): Add $1.05/hr eff. 06/01/2015; Add $1.00/hr eff. 06/01/2016; Add $1.00/hr eff. 06/01/2017 Premium Pay: Add $.10/hr for topman, air tool operator, vibrator or tamper operator (mechanical hand operated), chain saw operator and demolition burning torch laborer; Add $.15/hr for bituminous worker (raker and luteman), formsetter (curb, sidewalk and pavement) and strike off man; Add $.20/hr for blaster and powderman; Add $.25/hr for bottomman; Add $.35/hr for line and grade specialist; Add $.45/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	9.58	27.58
Landscaper	30.41	15.14	45.55
Future Increase(s): Add $1.05/hr eff. 06/01/2015; Add $1.00/hr eff. 06/01/2016; Add $1.00/hr eff. 06/01/2017 Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr for work on projects involving temporary traffic control setup, for lane and shoulder closures, when work under artificial illumination conditions is necessary as required by the project provisions (including prep time prior to and/or cleanup after such time period).			
Flagperson or Traffic Control Person	26.76	15.14	41.90

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY $	HOURLY FRINGE BENEFITS $	TOTAL $
Future Increase(s): Add $1.05/hr eff. 06/01/2015; Add $1.00/hr eff. 06/01/2016; Add $1.00/hr eff. 06/01/2017 Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr 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)	18.33	13.65	31.98
Railroad Track Laborer	14.50	5.29	19.79
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 $1.25/hr on 6/1/2015; Add $1.30/hr on 6/1/2016; Add $1.25/hr on 6/1/2017. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: http:/ / www.dot.wi.gov/ business/ civilrights/ laborwages/ pwc. htm.	37.72	21.15	58.87
Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of 130,000 Lbs. or Over; Caisson Rig; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 175 Ft or Under; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With or Without Attachments, With a Lifting Capacity of 100 Tons or Under, Self-Erecting Tower Crane With A Lifting Capacity Of 4,000 Lbs., & Under; Dredge (NOT Performing Work on the Great Lakes); Licensed Boat Pilot (NOT Performing Work on the Great Lakes); Pile Driver. Future Increase(s): Add $1.25/hr on 6/1/2015; Add $1.30/hr on 6/1/2016; Add $1.25/hr on 6/1/2017. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: http:/ / www.dot.wi.gov/ business/ civilrights/ laborwages/ pwc. htm.	37.22	21.15	58.37
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	36.72	21.15	57.87

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
	$	$	$
Digger or Driver; Roller (Over 5 Ton); Scraper (Self Propelled or Tractor Drawn) 5 cu yds or More Capacity; Shoulder Widener; Sideboom; Skid Rig; Stabilizing or Concrete Mixer (Self-Propelled or 14S or Over); Straddle Carrier or Travel Lift; Tractor (Scraper, Dozer, Pusher, Loader); Tractor or Truck Mounted Hydraulic Backhoe; Trencher (Wheel Type or Chain Type); Tube Finisher; Tugger (NOT Performing Work on the Great Lakes); Winches & A- Frames. Future Increase(s): Add $1.25/hr on 6/1/2015; Add $1.30/hr on 6/1/2016; Add $1.25/hr on 6/1/2017. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: http:/ / www.dot.wi.gov/ business/ civilrights/ laborwages/ pwc. htm.			
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. Future Increase(s): Add $1.25/hr on 6/1/2015; Add $1.30/hr on 6/1/2016; Add $1.25/hr on 6/1/2017. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: http:/ / www.dot.wi.gov/ business/ civilrights/ laborwages/ pwc. htm.	36.46	21.15	57.61
Air Compressor (&/or 400 CFM or Over); Air, Electric or Hydraulic Jacking System; Augers (Vertical & Horizontal); Automatic Belt Conveyor & Surge Bin; Boiler (Temporary Heat); Concrete Proportioning Plant; Crusher, Screening or Wash Plant; Generator (&/or 150 KW or Over); Heaters (Mechanical); High Pressure Utility Locating Machine (Daylighting Machine); Mudjack; Oiler; Prestress Machine; Pug Mill; Pump (3 Inch or Over) or Well Points; Rock, Stone Breaker; Screed (Milling Machine); Stump Chipper; Tank Car Heaters; Vibratory Hammer or Extractor, Power Pack. Future Increase(s): Add $1.25/hr on 6/1/2015; Add $1.30/hr on 6/1/2016; Add $1.25/hr on 6/1/2017. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.50/hr night work premium. See DOT'S website for details about the applicability of this night work premium at: http:/ / www.dot.wi.gov/ business/ civilrights/ laborwages/ pwc. htm.	36.17	21.15	57.32
Fiber Optic Cable Equipment.	28.89	17.95	46.84

SCHEDULE OF ITEMS REVISED:

CONTRACT:	PROJECT(S):	FEDERAL ID(S):
20160209003	1007-10-73	N/A
	1007-10-79	N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
	SECTION 0001 Contract Items					
0010	201.0105 Clearing	100.000 STA		.		.
0020	201.0205 Grubbing	100.000 STA		.		.
0030	203.0100 Removing Small Pipe Culverts	19.000 EACH		.		.
0040	203.0200 Removing Old Structure (station) 001. 1810'SB'+80	LUMP	LUMP			.
0050	203.0200 Removing Old Structure (station) 002. 1930'SB'+40	LUMP	LUMP			.
0060	203.0200 Removing Old Structure (station) 003. 50'MG'+00	LUMP	LUMP			.
0070	203.0200 Removing Old Structure (station) 004. 1904+79 'TSB'	LUMP	LUMP			.
0080	203.0210.S Abatement of Asbestos Containing Material (structure) 001. B-13-173	LUMP	LUMP			.
0090	203.0225.S Debris Containment (structure) 001. B-13-173	LUMP	LUMP			.

CONTRACT: 20160209003
PROJECT(S): 1007-10-73, 1007-10-79
FEDERAL ID(S): N/A, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0100	204.0100 Removing Pavement	42,745.000 SY		.		.
0110	204.0110 Removing Asphaltic Surface	897.000 SY		.		.
0120	204.0115 Removing Asphaltic Surface Butt Joints	33.000 SY		.		.
0130	204.0120 Removing Asphaltic Surface Milling	8,941.000 SY		.		.
0140	204.0150 Removing Curb & Gutter	2,101.000 LF		.		.
0150	204.0157 Removing Concrete Barrier	221.000 LF		.		.
0160	204.0165 Removing Guardrail	9,786.000 LF		.		.
0170	204.0170 Removing Fence	24,630.000 LF		.		.
0180	204.0180 Removing Delineators and Markers	112.000 EACH		.		.
0190	204.0195 Removing Concrete Bases	2.000 EACH		.		.
0200	204.0215 Removing Catch Basins	2.000 EACH		.		.

CONTRACT: 20160209003
PROJECT(S): 1007-10-73, 1007-10-79
FEDERAL ID(S): N/A, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0210	204.0220 Removing Inlets	10.000 EACH		.		.
0220	204.0245 Removing Storm Sewer (size) 001. 18-INCH	1,289.000 LF		.		.
0230	204.0270 Abandoning Culvert Pipes	3.000 EACH		.		.
0240	205.0100 Excavation Common	265,133.000 CY		.		.
0250	205.0200 Excavation Rock	72,476.000 CY		.		.
0260	205.0400 Excavation Marsh	687.000 CY		.		.
0270	206.1000 Excavation for Structures Bridges (structure) 001. B-13-707	LUMP	LUMP			.
0280	206.1000 Excavation for Structures Bridges (structure) 002. B-13-710	LUMP	LUMP			.
0290	206.1000 Excavation for Structures Bridges (structure) 003. B-13-706	LUMP	LUMP			.
0300	206.2000 Excavation for Structures Culverts (structure) 001. C-13-3078	LUMP	LUMP			.

SCHEDULE OF ITEMS REVISED:

CONTRACT:	PROJECT(S):	FEDERAL ID(S):
20160209003	1007-10-73	N/A
	1007-10-79	N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0310	206.5000 Cofferdams (structure) 001. C-13-3078	LUMP	LUMP			.
0320	210.0100 Backfill Structure	2,108.000 CY		.		.
0330	213.0100 Finishing Roadway (project) 001. 1007-10-79	1.000 EACH		.		.
0340	305.0110 Base Aggregate Dense 3/4-Inch	4,487.000 TON		.		.
0350	305.0120 Base Aggregate Dense 1 1/4-Inch	150,997.000 TON		.		.
0360	305.0130 Base Aggregate Dense 3-Inch	4,010.000 TON		.		.
0370	311.0115 Breaker Run	37.000 CY		.		.
0380	312.0110 Select Crushed Material	79,099.000 TON		.		.
0390	371.1000.S QMP Base Aggregate Dense 1 1/4-Inch Compaction	150,229.000 TON		.		.
0400	415.0070 Concrete Pavement 7-Inch **P**	20.000 SY		.		.
0410	415.0080 Concrete Pavement 8-Inch **P**	9,157.000 SY		.		.

CONTRACT: 20160209003
PROJECT(S): 1007-10-73, 1007-10-79
FEDERAL ID(S): N/A, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0420	415.0100 Concrete Pavement 10-Inch **P**	2,958.000 SY		.		.
0430	415.0120 Concrete Pavement 12-Inch **P**	51,681.000 SY		.		.
0440	415.0410 Concrete Pavement Approach Slab **P**	372.000 SY		.		.
0450	415.6000.S Rout and Seal	8,506.000 LF		.		.
0460	416.0610 Drilled Tie Bars	200.000 EACH		.		.
0470	416.0620 Drilled Dowel Bars	32.000 EACH		.		.
0480	416.1010 Concrete Surface Drains **P**	19.300 CY		.		.
0490	440.4410 Incentive IRI Ride	21,821.000 DOL	1.00000		21821.00	
0500	455.0105 Asphaltic Material PG58-28	1,654.000 TON		.		.
0510	455.0120 Asphaltic Material PG64-28	666.000 TON		.		.
0520	455.0605 Tack Coat	9,731.000 GAL		.		.

CONTRACT: 20160209003
PROJECT(S): 1007-10-73, 1007-10-79
FEDERAL ID(S): N/A, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS		UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0530	460.1100 HMA Pavement Type E-0.3	1,518.000	TON	.		.	
0540	460.1101 HMA Pavement Type E-1	1,761.000	TON	.		.	
0550	460.1130 HMA Pavement Type E-30	38,143.000	TON	.		.	
0560	460.2000 Incentive Density HMA Pavement	26,510.000	DOL	1.00000		26510.00	
0570	460.4000 HMA Cold Weather Paving	1,772.000	TON	.		.	
0580	465.0105 Asphaltic Surface	163.000	TON	.		.	
0590	465.0120 Asphaltic Surface Driveways and Field Entrances	91.000	TON	.		.	
0600	501.1000.S Ice Hot Weather Concreting	9,950.000	LB	.		.	
0610	502.0100 Concrete Masonry Bridges **P**	1,292.000	CY	.		.	
0620	502.3200 Protective Surface Treatment **P**	3,453.000	SY	.		.	
0630	502.3210 Pigmented Surface Sealer	610.000	SY	.		.	

CONTRACT: 20160209003
PROJECT(S): 1007-10-73, 1007-10-79
FEDERAL ID(S): N/A, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0640	502.6105 Masonry Anchors Type S 5/8-Inch	18.000 EACH		.		.
0650	503.0137 Prestressed Girder Type I 36W-Inch **P**	917.000 LF		.		.
0660	503.0155 Prestressed Girder Type I 54W-Inch **P**	2,672.000 LF		.		.
0670	504.0100 Concrete Masonry Culverts **P**	73.000 CY		.		.
0680	505.0400 Bar Steel Reinforcement HS Structures **P**	48,680.000 LB		.		.
0690	505.0600 Bar Steel Reinforcement HS Coated Structures **P**	311,480.000 LB		.		.
0700	505.0800.S Bar Steel Reinforcement HS Stainless Structures **P**	4,326.000 LB		.		.
0710	505.0905 Bar Couplers No. 5 **P**	14.000 EACH		.		.
0720	505.0907 Bar Couplers No. 7 **P**	54.000 EACH		.		.
0730	505.0909 Bar Couplers No. 9 **P**	7.000 EACH		.		.

CONTRACT: 20160209003
PROJECT(S): 1007-10-73, 1007-10-79
FEDERAL ID(S): N/A, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0740	506.2605 Bearing Pads Elastomeric Non-Laminated	66.000 EACH		.		.
0750	506.4000 Steel Diaphragms (structure) 001. B-13-707 **P**	10.000 EACH		.		.
0760	506.4000 Steel Diaphragms (structure) 002. B-13-710 **P**	16.000 EACH		.		.
0770	506.4000 Steel Diaphragms (structure) 003. B-13-706 **P**	20.000 EACH		.		.
0780	511.1100 Temporary Shoring	3,000.000 SF		.		.
0790	511.1200 Temporary Shoring (structure) 001. B-13-707	250.000 SF		.		.
0800	511.1200 Temporary Shoring (structure) 002. B-13-710	640.000 SF		.		.
0810	511.2200 Temporary Shoring Left in Place (structure) 001. C-13-3078	300.000 SF		.		.
0820	516.0500 Rubberized Membrane Waterproofing	105.000 SY		.		.
0830	517.1010.S Concrete Staining (structure) 001. B-13-706 **P**	9,810.000 SF		.		.

CONTRACT: 20160209003
PROJECT(S): 1007-10-73, 1007-10-79
FEDERAL ID(S): N/A, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0840	517.1010.S Concrete Staining (structure) 002. B-13-707 **P**	7,010.000 SF		.		.
0850	520.8000 Concrete Collars for Pipe	22.000 EACH		.		.
0860	521.0130 Culvert Pipe Corrugated Steel 30-Inch	687.000 LF		.		.
0870	521.0142 Culvert Pipe Corrugated Steel 42-Inch	19.000 LF		.		.
0880	521.1012 Apron Endwalls for Culvert Pipe Steel 12-Inch	6.000 EACH		.		.
0890	521.1030 Apron Endwalls for Culvert Pipe Steel 30-Inch	8.000 EACH		.		.
0900	521.1042 Apron Endwalls for Culvert Pipe Steel 42-Inch	1.000 EACH		.		.
0910	522.0118 Culvert Pipe Reinforced Concrete Class III 18-Inch	260.000 LF		.		.
0920	522.0124 Culvert Pipe Reinforced Concrete Class III 24-Inch	68.000 LF		.		.
0930	522.0130 Culvert Pipe Reinforced Concrete Class III 30-Inch	392.000 LF		.		.

CONTRACT: 20160209003
PROJECT(S): 1007-10-73, 1007-10-79
FEDERAL ID(S): N/A, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0940	522.0136 Culvert Pipe Reinforced Concrete Class III 36-Inch	156.000 LF		.		.
0950	522.0142 Culvert Pipe Reinforced Concrete Class III 42-Inch	53.000 LF		.		.
0960	522.0148 Culvert Pipe Reinforced Concrete Class III 48-Inch	121.000 LF		.		.
0970	522.0318 Culvert Pipe Reinforced Concrete Class IV 18-Inch	52.000 LF		.		.
0980	522.0336 Culvert Pipe Reinforced Concrete Class IV 36-Inch	123.000 LF		.		.
0990	522.0354 Culvert Pipe Reinforced Concrete Class IV 54-Inch	258.000 LF		.		.
1000	522.0360 Culvert Pipe Reinforced Concrete Class IV 60-Inch	162.000 LF		.		.
1010	522.1018 Apron Endwalls for Culvert Pipe Reinforced Concrete 18-Inch	13.000 EACH		.		.
1020	522.1024 Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	3.000 EACH		.		.
1030	522.1030 Apron Endwalls for Culvert Pipe Reinforced Concrete 30-Inch	2.000 EACH		.		.

CONTRACT: 20160209003
PROJECT(S): 1007-10-73, 1007-10-79
FEDERAL ID(S): N/A, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1040	522.1036 Apron Endwalls for Culvert Pipe Reinforced Concrete 36-Inch	2.000 EACH		.		.
1050	522.1048 Apron Endwalls for Culvert Pipe Reinforced Concrete 48-Inch	2.000 EACH		.		.
1060	522.1054 Apron Endwalls for Culvert Pipe Reinforced Concrete 54-Inch	1.000 EACH		.		.
1070	522.1060 Apron Endwalls for Culvert Pipe Reinforced Concrete 60-Inch	1.000 EACH		.		.
1080	523.0119 Culvert Pipe Reinforced Concrete Horizontal Elliptical Class HE-III 19x30-Inch	107.000 LF		.		.
1090	523.0519 Apron Endwalls for Culvert Pipe Reinforced Concrete Horizontal Elliptical 19x30-Inch	2.000 EACH		.		.
1100	524.0636 Apron Endwalls for Culvert Pipe Salvaged 36-Inch	2.000 EACH		.		.
1110	524.0642 Apron Endwalls for Culvert Pipe Salvaged 42-Inch	2.000 EACH		.		.

CONTRACT: 20160209003
PROJECT(S): 1007-10-73, 1007-10-79
FEDERAL ID(S): N/A, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1120	550.0020 Pre-Boring Rock or Consolidated Materials	110.000 LF		.		.
1130	550.1100 Piling Steel HP 10-Inch X 42 Lb	2,070.000 LF		.		.
1140	550.1120 Piling Steel HP 12-Inch X 53 Lb	1,170.000 LF		.		.
1150	601.0551 Concrete Curb & Gutter 4-Inch Sloped 36-Inch Type A **P**	2,202.000 LF		.		.
1160	603.1136 Concrete Barrier Type S36 **P**	746.000 LF		.		.
1170	603.8000 Concrete Barrier Temporary Precast Delivered	44,778.000 LF		.		.
1180	603.8125 Concrete Barrier Temporary Precast Installed	51,003.000 LF		.		.
1190	604.0500 Slope Paving Crushed Aggregate	800.000 SY		.		.
1200	606.0200 Riprap Medium	291.000 CY		.		.
1210	606.0300 Riprap Heavy	124.000 CY		.		.
1220	607.5000 Storm Sewer Rock Excavation	30.000 CY		.		.

CONTRACT: 20160209003
PROJECT(S): 1007-10-73, 1007-10-79
FEDERAL ID(S): N/A, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1230	608.0318 Storm Sewer Pipe Reinforced Concrete Class III 18-Inch	1,615.000 LF		.		.
1240	608.0324 Storm Sewer Pipe Reinforced Concrete Class III 24-Inch	347.000 LF		.		.
1250	608.0330 Storm Sewer Pipe Reinforced Concrete Class III 30-Inch	77.000 LF		.		.
1260	608.0418 Storm Sewer Pipe Reinforced Concrete Class IV 18-Inch	283.000 LF		.		.
1270	611.0610 Inlet Covers Type BW	2.000 EACH		.		.
1280	611.0627 Inlet Covers Type HM	4.000 EACH		.		.
1290	611.0642 Inlet Covers Type MS	18.000 EACH		.		.
1300	611.0651 Inlet Covers Type S	2.000 EACH		.		.
1310	611.0654 Inlet Covers Type V	6.000 EACH		.		.
1320	611.1006 Catch Basins 6-FT Diameter	2.000 EACH		.		.
1330	611.3220 Inlets 2x2-FT	6.000 EACH		.		.

CONTRACT: 20160209003
PROJECT(S): 1007-10-73, 1007-10-79
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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1340	611.3225 Inlets 2x2.5-FT	2.000 EACH		.		.
1350	611.3253 Inlets 2.5x3-FT	4.000 EACH		.		.
1360	611.3901 Inlets Median 1 Grate	8.000 EACH		.		.
1370	611.3902 Inlets Median 2 Grate	5.000 EACH		.		.
1380	611.8115 Adjusting Inlet Covers	1.000 EACH		.		.
1390	611.8120.S Cover Plates Temporary	3.000 EACH		.		.
1400	611.9710 Salvaged Inlet Covers	1.000 EACH		.		.
1410	612.0106 Pipe Underdrain 6-Inch	1,050.000 LF		.		.
1420	612.0212 Pipe Underdrain Unperforated 12-Inch	285.000 LF		.		.
1430	612.0406 Pipe Underdrain Wrapped 6-Inch	580.000 LF		.		.

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PROJECT(S): 1007-10-73, 1007-10-79
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CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1440	614.0150 Anchor Assemblies for Steel Plate Beam Guard	12.000 EACH		.		.
1450	614.0800 Crash Cushions Permanent	13.000 EACH		.		.
1460	614.0905 Crash Cushions Temporary	7.000 EACH		.		.
1470	614.2300 MGS Guardrail 3	1,253.000 LF		.		.
1480	614.2500 MGS Thrie Beam Transition	354.600 LF		.		.
1490	614.2610 MGS Guardrail Terminal EAT	7.000 EACH		.		.
1500	614.2620 MGS Guardrail Terminal Type 2	2.000 EACH		.		.
1510	616.0100 Fence Woven Wire (height) 001. 4-FT **P**	24,255.000 LF		.		.
1520	616.0700.S Fence Safety	1,500.000 LF		.		.
1530	619.1000 Mobilization	1.000 EACH		.		.
1540	620.0300 Concrete Median Sloped Nose **P**	84.000 SF		.		.

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PROJECT(S): 1007-10-73, 1007-10-79
FEDERAL ID(S): N/A, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1550	624.0100 Water	2,200.000 MGAL		.		.
1560	625.0500 Salvaged Topsoil **P**	330,670.000 SY		.		.
1570	627.0200 Mulching	168,100.000 SY		.		.
1580	628.1104 Erosion Bales	3,165.000 EACH		.		.
1590	628.1504 Silt Fence	28,410.000 LF		.		.
1600	628.1520 Silt Fence Maintenance	170,405.000 LF		.		.
1610	628.1905 Mobilizations Erosion Control	15.000 EACH		.		.
1620	628.1910 Mobilizations Emergency Erosion Control	8.000 EACH		.		.
1630	628.2002 Erosion Mat Class I Type A	20,780.000 SY		.		.
1640	628.2004 Erosion Mat Class I Type B	63,980.000 SY		.		.
1650	628.2006 Erosion Mat Urban Class I Type A	25,390.000 SY		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1660	628.2023 Erosion Mat Class II Type B	2,850.000 SY		.		.
1670	628.6505 Soil Stabilizer Type A	9.000 ACRE		.		.
1680	628.6510 Soil Stabilizer Type B	9.000 ACRE		.		.
1690	628.7005 Inlet Protection Type A	55.000 EACH		.		.
1700	628.7010 Inlet Protection Type B	3.000 EACH		.		.
1710	628.7015 Inlet Protection Type C	15.000 EACH		.		.
1720	628.7504 Temporary Ditch Checks	1,428.000 LF		.		.
1730	628.7555 Culvert Pipe Checks	340.000 EACH		.		.
1740	628.7560 Tracking Pads	16.000 EACH		.		.
1750	628.7570 Rock Bags	1,152.000 EACH		.		.
1760	629.0205 Fertilizer Type A	191.000 CWT		.		.

CONTRACT: 20160209003 PROJECT(S): 1007-10-73, 1007-10-79 FEDERAL ID(S): N/A, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1770	630.0110 Seeding Mixture No. 10	1,335.000 LB		.		.
1780	630.0120 Seeding Mixture No. 20	3,083.000 LB		.		.
1790	630.0130 Seeding Mixture No. 30	850.000 LB		.		.
1800	630.0200 Seeding Temporary	8,247.000 LB		.		.
1810	633.0100 Delineator Posts Steel	76.000 EACH		.		.
1820	633.0500 Delineator Reflectors	98.000 EACH		.		.
1830	633.5100 Markers Row	110.000 EACH		.		.
1840	633.5200 Markers Culvert End	40.000 EACH		.		.
1850	634.0614 Posts Wood 4x6-Inch X 14-FT	1.000 EACH		.		.
1860	634.0616 Posts Wood 4x6-Inch X 16-FT	6.000 EACH		.		.
1870	634.0618 Posts Wood 4x6-Inch X 18-FT	3.000 EACH		.		.

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FEDERAL ID(S): N/A, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1880	634.0620 Posts Wood 4x6-Inch X 20-FT	2.000 EACH		.		.
1890	634.0622 Posts Wood 4x6-Inch X 22-FT	7.000 EACH		.		.
1900	634.0624 Posts Wood 4x6-Inch X 24-FT	1.000 EACH		.		.
1910	635.0200 Sign Supports Structural Steel HS	445.000 LB		.		.
1920	636.0100 Sign Supports Concrete Masonry **P**	38.800 CY		.		.
1930	636.0500 Sign Supports Steel Reinforcement	166.000 LB		.		.
1940	636.1500 Sign Supports Steel Coated Reinforcement HS	5,655.000 LB		.		.
1950	637.2210 Signs Type II Reflective H	185.250 SF		.		.
1960	637.2230 Signs Type II Reflective F	91.250 SF		.		.
1970	637.3210 Sign S Type III Reflective H	61.500 SF		.		.
1980	638.2101 Moving Signs Type I	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
1990	638.2102 Moving Signs Type II	34.000 EACH		.		.
2000	638.2601 Removing Signs Type I	1.000 EACH		.		.
2010	638.2602 Removing Signs Type II	22.000 EACH		.		.
2020	638.3000 Removing Small Sign Supports	25.000 EACH		.		.
2030	638.3100 Removing Structural Steel Sign Supports	5.000 EACH		.		.
2040	638.4100 Moving Structural Steel Sign Supports	4.000 EACH		.		.
2050	641.1200 Sign Bridge Cantilevered (structure) 001. S-13-400	LUMP	LUMP			.
2060	641.6600 Sign Bridge (structure) 001. S-13-399	LUMP	LUMP			.
2070	642.5401 Field Office Type D	1.000 EACH		.		.
2080	643.0100 Traffic Control (project) 001. 1007-10-79	1.000 EACH		.		.
2090	643.0300 Traffic Control Drums	23,415.000 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
2100	643.0420 Traffic Control Barricades Type III	6,348.000 DAY		.		.
2110	643.0500 Traffic Control Flexible Tubular Marker Posts	33.000 EACH		.		.
2120	643.0600 Traffic Control Flexible Tubular Marker Bases	33.000 EACH		.		.
2130	643.0705 Traffic Control Warning Lights Type A	3,260.000 DAY		.		.
2140	643.0715 Traffic Control Warning Lights Type C	4,820.000 DAY		.		.
2150	643.0800 Traffic Control Arrow Boards	150.000 DAY		.		.
2160	643.0900 Traffic Control Signs	11,304.000 DAY		.		.
2170	643.0910 Traffic Control Covering Signs Type I	12.000 EACH		.		.
2180	643.0920 Traffic Control Covering Signs Type II	27.000 EACH		.		.
2190	643.1050 Traffic Control Signs PCMS	776.000 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
2200	643.2000 Traffic Control Detour (project) 001. 1007-10-79	1.000 EACH		.		.
2210	643.3000 Traffic Control Detour Signs	18,000.000 DAY		.		.
2220	645.0105 Geotextile Fabric Type C	124.000 SY		.		.
2230	645.0112 Geotextile Fabric Type DF Schedule B	168.000 SY		.		.
2240	645.0120 Geotextile Fabric Type HR	1,100.000 SY		.		.
2250	646.0106 Pavement Marking Epoxy 4-Inch	71,030.000 LF		.		.
2260	646.0126 Pavement Marking Epoxy 8-Inch	2,160.000 LF		.		.
2270	646.0600 Removing Pavement Markings	39,428.000 LF		.		.
2280	646.0841.S Pavement Marking Grooved Wet Reflective Contrast Tape 4-Inch	145.000 LF		.		.
2290	646.0843.S Pavement Marking Grooved Wet Reflective Contrast Tape 8-Inch	905.000 LF		.		.

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FEDERAL ID(S): N/A, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2300	647.0456 Pavement Marking Curb Epoxy	105.000 LF		.		.
2310	647.0606 Pavement Marking Island Nose Epoxy	2.000 EACH		.		.
2320	647.0746 Pavement Marking Diagonal Epoxy 24-Inch	65.000 LF		.		.
2330	649.0400 Temporary Pavement Marking Removable Tape 4-Inch	142,162.000 LF		.		.
2340	649.0801 Temporary Pavement Marking Removable Tape 8-Inch	2,949.000 LF		.		.
2350	652.0125 Conduit Rigid Metallic 2-Inch **P**	202.000 LF		.		.
2360	652.0225 Conduit Rigid Nonmetallic Schedule 40 2-Inch **P**	2,974.000 LF		.		.
2370	652.0235 Conduit Rigid Nonmetallic Schedule 40 3-Inch **P**	135.000 LF		.		.
2380	653.0135 Pull Boxes Steel 24x36-Inch	3.000 EACH		.		.
2390	653.0140 Pull Boxes Steel 24x42-Inch	6.000 EACH		.		.
2400	653.0222 Junction Boxes 18x12x6-Inch	8.000 EACH		.		.

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CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2410	653.0900 Adjusting Pull Boxes	2.000 EACH		.		.
2420	653.0905 Removing Pull Boxes	3.000 EACH		.		.
2430	654.0105 Concrete Bases Type 5	3.000 EACH		.		.
2440	655.0615 Electrical Wire Lighting 10 AWG	723.000 LF		.		.
2450	655.0630 Electrical Wire Lighting 4 AWG	5,072.000 LF		.		.
2460	656.0200 Electrical Service Meter Breaker Pedestal (location) 001. DMS-13-0027	LUMP	LUMP			.
2470	656.0200 Electrical Service Meter Breaker Pedestal (location) 002. G-13-08	LUMP	LUMP			.
2480	656.0500 Electrical Service Breaker Disconnect Box (location) 001. DMS-13-0027	LUMP	LUMP			.
2490	657.0255 Transformer Bases Breakaway 11 1/2-Inch Bolt Circle	1.000 EACH		.		.
2500	657.0322 Poles Type 5-Aluminum	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
2510	670.0100 Field System Integrator	LUMP	LUMP			.
2520	670.0200 ITS Documentation	LUMP	LUMP			.
2530	673.0105 Communication Vault Type 1	1.000 EACH		.		.
2540	673.0225.S Install Pole Mounted Cabinet	1.000 EACH		.		.
2550	674.0300 Remove Cable	1,480.000 LF		.		.
2560	674.0400 Reinstall Cable	185.000 LF		.		.
2570	675.0400.S Install Ethernet Switch	1.000 EACH		.		.
2580	678.0100.S Install Overhead Freeway DMS Full Matrix	1.000 EACH		.		.
2590	690.0150 Sawing Asphalt	31,377.000 LF		.		.
2600	690.0250 Sawing Concrete	888.000 LF		.		.
2610	715.0415 Incentive Strength Concrete Pavement	20,087.000 DOL	1.00000		20087.00	

CONTRACT: 20160209003
PROJECT(S): 1007-10-73, 1007-10-79
FEDERAL ID(S): N/A, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2620	715.0502 Incentive Strength Concrete Structures	14,424.000 DOL	1.00000		14424.00	
2630	SPV.0035 Special 001. Roadway Embankment	185,310.000 CY	.		.	
2640	SPV.0035 Special 701. HPC Masonry Structures **P**	1,039.000 CY	.		.	
2650	SPV.0060 Special 001. Baseline CPM Progress Schedule	1.000 EACH	.		.	
2660	SPV.0060 Special 002. CPM Progress Schedule Updates And Accepted Revisions	8.000 EACH	.		.	
2670	SPV.0060 Special 003. Access Gate 6-FT	2.000 EACH	.		.	
2680	SPV.0060 Special 004. Removing Billboards	2.000 EACH	.		.	
2690	SPV.0060 Special 103. Traffic Control Barricades Type III With Sign, Permanent	19.000 EACH	.		.	
2700	SPV.0060 Special 401. Fiber Tracer Marker Post	1.000 EACH	.		.	
2710	SPV.0060 Special 402. Install Cellular Modem	1.000 EACH	.		.	

CONTRACT: 20160209003
PROJECT(S): 1007-10-73, 1007-10-79
FEDERAL ID(S): N/A, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2720	SPV.0060 Special 403. Remove Poles Wood	1.000 EACH		.		.
2730	SPV.0060 Special 404. Remove Electrical Service Meter Breaker Pedestal	2.000 EACH		.		.
2740	SPV.0060 Special 701. Grouted Bar Couplers	144.000 EACH		.		.
2750	SPV.0090 Special 200. Concrete Barrier Temporary Precast Left In Place	6,084.000 LF		.		.
2760	SPV.0090 Special 202. Traffic Control Gawk Screen Furnished	2,000.000 LF		.		.
2770	SPV.0090 Special 203. Traffic Control Gawk Screen Installed	2,000.000 LF		.		.
2780	SPV.0090 Special 701. Precast Pier Columns **P**	68.000 LF		.		.
2790	SPV.0090 Special 702. Precast Pier Cap **P**	56.000 LF		.		.
2800	SPV.0090 Special 703. Fence Chain Link Polymer Coated 6-F	606.000 LF		.		.
2810	SPV.0105 Special 001. Concrete Pavement Joint Layout	LUMP	LUMP			.

CONTRACT: 20160209003
PROJECT(S): 1007-10-73, 1007-10-79
FEDERAL ID(S): N/A, N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2820	SPV.0105 Special 002. Survey Project 1007-10-73	LUMP	LUMP			.
2830	SPV.0105 Special 004. Survey Project 1007-10-79	LUMP	LUMP			.
2840	SPV.0105 Special 401. Relocate Solar-Powered Bluetooth Sensor	LUMP	LUMP			.
2850	SPV.0105 Special 402. Relocate Ramp Closure Gate (G-13-08)	LUMP	LUMP			.
2860	SPV.0105 Special 403. Relocate Ramp Closure Gate (G-13-09)	LUMP	LUMP			.
2870	SPV.0105 Special 404. Salvage Roadside DMS	LUMP	LUMP			.
2880	SPV.0165 Special 701. Longitudinal Grooving Bridge Deck **P**	21,590.000 SF	.			.
2890	SPV.0180 Special 001. Emulsified Asphalt Median Treatment	140.000 SY	.			.
	SECTION 0001 TOTAL					.
	TOTAL BID					.

PLEASE ATTACH SCHEDULE OF ITEMS HERE