

## HIGHWAY WORK PROPOSAL

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

Proposal Number:

Ø 6

<u>COUNTY</u>	<u>STATE PROJECT ID</u>	<u>FEDERAL PROJECT ID</u>	<u>PROJECT DESCRIPTION</u>	<u>HIGHWAY</u>
Dane	5390-00-72		Janesville – Stoughton South Dane County Line to I-39	USH 51
Rock	5390-00-73		Janesville – Stoughton USH 14 to South Dane County Line	USH 51
Rock	5569-00-72	WISC 2015 086	Evansville – Janesville USH 51 to Wright Road	USH 14

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

Proposal Guaranty Required, \$ 100,000.00 Payable to: Wisconsin Department of Transportation	Attach Proposal Guaranty on back of this PAGE.
Bid Submittal Due  Date: February 10, 2015 Time (Local Time): 9:00 AM	Firm Name, Address, City, State, Zip Code
Contract Completion Time  October 2, 2015	<b>SAMPLE</b> <b>NOT FOR BIDDING PURPOSES</b>
Assigned Disadvantaged Business Enterprise Goal  6%	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 Milling, grading, base aggregate, concrete pavement, concrete pavement repair, HMA pavement, asphaltic patching, culvert pipe, storm sewer, beam guard, permanent signing, pavement marking, and traffic signals.	
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.

## BID PREPARATION

### **Preparing the Proposal Schedule of Items**

#### **A General**

- (1) Obtain bidding proposals as specified in **section 102** of the standard specifications prior to 11:45 AM of the last business day preceding the letting. Submit bidding proposals using one of the following methods:
  1. Electronic bid on the internet.
  2. Electronic bid on a printout with accompanying diskette or CD ROM.
  3. Paper bid under a waiver of the electronic submittal requirements.
- (2) Bids submitted on a printout with accompanying diskette or CD ROM or paper bids submitted under a waiver of the electronic submittal requirements govern over bids submitted on the internet.
- (3) The department will provide bidding information through the department's web site at <http://www.dot.wisconsin.gov/business/engrserv/bid-letting-information.htm>. The contractor is responsible for reviewing this web site for general notices as well as information regarding proposals in each letting. The department will also post special notices of all addenda to each proposal through this web site no later than 4:00 P.M. local time on the Thursday before the letting. Check the department's web site after 5:00 P.M. local time on the Thursday before the letting to ensure all addenda have been accounted for before preparing the bid. When bidding using methods 1 and 2 above, check the Bid Express™ on-line bidding exchange at <http://www.bidx.com/> after 5:00 P.M. local time on the Thursday before the letting to ensure that the latest schedule of items Expedite file (\*.ebs or \*.00x) is used to submit the final bid.
- (4) Interested parties can subscribe to the Bid Express™ on-line bidding exchange by following the instructions provided at the [www.bidx.com](http://www.bidx.com) web site or by contacting:

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

- (5) The department will address equipment and process failures, if the bidder can demonstrate that those failures were beyond their control.
- (6) Contractors are responsible for checking on the issuance of addenda and for obtaining the addenda. Notice of issuance of addenda is posted on the department's web site at <http://www.dot.wisconsin.gov/business/engrserv/bid-letting-information.htm> or by calling the department at (608) 266-1631. Addenda can ONLY be obtained from the departments web site listed above or by picking up the addenda at the Bureau of Highway Construction, Room 601, 4802 Sheboygan Avenue, Madison, WI, during regular business hours.

#### **B Submitting Electronic Bids**

##### **B.1 On the Internet**

- (1) Do the following before submitting the bid:
  1. Have a properly executed annual bid bond on file with the department.
  2. Have a digital ID on file with and enabled by Info Tech Inc. Using this digital ID will constitute the bidder's signature for proper execution of the bidding proposal.
- (2) In lieu of preparing, delivering, and submitting the proposal as specified in **102.6** and **102.9** of the standard specifications, submit the proposal on the internet as follows:

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

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

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

**Bidder Name**

**BN00**

**Proposals: 1, 12, 14, & 22**

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

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

### **C Waiver of Electronic Submittal**

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





# PROPOSAL BID BOND

DT1303 1/2006

Wisconsin Department of Transportation

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

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

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

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

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

## PRINCIPAL

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

\_\_\_\_\_  
(Signature and Title)

\_\_\_\_\_  
(Company Name)

\_\_\_\_\_  
(Signature and Title)

\_\_\_\_\_  
(Company Name)

\_\_\_\_\_  
(Signature and Title)

\_\_\_\_\_  
(Company Name)

\_\_\_\_\_  
(Signature and Title)

## NOTARY FOR PRINCIPAL

\_\_\_\_\_  
(Date)

State of Wisconsin )  
 ) ss.  
\_\_\_\_\_ County )

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

\_\_\_\_\_  
(Signature, Notary Public, State of Wisconsin)

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

\_\_\_\_\_  
(Date Commission Expires)

**Notary Seal**

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

\_\_\_\_\_  
(Signature of Attorney-in-Fact)

## NOTARY FOR SURETY

\_\_\_\_\_  
(Date)

State of Wisconsin )  
 ) ss.  
\_\_\_\_\_ County )

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

\_\_\_\_\_  
(Signature, Notary Public, State of Wisconsin)

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

\_\_\_\_\_  
(Date Commission Expires)

**Notary Seal**

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



# CERTIFICATE OF ANNUAL BID BOND

DT1305 8/2003

Wisconsin Department of Transportation

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

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

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

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

\_\_\_\_\_  
(Signature of Authorized Contractor Representative)

\_\_\_\_\_  
(Date)



## March 2010

## LIST OF SUBCONTRACTORS

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

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

[illegible]

**DECEMBER 2000**

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

Instructions for Certification

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

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

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

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

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

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## **SPECIAL PROVISIONS**

### **1. General.**

Perform the work under this construction contract for Projects 5390-00-72, Janesville – Stoughton, South Dane County Line to I 39, USH 51; ID 5390-00-73, Janesville – Stoughton, USH 14 to South Dane County Line, USH 51; and ID 5569-00-72, Evansville – Janesville, USH 51 to Wright Road, USH 14 in Dane and Rock Counties, 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, 2015 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 milling, grading, base aggregate, concrete pavement, concrete pavement repair, HMA pavement, asphaltic patching, culvert pipe, storm sewer, beam guard, permanent signing, pavement marking, traffic signals and all incidental items necessary to complete the work as shown on the plans and included in the proposal and contract.  
104-005 (20090901)

### **3. Prosecution and Progress.**

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

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

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

The contract time for completion is based on an expedited work scheduled and may require extraordinary forces and equipment. Included in this "Prosecution and Progress" special provision 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.

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.

#### **Schedule of Operations 5390-00-72**

The department anticipates that the schedule for each stage is as follows:

- All work done using flagging operations suitable for moving operations
- Patch all asphaltic surface patching areas
- Widen paved shoulders and pave lower lift or asphalt in widening areas
- Mill existing pavement
- Pave top 3.5" of asphalt for overlay and widening areas at same time.

#### **Schedule of Operations 5390-00-73**

The department anticipates that the schedule for each stage is as follows:

##### **USH 51/Kidder Road Intersection:**

- Stage 1 – Construct northbound pavement widening
- Stage 2 – No work at Kidder Road
- Stage 3 – Mill/Overlay through lanes, final lift of widening

##### **USH 51/CTH M East Intersection:**

- Stage 1 – Construct northbound pavement widening
- Stage 2 – Construct southbound pavement widening
- Stage 3 – Mill/Overlay existing pavement, final lift of asphalt on widening

##### **USH 51/CTH M West Intersection:**

- Stage 1 – Construct northbound pavement widening
- Stage 2 – Construct southbound pavement widening
- Stage 3 – Mill/Overlay existing pavement, final lift of asphalt on widening

##### **CTH F (Main St):**

- Perform all work in one stage

##### **Wisconsin and Southern and Railroad Spur Crossing:**

- Perform all work with roadway closed to all traffic

**USH 51/STH 59 Intersection:**

- Perform all work in one stage with four way stop control intersection
- Move signal poles and update signal equipment
- Install railroad preemption
- Re-cable traffic signal and install new traffic signal cabinet
- Construct sidewalk and brick paver band

**USH 51/Swift St Intersection:**

- Perform all work using daytime lane closures
- Install Flashing Beacon and Emergency Egress Warning System

**USH 51 (Station 482+68 – Station 487+23)**

- Stage 1 – Construct southbound lanes
- Stage 2 – Construct northbound lanes

**Schedule of Operations 5569-00-72**

The department anticipates that the schedule for each stage is as follows:

**USH 14 and USH 51 Intersection**

- Stage 1 – Reconstruction including shoulders and right-turn lanes.
- Stage 2 – Reconstruction including median and inside lanes.

**USH 14 and STH 26 Intersection**

- Stage 1 – Remove existing island and place temporary pavement.
- Stage 2 – Reconstruct right turn lane.
- Stage 3 and 4 – Reconstruct right turn island and concrete pavement repair.

**USH 14 and Lexington/Pontiac Drive Intersections**

- Stage 1 – Reconstruct median.
- Stage 2 – Continue reconstruction of median. Reconstruct side road islands. The intersection through and left movements will be closed for approximately two weeks. Right-in/right-out movements will be maintained at the intersection.
- Stage 3 – Mill and overlay USH 14 lanes.

**USH 14 and IH 39/90 Interchange**

- Stage 1 – Construct new configuration of on and off-ramps and right and left turn lanes on USH 14. Mill and overlay on-ramps
- Stage 2 – Complete USH 14 right turn lanes.
- Stage 3 – Complete removal of existing on and off-ramps.
- Stage 4 – Complete USH 14 median and left turn lanes.

**USH 14 and Deerfield Drive Intersection**

- Stage 1 – Remove existing island and place temporary pavement.
- Stage 2 – Reconstruct right turn lanes on USH 14 and Deerfield Drive.
- Stage 3 – Reconstruct right turn island and complete mill and overlay.

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

### **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 5390-00-72, 5390-00-73 and 5569-00-72. 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, City of Edgerton, City of Janesville, City of Janesville Transit and Rock 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.

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.

USH 51 and USH 14 are the known alternate routes for IH 39/90. Develop a contingency plan in the event that an incident occurs on IH 39/90 that requires the use of USH 51 and USH 14 as the alternate route. Coordinate this plan with the engineer.

### **Work Restrictions**

Do not close traffic lanes or shoulders on IH 39/90, USH 51, USH 14 or STH 26 outside the allowed time periods specified in the Lane Fee Rental Assessment and Traffic articles of these special provisions.

Asphaltic surface patching on USH 51 shall take place on one half of the roadway at a time using flagging operations suitable for moving operations. The total work area measured from flagger to flagger shall not extend beyond 1500 feet measured flagger to flagger. The flagger controlled work zone may not extend through the Kidder Road, CTH M East, or CTH M West intersections during asphalt paving operations. Any



asphaltic surface patching areas that are removed must be replaced and opened to two-way traffic by the end of the work day.

Concrete pavement repairs and concrete pavement replacement south of CTH F shall take place on one half of the roadway at a time using flagging operations suitable for moving operations. The total work area measured from flagger to flagger shall not extend beyond 1000 feet measured flagger to flagger. The flagger controlled work zone may not extend through the CTH F or STH 59 intersections. Work shall take place only between 7:00 AM and 8:00 PM Monday through Saturday. Any concrete pavement that is removed must be replaced by the end of the work day and the roadway shall be opened to two-way traffic by the end of the work day. Sawing for concrete pavement repairs and replacement may take place the day previous to the concrete removal.

Concrete pavement repairs and replacement between CTH F and the South Dane County Line shall take place in no more than one lane in each direction at a time. Flagging operations suitable for moving operations may be used when needed. Work shall only take place between 7:00 AM and 8:00 PM on Monday through Saturday. Open the roadway to at least one lane in each direction by the end of the work day. Concrete that is removed shall be replaced by the end of the work day. One lane in each direction may be closed overnight to allow concrete to cure.

Work on the Wisconsin & Southern railroad and railroad spur crossing of USH 51 shall not start before September 8, 2015.

USH 51 will be allowed to be closed for five calendar days for the replacement of the Wisconsin & Southern railroad and railroad spur crossing after September 8, 2015. Do not reopen USH 51 until completing the following work: replace the Wisconsin & Southern railroad and railroad spur crossing, all pavement, and pavement marking necessary to reopen the roadway. Coordination with Project 5390-00-50 will be required for this work.

Concrete pavement repair work may not occur within 500 feet of the STH 59 intersection when lane closures are required at the STH 59 intersection for traffic signal or sidewalk work.

The IH 39/90 northbound on-ramp from USH 14 will be allowed to be closed for two night closures for the overlay of the existing ramp. See the Lane Rental Fee Assessment article of these special provisions for allowed time periods and lane rental fees.

The IH 39/90 southbound on-ramp from USH 14 will be allowed to be closed for two night closures for the grinding and overlay of the existing ramp. See the Lane Rental Fee Assessment article of these special provisions for allowed time periods and lane rental fees.

USH 14 westbound will be allowed to be closed for three calendar days for the replacement of the Union Pacific railroad crossing after June 15, 2015. Do not reopen USH 14 westbound until completing the following work: replace the Union Pacific railroad crossing, all

pavement, and pavement marking necessary to reopen the roadway. Coordination with Projects 5569-00-50, 5569-00-51 and 5569-00-53 will be required for this work.

USH 14 eastbound will be allowed to be closed for three calendar days for the replacement of the Union Pacific railroad crossing after June 15, 2015. Do not reopen USH 14 eastbound until completing the following work: replace the Union Pacific railroad crossing, all pavement, and pavement marking necessary to reopen the roadway. Coordination with Projects 5569-00-50, 5569-00-51 and 5569-00-53 will be required for this work.

USH 51, USH 14 westbound and USH 14 eastbound will not be allowed to be closed at the same time.

Paving operations shall be completed a maximum of two days after any milling operations are completed.

The median of the USH 14 and Lexington Drive intersection and USH 14 and Pontiac Drive intersection will not be allowed to be closed at the same time.

USH 14 and STH 26 lane closures and the median closures of the USH 14 and Lexington Drive intersection and USH 14 and Pontiac Drive intersection will not be allowed on June 20, 2015 or from July 9, 2015 through July 12, 2015.

### **Traffic Signal Cabinet Replacement**

Traffic signal cabinets will be removed and replaced at multiple signalized intersections within the project limits. The replacement of traffic signal cabinets will require signal outages of variable duration depending on field conditions. Only one signal outage at a time will be allowed to take place within the project limits. Provide the engineer with a schedule for cabinet replacements two weeks prior to starting work. Outages shall be coordinated with other project activities and traffic control operations.

Complete the cabinet replacements in accordance to the following coordination and signal outage requirements:

Coordinate electrical service modifications, provide traffic control devices and complete signal cabinet replacement during overnight hours between 10:30 PM – 5:00 AM for the following intersections:

- USH 14 and USH 51
- USH 14 and STH 26
- STH 26 and Kettering Drive
- STH 26 and Morse Street

Coordinate electrical service modifications, provide traffic control devices, complete signal cabinet replacement and arrange for assistance for rail traffic monitoring to be completed during off-peak hours between 8:30 AM – 3:00 PM for the following intersections:

- USH 14 and Kennedy Road
- USH 14 and Newville Road

Coordinate electrical service modifications, provide traffic control devices and complete signal cabinet replacement during off-peak hours between 8:30 AM – 3:00 PM for the following intersections:

- USH 14 and Bell Street
- USH 14 and Wright Road

Install portable changeable message signs for advance warning of signal outage and/or change in traffic control for the duration of the signal cabinet replacement at an intersection. Coordinate with project staff to arrange for law enforcement assistance for traffic management as required.

Coordinate electrical service modifications and complete during the planned intersection shutdown or while under temporary signalization for the following intersections:

- USH 14 and Lexington Drive
- USH 14 and Pontiac Drive
- USH 14 and IH 39 southbound Ramp
- USH 14 and IH 39 northbound Ramp
- USH 14 and Deerfield Drive

#### **Other Electrical Work Requirements**

Coordinate electrical service modifications and complete during the temporary all-way stop condition for the following intersections:

- USH 51 and STH 59

CCTV cameras shall be fully operational with the ability to access data remotely at the following locations prior to September 28, 2015:

- UP Railroad @ Memorial Drive/CTH A (CCTV-53-0119)
- USH 14 @ Kennedy Road (CCTV-53-0120)
- USH 14 @ STH 26 (CCTV-53-0121)
- WSOR Railroad @ Rotamer Road (CCTV-53-0122)

CCTV cameras shall be fully operational with the ability to access data remotely at the following locations prior to September 15, 2015:

- USH 51 @ STH 59 (on USH 51) (CCTV-53-0114)
- USH 51 @ STH 59 (on STH 59) (CCTV-53-0118)

#### **Interim and Final Completion of Work**

No lanes on IH 39/90, USH 51, USH 14 or STH 26 shall be closed prior to or after the specified times provided in the Lane Rental Fee Assessment article of these special provisions. 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 the Lane Rental Fee Assessment article of these special provisions will be assessed to the contractor.

USH 51 will be allowed to be reduced to one lane controlled by a temporary traffic signal between Station 359+83 and Station 366+57 for up to 14 calendar days.

If the contractor fails to complete the work necessary to reopen USH 51 from Station 359+83 to Station 366+57 to bi-directional traffic within 14 calendar days, the department will assess the contractor \$1,000.00 in interim liquidated damages for each calendar day the contract work remains incomplete beyond 14 calendar days. An entire calendar day will be charged for any period of time within a calendar day that the road remains closed beyond 12:01 AM.

Concrete pavement replacement between Station 482+68 and Station 487+23 shall be staged as shown in the plans. Complete all work necessary to reopen all lanes of USH 51 from Station 482+68 to Station 487+63 to through traffic prior to 12:01 AM May 21, 2015. Construction shall not begin until after the City of Edgerton has completed all water main and sanitary sewer work on USH 51. Once construction activities begin, complete all work necessary to reopen all lanes of USH 51 from Station 482+68 to Station 487+63 to through traffic within 21 calendar days.

If the contractor fails to complete the work necessary to reopen all lanes of USH 51 from Station 482+68 to Station 487+63 to through traffic prior to 12:01 AM May 21, 2015, the department will assess the contractor \$1,000.00 in interim liquidated damages for each calendar day that the roadway remains closed after 12:01 AM, May 21, 2015. An entire calendar day will be charged for any period of time within a calendar day that the road remains closed beyond 12:01 AM.

If the contractor fails to complete the work necessary to reopen all lanes of USH 51 from Station 482+68 to Station 487+63 to through traffic within 21 calendar days of beginning construction activities, the department will assess the contractor \$1,000.00 in interim liquidated damages for each calendar day the contract work remains incomplete beyond 21 calendar days. An entire calendar day will be charged for any period of time within a calendar day that the road remains closed beyond 12:01 AM.

All work in ID 5390-00-72 (Station 487+23 to Station 554+64) must be completed prior to the start of Stage 2 of the adjacent ID 1007-10-72 project at the IH 39/STH 73 Interchange. Stage 2 is expected to begin July 15, 2015. Mill and overlay work in ID 5390-00-72 shall not take place until after the concrete replacement between Station 482+68 and Station 487+23 is completed.

If the contractor fails to complete all work on USH 51 from Station 487+23 to Station 554+64 to through traffic prior to 12:01 AM July 15, 2015, the department will assess the contractor \$1,000.00 in interim liquidated damages for each calendar day that the roadway remains closed after 12:01 AM, July 15, 2015. An entire calendar day will be charged for any period of time within a calendar day that the road remains closed beyond 12:01 AM.

Once construction activities begin at the intersection of USH 51 and USH 14, complete all work within 40 calendar days.

If the contractor fails to complete all work at the intersection of USH 51 and USH 14 within 40 calendar days of beginning construction activities, the department will assess the contractor \$1,000.00 in interim liquidated damages for each calendar day the contract work remains incomplete beyond 40 calendar days. An entire calendar day will be charged for any period of time within a calendar day that the road remains closed beyond 12:01 AM.

Once construction activities begin at the intersection of USH 14 and STH 26, complete all work within 30 calendar days.

If the contractor fails to complete all work at the intersection of USH 14 and STH 26 within 30 calendar days of beginning construction activities, the department will assess the contractor \$1,000.00 in interim liquidated damages for each calendar day the contract work remains incomplete beyond 30 calendar days. An entire calendar day will be charged for any period of time within a calendar day that the road remains closed beyond 12:01 AM.

Once construction activities begin at the intersection of USH 14 and Lexington Drive, complete all work within 30 calendar days.

If the contractor fails to complete all work at the intersection of USH 14 and Lexington Drive within 30 calendar days of beginning construction activities, the department will assess the contractor \$1,000.00 in interim liquidated damages for each calendar day the contract work remains incomplete beyond 30 calendar days. An entire calendar day will be charged for any period of time within a calendar day that the road remains closed beyond 12:01 AM.

The median of the USH 14 and Lexington Drive intersection will be allowed to be closed for the reconstruction of the intersection. Once the median is closed, complete all work necessary to reopen the median and all lanes to through traffic within 14 calendar days.

If the contractor fails to complete all work necessary to reopen the USH 14 and Lexington Drive median and all lanes to through traffic within 14 calendar days of beginning construction activities, the department will assess the contractor \$1,000.00 in interim liquidated damages for each calendar day the contract work remains incomplete beyond 14 calendar days. An entire calendar day will be charged for any period of time within a calendar day that the road remains closed beyond 12:01 AM.

Once construction activities begin at the intersection of USH 14 and Pontiac Drive, complete all work within 30 calendar days.

If the contractor fails to complete all work at the intersection of USH 14 and Pontiac Drive within 30 calendar days of beginning construction activities, the department will assess the contractor \$1,000.00 in interim liquidated damages for each calendar day the contract work remains incomplete beyond 30 calendar days. An entire calendar day will be charged

for any period of time within a calendar day that the road remains closed beyond 12:01 AM.

The median of the USH 14 and Pontiac Drive intersection will be allowed to be closed for the reconstruction of the intersection. Once the median is closed, complete all work necessary to reopen the median and all lanes to through traffic within 14 calendar days.

If the contractor fails to complete all work necessary to reopen the USH 14 and Pontiac Drive median and all lanes to through traffic within 14 calendar days of beginning construction activities, the department will assess the contractor \$1,000.00 in interim liquidated damages for each calendar day the contract work remains incomplete beyond 14 calendar days. An entire calendar day will be charged for any period of time within a calendar day that the road remains closed beyond 12:01 AM.

Once construction activities begin at the USH 14 and IH 39/90 interchange, complete all work within 100 calendar days.

If the contractor fails to complete all work at the interchange of USH 14 and IH 39/90 within 100 calendar days of beginning construction activities, the department will assess the contractor \$1,000.00 in interim liquidated damages for each calendar day the contract work remains incomplete beyond 100 calendar days. An entire calendar day will be charged for any period of time within a calendar day that the road remains closed beyond 12:01 AM.

Once construction activities begin at the intersection of USH 14 and Deerfield Drive, complete all work within 30 calendar days.

If the contractor fails to complete all work at the intersection of USH 14 and Deerfield Drive within 30 calendar days of beginning construction activities, the department will assess the contractor \$1,000.00 in interim liquidated damages for each calendar day the contract work remains incomplete beyond 30 calendar days. An entire calendar day will be charged for any period of time within a calendar day that the road remains closed beyond 12:01 AM.

If contract time expires prior to completing all work specified in the contract, additional liquidated damages will be affixed in accordance to standard spec 108.11.

#### **4. Lane Rental Fee Assessment.**

##### **A General**

The contract designates some lane and ramp closures to perform the work. No Lane Rental Fee Assessments will be charged for closing lanes or ramps during the permitted lane closure times. If a lane or ramp is closed outside of the permitted lane closure times, the contractor will be subject to Lane Rental Fee Assessments. If a lane or ramp is obstructed at any time due to contractor operations, it is considered a closure. The purpose of lane rental is to enforce compliance of lane and ramp restrictions and discourage unnecessary closures.

The contractor will incur a Lane Rental Fee Assessment for each lane and ramp closure outside of the permitted lane closure times. The contractor will not incur a Lane Rental Fee Assessment for closure of lanes or ramps during the permitted lane closure times. The designated times of lane and ramp closure are during the working hours shown in the tables below:

<b>Permitted Lane Closure Times</b>		
<b>Day of the Week</b>	<b>IH 39/90</b>	<b>USH 14</b>
Monday - Thursday	12:00 AM – 5:00 AM 8:00 PM – 11:59 PM	12:00 AM – 3:00 PM 6:00 PM – 11:59 PM
Friday	12:00 AM – 5:00 AM 10:00 PM – 11:59 PM	12:00 AM – 3:00 PM 6:00 PM – 11:59 PM
Saturday	12:00 AM – 7:00 AM 8:00 PM – 11:59 PM	12:00 AM – 3:00 PM 6:00 PM – 11:59 PM
Sunday	12:00 AM – 7:00 AM 10:00 PM – 11:59 PM	12:00 AM – 3:00 PM 6:00 PM – 11:59 PM

<b>Permitted Lane Closure Times</b>			
<b>Day of the Week</b>	<b>STH 26 Single Lane Closure</b>	<b>STH 26* Dual Lane Closure</b>	<b>USH 51</b>
Monday	12:00 AM – 6:00 AM 8:00 PM – 11:59 PM	12:00 AM – 6:00 AM 10:00 PM – 11:59 PM	8:00 PM – 11:59 PM
Tuesday - Friday	12:00 AM – 6:00 AM 8:00 PM – 11:59 PM	12:00 AM – 6:00 AM 10:00 PM – 11:59 PM	12:00 AM – 7:00 AM 8:00 PM – 11:59 PM
Saturday	12:00 AM – 6:00 AM 8:00 PM – 11:59 PM	12:00 AM – 6:00 AM 10:00 PM – 11:59 PM	12:00 AM – 7:00 AM
Sunday	12:00 AM – 6:00 AM 8:00 PM – 11:59 PM	12:00 AM – 6:00 AM 10:00 PM – 11:59 PM	None

\* Dual lane closures on STH 26 are only allowed in segments of STH 26 that have a minimum of three lanes in each direction.

<b>Permitted Ramp Closure Times</b>	
<b>Day of the Week</b>	<b>USH 14 to IH 39/90 Southbound On-Ramp USH 14 to IH 39/90 Northbound On-Ramp</b>
Monday - Friday	12:00 AM – 5:00 AM 11:00 PM – 11:59 PM
Saturday	12:00 AM – 5:00 AM 11:00 PM – 11:59 PM
Sunday	12:00 AM – 5:00 AM 11:00 PM – 11:59 PM

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 and ramp 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.1 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:

<b>Time Period in excess of specified time</b>	<b>Reduction per lane of traffic and per direction of traffic</b>	<b>Cumulative reduction of traffic and per direction of traffic</b>
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

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.

## **5. Traffic.**

### **General**

The following is a general overview of the traffic control and staging required throughout all stages of the project. The staging requirements are described further in the “Prosecution and Progress” article in these special provisions.

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

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

Submit a detailed traffic control plan to the engineer for approval if different than the traffic control plan provided in the plan set. Submit this plan ten days prior to the pre-construction conference.

Submit all traffic control change requests to the engineer at least 3 working days prior to an actual traffic control change. A request does not constitute approval.

IH 39/90, USH 51, USH 14 and STH 26 will remain open to through traffic at all times for the duration of this project except where noted below and in the Prosecution and Progress and Lane Rental Fee Assessment articles of these special provisions.

### **Traffic operations during all stages**

- Maintain two lanes of traffic in each direction at all times on IH 39/90\*\*.
- Maintain one lane of traffic in each direction at all times on USH 51 and USH 14\*\*.
- Maintain the existing number of lanes of traffic in each direction at all times on STH 26\*\*.
- Maintain traffic on ramps at all times\*\*.
- Maintain one lane of traffic in each direction for all sideroads.
- Maintain left turn bays at intersections as shown on the plans\*\*.
- Maintain mainline traffic on IH 39/90, USH 51, USH 14 and STH 26 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), ramps, USH 51, USH 14, STH 26 and a minimum lane width of 10-feet on all other roads.

*\*\* Lane closures allowed as specified in the Lane and Shoulder Closure section and Lane Rental Fee Assessment articles of these special provisions.*

**Traffic Operations – ID 5390-00-72**

- Maintain one lane in each direction on USH 51 outside of flagger controlled zones.
- Use flagging operations suitable for moving operations to construct asphalt patching, milling asphalt pavement, and paving asphalt pavement.
- Flagger controlled zone shall not extend beyond 1500 feet in length.

**Traffic Operations – ID 5390-00-73**

Unless otherwise noted work in one location may occur concurrently with work in another location.

- Asphalt Patching Areas
  - Flagging operations suitable of moving operations.
  - Flagger controlled work zones shall not extend beyond 1500 feet in length.
  - One lane in each direction outside of flagger controlled work zone and during non-work hours.
  - Flagger controlled work zone shall not extend through Kidder Road, CTH M East, or CTH M West intersection during asphalt patching operations.
- Kidder Road, CTH M East, and CTH M West intersections
  - Stage 1 – One lane in each direction on USH 51.
  - Stage 2 – One lane in each direction on USH 51.
  - Stage 3 – Flagging Operations during milling and paving operations. One lane in each direction when milling or paving operations are not occurring.
- USH 51 Bridge over Rock River Polymer Overlay
  - Stage 1 – One lane bridge on USH 51, traffic on northbound side of bridge.
  - Stage 2 – One lane bridge on USH 51, traffic on southbound side of bridge.
  - Temporary concrete barrier is required between traffic and the work area.
- Concrete Pavement Repair Areas south of CTH F
  - Flagger controlled work zone during daytime hours.
  - One lane in each direction during non-work hours.
  - Flagger controlled work zones shall not extend beyond 1000 feet in length.
  - Flagger controlled work zone shall not extend through CTH F intersection.
- Concrete Pavement Repair Areas north of CTH F
  - Flagger controlled work zone during daytime hours in repair areas.
  - One lane in each direction overnight in repair areas to allow concrete to cure.
  - Two lanes in each direction outside of flagger controlled work zones.
  - Flagger controlled work zones shall not extend beyond 1000 feet in length.
  - Flagger controlled work zone shall not extend through CTH F or STH 59 intersection.
  - Access must be maintained to Edgerton Fire Department at all times.
- Wisconsin and Southern Railroad Crossing
- USH 51 to be detoured for five days using IH 39 and USH 14.

- STH 59 intersection
  - One lane in each direction on all legs of USH 51/STH 59 intersection.
  - All way stop control will replace traffic signal during construction at intersection.
- Flashing beacon installation at USH 51 and Swift Street intersection
  - Install beacons using single lane closures during daytime hours.
  - Two lanes in each direction during non-work hours.
- Pavement Replacement Station 482+68 – Station 487+23
  - Stage 1 – One lane in each direction on existing northbound lanes. Flagging operations used during day of paving.
  - Stage 2 – One lane in each direction on proposed southbound lanes. Flagging operations used during day of paving.

#### **Traffic Operations – ID 5569-00-72**

- USH 14 and USH 51 Intersection
  - USH 14 traffic will be maintained on all existing lanes except as specified in the Shoulder Closures, Lane Closures and Roadway Closures section.
  - USH 51 traffic will be maintained on all existing lanes except as specified in the Shoulder Closures, Lane Closures and Roadway Closures section.
- USH 14 and STH 26 Intersection
  - USH 14 and STH 26 traffic will be maintained on all existing lanes except as specified in the Shoulder Closures, Lane Closures and Roadway Closures section.
- USH 14 and Lexington/Pontiac Drive Intersections
  - USH 14 traffic will be maintained on all existing lanes except as specified in the Shoulder Closures, Lane Closures and Roadway Closures section.
  - Lexington/Pontiac Drive will be maintained on all existing lanes except as specified in the Shoulder Closures, Lane Closures and Roadway Closures section.
- USH 14 and IH 39/90 Interchange
  - IH-39/90 traffic will be maintained on all existing lanes except as specified in the Shoulder Closures, Lane Closures and Roadway Closures section.
  - IH-39/90 northbound to USH 14 eastbound and IH-39/90 southbound to USH 14 westbound exit ramps will be maintained on one lane of traffic.
  - USH 14 entrance ramps to both IH-39/90 northbound and southbound traffic will be maintained on all existing lanes except as specified in the Shoulder Closures, Lane Closures and Roadway Closures section.
  - USH 14 traffic will be maintained on all existing lanes except as specified in the Shoulder Closures, Lane Closures and Roadway Closures section.

- USH 14 and Deerfield Drive Intersection
  - USH 14 eastbound traffic will be maintained on all existing lanes except as specified in the Shoulder Closures, Lane Closures and Roadway Closures section.
  - USH 14 westbound traffic will be maintained on one lane of traffic.

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 signing and roadway temporary 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. Temporary lane closures and/or halting of traffic within open roadways and pedestrian paths require flaggers and will not be permitted during Peak Travel Periods.

Conduct operations in a manner that will cause the least interference to traffic and pedestrian movements. Maintain vehicle and pedestrian access at all times to buildings within the limits of construction. Access to residential parcels may be restricted for up to one calendar day in order to construct concrete pavement repair in front of residential access points. Notify property owners at least two working days prior to closing their access point. Maintaining property access is incidental to the Traffic Control (project) bid item.

Do not at any time conduct construction operations in the median area and adjacent outside terrace area of IH 39/90 at the same time without the permission of the engineer.

Obtain approval from the engineer for the location of any ingress or egress access points for construction vehicles during peak travel periods.

### **Definitions**

The following definitions apply to this contract:

### **USH 51**

#### Night-Time Work Hours:

Monday, Tuesday, Wednesday, Thursday, Friday, Saturday 12:00 AM to 7:00 AM and 8:00 PM to 11:59 PM

## **USH 14**

### **Off-Peak Work Hours:**

Monday, Tuesday, Wednesday, Thursday: 12:00 AM to 3:00 PM and 6:00 PM to 11:59 PM

Friday: 12:00 AM to 3:00 PM and 6:00 PM to 11:59 PM

Saturday, Sunday: 12:00 AM to 3:00 PM and 6:00 PM to 11:59 PM

## **STH 26**

### **Night-Time Work Hours:**

Monday, Tuesday, Wednesday, Thursday: 12:00 AM to 6:00 AM and 8:00 PM to 11:59 PM

Friday: 12:00 AM to 6:00 AM and 8:00 PM to 11:59 PM

Saturday, Sunday: 12:00 AM to 6:00 AM and 8:00 PM to 11:59 PM

## **Lane and Shoulder Closure Times**

On IH 39/90 closures are allowed only at the times in the Lane Rental Fee Assessment article of these special provisions and the following text and tables. At all other times all lanes and shoulders shall be fully open to traffic.

### **Permitted Shoulder Closure Times**

DAY OF THE WEEK	PERMITTED SHOULDER CLOSURE TIMES
Monday – Thursday	12:00 AM to 11:59 PM
Friday	12:00 AM to 1:00 PM 7:00 PM to 11:59 PM
Saturday	12:00 AM to 11:59 PM
Sunday	12:00 AM to 12:00 PM 7:00 PM to 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.

Coordinate 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](mailto:jeffrey.gustafson@dot.wi.gov).

## **Lane Closures**

Single lane closures on IH 39/90 may be permitted during times shown in the Lane Rental Fee Assessment article of these special provisions for work required to complete the northbound off-ramp to USH 14 eastbound, the removal of the existing pavement for the existing northbound off-ramp to USH 14 westbound, the removal of the existing pavement for the existing southbound off-ramp to USH 14 eastbound and removal and placement of Type I signs on existing sign bridges. 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.

Single lane closures on USH 51 may be permitted during Night-Time Work Hours and as specified in the Lane Rental Fee Assessment article of these special provisions for all work required on USH 51 and

Single lane closures on USH 14 may be permitted during Off-Peak Work Hours and as specified in the Lane Rental Fee Assessment article of these special provisions for all work required on USH 14.

Single lane closures on STH 26 may be permitted during Night-Time Work Hours and as specified in the Lane Rental Fee Assessment article of these special provisions for all work required on STH 26.

Request approval from the engineer for all lane closures at least three working days in advance. 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 beginning of peak travel periods. Failure to obtain approval or reopen closed lanes at the required time shall be subject to penalties specified under the Prosecution and Progress and Lane Rental Fee Assessment articles of these special provisions.

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.

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

Provide arrow boards for use during all single lane closures in accordance 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.

### **Roadway Closures**

Maintain full access as shown in the Construction Staging section of the plans except as follows:

During the replacement of the Wisconsin and Southern railroad and railroad spur crossing USH 51 will be allowed to be closed for five calendar days. This will involve detouring the USH 51 traffic as specified in the plans.

During the replacement of the Union Pacific railroad crossing USH 14 westbound will be allowed to be closed for three calendar days. This will involve detouring the USH 14 westbound traffic as specified in the plans.

During the replacement of the Union Pacific railroad crossing USH 14 eastbound will be allowed to be closed for three calendar days. This will involve detouring the USH 14 eastbound traffic as specified in the plans.

During the overlay of the IH 39/90 northbound on-ramp from USH 14 arrange for two night closures to be utilized. This will involve detouring the IH 39/90 ramp traffic as specified in the plans. Additional law enforcement will be required at the USH 14 and STH 26 intersection during the detours. See the Lane Rental Fee Assessment article of these special provisions for the allowed ramp closure times.

During the grinding and overlay of the IH 39/90 southbound on-ramp from USH 14 arrange for two night closures to be utilized. This will involve detouring the IH 39/90 ramp traffic as specified in the plans. Additional law enforcement will be required at the USH 14 and STH 26 intersection during the detours. See the Lane Rental Fee Assessment article of these special provisions for the allowed ramp closure times.

Failure to reopen the roadway at the required times shall be subject to penalties specified under the Prosecution and Progress and Lane Rental Fee Assessment articles of these special provisions.

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.

#### **Local Traffic Access to Project**

Maintain local traffic access to during the construction of USH 51 and USH 14. Stage construction activities as required to maintain local traffic access.

Construct and maintain a local traffic access route on any section of roadway that will carry only local traffic conforming to the following criteria:

- Number of Lanes: One lane in each direction
- Lane Width: Minimum of ten foot width OR one lane roadway with flagging
- Driving Surface: Acceptable driving surfaces include asphaltic surface temporary, HMA pavement, concrete pavement and milled surfaces.

#### **Pedestrian Access**

Maintain sidewalk at all times except under direction of the engineer. In areas of sidewalk construction, provide a temporary surface for pedestrian access at all times. The temporary surface shall meet Americans with Disabilities Act Accessibility Guidelines (ADAAG) requirements and shall consist of conveyor belt, temporary asphaltic surface, any grade of concrete, skid resistant steel plating, or alternative material as approved by the engineer. Gravel or base course material is not acceptable. Maintaining sidewalk is considered incidental to the contract.

When sidewalks are closed provide clear signage to direct pedestrians to an alternate pedestrian route. All temporary curb ramps shall meet the requirements of the Americans with Disabilities Act Accessibility Guidelines (ADAAG) and have a temporary detectable warning field.

Maintain pedestrian crosswalks at all times crossing USH 51 and USH 14, as shown on the traffic control plans, unless otherwise directed by the engineer. Temporary crosswalks shall meet requirements of the Americans with Disabilities Act Accessibility Guidelines (ADAAG) and shall consist of temporary asphaltic surface, any grade of concrete, skid resistant steel plating, or alternative material as approved by the engineer. Gravel or base course material is not acceptable. Maintain ADA accessible pedestrian walkways that are free from mud, sand, and construction debris. The Temporary Crosswalk Access bid item is payment for maintaining crosswalks through the construction zone.

### **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. Concrete curb and gutter, concrete driveway, and concrete sidewalk construction shall be staged to maintain driveway access. 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.

Inform all adjacent property owners two working days prior to closing their access(es). Maintaining property access as described above is considered incidental to the Traffic Control (Project) bid item.

### **Advance Notification**

Notify the City of Edgerton Police Department, Fire Department and Director of Public Works, Town of Janesville; Town of Fulton; Town of Albion, City of Janesville Police Department, Fire Department and Director of Public Works, Mercy Hospital, Rock County Sheriff's Department and Highway Commissioner, Wisconsin State Patrol, Edgerton Post Office, Janesville Post Office, Edgerton Reporter and Janesville Gazette 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 City of Edgerton and City of Janesville School Districts and Janesville Transit two weeks prior to construction. Also notify them one week prior to traffic switches and lane closures.

The department has the authority to disallow any requested closures or width restrictions. 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 34 feet, USH 51 is 24 feet, USH 14 is 24 feet and STH 26 is 24 feet.

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

Store materials or park equipment a minimum of 34-feet from the edge of the IH 39/90 traveled way, 24 feet from the edge of the USH 51 traveled way, 24 feet from the edge of the USH 14 traveled way and 24 feet from the edge of the STH 26 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, three 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).

<b>Requested Closure or Restriction</b>	<b>Calendar or Business Days</b>
Project Start	14 calendar days
Lane closures (without width restriction)	3 business days
Lane closures (with width restriction)	14 calendar days
Construction stage changes	14 calendar days
Detours	14 calendar days
Local Street (side road) openings/closings	7 calendar days
Intersection cross-traffic closures	14 calendar days

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.

Coordinate with the engineer prior to any traffic detour to allow at least ten working days for the review of the detour route marker signing. The engineer shall contact the Southwest Region Madison Office Traffic Management Coordinator, Jeff Gustafson, (608) 516-6400.

### **Portable Intelligent Transportation System**

The department will be supplying and operating an intelligent transportation system during the construction of this project. The ITS system will consist of a portable video surveillance system and portable changeable message signs. These portable units will be parked inside and outside the construction limits to help assist law enforcement and the department with monitoring traffic conditions during the construction activities.

The department will coordinate the placement of these devices with the contractor. The contractor will be required to accommodate the placement of these devices within the project. The general accommodations include an area to park the devices out of the clear zone but still visible to traffic and access to and from the devices. Contact the Southwest Region Traffic Section, Graham Heitz at (608) 246-5362 for specific details regarding the intelligent transportation system.

### **Protection of Structures**

Bridge pier columns and sign bridge bases are to remain protected at all times throughout construction.

### **Construction Access**

Restrict work on IH 39/90 within closed shoulders as allowed by the plans or engineer. Provide and utilize temporary deceleration and acceleration lanes to/from the work zones. Construction of the temporary lanes shall be incidental to other items of work. All construction access is subject to approval of the engineer.

During the period when lane closures are not allowed on IH 39/90, access into the work zones from IH 39/90 must be made with a deceleration lane. The length of the deceleration lane is subject to review and approval by the engineer to ensure work zone traffic is exiting safely from IH 39/90. Construction traffic from the work zone entering live traffic on IH 39/90 must use an acceleration lane with a minimum length of 1000-feet. Construction traffic shall not exit the work zone between traffic control drums set for a lane closure. The acceleration lane entrance to IH 39/90 cannot be placed within 1500-feet of an interchange ramp.

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 when lane closures are in place for inside northbound and southbound 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 non-peak work periods.

## **6. Holiday Work Restrictions.**

Do not perform work on, nor haul materials of any kind along or across any portion of the highway carrying IH 39/90, USH 51, USH 14 or STH 26 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, April 3, 2015 to 6:00 AM Monday, April 6, 2015 for Good Friday and Easter;
- From noon Friday, May 22, 2015 to 6:00 AM Tuesday, May 26, 2015 for Memorial Day;
- From noon Friday, July 3, 2015 to 6:00 AM Monday, July 6, 2015 for Independence Day;
- From noon Friday, July 17, 2015 to 6:00 AM Monday, July 20, 2015 Edgerton Tobacco Heritage Days;
- From noon Friday, September 4, 2015 to 6:00 AM Tuesday, September 8, 2015 for Labor Day.

107-005 (20050502)

## **7. 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. There are known utility adjustments required for the construction project as noted below. Coordinate construction activities with a call to Diggers Hotline or a direct call to the utilities that have facilities in the area as required per statutes. Use caution to ensure the integrity of underground facilities and maintain code clearance from overhead facilities at all times. Adjustments in the location of certain described items may be necessary, as directed by the engineer, when it becomes evident that a utility conflict could occur.

### **Alliant Energy – Electric** **Project 5390-00-72/73**

Alliant Energy - Electric has overhead and underground facilities within the project area that are not anticipated to conflict with the project. However, there are overhead and underground facilities that are potential conflicts at the following locations:

- The existing electric pole line on the north side of Main Street at Station 17+30 and Station 18+20 is in conflict with construction of a proposed left turn lane on Main Street. New poles will be placed at approximately Station 17+25, 23' LT and Station 18+15, 27' LT. Relocation of pole line is anticipated to be complete by October 2014.
- The contractor shall work over the top of underground three phase electric wires at Station 425+50 LT. Lines are not anticipated to conflict with construction.

The field contact for USH 51 is Jason Hogan, 4902 N Biltmore Ln, Madison, WI 53718, (608) 458-4871, mobile: (608) 395-7395, email: [jasonhogan@alliantenergy.com](mailto:jasonhogan@alliantenergy.com)

### **Project 5569-00-72**

Alliant Energy-Electric has overhead and underground electric facilities within the project limits.

- Station 241+00 HEA to Station 242+00 HEA: The existing underground electric line will be lowered. This work is anticipated to be completed by October 2014.
- Electric services for signal work will need to be coordinated during construction.

The field contact for USH 14 is Jason Hogan, 4902 N Biltmore Ln, Madison, WI 53718, (608) 458-4871, mobile: (608) 395-7395, e-mail: [jasonhogan@alliantenergy.com](mailto:jasonhogan@alliantenergy.com).

### **Alliant Energy – Gas**

#### **Project 5390-00-72/73**

Alliant Energy - Gas has underground facilities within the project area that are not anticipated to conflict with the project. However, there are underground facilities that are potential conflicts at the following locations:

- The existing gas valve on USH 51 at Station 425+45 will need adjustment because of sidewalk replacement. The contractor may adjust the valve box to the new grade or may call Alliant Energy to adjust the valve box.
- The contractor shall work around the existing underground gas facility on USH 51 from Station 425+45 to Station 426+65 LT. A traffic signal base and traffic signal pull box will be placed in close proximity to the gas main at Station 435+40 LT. The contractor shall work around any gas facilities encountered during construction. All gas facilities in the vicinity are to be left intact and remain in place.
- The contractor shall work around the existing gas main on USH 51 from Station 483+90 to Station 484+15 LT and Station 484+85 to Station 485+05. All gas facilities in the vicinity of this area shall be left intact and remain in place.
- The contractor shall work around the existing underground gas lateral on the north side of Main Street at Station 18+00. All gas facilities in the vicinity of this area shall be left intact and remain in place.

The field contact for USH 51 is Jason Hogan, 4902 N Biltmore Ln, Madison, WI 53718, (608) 458-4871, mobile: (608) 395-7395, email: [jasonhogan@alliantenergy.com](mailto:jasonhogan@alliantenergy.com).

**Project 5569-00-72**

Alliant Energy-Gas has underground gas facilities within the project limits.

- Station 217+53 CRA – Station 218+33 CRA: The existing crossing at 217+53 CRA will be discontinued. A new crossing will be installed at 218+75 CRA. The existing line on the north side of USH 14 from 217+53 CRA to 218+53 CRA will be discontinued. A new line will be installed along the north right-of-way line. This work is anticipated to be completed by October 2014.
- Station 233+31 HWA: the existing gas mains will remain in place at this location. Contact Alliant Energy a minimum of 5 working days prior to beginning this work to provide a representative.

The field contact for USH 14 is Jason Hogan, 4902 N Biltmore Ln, Madison, WI 53718, (608) 458-4871, mobile: (608) 395-7395, e-mail: [jasonhogan@alliantenergy.com](mailto:jasonhogan@alliantenergy.com).

**American Transmission Company (ATC)****Project 5390-00-72/73 and 5569-00-72**

ATC has overhead facilities within the project area but there are no anticipated conflicts with this project.

The field contact is Rodger Ludlum, 5303 Fen Oak Drive, Madison, WI 53718, (608) 877-3516, mobile: (608) 622-9225, e-mail: [rludlum@atcllc.com](mailto:rludlum@atcllc.com).

**ANR Pipeline Company****Project 5390-00-72/73 and 5569-00-72**

ANR Pipeline Company has underground gas facilities within the project area but there are no anticipated conflicts with this project. The following procedures are to be followed:

- No ground disturbance shall be made within the TransCanada right-of-way or within 25 feet, measured at right angles, of our pipeline(s) except in the presence of our company representative.
- Notice of at least 72 hours in advance of construction must be provided. Contact the following TransCanada field representatives: Dick Mellom, Cell: (331) 256-0815
- TransCanada will arrange for a representative to be on site when work is occurring on or near the right-of-way area, or within 25' of the pipelines. After hours call (800) 447-8066.
- Hydro-vac or hand expose TransCanada' buried pipeline(s) prior to use of mechanical equipment within 15 feet of the pipeline(s).
- No part of powered equipment shall come within 3 feet of TransCanada pipelines, or according to applicable State or Federal requirements.
- No bucket, any attachment or load may be swung over TransCanada pipeline(s) where there is less than 24" of cover.
- Buried utilities should be designed to have at least 18 inches of clearance between their installed position and TransCanada Pipelines(s). As far as practicable, all buried utilities are to cross TransCanada' pipeline(s) at right angles.

- Proposed buried facilities where the function of the facility is reliant upon the elevation or slope of the facility, such as gravity flow sewers, will require a detail drawing of the new facility. The drawing must show the elevation of the new facility in relation to the elevation of the existing TransCanada pipeline(s) with the clearances identified.
- Bored crossings are an acceptable method for constructing a crossing of a TransCanada pipeline(s) for cables, pipes, drains, etc. provided the following conditions are met:
  - A drawing detailing the proposed bored crossing must be submitted to TransCanada for review and approval prior to construction. The items to be included on the drawing include; location of bore pits, alignment of the new facility, location of existing underground facilities, elevation profiles, etc.
  - The top and side (side closest to the drill) of all TransCanada pipelines or buried facilities must be exposed by hand digging or hydrovac.
  - Sight holes must be excavated at a minimum of 5 feet and a maximum of 10 feet from the side (nearest to the drill) of each buried facility, and parallel to the existing TransCanada buried facility.
  - Any bore pits required to set up and stage equipment shall be outside of TransCanada's buried facility right-of-way.
  - The new crossing facility should maintain a continuous depth or consistent profile and straight horizontal alignment across the full width of the TransCanada right-of-way.
  - The crossing facility must pass the TransCanada facility with a minimum clearance of 3 feet.
  - When existing TransCanada buried pipelines are exposed, resulting in an unsupported length of five times the diameter of the existing pipeline, as a minimum, the following requirements shall be met:
    - A layer of select bedding material, sand or a mixture of sand and crushed stone, shall be placed on the bottom of the trench 2 feet wider than the pipeline. This bedding shall be a minimum of 4" thick and be compacted.
    - Structural backfill sand shall then be carefully placed in 6 inch lifts and compacted up to the middle of the TransCanada pipeline.
    - The backfill, sand or native soil, above the pipe shall be free of rocks, cobbles and boulders and be compacted enough to prevent excessive settlement.
  - In the event of equipment crossings outside of existing road right-of-way or wherever our technician determines that inadequate cover exists, the contractor shall install and maintain temporary crossings of TransCanada' pipeline(s) at location(s) specified by TransCanada and that are/is perpendicular to TransCanada' pipeline(s). A minimum of 5 feet of total cover over TransCanada' pipeline(s) is required. If fill is required to obtain the minimum cover, a suitable material (preferably a bank run gravel material, or a combination of wooden mats and bank run gravel, or a TransCanada approved "Portable Land Bridge") will be placed on the existing surface of the ground over the pipeline(s) from a point 15 feet ahead of the pipeline crossing to a point 15 feet beyond the pipeline crossing. The crossing area should be a minimum of 20 feet wide so as to adequately bear the crossing

weights of the heavy equipment. All vehicular traffic will cross TransCanada' pipeline(s) at these designated locations only.

- The applicable state one-call system must be contacted at 811 in accordance to its advance notification requirements prior to any ground disturbance.
- WIDOT will be crossing one or more of TransCanada's transmission pipeline(s). These pipeline(s) are coated with a material to protect them from corrosion. If the excavation results in exposing TransCanada' pipeline(s) and there is any damage to the coating, you will be responsible for all costs, including any disposal costs, associated with the coating repair. If necessary, you will also be required, to halt its work activity while the coating material is being analyzed. The coating repair, including the removal of the original material, will be performed by TransCanada personnel or a qualified third party contractor selected by TransCanada. All work will be done in accordance to TransCanada's current engineering and environmental standards. During the course of the excavation work, contractor agrees to cooperate with TransCanada to ensure all federal, state and local environmental and safety regulations are followed.
- Should it be necessary for a TransCanada employee/representative to enter the excavation to inspect its pipeline(s), the excavation at the crossing shall be sloped, permitted safe with trench boxes, or shored in accordance to the requirements of the Occupational Safety and Health Administration.

The field contact is Dick Mellom, mobile: (331) 256-0815, e-mail: [dick\\_mellom@transcanada.com](mailto:dick_mellom@transcanada.com).

### **AT&T Wisconsin**

#### **Project 5390-00-73 and 5569-00-72**

AT&T Wisconsin has underground telephone and fiber optic facilities within the project limits.

- Station 233+21 HWA: the existing fiber optic will remain in place at this location. Contact AT&T Wisconsin a minimum of 5 working days prior to beginning this work to provide a representative.
- Station 243+50 HEA to Station 244+50 HEA: the existing fiber optic cable will be lowered to a depth of approximately 7 feet. It is anticipated that this work will require 5 working days to complete. Contact AT&T Wisconsin a minimum of 5 working days prior to beginning work in this area. It is anticipated that this work will require 5 working days to complete.
- Station 263+00HEA: the existing fiber optic cables are anticipated to remain in place at this location. Contact AT&T Wisconsin a minimum of 5 working days prior to beginning this work to provide a representative.

AT&T Wisconsin plans on adjusting the existing facilities during construction after the existing pavement is removed at the locations described above. Coordination with AT&T Wisconsin will be required for the completion of this work.

The field contact is Carol Anason, 316 W Washington Ave, Madison, WI 53703, (608) 252-2385, mobile: (920) 475-2799, e-mail: [ca2624@att.com](mailto:ca2624@att.com).

### **Century Link**

#### **Project 5390-00-72/73**

Century Link has underground communication facilities within the project area that are not anticipated to conflict with the project. However, there are underground facilities that are potential conflicts at the following locations:

- The existing underground communication facility along the west side of USH 51 from Station 255+30 to Station 260+30 LT is in conflict with the left turn lane that is being constructed. The line will be relocated outside the proposed grading limits.

The field contact is Jeff Turley, 224 Industrial Dr, North Prairie, WI 53153, (262) 392-5270, mobile: (414) 587-3811, email [jeff.turley@centurylink.com](mailto:jeff.turley@centurylink.com).

### **Charter Communications**

#### **Project 5390-00-72/73**

Charter has overhead and underground facilities within the project limits that are not anticipated to conflict with construction.

#### **Project 5569-00-72**

Charter Communications has underground facilities within the project area but there are no anticipated conflicts with this project.

The field contact is Randy Steurer, 1348 Plainfield Avenue, Janesville, WI 53545, (608) 373-7544, mobile: (608) 209-3194, e-mail: [rsteurer@chartercom.com](mailto:rsteurer@chartercom.com).

### **City of Edgerton – Water/Sanitary Sewer**

#### **Project 5390-00-72/73**

City of Edgerton Water/Sanitary Sewer has underground facilities within the project area that are not anticipated to conflict with the project. However, there are sanitary manholes, water valves, and water valve vaults that will need to be adjusted to meet the proposed pavement elevation. The contractor shall adjust any valve or manhole that needs adjustment as part of this contract.

The City of Edgerton plans to extend watermain and sanitary sewer near the USH 51 and Thronson Drive intersection. The work is anticipated to take 3 working days and be complete by April 15, 2015 and prior to the USH 51 traffic staging.

The field contact is Robert Amundson, 908 Mildred Ave, Edgerton, WI 53534, (608) 751-4190, mobile: (608) 290-8592, email: [waterdept@cityofedgerton.com](mailto:waterdept@cityofedgerton.com).

### **City of Janesville – Sanitary Sewer**

#### **Project 5569-00-72**

City of Janesville has underground sanitary sewer facilities within the project limits. The sanitary manholes will be adjusted as part of this project.



The field contact is Craig Thiesenhusen, 123 East Delavan Drive, Janesville, WI 53546, (608) 373-3471, mobile: (608) 931-8010, e-mail: [thiesenhusenc@ci.janesville.wi.us](mailto:thiesenhusenc@ci.janesville.wi.us).

### **City of Janesville – Signals**

#### **Project 5569-00-72**

City of Janesville has existing traffic signals within the project limits. Modifications to the existing facilities are included in this project. See project plans for details.

The field contact is Dennis Ryan, 18 North Jackson Street, Janesville, WI 53547, (608) 755-3171, mobile: (608) 289-2146, e-mail: [ryand@ci.janesville.wi.us](mailto:ryand@ci.janesville.wi.us).

### **City of Janesville – Water**

#### **Project 5569-00-72**

City of Janesville has underground water facilities within the project limits. The water valves and manholes will be adjusted as part of this project.

The City of Janesville Water Utility will insulate the watermain at Station 233+21 'HWA' prior to the completion of the storm sewer. Contact the City of Janesville Water Utility a minimum of 5 working days prior to requiring the insulation.

At any time that construction activities are within 2 feet of the City of Janesville Water Utility, a representative from the City of Janesville is required. Contact the City of Janesville a minimum of 5 working days prior to any activities anticipated to be within 2 feet of the water utility.

The field contact is Craig Thiesenhusen, 123 East Delavan Drive, Janesville, WI 53546, (608) 373-3471, mobile: (608) 931-8010, e-mail: [thiesenhusenc@ci.janesville.wi.us](mailto:thiesenhusenc@ci.janesville.wi.us).

### **Frontier Wisconsin**

#### **Project 5390-00-72/73**

Frontier Wisconsin has underground and overhead facilities within the project area that are not anticipated to conflict with the project. However, there are underground facilities that are potential conflicts at the following locations:

- The existing underground communication facility along the west side of USH 51 from Station 305+40 to Station 310+20, and along the east side of USH 51 from Station 310+20 to Station 311+25 will be in conflict with the widening and storm sewer required to add a northbound and southbound left turn lane on USH 51. The facility will be relocated to approximately 5' east of the west right-of-way line from Station 303+20 to Station 306+00 and 2' east of the west right-of-way line from Station 306+00 to Station 310+25. A new underground facility will be placed under USH 51 at Station 310+25 at a depth of 8' under the existing roadway pavement. A new underground facility will be placed under Hurd Road from Station 310+25 to Station 311+50 at a depth of approximately 5' along the existing east right-of-way line of USH 51. Relocation of the underground communication facility is anticipated to be complete by December 15, 2014.

The field contact is Brian Van Ooyen, 451 Broadway Dr, Sun Prairie, WI 53590, (608) 837-1151, mobile: (608) 509-5051.

**Koshkonong Sanitary District**

**Project 5390-00-72/73**

Koshkonong Sanitary District has underground facilities within the project area that are not anticipated to conflict with the project.

The field contact is David Houfe, 328 Ellendale Road, Edgerton, WI 53534, (608) 868-7191, mobile: (608) 774-0490.

**Northern Natural Gas**

**Project 5390-00-72/73**

Northern Natural Gas has underground facilities within the project area that are not anticipated to conflict with the project.

The field contact is Scott McPhail, 5557 County Road D, Platteville, WI 53818, (608) 778-8515, email: [scott.mcphail@nngco.com](mailto:scott.mcphail@nngco.com).

**Rock County Co-op**

**Project 5390-00-72/73**

Rock County Co-op has underground and overhead facilities within the project area that are not expected to conflict with the project.

The field contact is Lynn Maier, 2815 Kennedy Road, Janesville, WI 53547-1758, (608) 752-4550, mobile: (608) 289-4149, email: [lynnM@rock.coop](mailto:lynnM@rock.coop).

**WE Energies-Gas**

**Project 5569-00-72**

WE Energies-Gas has underground gas facilities within the project area but there are no anticipated conflicts with this project.

The field contact is Gerald Thiede, 1251 W Main Street, Sun Prairie, WI 53590, (920) 262-6881, mobile: (608) 604-3865, e-mail: [gerald.thiede@we-energies.com](mailto:gerald.thiede@we-energies.com).

**Windstream (Mcleod/KDL)**

**Project 5390-00-72/73**

Windstream KDL has facilities within the project area that are not anticipated to conflict with the project.

**Project 5569-00-72**

Windstream has underground facilities within the project limits. All work described below

- Stations 83+39 DSR to 84+10 DSR: Windstream will relocate the existing handhole and bore in new duct to avoid conflict with new turn lanes. It is anticipated that this work will require 12 working days to complete.

- Station 81+58 DSA: If necessary Windstream will lower fiber to avoid conflict with new median and signal work. Work to be done during median construction. It is anticipated that this work will require 2 working days to complete.
- Stations 918+07 HAA, 255+96 HWAN, 256+09 HEA: Windstream to lower fiber from conflict of proposed on/off ramps. Work to be performed at time of ramp construction, when concrete and asphalt have been removed. It is anticipated that this work will require 2 working days to complete.
- Stations 216+00 CRA to 219+02 CRA: Windstream will move the existing handhole in proposed turn lane and will lower fiber avoiding conflicts with sewer lateral and turn lane construction. Lowering to be performed at time of turn lane construction. It is anticipated that this work will require 2 working days to complete.
- Station 233+21 HWA: Windstream will lower fiber avoiding conflict with new storm sewer lateral construction. It is anticipated that this work will require 2 working days to complete.
- 43+39 LNA: Windstream will lower fiber avoiding conflicts with proposed new median and storm sewer. Work to be completed at time of construction for storm sewer and median. It is anticipated that this work will require 2 working days to complete.
- 53+07 PNA: If necessary Windstream will lower fiber to avoid conflict with new median and signal work. Work to be done during median construction. It is anticipated that this work will require 2 working days to complete.
- Stations 251+80 HWA to 253+30 HWA: If necessary, Windstream will lower fiber and duct at time of ramp removal. It is anticipated that this work will require 2 working days to complete.
- Stations 255+18 HWAN to 255+96 HWAN: Windstream will lower fiber and duct avoiding conflict with new on-ramp and storm sewer. Work to be performed at time of ramp construction, when concrete and asphalt have been removed. It is anticipated that this work will require 2 working days to complete.
- Station 256+09 HEA: If necessary, Windstream will lower fiber and duct to avoid conflict with median construction. Lowering to be performed at time of median construction. It is anticipated that this work will require 2 working days to complete.
- Station 926+25 HDAL: Windstream will lower fiber and duct avoiding conflict of southbound off-ramp construction. Work to be performed at time of ramp construction, when concrete and asphalt have been removed. It is anticipated that this work will require 2 working days to complete.

Windstream plans on adjusting the existing facilities described above during construction after the existing pavement is removed at the locations described above. Coordination with Windstream will be required for the completion of this work.

The field contact is Jim Kostuch, 13935 Bishops Drive, Brookfield, WI 53188, (262) 792-7938, e-mail: [james.kostuch@windstream.com](mailto:james.kostuch@windstream.com).

**WisDOT Signals**  
**Project 5569-00-72**

WisDOT has underground electric facilities within the project limits.

- Stations 216+25 HWA to 218+50 HWA: It is anticipated that the existing WisDOT STOC will remain in place. It will be required to work around the fiber optic line.

The contact is Dean Beekman, (414) 227-2154, e-mail: [dean.beekman@dot.wi.gov](mailto:dean.beekman@dot.wi.gov).

**8. Municipality Acceptance of Sanitary Sewer and Water Main Construction.**

Both the department and City of Edgerton personnel will inspect construction of sanitary sewer and water main under projects 5390-00-72 and 5390-00-73. However, construction staking, testing, and acceptance of the sanitary sewer and water main construction will be by the City of Edgerton.

Both the department and City of Janesville personnel will inspect construction of sanitary sewer and water main under project 5569-00-72. However, construction staking, testing, and acceptance of the sanitary sewer and water main construction will be by the City of Janesville.

105-001 (20150630)

**9. Referenced Construction Specifications.**

Construct the sanitary sewer and water main work conforming to the “Standard Specifications for Sewer and Water Construction in Wisconsin, latest edition.” If there is a discrepancy or conflict between the referenced specification and the standard specifications regarding contract administration, part 1 of the standard specifications governs.

**10. Other Contracts.**

Project 1007-10-72, IH 39/USH 51/STH 73 Interchange (Dane County Line – East Church Road) has an anticipated construction start date of May 2015 and is anticipated to have a completion date of October 2015 and is located adjacent to this project. The work under this contract will need to be coordinated with Project 5390-00-72.

Project 1009-91-52 will add railroad gates and lights at the Wisconsin and Southern Railroad Crossing with USH 51 prior to May 15, 2015. These railroad gates and lights shall remain in place with this contract. The work under this contract may need to be coordinated with Project 5390-00-73.

Project 5390-00-50 will replace the Wisconsin and Southern Railroad crossing tracks and panels at the crossing of USH 51, south of STH 59, in the City of Edgerton. The work under this contract will need to be coordinated with Project 5390-00-73.

Projects 5569-00-50, 5569-00-51 and 5569-00-53 will replace the Union Pacific crossing tracks and panels, upgrade the equipment and install interconnect conduit at the crossing of USH 14, near the Newville Road intersection. The work under this contract will need to be coordinated with Project 5569-00-72.

Projects 5569-00-52 and 5569-00-54 will upgrade the equipment and install interconnect conduit at the Wisconsin and Southern Railroad crossing of USH 14, at the intersection of Kennedy Road. The work under this contract will need to be coordinated with Project 5569-00-72.

Project 5569-00-73 (USH 14, IH 39 to STH 11) has an anticipated construction start date of April 2015 and is anticipated to have a completion date of September 2015 and is located adjacent to this project. The work under this contract will need to be coordinated with Project 5569-00-72.

## **11. Railroad Insurance and Coordination.**

### **A Description**

Comply with standard spec 107.17 for all work affecting WSOR and UPR property and any existing tracks. The railroad will provide three days of flagging at its expense for each of the following railroad crossings listed in A.1.

#### **A.1 Railroad Insurance Requirements**

In addition to standard spec 107.26, provide railroad protective liability insurance coverage as specified in standard spec 107.17.3. Insurance is filed in the name of WSOR.

Provide the second policy in the name of UPR.

Notify evidence of the required coverage, and duration to Roger Schaalma at WSOR, 1890 East Johnson Street, Madison, WI 53704. Include the following information on the insurance document:

Project 5569-00-72  
Route Name US 14 at Kennedy Road, Rock County  
Crossing ID 392371R  
Railroad Subdivision Madison  
Railroad Milepost 102.17

Project 5569-00-72  
Route Name Rotamer Road, Rock County  
Crossing ID 392368R  
Railroad Subdivision Madison  
Railroad Milepost 103.54

Project 5390-00-73  
Route Name US 51, Rock County  
Crossing ID 391658M  
Railroad Subdivision Madison  
Railroad Milepost 113.75

Notify evidence of the required coverage, and duration to John Venice at UPR, 101 North Wacker Drive Suite 1920, Chicago IL 60606. Include the following information on the insurance document:

Project 5569-00-72  
Route Name US 14, Rock County  
Crossing ID 178680S  
Railroad Subdivision Janesville  
Railroad Milepost 94.53

Project 5569-00-72  
Route Name Memorial Drive, Rock County  
Crossing ID 177815S  
Railroad Subdivision Janesville  
Railroad Milepost 92.27

## **A.2 Work by Railroad**

The railroad will perform the work described in this section, except for work described in other special provisions and will be accomplished without cost to the contractor.

### Project 5569-00-72

At Crossing ID 392371R on US 14 at Kennedy Road, WSOR will complete interconnect wiring within the railroad bungalow.

At Crossing ID 392368R on Rotamer Road, WSOR will complete the electrical wiring for the contact closure inside the railroad bungalow.

At Crossing ID 178680S on US 14, UPR will complete the interconnect wiring within the railroad bungalow, and replace the crossing surface.

At Crossing ID 177815S on Memorial Drive, UPR will complete the electrical wiring for the contact closure inside the railroad bungalow.

### Project 5390-00-73

At Crossing ID 391658M on US 51, WSOR will complete the interconnect wiring within the railroad bungalow, and replace the crossing surface.

The contractor will provide conduit and cable up to each of the railroad bungalows. The contractor will leave the required length of cable plus an additional 20-feet of slack coiled in the nearest cabinet or pull box to be installed into each bungalow. The railroads will each install this cable so that it enters the railroad bungalow and will terminate the cable on the railroad notification relay.

### **A.3 Names and addresses of Railroad Representatives for Consultation and Coordination**

Contact Roger Schaalma, Superintendent of Maintenance of Way, Wisconsin and Southern Railroad Co., 1890 East Johnson Street, Madison, WI 53704; TELEPHONE (414) 438-8820; Ext. 4201; FAX (608) 243-9225; email [rschaalma@watcocompanies.com](mailto:rschaalma@watcocompanies.com) for consultation on railroad requirements during construction.

Contact John Venice, Manager Special Projects – Industry and Public Projects Engineering Department, 101 North Wacker Drive – Suite 1920, Chicago, IL 60606, TELEPHONE (312) 777-2043, FAX (402) 233-2769, email [jnvenice@up.com](mailto:jnvenice@up.com), for consultation on railroad requirements during construction.

Amend standard spec 108.4 to include the railroad in the distribution of the initial bar chart, and monthly schedule updates. The bar chart shall specifically show work involving coordination with the railroad.

### **A.4 Temporary Grade Crossing**

If a temporary grade crossing is desired, submit a written request to the railroad representative named in A.3 several weeks prior to the time needed. Approval is subject to the discretion of the railroad. The department has made no arrangements for a temporary grade crossing.

### **A.5 Train Operation**

#### **Project 5569-00-72**

At Crossing ID 392371R on US 14 at Kennedy Road, four through freight trains operate daily through the construction site. Through freight trains operate at up to 25 mph. Switching movements are not expected at the crossing.

At Crossing ID 392368R on Rotamer Road, four through freight trains operate daily through the construction site. Through freight trains operate at up to 25 mph. Switching movements are not expected at the crossing.

At Crossing ID 178680S on US 14, one through freight trains operates weekly through the construction site. Through freight trains operate at up to 10 mph. Switching movements are not expected at the crossing.

At Crossing ID 177815S on Memorial Drive, six through freight trains operate daily through the construction site. Through freight trains operate at up to 10 mph. Two additional train switching movements are expected at the crossing daily.

#### Project 5390-00-73

At Crossing ID 391658M on US 51, four through freight trains operate daily through the construction site. Through freight trains operate at up to 25 mph. Switching movements are not expected at the crossing.

#### **A.6 Rail Security Awareness and Contractor Orientation**

Prior to entry on railroad right-of-way, the contractor shall arrange for on-line security awareness and contractor orientation training and testing, and be registered through “e-RAILSAFE” for all contractor and subcontractor employees working on railroad right-of-way. See e-railsafe.com “Information”. The security awareness and contractor orientation training is shown under the railroad’s name. The department has secured right of entry to railroad property; neither the contractor nor subcontractors or their employees will be required to sign a right-of-entry form. The security awareness and contractor orientation certification is valid for 2 year(s) and must be renewed for projects that will carry over beyond the 2 year period. Contractor and subcontractor employees shall wear the identification badge issued by e-RAILSAFE when on railroad right-of-way. Costs associated with training and registration are incidental to other items in the contract.

## **12. Erosion Control.**

*Add the following to standard spec 107.20:*

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

Immediately re-topsoil graded areas, as designated by the engineer, after grading is completed within those areas. Seed, fertilize, and mulch or erosion mat all topsoiled areas within five working days after placement of topsoil.

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 immediately after performing grading operations, unless temporary erosion control measures are specified or authorized by the engineer.



### 13. Public Convenience and Safety.

*Revise standard spec 107.8(6) as follows:*

Check for and comply with local ordinances governing the hours of operation of construction equipment. Do not operate motorized construction equipment from 8:00 PM until the following 7:00 AM, within the City of Edgerton, and from 7:00 PM until the following 7:00 AM, within the City of Janesville, unless prior written approval is obtained from the engineer. Construction activities shall not take place on Sunday with the City of Edgerton without written approval of the City of Edgerton and the engineer.  
107-001 (20060512)

### 14. Contract Award and Execution.

*Add the following to standard spec 103:*

#### **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.

<b>Workshop</b>	<b>Timeframe</b>
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.**

- 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:

- Review the project special provisions.
- 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
- 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.

- 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)
- 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:

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

## 15. 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:

#### Project 5390-00-73

<b>Department-Furnished Items</b>
Cabinet, Pole-Mounted, CCTV
(2) Encoder, video mpeg 2/4 (hardened) 1-channel
(2) Camera, outdoor, barrel, internet protocol
Switch, 9-port with dual SM ports
Cellular modem, 4G LTE, with 6-inch antenna
Antenna, cellular, LTE
Camera bracket, signal pole

#### Project 5569-00-72

<b>Department-Furnished Items</b>
(4) Cabinet, Pole-Mounted, CCTV
(4) Encoder, video mpeg 2/4 (hardened) 1-channel
(4) Camera, outdoor, barrel, internet protocol
(4) Cellular modem, 4G LTE, with 6-inch antenna
(4) Antenna, cellular, LTE
(4) Camera bracket, wood pole

Pick-up small department-furnished equipment, such as communications devices, cameras, 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.

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.

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.

## **16. Maintaining Drainage.**

Maintain drainage at and through worksite during construction in accordance to standard spec 107.22, standard spec 204, and standard spec 520.

Use existing inlets, existing storm sewer, temporary inlets, temporary storm sewer pipe, and bypass drainage to maintain existing subsurface drainage.

If dewatering or pumping is required, the pumped water shall be filtered through a media such as a filter bag or allowed to settle in a sediment basin constructed as detailed in the plans prior to release into a live stream. The discharge shall be dissipated as to not scour any surface area. This operation is incidental to the task requiring dewatering, including, but not limited to; pipe, inlet and manhole removal; pipe, inlet and manhole installation; and temporary pipe and inlet installation and removal.

## **17. Project Communication Enhancement Effort.**

Use this Project Communication Enhancement Effort (PCEE) tools 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 PCEE Manual available at the department's Highway Construction Contract Information (HCCI) web site at:

<http://roadwaystandards.dot.wi.gov/standards/admin/pcee-user-manual.doc>

## **18. Notice to Contractor, Asbestos Containing Materials on Structure.**

John Roelke, License Number AII-119523, inspected Structure B-53-0145 for asbestos on July 21, 2015. Regulated Asbestos Containing Material (RACM) was found on this structure in the following locations and quantities: non-friable asbestos in the caulk at the parapet expansion joints, 88 locations at 4 feet long by 1 inch wide.

A copy of the inspection report is available from: Jennifer Grimes, (608) 884-1147. 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 in accordance to standard spec 107.24. Keep material wet until it is abated.  
107-120 (20120615)

## **19. Notice to Contractor – Contamination Beyond Construction Limits.**

The department completed testing for soil and ground water contamination for locations within this project where excavation is required. Testing indicated that petroleum-contaminated soil is present at the following site(s):

1. Station 18+60 to Station 20+00 from 0' feet LT of centerline to 33' feet LT of CTH F centerline.

The contaminated soils at the above sites are expected to be beyond the excavation limits necessary to complete the work under this project. Control construction operations at these locations to ensure that they do not extend beyond the excavation limits indicated in the plans. If contaminated soils are encountered at these sites or elsewhere on the project during excavation, terminate excavation in the area and notify the engineer.

The Hazardous Materials Report is available by contacting: Jennifer Grimes (608) 246-3823, [jennifer.grimes@dot.wi.gov](mailto:jennifer.grimes@dot.wi.gov).  
107-100 (20050901)

## **20. 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). In accordance to TMP requirements, the department will 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 I-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 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](mailto:Johnny.Gerbitz@dot.gov)
- Rich Cannon, I-39 CMT Traffic, [Richard.Cannon@dot.wi.gov](mailto:Richard.Cannon@dot.wi.gov)
- Jeff Gustafson, I-39 CMT Traffic, [Jeffrey.Gustafson@dot.wi.gov](mailto:Jeffrey.Gustafson@dot.wi.gov)

## **21. Notice to Contractor, New or Revised Temporary Construction Access to I-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 I-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 I-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 I-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 I-39/90. The request will be reviewed, and if warranted, concurred

with designated I-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](mailto:Johnny.Gerbitz@dot.gov)
- Rich Cannon, I-39 CMT Traffic, [Richard.Cannon@dot.wi.gov](mailto:Richard.Cannon@dot.wi.gov)
- Jeff Gustafson, I-39 CMT Traffic, [Jeffrey.Gustafson@dot.wi.gov](mailto: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.

## **22. Electrical Work By Others.**

Under project 5569-00-72, the Wisconsin Department of Transportation Southwest Region Electrical Unit will perform the following work for WisDOT maintained traffic signal systems:

- Approve and authorize electrical service installation applications.
- Furnish equipment for installation including signal cabinets, fiber optic cable, microwave detectors, adaptive signal equipment and monotube poles and arms.
- Observe cabinet assembly, testing and installation.
- Provide all permanent traffic signal timing.

## **23. Street Lighting and Traffic Signal Systems – General.**

All work shall be in accordance to the plans and the standard specifications and these special provisions.

### Contacts and Facility Location Information

For the purposes of this contract the primary point of contact for WisDOT Southwest Region traffic signals will be Graham Heitz / [graham.heizt@dot.wi.gov](mailto:graham.heizt@dot.wi.gov) / (608) 246-5362 / 2101 Wright Street, Madison, WI.

Provide for equipment pick-up, salvaged equipment delivery and cabinet assembly in either of the following locations:

- Southwest Region Electrical Shop – 2101 Wright Street, Madison, WI
- Southwest Region Project Field Office – 111 Interstate Boulevard, Edgerton, WI

For the purposes of this contract the primary point of contact for City of Janesville traffic signals and street lighting will be Dennis Ryan / [ryand@ci.janesville.wi.us](mailto:ryand@ci.janesville.wi.us) / (608) 755-3171 / 18 N Jackson St, Janesville, WI 53548

Provide for salvaged equipment delivery to the following location:

- City of Janesville Services Center – 2200 North USH 51, Janesville, WI

For the purposes of this contract the primary point of contact for City of Edgerton traffic signals and street lighting will be Tom Hartzell / 608-884-3341

Provide for equipment storage and salvaged equipment delivery to the following location:

- Edgerton City Garage – 315 West High Street, Edgerton, WI

#### WisDOT Maintained Traffic Signals

This contract includes electrical work being completed at the following locations:

##### **USH 14 Corridor**

- USH 51
- Newville Road
- Kennedy Road
- Bell Street
- STH 26 (Milton Avenue)
- Lexington Drive
- Pontiac Drive
- IH 39 Southbound Ramp
- IH 39 Northbound Ramp
- Deerfield Drive
- Wright Road

##### **STH 26 Corridor**

- Morse Street
- Kettering Drive

This contract includes mobilization bid items to provide both urgent and routine traffic signal maintenance work at the above 13 intersections and associated systems, for the duration of the project. Refer to the Mobilization item for additional provisions.

#### City of Janesville Maintained Traffic Signals

This contract includes electrical work being completed at the following locations:

- Pontiac Drive and Pontiac Place
- Deerfield Drive and Lucey Drive

Work included at Deerfield Drive and Lucey Drive intersection consists of installing a preemption detector loop 300-feet south of Lucey Drive on the northbound approach of Deerfield Drive. Contact the City of Janesville to arrange field locating of this loop and terminating cables in the cabinet. This work is not depicted in the plan.

#### City of Janesville Maintained Street Lighting

This contract includes electrical work being completed adjacent to and along USH 14 throughout the project limits. Work included under this contract consists primarily of removing existing city lighting circuits from WisDOT maintained traffic signals. Coordinate with the city in advance of construction to determine existing service locations, conductor sizes and existing circuiting.

Work also includes replacing existing high pressure sodium fixtures to LED type from the first light east of STH 26 along USH 14 through the Deerfield Drive intersection. Removal of existing fixtures and installation of new LED fixtures are included in the miscellaneous quantities.

#### City of Edgerton Owned and Maintained Traffic Signals

Work under this contract consists of removals, reconstruction and electrical service modifications indicated in the plans for the City of Edgerton owned and maintained traffic signals at the following intersections:

- USH 51 and STH 59

#### Project Schedule

This project will require special attention to maintaining an aggressive schedule in order to complete work as required in the prosecution and progress article. Compile all material submittals within 2-weeks of contract award and provide to the engineer for review and approval. Approvals must be completed as early as possible to provide adequate lead time from material suppliers.

Refer to the prosecution and progress article in these special provisions for requirements for traffic control and coordination regarding the traffic signal cabinet removal and replacement.

#### Electrical Services

This contract includes the removal and installation of a significant number of electrical services throughout the project limits. Identify each electrical service location by customer name and timeframe for removal/installation. Provide written documentation of the service identification to the engineer, including updates as construction progresses.

#### Existing Electrical Systems

This contract includes performing retro-fit electrical work at existing installations. Anticipate effort to perform verification of existing systems including conduit connections, cable-fill capacity, cabling patterns and circuit routing. Portions of existing electrical facilities were unmapped and have been shown as a best fit of as-built mapping and field survey. Document discrepancies in field conditions and provide to the engineer. Consider work described above to be incidental to the work items included in this contract.

#### Document Existing Equipment

This contract includes salvage and reinstallation of a significant amount of existing traffic signal and lighting equipment. Document the location, condition, attachments, cable

routing for all existing equipment noted for removal or salvage. Include durable labels to track existing equipment. Provide documentation of existing equipment to the engineer. Provide a list of any equipment noted for salvage that is in poor condition or otherwise unable to reinstall.

Salvage and deliver all City of Janesville equipment deemed of suitable condition. Confirm with WisDOT for salvaged equipment. Consider work described above to be incidental to the work items included in this contract.

#### Traffic Control Devices

This contract includes electrical work to be completed under traffic control devices shown in the plans; and also includes work in areas where no traffic control devices are explicitly shown. Confirm traffic control requirements prior to starting work in areas where roadway reconstruction is not taking place. The engineer shall direct the necessary traffic control devices and staging requirements for areas where electrical work is shown outside of roadway work zones. Undistributed traffic control items are included for these areas.

#### Rail Road Coordination

This contract includes two intersections with rail road crossings. Refer to the pertinent articles in these special provisions for additional information.

#### Pedestrian Push Button Signs

This contract includes replacement and installation of new pedestrian push buttons at several intersections. Furnish and install signs in accordance to the pertinent provisions of standard spec 637, decal-type signs will not be accepted. Signs and mounting materials and installation are to be considered incidental to the pedestrian push button bid item. Furnish a list of signs for the proposed installations for approval by the engineer prior to ordering materials. The list of signs shall indicate the sign message, arrow type and arrow direction for each push button location at all intersections.

#### Queue Pre-emption Loops – IH 39/90 Interchange Ramps

The plans and miscellaneous quantities for the intersections of USH 14 and IH 39/90 southbound and northbound Ramps indicate that queue pre-emption detector loops shall be placed along the off-ramps; but do not show a specific location. The proposed location for these loops was not known at the time that this proposal was finalized; however will be selected prior to the start of construction. Contact the engineer prior to starting all work to have the locations of the queue pre-emption loops identified. The engineer will authorize the use of undistributed bid items to account for additional work items including: electrical, removals, pavement, erosion control, landscaping and traffic control items needed to install the loops.

## **24. Coordination with Businesses.**

The contractor shall arrange and conduct a meeting between the contractor, the department, local officials and business people to discuss the project schedule of operations including vehicular and pedestrian access during construction operations. Hold

the first meeting prior to the start of work under this contract and hold two meetings per month thereafter.

108-060 (20030820)

**25. Clearing and Grubbing, Items 201.0105, 201.0120, 201.0205, and 201.0220.**

*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 (fluorescent 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**

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

Except as provided in sub. (3), no person may do any of the following:

- 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.
- Move any regulated item under sub. (2) out of an emerald ash borer regulated area that is identified in 7CFR 301.53-3 and located in this state.
- Note: the United States Department of Agriculture-Animal and Plant Health Inspection Service (USDA-APHIS) periodically updates the list of regulated areas in 7CFR 301.53-3. Subsection (1) applies to new regulated areas as those areas are identified in the CFR.
- Regulated items.

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

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

### **Regulatory Considerations**

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

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

#### **Chipped ash trees**

- May be left on site if used as landscape mulch within the project limits. If used as mulch on site, chips may not be applied at a depth greater than standard mulch applications as this will impede germination of seeded areas.
- May be buried on site within the right-of-way in accordance to standard spec 201.3 (14).
- May be buried on adjacent properties to projects within the quarantined zone with prior approval of the engineer in accordance to standard spec 201.3 (15).
- May be trucked to a licensed landfill within the quarantined zone with the engineer's approval in accordance to standard spec 201.3 (15).

## **26. 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.

## **27. Select Borrow.**

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

### **Material**

Furnish and use material that consists of granular material meeting the following requirements: The material shall contain maximum of 15% by weight passing the No. 200 sieve.

208-005 (20031103)

## **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, 305, and 310 as modified here in this special provision. Apply this special provision to material placed under all of the Base Aggregate Dense and Base Aggregate Open Graded bid items, except do not apply this special provision to material classified as reclaimed asphaltic pavement placed under the Base Aggregate Dense bid items.

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

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

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

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

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



## **A.2 Contractor Testing for Small Quantities**

(1) The department defines a small quantity, for each individual Base Aggregate bid item, as a plan quantity of 9000 tons or less of material as shown in the schedule of items under that bid item.

(2) The requirements under this special provision apply equally to a small quantity for an individual bid item except as follows:

1. The contractor need not submit a full quality control plan but shall provide an organizational chart to the engineer including names, telephone numbers, and current certifications of all persons involved in the quality control program for material under affected bid items.

2. Divide the aggregate into uniformly sized sublots for testing as follows:

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

<sup>[1]</sup> 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.

<sup>[2]</sup> For 3-inch material, obtain samples at load-out.

<sup>[3]</sup> If the actual quantity overruns 9000 tons, create overrun sublots to test at a rate of one additional placement test for each 3000 tons, or fraction of 3000 tons, of overrun.

3. No control charts are required. Submit aggregate load-out and placement test results to the engineer within one business day of obtaining the sample. Assure that all properties are within the limits specified for each test.

4. Department verification testing is optional for quantities of 6000 tons or less.

(3) Material represented by a subplot with any property outside the specification limits is nonconforming. The department may reject material or otherwise determine the final disposition of nonconforming material as specified in standard spec 106.5.

## **B Materials**

### **B.1 Quality Control Plan**

(1) Submit a comprehensive written quality control plan to the engineer at or before the pre-construction meeting. Do not place base before the engineer reviews and comments on the plan. Construct the project as that plan provides.

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

1. An organizational chart with names, telephone numbers, current certifications and/or titles, and roles and responsibilities of QC personnel.
2. The process used to disseminate QC information and corrective action efforts to the appropriate persons. Include a list of recipients, the communication means that will be used, and action time frames.
3. A list of source and processing locations, section and quarter descriptions, for all aggregate materials requiring QC testing.
4. Test results for wear, sodium sulfate soundness, freeze/thaw soundness, and plasticity index of all aggregates requiring QC testing. Obtain this information from the region materials unit or from the engineer.
5. Descriptions of stockpiling and hauling methods.
6. Locations of the QC laboratory, retained sample storage, and where control charts and other documentation is posted.
7. An outline for resolving a process control problem. Include responsible personnel, required documentation, and appropriate communication steps.

## B.2 Personnel

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

<b>Required Certification Level:</b>	<b>Sampling or Testing Roles:</b>
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 Boulevard  
Madison, WI 53704  
Telephone: (608) 246-5388  
<http://www.dot.state.wi.us/business/engrserv/lab-qualification.htm>

## **B.4 Quality Control Documentation**

### **B.4.1 General**

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

### **B.4.2 Records**

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

### **B.4.3 Control Charts**

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

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

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

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

## **B.5 Contractor Testing**

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

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

- (3) Split each contractor QC sample and identify it according to CMM 8.30. Retain the split for 7 calendar days in a dry, protected location. If requested for department comparison testing, deliver the split to the engineer within one business day.
- (4) The engineer may require additional sampling and testing to evaluate suspect material or the technician's sampling and testing procedures.
- (5) Test fracture for each gradation test until the fracture running average is above the lower warning limit. Subsequently, the contractor may reduce the frequency to one test per 10 gradation tests if the fracture running average remains above the warning limit.
- (6) Test the liquid limit and plasticity index for the first gradation test. Subsequently, test the liquid limit and plasticity index a minimum of once per 10 gradation tests.

## **B.6 Test Methods**

### **B.6.1 Gradation**

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

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

- (2) For 3-inch base, if 3 consecutive running average points for the percent passing the No. 200 sieve are 8.5 percent or less, the contractor may use an unwashed analysis. Wash at least one sample out of 10. If a single running average for the percent passing the No. 200 sieve exceeds 8.5 percent, resume washed analyses until 3 consecutive running average points are again 8.5 percent passing or less.
- (3) Maintain a separate control chart for each sieve size specified in standard spec 305 or 310 for each base aggregate size, source or classification, and type. Set control and warning limits based on the standard specification gradation limits as follows:
  1. Control limits are at the upper and lower specification limits.
  2. There are no upper warning limits for sieves allowing 100 percent passing and no lower control limits for sieves allowing 0 percent passing.
  3. Dense graded warning limits, except for the No. 200 sieve, are 2 percent within the upper and lower control limits. Warning limits for the No. 200 sieve are set 0.5 percent within the upper and lower control limits.
  4. Open graded warning limits for the 1-inch, 3/8-inch, and No. 4 sieves are 2 percent within the upper and lower control limits. Upper warning limits for the No. 10, No. 40, and No. 200 sieves are 1 percent inside the upper control limit.

### **B.6.2 Fracture**

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

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

### **B.6.3 Liquid Limit and Plasticity**

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

## **B.7 Corrective Action**

### **B.7.1 General**

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

### **B.7.2 Placement Corrective Action**

- (1) Do not blend additional material on the roadbed to correct gradation problems.
- (2) Notify the engineer whenever the running average exceeds a warning limit. When 2 consecutive running averages exceed a warning limit, the engineer and contractor will discuss appropriate corrective action. Perform the engineer's recommended corrective action and increase the testing frequency as follows:
  1. For gradation, increase the QC testing frequency to at least one randomly sampled test per 1000 tons placed.
  2. For fracture, increase the QC testing frequency to at least one test per gradation test.
- (3) If corrective action improves the property in question such that the running average after 4 additional tests is within the warning limits, the contractor may return to the testing frequency specified in B.5.3. If corrective action does not improve the property in question such that the running average after 4 additional individual tests is still in the warning band, repeat the steps outlined above starting with engineer notification.
- (4) If the running average exceeds a control limit, material starting from the first running average exceeding the control limit and ending at the first subsequent running average inside the control limit is nonconforming and subject to pay reduction.
- (5) For individual test results significantly outside the control limits, notify the engineer, stop placing base, and suspend other activities that may affect the area in question. The engineer and contractor will jointly review data, data reduction, and data analysis; evaluate sampling and testing procedures; and perform additional testing as required to determine the extent of potentially unacceptable material. The engineer may direct the contractor to remove and replace that material. Individual test results are significantly outside the control limits if meeting one or more of the following criteria:

1. A gradation control limit for the No. 200 sieve is exceeded by more than 3.0 percent.
2. A gradation control limit for any sieve, except the No. 200, is exceeded by more than 5.0 percent.
3. The fracture control limit is exceeded by more than 10.0 percent.

## **B.8 Department Testing**

### **B.8.1 General**

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

### **B.8.2 Verification Testing**

#### **B.8.2.1 General**

(1) The department will have an HTCP technician, or ACT working under a certified technician, perform QV sampling and testing. Department verification testing personnel must meet the same certification level requirements specified in B.2 for contractor testing personnel for each test result being verified. The department will notify the contractor before sampling so the contractor can observe QV sampling.

(2) The department will conduct QV tests of each base aggregate size, source or classification, and type during placement conforming to the following:

1. One non-random test on the first day of placement.
2. At least one random test per 30,000 tons, or fraction of 30,000 tons, placed.

(3) The department will sample randomly, at locations independent of the contractor's QC work, collecting one sample at each QV location. The department will collect QV samples after the material has been bladed, mixed, and shaped but before compacting; except, for 3-inch aggregates, the department will collect samples from the stockpile at load-out. The department will split each sample, test half for QV, and retain half.

(4) The department will conduct QV tests in a separate laboratory and with separate equipment from the contractor's QC tests. The department will use the same methods specified for QC testing.

(5) The department will assess QV results by comparing to the appropriate specification limits. If QV test results conform to the specification, the department will take no further action. If QV test results are nonconforming, add the QV to the QC test results as if it were an additional QC test.

#### **B.8.3 Independent Assurance**

(1) Independence assurance is unbiased testing the department performs to evaluate the department's QV and the contractor's QC sampling and testing including personnel qualifications, procedures, and equipment. The department will perform an IA review

according to the department's independent assurance program. That review may include one or more of the following:

1. Split sample testing.
2. Proficiency sample testing.
3. Witnessing sampling and testing.
4. Test equipment calibration checks.
5. Reviewing required worksheets and control charts.
6. Requesting that testing personnel perform additional sampling and testing.

(2) If the department identifies a deficiency, and after further investigation confirms it, correct that deficiency. If the contractor does not correct or fails to cooperate in resolving identified deficiencies, the engineer may suspend placement until action is taken. Resolve disputes as specified in B.9.

### **B.9 Dispute Resolution**

(1) The engineer and contractor should make every effort to avoid conflict. If a dispute between some aspect of the contractor's and the engineer's testing program does occur, seek a solution mutually agreeable to the project personnel. The department and contractor may review the data, examine data reduction and analysis methods, evaluate sampling and testing procedures, and perform additional testing. Use ASTM E 178 to evaluate potential statistically outlying data.

(2) Production test results, and results from other process control testing, may be considered when resolving a dispute.

(3) If the project personnel cannot resolve a dispute, and the dispute affects payment or could result in incorporating non-conforming product, the department will use third party testing to resolve the dispute. The department's central office laboratory, or a mutually agreed on independent testing laboratory, will provide this testing. The engineer and contractor will abide by the results of the third party tests. The party in error will pay service charges incurred for testing by an independent laboratory. The department may use third party test results to evaluate the quality of questionable materials and determine the appropriate payment. The department may reject material or otherwise determine the final disposition of nonconforming material as specified in standard spec 106.5.

### **C (Vacant)**

### **D (Vacant)**

### **E Payment**

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

(2) For material represented by a running average exceeding a control limit, the department will reduce pay by 10 percent of the contract price for the affected Base Aggregate bid items listed in subsection A. The department will administer pay reduction under the Nonconforming QMP Base Aggregate Gradation or Nonconforming QMP Base Aggregate Fracture Administrative items. The department will determine the quantity of nonconforming material as specified in B.7.2.

301-010 (20100709)

## **29. Base Aggregate Dense 3/4 –Inch, Item 305.0110.**

Revise standard spec 301.2.4.3 as follows:

Furnish aggregate classified as crushed stone for 3/4-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 1/4-Inch, Item 305.0120.**

*Revise standard spec 305.2.2.1 as follows:*

Use 1 1/4-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 <sup>[1], [2]</sup>

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

<sup>[2]</sup> 3 - 10 percent passing when base is <sup>3</sup> 50% crushed gravel

## **31. Concrete Pavement Continuous Diamond Grinding, Item 420.1000.S.**

### **A Description**

(1) This special provision describes continuous diamond grinding of concrete pavement.

### **B (Vacant)**

### **C Construction**

#### **C.1 General**

(1) Diamond grind the existing concrete pavement to provide a uniform surface that is reasonably plane, free of excessively large scarification marks, and has the grade and cross slope the plans show or the engineer specifies. Do not damage the remaining pavement. Do not grind deeper than 3/4 inch from the top of the original surface.



(2) Complete full-depth and partial-depth concrete repairs, slab stabilization, dowel bar retrofit, and other pavement repair operations before grinding. Begin and end grinding at lines perpendicular to the pavement centerline at the project limits. Do not overlap adjacent grinding passes by more than 1-inch. Do not leave un-ground surface area between passes.

(3) Grind joint or crack faults so there is no more than a 1/16-inch differential between the adjacent sides of the joints and cracks. Grind warped and curled slabs as required to provide an acceptable ride. Provide smooth transitions from the edge of the mainline to shoulders, adjacent lanes, and ramps leaving no more than a 3/16-inch ridge at transitions. Grind adjacent pavement and paved shoulders as necessary to feather in a smooth transition and maintain drainage. Do not grind approach slabs unless necessary to provide a smooth transition.

(4) Provide lateral drainage by maintaining a constant cross slope between grinding extremities in each lane including feathered areas of the shoulder. Ensure that the finished cross slope conforms to the plans and has no depressions or slope misalignment greater than 1/4-inch in 12 feet when measured perpendicular to the centerline with a 12-foot straightedge

(5) Do not diamond grind over valves, manholes, or other fixtures. Provide a smooth taper from the diamond ground surface to the top of the fixture.

## **C.2 Equipment**

(1) Use self-propelled grinding machines with electronic depth, grade, and slope controls designed for grinding and texturing pavement. Equip grinding machines with diamond blades and a vacuuming system capable of removing liquid and solid residue from the pavement surface. Shroud the machine to prevent discharging loosened material into adjacent work areas or live traffic lanes.

(2) Ensure that the machine, including the grinding head, weighs 35,000 pounds or more, will grind a strip at least 4 feet wide, and has an effective wheel base of 25 feet or more. Do not use equipment that causes raveling, aggregate fractures, joint deflection, or other damage to material remaining in place.

(3) Maintain equipment in proper working order. Ensure that the match and depth control wheels are round. Stop grinding and immediately replace out-of-round wheels.

## **C.3 Final Surface Finish**

(1) Produce a pavement surface that is true in grade and uniform in appearance. Provide a longitudinal line-type texture with corrugations parallel to the outside pavement edge.

(2) Select the number of diamond blades per foot that will provide the proper surface finish for the aggregate type. Determine the proper sequence of operations and number of passes required to meet the specifications.

(3) Ensure that ridges are 1/8-inch +/- 1/16-inch higher than the bottom of the grooves and uniformly spaced as follows:

	<b>Limestone</b>	<b>Gravel</b>
<b>Width between grooves</b>	0.090 to 0.110 inch	0.080 to 0.095 inch

(4) Ensure that a minimum of 95 percent of any 4-foot by 100-foot section of pavement surface is textured. Remove unbroken fins as the engineer directs.

#### **C.4 Residue Disposal**

(1) Remove solid and liquid grinding residues from the roadway by vacuuming. Leave the roadway in a clean, damp condition immediately behind the grinding machine. Remove residue immediately in areas of cross traffic. Do not allow residue and water to flow or blow across lanes used by public traffic or to enter any storm sewer, stream, lake, reservoir, marsh, or wetland. Dispose of residue and water at an acceptable material disposal site located off the project limits and as shown in the Erosion Control Implementation Plan (ECIP).

#### **C.5 Smoothness Requirements**

(1) Measure IRI for the pavement the contract designates for grinding both before and after grinding. Conform to the QMP Ride special provision as contained elsewhere in the contract except as follows:

- Submit smoothness assurance reports to the engineer before and after grinding for IRI and before and after correcting areas of longitudinal surface deviation.
- Straight edging is required to identify depressions or slope misalignment as specified in C.1(4).
- No quality control plan is required. The contractor need only provide the name and certifications for the profiler operator and identify segment locations of each profile run.
- The profiler and operator need only be on site when before-grinding and after-grinding profiles are run; and when conducting corrective grinding operations.
- Do not apply localized roughness requirements to surfaces the contract designates for continuous diamond grinding or the transitions to existing pavement that is not ground under the contract. Instead ensure that the finished ground surface does not include longitudinal surface deviations exceeding 0.3-inch in 25 feet as determined using ProVal's straightedge simulation analysis.
- Low areas due to subsidence or other localized causes are excluded from the smoothness requirements. The engineer will review each low area and may direct the contractor to perform corrective grinding as required to reduce the final IRI for that segment.

(2) In addition to the categories defined in the contract QMP Ride special provision, the department will categorize each diamond ground standard or partial segment of concrete pavement as follows:

<b>Segments with a Posted Speed Limit of 55 MPH or Greater</b>	
<b>Category</b>	<b>Description</b>
RCDG V	Rural concrete pavement surfaces the contract designates for continuous diamond grinding.
<b>Segments with Any Portion Having a Posted Speed Limit Less Than 55 MPH</b>	
<b>Category</b>	<b>Description</b>
UCDG V	Urban concrete pavement surfaces the contract designates for continuous diamond grinding.

(3) If an individual segment IRI exceeds the corrective grinding limits of 65 in/mile for RCDG V or 115 in/mile for UCDG V, perform corrective grinding on that segment. Re-profile corrected segments to verify the final IRI. Ensure that each segment has an IRI after corrective grinding as follows:

- For segments with a before-grinding IRI less than or equal to 200 inches/mile, provide a final segment IRI that does not exceed 65 in/mile for RCDG V or 115 in/mile for UCDG V.
- For segments with a before-grinding IRI greater than 200 inches/mile, provide a final segment IRI that does not exceed 65 in/mile for RCDG V, 115 in/mile for UCDG V, or 35 percent of the before-grinding IRI whichever is greater.

(4) Submit a revised ProVAL smoothness assurance report after corrective grinding for corrected segments to validate the final segment IRI.

(5) If after performing corrective grinding, a segment contains a bump exceeding 0.3-inch in 25 feet or has a final segment IRI greater than specified, that segment is subject to the engineer's right to adjust pay for non-conforming work under standard spec 105.3.

#### **D Measurement**

(1) The department will measure Concrete Pavement Continuous Diamond Grinding by the square yard acceptably completed, measured as the final textured surface area regardless of the number of passes required to achieve acceptable results. The department will include minor areas of un-ground pavement within the ground area.

(2) If conditions require a feather pass into the shoulder, adjacent lanes, or ramps, the department will also measure an area 2 feet wide times the length of the feather pass or an additional 20 square yards whichever is greater.

## E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
420.1000.S	Concrete Pavement Continuous Diamond Grinding	SY

(2) Payment for Concrete Pavement Continuous Diamond Grinding is full compensation for grinding to improve pavement ride including measuring IRI before and after grinding; for feathering in adjacent pavement; for removing unbroken fins; and for hauling and off-site disposal of grinding residue.

(3) The department will adjust pay for smoothness of each 500-foot long segment nominally one wheel path wide using equation as follows:

<b>Category RCDG V - Rural Diamond Ground Concrete Pavement</b>	
<b>IRI in/mile</b>	<b>Incentive \$ per 500-foot section</b>
< 45	\$125
≥ 45 to < 55	\$687.5 - (12.5 x IRI)
≥ 55 to < 65	\$0
≥ 65	Corrective action
<b>Category UCDG V - Urban Diamond Ground Concrete Pavement</b>	
<b>IRI in/mile</b>	<b>Incentive \$ per 500-foot section</b>
< 50	\$125
≥ 50 to < 75	\$375 - (5 x IRI)
≥ 75 to < 115	\$0
≥ 115	Corrective action

420-010(20110930)

## 32. Concrete Pavement.

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 501.2.5.4.1 with 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 <sup>(1)</sup> .....	2.0

<sup>(1)</sup>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. QMP Ride; Incentive IRI Ride, Item 440.4410.S.**

#### **A Description**

- (1) This special provision describes profiling pavements with a non-contact profiler, locating areas of localized roughness, and determining the International Roughness Index (IRI) for each wheel path segment.
- (2) Profile the final riding surface of all mainline pavements. Include auxiliary lanes in Category I and II segments; crossroads with county, state or U.S. highway designations greater than 1500 feet in continuous length; bridges, bridge approaches; and railroad crossings. Exclude roundabouts and pavements within 150 feet of the points of curvature of roundabout intersections.
- (3) The engineer may direct straightedging under standard spec 415.3.10 for pavement excluded from localized roughness under C.5.2 (1); for bridges; and for roundabouts and pavements within 150 feet of the points of curvature of roundabout intersections. Other surfaces being tested under this provision are exempt from straightedging requirements.

#### **B (Vacant)**

## **C Construction**

### **C.1 Quality Control Plan**

(1) Submit a written quality control plan to the engineer at or before the pre-pave meeting. Ensure that the plan provides the following elements:

1. An organizational chart with names, telephone numbers, current certifications and/or titles, and roles and responsibilities of all quality control personnel.
2. The process by which quality control information and corrective action efforts will be disseminated to the appropriate persons. Include a list of recipients, the communication means that will be used, and action time frames.
3. The methods and timing used for monitoring and/or testing ride quality throughout the paving process. Also indicate the approximate timing of acceptance testing in relation to the paving operations.
4. The segment locations of each profile run used for acceptance testing.
5. Traffic Control Plan.

### **C.2 Personnel**

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

### **C.3 Equipment**

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

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

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

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

### **C.4 Testing**

#### **C.4.1 Run and Reduction Parameters**

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

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

#### **C.4.2 Contractor Testing**

(1) Operate profilers within the manufacturer's recommended speed tolerances. Perform all profile runs in the direction of travel. Measure the longitudinal profile of each

wheel track of each lane. The wheel tracks are 6.0 feet apart and centered in the traveled way of the lane.

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

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

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

(4) Treat partial segments as independent segments.

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

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

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

#### **C.4.3 Verification Testing**

(1) The department may conduct verification testing (QV) to validate the quality of the product. A HTCP certified profiler operator will perform the QV testing. The department

will provide the contractor with a listing of the names and telephone numbers of all verification personnel for the project.

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

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

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

#### **C.4.4 Documenting Profile Runs**

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

	<u>Fixed Interval</u>	<u>Continuous (Localized Roughness)</u>
Base-length	500'	25'
Threshold	140"/Mile	200"/Mile

The ProVAL software is available for download at: <http://www.roadprofile.com>.

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

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

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

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



## C.5 Corrective Actions

### C.5.1 General

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

### C.5.2 Corrective Actions for Localized Roughness

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

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

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

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

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

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

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

### C.5.3 Corrective Actions for Excessive IRI

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

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

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

### **C.6 Dispute Resolution**

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

(2) If the project personnel cannot resolve a dispute and the dispute affects payment or could result in incorporating nonconforming pavement, the department will use third party testing to resolve the dispute. The department's Quality Assurance Unit, or a mutually agreed on independent testing company, will provide this testing. The engineer and contractor will abide by the results of the third party tests. The party in error will pay service charges incurred for testing by an independent tester. The department may use third party tests to evaluate the quality of questionable pavement and determine the appropriate payment.

## **D Measurement**

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

## **E Payment**

### **E.1 Payment for Profiling**

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

### **E.2 Pay Adjustment**

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

ITEM NUMBER	DESCRIPTION	UNIT
440.4410.S	Incentive IRI Ride	DOL

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

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

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

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

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

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

<b>HMA I</b>	
<b>Initial IRI (inches/mile)</b>	<b>Pay Adjustment<sup>[1]</sup> (dollars per standard segment)</b>
< 30	250
≥ 30 to <35	$1750 - (50 \times \text{IRI})$
≥ 35 to < 60	0
≥ 60 to < 75	$1000 - (50/3 \times \text{IRI})$
≥ 75	-250

<b>HMA II and PCC II</b>	
<b>Initial IRI (inches/mile)</b>	<b>Pay Adjustment<sup>[1][2]</sup> (dollars per standard segment)</b>
< 50	250
≥ 50 to < 55	$2750 - (50 \times \text{IRI})$
≥ 55 to < 85	0
≥ 85 to < 100	$(4250/3) - (50/3 \times \text{IRI})$
≥ 100	-250

<b>HMA IV and PCC IV</b>	
<b>Initial IRI (inches/mile)</b>	<b>Pay Adjustment<sup>[1][2]</sup> (dollars per standard segment)</b>
< 35	250
≥ 35 to < 45	$1125 - (25 \times \text{IRI})$
≥ 45	0

<sup>[1]</sup> The department will not assess a ride disincentive for HMA pavement placed in cold weather because of a department-caused delay as specified in standard spec 450.5(4) of the contract additional special provisions (ASP 6).

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

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

### **34. HMA Pavement.**

#### **A Description**

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 460.2.7 with the following:

Mixture type	E - 1	E - 3	E - 10	E - 30	E - 30x	SMA
ESALs x 10 <sup>6</sup> (20 yr design life)	0.3 - < 1	1 - < 3	3 - < 10	10 - < 30	>= 30	
LA Wear (AASHTO T96)						
100 revolutions (max % loss)	13	13	13	13	13	13
500 revolutions (max % loss)	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
Freeze/Thaw (AASHTO T103) (specified counties, max % loss)	12	12	12	12	12	12
Fractured Faces (ASTM 5821) (one face/2 face, % by count)	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)	20 (3:1 ratio)
Fine Aggregate Angularity (AASHTO T304, method A, min)	40	43	45	45	45	45
Sand Equivalency (AASHTO T176, min)	40	40	45	45	50	50
Gyratory Compaction Gyration for N <sub>ini</sub> Gyration for N <sub>des</sub>	7 60	7 75	8 100	8 100	9 125	8 65
Gyration for N <sub>max</sub>	75	115	160	160	205	160
Air Voids, %V <sub>a</sub> (%G <sub>mm</sub> N <sub>des</sub> )	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 <sub>mm</sub> N <sub>ini</sub>	<= 90.5 <sup>[1]</sup>	<= 89.0 <sup>[1]</sup>	<= 89.0	<= 89.0	<= 89.0	
% G <sub>mm</sub> N <sub>max</sub>	<= 98.0	<= 98.0	<= 98.0	<= 98.0	<= 98.0	
Dust to Binder Ratio <sup>[2]</sup> (% passing 0.075/P <sub>bc</sub> )	0.6 - 1.2	0.6 - 1.2	0.6 - 1.2	0.6 - 1.2	0.6 - 1.2	1.2 - 2.0
Voids filled with Binder (VFB or VFA, %)	65 - 78 <sup>[4]</sup>	65 - 75 <sup>[4]</sup>	65 - 75 <sup>[3]</sup> [4]	65 - 75 <sup>[3]</sup> [4]	65 - 75 <sup>[3]</sup> [4]	70 - 80
Tensile Strength Ratio (TSR) (ASTM 4867)						
no antistripping additive	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
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%.

### 35. Asphaltic Surface Patching, Item 465.0110.

*Revise standard spec 465.2(1) as follows:*

Furnish asphaltic mixture meeting the requirements specified for type E-1 or E-3 under standard spec 460.2; except that the engineer will not require the contractor to conform to the quality management program specified under standard spec 460.2.8.

### 36. Polymer Overlay, Item 509.5100.S.

#### A Description

This special provision describes furnishing and applying two layers of a two-component polymer overlay system to the bridge decks shown on the plans. The minimum total thickness of the overlay system shall be  $\frac{1}{4}$ ".

#### B Materials

##### B.1 General

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

##### B.2 Polymer Resin

The polymer resin base and hardener shall be composed of two-component, 100% solids, 100% reactive, thermosetting compound with the following properties:

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

<sup>A</sup> Uncured, mixed polymer binder

<sup>B</sup> Cured, mixed polymer binder

##### B.3 Aggregates

Furnish natural or synthetic aggregates that have a proven record of performance in applications of this type. Furnish aggregates that are non-polishing, clean, free of surface moisture, fractured or angular in shape; free from silt, clay, asphalt, or other organic materials; and meet the following properties and gradation requirements:

Aggregate Properties:

Property	Requirement	Test Method
Moisture Content*	1/2 of the measured aggregate absorption, %	ASTM C566
Hardness	<sup>3</sup> 6.5	Mohs Scale
Fractured Faces	100% with at least 1 fractured face and 80% with at least 2 fractured faces of material retained on No.16	ASTM 5821
Absorption	≤1%	ASTM C128

\* Sampled and tested at the time of placement.

Gradation:

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

#### B.4 Required Properties of Overlay System

The required properties of the overlay system are listed in the table below:

Property	Requirement <sup>A</sup>	Test Method
Minimum Compressive Strength at 8 Hrs. (psi)	1,000 psi @ 8 hrs 5,000 psi @ 24 hrs	ASTM C 579 Method B <sub>2</sub> Modified <sup>B</sup>
Thermal Compatibility	No Delaminations	ASTM C 884
Minimum Pull-off Strength	250 psi @ 24 hrs	ACI 503R, Appendix A

<sup>A</sup> Based on samples cured or aged and tested at 75°F

<sup>B</sup> Plastic inserts that will provide 2-inch by 2-inch cubes shall be placed in the oversized brass molds.

#### B.5 Approval of Bridge Deck Polymer Overlay System

A minimum of 20 working days prior to application, submit product data sheets and specifications from the manufacturer, and a certified test report to the engineer for approval. The engineer may request samples of the polymer and/or aggregate, prior to application, for the purpose of acceptance testing by the department.

For materials not pre-qualified, in addition to the above submittals, submit product history/reference projects and a certified test report from an independent testing laboratory showing compliance with the requirements of the specification.

The product history/reference projects consist of a minimum of 5 bridge/roadway locations where the proposed overlay system has been applied in Wisconsin or in locations with a similar climate - include contact names for the facility owner, current phone number or e-mail address, and a brief description of the project.

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

## **C Construction**

### **C.1 General**

Conduct a pre-installation conference with the manufacturer's representative prior to construction to establish procedures for maintaining optimum working conditions and coordination of work. Furnish the engineer a copy of the recommended procedures and apply the overlay system according to the manufacturer's instructions. The manufacturer's representative familiar with the overlay system installation procedures shall be present at all times during surface preparation and overlay placement to provide quality assurance that the work is being performed properly.

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

### **C.2 Deck Preparation**

#### **C.2.1. Deck Repair**

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

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

#### **C.2.2 Surface Preparation**

Determine an acceptable shotblasting machine operation (size of shot, flow of shot, forward speed, and/or number of passes) that provides a surface a profile meeting CSP 5 according to the International Concrete Repair Institute Technical Guideline No. 03732. If the engineer requires additional verification of the surface preparation, test the tensile bond strength according to ACI 503R, Appendix A of the *ACI Manual of Concrete Practice*. The surface preparation will be considered acceptable if the tensile bond strength is greater than or equal to 250 psi or the failure area at a depth of ¼ inches or more is greater than



50% of the test area. Continue adjustment of the shotblasting machine and necessary testing until the surface is acceptable to the engineer or a passing test result is obtained.

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

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

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

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

Create a transitional area approaching transverse expansion joints and ends of the deck using the shotblasting machine or other approved method. Remove 5/16" to 3/8" of concrete adjacent to the joint or end of deck and taper a distance of 3 feet.

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

### **C.3 Application of the Overlay**

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

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

After the deck has been shotblasted or during the overlay curing period, only necessary surface preparation and overlay application equipment will be allowed on the deck. Begin overlay placement as soon as possible after surface preparation operations.

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

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

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

Prior to opening to traffic, clean expansion joints and joint seals of all debris and polymer. If required by the engineer, a minimum of 3 days following opening to traffic, remove loosened aggregates from the deck, expansion joints, and approach pavement.

#### **C.4 Application Rates**

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

<b>Course</b>	<b>Minimum Polymer Rate <sup>A</sup> (GAL/100 SF)</b>	<b>Aggregate <sup>B</sup> (LBS/SY)</b>
1	2.5	10+
2	5.0	14+

<sup>A</sup> The minimum total applications rate is 7.5 GAL/100 SF.

<sup>B</sup> Application of aggregate shall be of sufficient quantity to completely cover the polymer.

### C.5 Minimum Curing Periods

As a minimum, cure the coating as follows:

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

### C.6 Repair of Polymer Overlay

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

### D Measurement

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

### E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
509.5100.S	Polymer Overlay	SY

Payment is full compensation for preparing the surface; for tensile bond testing; for providing the overlay; for cleanup; and for sweeping/vacuuming and disposing of excess materials. Concrete Deck Repair will be paid for separately.  
509-030 (20130615)

## 37. Apron Endwall for Culvert Pipe Salvaged.

Perform this work in accordance to standard spec 524 and as herein after provided.

Payment for Apron Endwalls for Culvert Pipe Salvaged also includes salvaging existing pipe grates on the apron endwalls.

## 38. Concrete Barrier Temporary Precast.

Perform this work in accordance to standard spec 603, these special provisions, and as hereinafter provided.

Concrete Barrier Temporary Precast shall be 12'-6" in length. Concrete Barrier Temporary Precast 10'-0" will not be allowed.

If the contractor chooses to store materials, equipment or other items that are a hazard within 4-feet of the construction zone side (deflection zone) of the barrier the barrier shall be anchored. The barrier must also be anchored when used on edge of bridge decks or locations where the drop-off exceeds two-feet, is steeper than 3H:1V and is less than 4-feet from the side of the barrier closest to the drop off. The system must be anchored as shown in the standard detail drawing.

### **39. Adjusting Manhole Covers.**

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

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

*Revise standard spec 611.3.7 by deleting the last paragraph.*

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

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

611-005 (20030820)

### **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 as units, acceptably completed in place.

**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. Permanent Signing.**

Do not remove any permanent signs such as stop, yield, stop ahead, yield ahead, folding stop signs, speed limit, signal ahead, do not enter or wrong way signs until the new permanent signs are installed. If any of these signs need to be removed due to construction activities, place a temporary sign at the location or as directed by the engineer until the permanent sign is installed. These signs shall be incidental to the item "Traffic Control (Project)."

### **43. Blue Specific Service Signs.**

*Supplement standard spec 638.3.4 with the following:*

Do not remove or move blue specific service signs or their associated posts. Specific service signs are signs with logos that identify commercial entities providing gas, food, lodging, camping, or attractions. A separate contractor, 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)

### **44. Traffic Control.**

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

Submit to engineer for approval a detailed traffic control plan for any changes to the proposed traffic control detail as shown on the plans. Submit this plan ten days prior to the preconstruction conference.

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

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

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

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

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

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

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

- Do not park or store any vehicle, piece of equipment, or construction materials on the right-of-way without approval of the engineer.
- All construction vehicles and equipment entering or leaving live traffic lanes shall yield to through traffic.
- Equip all vehicles and equipment entering or leaving the live traffic lanes with a hazard identification beam (flashing yellow signal) capable of being visible on a sunny day when viewed without the sun directly on or behind the device from a distance of 1000 feet. Activate the beam when merging into or exiting a live traffic lane.

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

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

**45. Traffic Control Barricades Permanent Type III, Item 643.0453.**

*Supplement standard spec 643.5.4(4) as follows:*

Payment for the Traffic Control Barricades Permanent bid items is full compensation for providing barricades, associated signs and warning lights and for maintaining the installation until the engineer accepts the work as specified in standard spec 105.11.

**46. Traffic Control Signs, Item 643.0900.**

**A Description**

This special provision describes mounting height requirements and sign support requirements. Conform to standard spec 643, as modified in this special provision.

*Supplement standard spec 643.2.9.1(5) as follows:*

Provide associated advanced signing, including portable traffic control signing, in accordance 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. Use signs and supports conforming to NCHRP 350 test level 3 or MASH crashworthiness criteria.

**47. Temporary Traffic Signal Timing Parameters – USH 14 and Deerfield Drive, USH 14 and NB IH 39/90 ramp, USH 14 and SB IH 39/90 ramp.**

Temporary traffic signals at the USH 14 intersections with Deerfield Drive, Northbound IH 39/90 ramp, and Southbound IH 39/90 ramp intersections shall be fully operational, as shown in the “Sequence of Operations” sheets in the plan set. The traffic signals shall be timed according to the following traffic signal timings. The timings will be used for all stages of construction; however signal phasing will change as shown in the sequence of operations sheets.





All work required to install signal timing, perform test operations and make updates shall be considered incidental to the bid items of “Temporary Traffic Signals for Intersections for each individual intersection.



# **TEMPORARY TRAFFIC SIGNAL TIMING** **USH 14 and DEERFIELD DRIVE**





Actuated Settings



	Phase			
	1	2	3	4
				
Approach Name	EBL USH 14	WB USH 14	NBL Deerfield Dr	SB Deerfield Dr
Minimum Green (sec.)	15.0	12.0	8.0	12.0
Passage Time (sec)	2.0	5.0	2.0	2.0
Maximum Green (sec)	30.0	35.0	20.0	20.0
Allowable Gap (sec)	0.0	2.0	0.0	2.0
Time Before Reduction (sec)	0.0	10.0	0.0	0.0
Time to Reduce (sec)	0.0	25.0	0.0	0.0
Yellow Change (sec)	4.0	4.0	4.0	4.0
Red Clearance (sec)	1.0	2.0	1.0	1.0
Walk (sec)	---	---	---	---
Ped Clearance (sec)	---	---	---	---
Phase Locking	Locking	Locking	Locking	Non-Locking
Phase Recall	None	Min.	None	None

Actuated Settings







	Phase			
	5	6	7	8
				
Approach Name	WBL USH 14	EB USH 14	SBL Deerfield Dr	NB Deerfield Dr
Minimum Green (sec.)	8.0	0.0	8.0	0.0
Passage Time (sec)	2.0	5.0	2.0	2.0
Maximum Green (sec)	0.0	35.0	20.0	0.0
Allowable Gap (sec)	0.0	0.0	0.0	0.0
Time Before Reduction (sec)	0.0	0.0	0.0	0.0
Time to Reduce (sec)	0.0	0.0	0.0	0.0
Yellow Change (sec)	0.0	0.0	4.0	4.0
Red Clearance (sec)	1.0	2.0	1.0	1.0
Walk (sec)	---	---	---	7.0
Ped Clearance (sec)	---	---	---	35.0
Phase Locking	Locking	Locking	Locking	Non-Locking
Phase Recall	None	Min.	None	None

### TEMPORARY TRAFFIC SIGNAL TIMING USH 14 and northbound IH 39/90

Actuated Settings







	Phase			
	1	2	6	8
				
Approach Name	EBL USH 14	WB USH 14	EB USH 12	NB IH 39/90
Minimum Green (sec.)	8.0	12.0	12.0	8.0
Passage Time (sec.)	2.0	5.0	5.0	2.0
Maximum Green (sec)	20.0	40.0	40.0	30.0
Allowable Gap (sec.)	1.0	3.0	3.0	1.0
Time Before Reduction (sec.)	20.0	10.0	10.0	20.0
Time to Reduce (sec.)	20.0	10.0	10.0	20.0
Yellow Change (sec)	4.0	4.0	4.0	4.0
Red Clearance (sec)	1.5	2.0	2.0	1.5
Walk (sec)	---	0.0	0.0	0.0
Ped Clearance (sec)	---	0.0	0.0	0.0
Phase Locking	Locking	Locking	Locking	Non-Locking
Phase Recall	None	Min.	Min.	None

### TEMPORARY TRAFFIC SIGNAL TIMING USH 14 and SB IH 39/90

Actuated Settings



	Phase			
	2	4	5	6
				
Approach Name	WB USH 14	SB IH 39/90	WBL USH 14	EB USH 14
Minimum Green (sec.)	12.0	8.0	8.0	12.0
Passage Time (sec.)	5.0	2.0	2.0	5.0
Maximum Green (sec)	40.0	30.0	20.0	40.0
Allowable Gap (sec.)	3.0	1.0	1.0	3.0
Time Before Reduction (sec.)	10.0	20.0	20.0	10.0
Time to Reduce (sec.)	10.0	0.0	0.0	10.0
Yellow Change (sec)	4.0	4.0	4.0	4.0
Red Clearance (sec)	2.0	1.5	1.5	2.0
Walk (sec)	-	-	-	-
Ped Clearance (sec)	-	-	-	-
Phase Locking	Locking	Non-Locking	Locking	Locking
Phase Recall	Min.	None	None	Min.

## 48. 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)

### **49. Removing Pavement Marking.**

Perform this work in accordance to standard spec 646.3.4 and as hereinafter provided.

Pavement markings required to be removed on permanent concrete pavement (pavement that will remain at the completion of the contract) shall be removed by a water blasting or hydroblasting method. Grinding or sand blasting the markings off the pavement will not be allowed.

Pavement markings required to be removed on non-permanent concrete pavement shall be removed by grinding or sand blasting methods, unless otherwise directed by the engineer.

Pavement markings required to be removed on all hot mix asphalt pavements shall be removed by grinding or sand blasting methods.

## **50. Locating No-Passing Zones, Item 648.0100.**

For this project, the spotting sight distance in areas with a 55 mph posted speed limit is 0.21 miles (1108 feet).

648-005 (20060512)

## **51. General Requirements of Electrical Work.**

*Add the following to standard spec 651.2, Materials:*

- (7) The approved products list is located at:  
<http://www.dot.wisconsin.gov/business/engrserv/electric/index.htm>

*Replace standard spec 651.3.2 (1) with the following:*

Perform all electrical work using a journey worker electrician. Before performing electrical work, provide the documentation specified in standard spec 651.3.2(3) to the engineer proving that the electrician's performing the work have attained status as journey worker.

*Add the following to standard spec 651.3.3(3):*

Request a signal inspection of the completed signal installation to the engineer at least five days prior to the requested signal installation. Notify the City of Edgerton Public Works Department at (608) 884-3341 to coordinate the USH 51 and STH 59 intersection inspection. City of Edgerton and WisDOT personnel will perform the inspection.

## **52. Requirements for Conduit Installation – Under Railroad Tracks.**

Install conduit below the railroad lines as shown in the plans. Coordinate directly with the designated railroad contacts as shown in these contract documents. Install all conduit in accordance to the conditions required by each railroad. Efforts and materials required to conform with the railroad requirements shall be considered incidental to the conduit bid items. Conditions required for conduit installation at all crossings as follows:

- Use rigid metallic conduit for all directional bored locations less than 12-feet deep.
- Directional boring pits may not be less than 30-ft clear of the nearest track.
- Bored conduit must extend 30-ft clear of the nearest rail at a consistent depth.

Additional requirements may apply. Coordinate directly with railroad personnel.

## **53. Install Conduit Into Existing Item, Item 652.0700.S.**

### **A Description**

This special provision describes installing proposed conduit into an existing concrete base, manhole, pull box, junction box, communication vault, or other structure.

## **B Materials**

Use non-metallic conduit, as provided and paid for under other items in this contract. Furnish concrete masonry, backfill material, topsoil, fertilizer, seed, and mulch conforming to the requirements of pertinent provisions of the standard specifications.

## **C Construction**

Expose the outside of the existing structure without disturbing existing conduits or cabling. Drill or otherwise provide for the appropriate sized entry for the entering conduit(s) at a location within the structure without disturbing the existing cabling, without hindering the installation of new cabling within the installed conduit and without damaging the structural integrity of the existing item. Fill void area between the drilled hole and conduit with an engineer-approved filling material to protect against conduit movement and entry of fill material into the structure. Tamp backfill into place.

## **D Measurement**

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

## **E Payment**

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

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

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

## **54. Electrical Service Meter Breaker Pedestal USH 51 and STH 59, Item 656.0200.450.**

*Append standard spec 656.2.3 with the following:*

The contractor will be responsible for the electric service installation or relocation request.

Electric utility company service installation and energy cost will be billed to and paid for by the maintaining authority.

Install the cabinet base and meter breaker pedestal first, so the electric utility company can install the service lateral. Finish grade the service trench, replace topsoil that is lost or contaminated with other materials, fertilize, seed, and mulch all areas that are disturbed by the electric utility company.

*Append standard spec 656.5(3) with the following:*

Payment for grading the service trench, replacing topsoil, fertilizer, seed, and mulch will be incidental to this work unless the bid items are in the contract and then they will be paid for at the contract price.

**55. Electrical Service Meter Breaker Pedestal USH14 and USH 51, Item 656.0200.451; USH 14 and Kennedy Road, Item 656.0200.452; USH 14 and STH 26, Item 656.0200.453.**

*Replace standard spec 656.2.3, Meter Breaker Pedestal Service, paragraph (1) with the following:*

(1) Furnish an approved service having a meter breaker pedestal, 22,000-AIC circuit breakers unless the local utility requires otherwise, grounding electrodes and connections, conduit and fittings, and all necessary conductors and equipment required by the WSEC and the utility for a service connection. Furnish a pedestal with two 100 A 2-pole breakers for any meter with shared ITS uses which are intended to provide electrical service for a WisDOT street lighting system as well as an ITS camera system. When the meter breaker pedestal is energized, install an approved meter seal at all access points on the meter trough. Meter shall be time of use type.

*Replace standard spec 656.3.2, Service Lateral, paragraph (1) with the following:*

(1) The local utility will furnish and install a 200 A, 120/240 volt AC, single phase, 3-wire underground electrical service lateral. Arrange and assume responsibility for the timely installation of the service lateral by the utility. The lateral shall be terminated at a meter pedestal as the plans show.

Ensure that electrical service is installed and energized a minimum of one week prior to the lighting system activation deadline.

Provide for an underground conduit connection to traffic signal cabinets. Do not pierce or otherwise compromise the integrity of the cabinet enclosure.

**56. Electrical Service Meter Breaker Pedestal Pontiac Drive and Pontiac Place, Item 656.0200.462.**

*Add the following to standard spec 656.2:*

- Furnish a pedestal with two meters capable of separate services for City of Janesville traffic signal and street lighting.

*Add the following to standard spec 656.3:*

- Obtain a City of Janesville Electrical Permit from the Housing, Building, and Neighborhood Services Department prior to performing any work. Pay all permit fees.
- Ensure that electrical service is installed and energized a minimum of one week prior to the system activation deadline.

**57. Temporary Traffic Signals for Bridges (B-53-145), Item 661.0100.001.**

*Replace standard spec 661.2.3 (1-5) with the following:*

Trailer mounted traffic signals from the department's approved products list are required.

Furnish control box, signal controller, radio communication, solar power panel, microwave vehicle detection, and control equipment. Provide a control box with an access door that allows placing the controller in emergency flash. Provide control box access to the engineer and law enforcement agencies as required. Supply a controller capable of executing the timing program supplied in this contract for this temporary traffic signal. The department may request changes to the timing intervals during the project as required by construction or traffic conditions. Make all engineer-requested changes within 24 hours.

Provide emergency flagging operations should a traffic signal malfunction occur. Contact the manufacturer or signal technician as soon as possible to restore operation of the traffic signal.

*Replace standard spec 661.3.1 (2) with the following:*

Request a signal inspection of the temporary traffic signal installation. Contact the department's regional electrical personnel 3-7 days in advance to inspect the trailer. Contact Dena Dramm (Southwest Region Signal Operations) at (608) 246-5360 in advance of the preconstruction meeting with any questions regarding this bid item.



*Replace standard spec 661.3.3.1 (2) with the following:*

Trailer mounted traffic signals from the department's approved products list are required. Provide a battery power supply with a solar powered charging system and a backup power source. Do not use gasoline powered equipment.

*Replace standard spec 661.4 (1) with the following:*

The department will measure Temporary Traffic Signals for Bridges as a single lump sum unit for the entire USH 51 Rock River bridge work zone. The work zone includes all signalized approaches serving the one-lane bridge section.

**58. Temporary Traffic Signals for Intersections (USH 14 and IH 39 SB Ramp), Item 661.0200.450; (USH 14 and IH 39 NB Ramp), Item 661.0200.451; (USH 14 and Deerfield Drive), Item 661.0200.0.452.**

**A Description**

This work shall be in accordance to the requirements of standard spec 661, the plans, standard detail drawings, and as hereinafter provided.

**B Materials**

In accordance to the plans and standard spec 661.2 and as hereinafter provided.

Furnish aerial cable rated for power distribution and sized to deliver the necessary voltage when temporary traffic signal installations are located beyond the electrical service point. Furnish poles of sufficient length to allow for grading operations to occur as construction progresses, while providing working clearances to surrounding surfaces at all times.

Furnish an emergency vehicle preemption system compatible with the City of Janesville's system and users. Contact the City of Janesville for information regarding the equipment needs and operational requirements of the emergency vehicle preemption system. Coordinate any potential reuse of existing equipment with the city at least 2-weeks prior to the removal of the existing signals. All emergency vehicle preemption materials furnished and/or reused shall be considered incidental to this bid item.

**C Construction**

In accordance to the plans and standard spec 661.3 and as hereinafter provided.

Verify the route for the overhead power distribution line which provides for minimal interference with staged construction activities. Coordinate the route planning with all items of work associated with the project.

Stake out the planned overhead power distribution route in the field and notify the engineer for approval prior to starting work.

Install the emergency vehicle preemption system in accordance to the plans and the City of Janesville's needs. Mount receivers as required for line of sight activation for each stage of operation. Arrange for testing of equipment prior to acceptance of the installation of each stage as needed.

#### **D Measurement**

The department will measure the Temporary Traffic Signals for Intersections (Location) bid item as a single lump sum for each location, acceptably completed.

#### **E Payment**

In accordance to the plans and standard spec 661.5 and as hereinafter provided.

Payment includes furnishing and installing emergency preemption equipment, aerial power distribution cables; and for overhead route planning, approval and staking.

### **59. 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:

- 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.
- 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.3 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  $\pm 3$  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:

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

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)

## **60. Intelligent Transportation Systems – Conduit.**

*Supplement standard spec 671.2 with the following:*

### **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 (20100630)

## **61. Install Pole Mounted Cabinet, Item 673.0225.S.**

### **A Description**

This special provision describes installing department furnished aluminum enclosures on poles for intelligent transportation systems equipment.

### **B Materials**

Use stainless steel bolts, nuts, and washers unless otherwise specified.

All conductors, terminals, and parts that could be hazardous to maintenance personnel shall be protected with suitable insulating material.

The cabinet will be equipped with service panels. Two panels shall be provided and mounted on the cabinet sidewalls. The left side panel shall be designated as “Input/Communications,” and the right side panel shall be designated as the “Service Panel.”

The service panel will be equipped with a four-outlet handi-box. Wire the handi-box to the series portion of the filtering surge protector.

Use metallic conduit, fittings, and adapters required from the underground conduit transition point to the cabinet as part of this item. A typical installation requires on 2-inch conduit. Use metallic conduit according to standard spec 652.

### **C Construction**

Fasten the field cabinet securely onto a pole. Provide bolted stainless steel connections with lock washers, locking nuts, or other engineer-approved means to prevent the connection nuts from backing off. Isolate dissimilar materials from one another using stainless steel fittings. Make all power connections to the cabinet as specified in standard spec 656.

Drill and tap the cabinet, as necessary, to mount the terminal blocks and other attachments to the service panel, to provide an entrance on the back of the cabinet for cable from the pole mounted intelligent transportation systems equipment, and to mount the service panel to the cabinet as shown in the details. Remove all sharp edges or burrs, or both, caused by

the cutting or drilling process. Seal all openings to prevent water from entering the cabinet. Mount the surge protector to the service panel.

Install metallic conduit on the exterior of the pole (for entrance to the cabinet from the ground) as shown in the plans, and according to the applicable requirements of standard spec 652.

**D Measurement**

The department will measure Install Pole Mounted Cabinet as each individual assembly, acceptably completed.

**E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
673.0225.S	Install Pole Mounted Cabinet	Each

Payment is full compensation for installing the pole mounted cabinet; for making all connections and conduit/wire entrances; and for furnishing all testing.  
673-010 (20100630)

**62. 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)

**63. Install Video Encoder, Item 677.0300.S.**

**A Description**

This special provision describes installing a state-furnished video encoder in a pole mounted cabinet or field cabinet as shown on the plans and as hereinafter provided.

**B Materials**

Provide Category 5 or better Ethernet cable to connect the Ethernet video encoder to the Ethernet switch. The department will furnish the video encoder or it will be an existing and salvaged encoder.

**C Construction**

Make the necessary electrical and communication network connections to the video encoder. Mount the video encoder in the pole mounted cabinet or field cabinet. Program the video encoder according to the manufacturer's instructions.

**D Measurement**

The department will measure Install Video Encoder by each individual assembly, acceptably completed.

**E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
677.0300.S	Install Video Encoder	Each

Payment is full compensation for installing the video encoder in a pole mounted cabinet or field cabinet; for making all connections; and for furnishing all programming.  
677-030 (20100630)

**64. Concrete Masonry Deck Patching, Item SPV.0035.700.**

**A Description**

This special provision describes constructing a grade E concrete masonry deck patching course on the sawed deck preparation areas of the concrete bridge deck in accordance to standard specs 502 and 509, as shown on the plans, and as hereinafter provided.

**B (Vacant)**

**C Construction**

Construct in accordance to the applicable methods specified in standard specs 502 and 509.

Immediately before placing the concrete deck patching, coat the prepared surfaces with a neat cement mixture. Mix the neat cement in a water-cement ratio approximately equal to five gallons of water per 94 pounds of cement. Ensure the prepared concrete surfaces are moist without any standing water before coating with the neat cement mixture. Brush the neat cement mixture over the prepared concrete surfaces to ensure that all parts receive an even coating, and do not allow excess neat cement to collect in pockets. Apply the neat cement at a rate that ensures the cement does not dry out before being covered with the new concrete.

Place concrete in accordance to standard spec 509 for concrete masonry overlay grade E concrete. The slump of the grade E concrete may be increased to three inches and ready-mixed concrete will be permitted. As determined by the engineer in the field, consolidate smaller areas by internal vibration, strike them off, and finish the areas with hand floats to produce plane surfaces that conform to the grade and elevation of the adjoining surfaces. Give all deck patching areas a final hand float finish.

Cure the concrete masonry deck patching in accordance to the requirements of standard spec 502.2.6.1. Before cleaning the deck surface or applying the sheet membrane waterproofing (if applicable), cure the concrete deck patching surfaces for a period of three days and ensure that the deck patching concrete has a minimum compressive strength of 3500 psi.

#### **D Measurement**

The department will measure Concrete Masonry Deck Patching by the cubic yard, acceptably completed. The department will not measure wasted concrete. The computation of the measured quantity will be based on the normal cubic yard of concrete as defined in standard spec 501.3.2.2.

#### **E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0035.700	Concrete Masonry Deck Patching	CY

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

### **65. Temporary Crosswalk Access, Item SPV.0045.200.**

#### **A Description**

This special provision describes using temporary surface material to maintain accessible crosswalks crossing the construction work zone.

#### **B Materials**

Furnish a hard temporary surface material consisting of conveyor belt, asphaltic surface temporary in accordance to standard spec 465, any grade of concrete, skid resistant steel plating, or alternative material as approved by the engineer. Gravel or base course material is not acceptable.

Furnish safety fence in accordance to the article “Fence Safety.”

### **C Construction**

Install, maintain, move, and remove temporary surface material at Temporary Crosswalk Access locations as shown on the plans and as directed by the engineer. Level and compact the surface prior to placing temporary surface material. The temporary crosswalk shall have a minimum clear width of 4 feet; be located outside the immediate work area, as approved by the engineer; and meet the requirements of the current Americans with Disabilities Act Accessibility Guidelines (ADAAG). Install safety fence along both sides of the temporary crosswalk. Reconstruct or relay Temporary Crosswalk Access and reset safety fence when disturbed by construction operations or utility trenches.

### **D Measurement**

The department will measure Temporary Crosswalk Access by the day, acceptably completed. The measured quantity will equal the number of calendar days a temporary crosswalk through the work zone is open to pedestrian traffic. A crosswalk is defined as an accessible crossing of a single leg of an intersection. A crossing of a street with an island within the route will be considered a single crosswalk. Each day that the crosswalk is out of service for more than 2 hours will result in one day being deducted from the quantity measured for payment. Undisturbed crosswalks on existing pavement or completed crosswalks on new pavement will not be measured for payment.

### **E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0045.200	Temporary Crosswalk Access	Day

Payment is full compensation for furnishing, loading, hauling; for preparing the foundation; for furnishing, placing, maintaining, and removing temporary surface material; for reconstructing or relaying the temporary surface material. Fence Safety will be measured and paid for separately.

## **66. 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 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."

##### **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 (Vacant)****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. 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.
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. The start of an activity shall have a Start-to-Start or Finish-to-Start relationship with preceding activities. The completion of an activity shall have a Finish-to-Start or Finish-to-Finish relationship with succeeding activities. Do not use Start-to-Finish relationships. Do not use Finish-to-Start relationships with a lag unless the engineer accepts requested exceptions. 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. 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 Using the bid quantities and unit prices, develop an anticipated cash-flow curve for the project, based on the Baseline CPM.
2. Provide three hard copies (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.

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 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.
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:

- The forecast completion date is scheduled to occur more than 14 calendar days after the contract completion date.
- An intermediate milestone is scheduled to occur more than 14 calendar days after the date required by the contract.
- The engineer determines that the progress of the work differs significantly from the current schedule.
- A contract change order requires the addition, deletion, or revision of activities that causes a change in the contractor's work sequence or the method and manner of performing the work.

#### **108.4.9 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:

- 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.
- 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.
- 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 \$500.00 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.

### **67. Cover Plates Permanent, Item SPV.0060.003.**

#### **A Description**

This special provision describes furnishing and installing a steel plate to cover and support embankment loading at endwalls and similar structures during grading 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 Permanent as each individual unit, acceptably completed in place.

**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	Cover Plates Permanent	Each

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

The steel plates shall become the property of the department when no longer needed in the contract work.

**68. Traffic Control, One Sided Vertical Panels, Item SPV.0060.201.****A Description**

This special provision describes the furnishing and installing one sided vertical panels, their supporting posts, and surface-mounted bases in accordance to the MUTCD and pertinent requirements of standard spec 643. The one sided vertical panels are to remain in place and become the property of the department at the completion of the contract.

**B Materials**

Provide one sided vertical panels and flexible supporting posts made of non-metallic material that have a reactive spring so as to be resistant to direct wheel impacts with speeds up to 70 mph, and have the capability of immediately restoring itself to a vertical position when struck by a standard vehicle.

The surface-mounted bases shall have a maximum size of 8 inches square and not be a hazard to vehicles.

Provide new and unused one sided hazard marker vertical panels, supporting posts, and bases.

Provide one sided vertical panels with alternating orange and white reflective stripes in accordance to MUTCD. The panels shall face one direction of traffic as indicated on the plans and shall have an overall height above the pavement of 36 inches. The dimensions of the reflective sheeting facing traffic shall be 12 inches by 24 inches. Reflective sheeting shall meet the requirements of standard spec 637.2.2.2 and shall be suitable for use on reboundable traffic control devices. The alternating orange and white stripes shall slope downward in the direction traffic is to flow.

Attach one sided vertical panels and supporting posts to the bases in accordance to the manufacturer's recommendations. Fasten the bases to the pavement in accordance to manufacturer recommendation.

**C (Vacant)**

**D Measurement**

The department will measure Traffic Control, One Sided Vertical Panels 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
SPV.0060.201	Traffic Control, One Sided Vertical Panels	Each

Payment is full compensation for furnishing and installing the one sided vertical panels, their supporting posts, bases and mounting hardware; and for maintaining the one sided vertical panels, posts, and bases during the life of the contract.

**69. Traffic Control, One Sided Vertical Panel Replacements, Item SPV.0060.202.****A Description**

This special provision describes the furnishing of replacement vertical panels, attached to their supporting posts, to the engineer for maintenance after completion of the contract. The work shall be in accordance to the MUTCD and pertinent requirements of standard spec 643.

**B Materials**

Provide one sided vertical panels and flexible supporting posts made of non-metallic material that have a reactive spring so as to be resistant to direct wheel impacts with speeds up to 70 mph, and have the capability of immediately restoring itself to a vertical position when struck by a standard vehicle.

Provide new and unused one sided vertical panels, their supporting posts and reactive spring assemblies.

Provide one sided vertical panels with alternating orange and white reflective stripes in accordance to MUTCD. The panels shall face one direction of traffic as indicated on the plans and shall have an overall height above the pavement of 36 inches. The dimensions of the reflective sheeting facing traffic shall be 12 inches by 24 inches. Reflective sheeting shall meet the requirements of standard spec 637.2.2.2 and shall be suitable for use on reboundable traffic control devices. The alternating orange and white stripes shall slope downward in the direction traffic is to flow.

Furnish bolts for attaching the one sided vertical panels and supporting posts to their surface-mounted bases in accordance to the manufacturer's recommendations.

**C (Vacant)**

**D Measurement**

The department will measure Traffic Control, One Sided Vertical Panel Replacements in place as units furnished.

**E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.202	Traffic Control, One Sided Vertical Panel Replacements	Each

Payment is full compensation for furnishing the replacement one sided vertical panels attached to their supporting posts and reactive spring assemblies; and for furnishing the bolts to attach the one sided vertical panels, posts and spring assemblies to their bases.

**70. Remove Street Light, Item SPV.0060.350.****A Description**

This special provision describes removing and salvaging a base mounted light pole, transformer bases, arm(s) and luminaire(s).

**B (Vacant)****C Construction**

Contact the appropriate personnel (as noted in *Street Lighting and Traffic Signal Systems – General Provisions* article) at least 7 days prior to removing any street lights on City of Janesville lighting systems. Coordinate with city staff to identify the following information:

1. Identify all items to be salvaged, reinstalled or disposed
2. Identify existing feed-point locations and circuit breaks.

When removing existing street lights, carefully remove and stockpile all equipment at a location approved by the engineer. Place all equipment on blocks so as not to be in direct contact with the ground. Protect luminaires from moisture. Either reinstall lights as the plans show or make available for pick up and salvage. Properly dispose of any equipment that is not salvaged.

Replace any equipment damaged in the removal process with equipment that is of greater or equal quality than the damaged piece. Removal of existing luminaires and internal wiring shall be considered incidental to this item when the plans and quantities indicate replacement.

Deliver salvaged materials to the City of Janesville Services Center.



**D Measurement**

The department will measure Remove Street Light as each individual unit, acceptably completed.

**E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.350	Remove Street Light	Each

Payment is full compensation for removals, salvage, delivery, stockpile and/or disposal as required above.

**71. Reinstall Street Light, Item SPV.0060.351.****A Description**

This special provision describes installing a salvaged street light pole, arm and luminaire on a new concrete base. Construction of the new concrete base shall be considered separate. Installation of new LED luminaires shall be considered separate.

**B Materials**

Use all street lighting materials salvaged from the project except for pole wiring. Furnish and install internal wiring under separate items in this contract.

**C Construction**

Reinstall street lights in accordance to the pertinent provisions of standard spec 657 and standard spec 659.

**D Measurement**

The department will measure Reinstall Street Light as each individual unit, acceptably completed.

**E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.351	Reinstall Street Light	Each

Payment is full compensation for installing the salvaged pole, arm, and luminaire.

**72. Utility Line Opening (ULO), Item SPV.0060.352.****A Description**

This special provision describes excavating to uncover utilities for the purpose of determining elevation and potential conflicts as shown on the plans or as directed by the engineer.

## **B (Vacant)**

## **C Construction**

Perform the excavation using hydro-vac excavation and in such a manner that the utility in question is not damaged and the safety of the workers is not compromised.

Perform the utility line openings as soon as possible and at least 10 days in advance of proposed utility construction to allow any conflicts to be resolved with minimal disruption. Where utilities are within 6 feet of each other at a potential conflict location, only one utility line opening is called for. In these cases, a single utility line opening will be considered full payment to locate multiple utilities. Utility line openings include a trench up to 10 feet long as measured at the trench bottom, and of any depth required to locate the intended utility.

Approve and coordinate all utility line openings with the engineer. Notify the utility engineers or their agents of this work a minimum of 3 days prior to the work so they may be present when the work is completed.

Replace pavement over utility line opening trenches which are within the staged traffic area with Asphaltic Surface Temporary. Replace pavement and open to traffic within 24 hours of the excavation.

## **D Measurement**

The department will measure Utility Line Opening by each individual unit, acceptably completed.

## **E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.352	Utility Line Opening (ULO)	Each

Payment is full compensation for the excavation required to expose the utility line; backfilling with existing material removed from the excavation; compacting the backfill material; restoring the site; and for cleanup.

Existing pavement, concrete curb, gutter, and sidewalk removals necessary to facilitate utility line openings shall not be considered part of or paid for under Utility Line Openings, but shall be considered separate and measured and paid for separately as removal items. Temporary pavement, concrete curb, gutter, and sidewalk items shall also be considered separate from Utility Line Openings and will be measured and paid for separately.

### **73. Install Cellular Modem, Item SPV.0060.401.**

#### **A Description**

This special provision describes installing a wireless cellular modem and antenna and providing all necessary associated wiring.

#### **B Materials**

The department will furnish the wireless cellular modem and antenna. Provide all necessary cables between the wireless modem and device to be connected to it.

#### **C Construction**

Drill a hole in the new or existing cabinet to install the wireless modem antenna cable through. Mount the antenna on top of the cabinet and seal the hole with purpose-made waterproof sealing device such as a grommet or gasket.

Install the wireless modem in a new or existing field cabinet. Connect it to the antenna and to devices as shown on the plans, or as directed by the engineer.

#### **D Measurement**

The department will measure Install Cellular Modem by each individual unit, acceptably completed.

#### **E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.401	Install Cellular Modem	Each

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

### **74. Poles Wood 12-FT, Item SPV.0060.402; 50-FT, Item SPV.0060.403.**

#### **A Description**

This special provision describes furnishing and installing wood poles.

#### **B Materials**

Furnish a Class II wood pole conforming to the American Standard Specifications and Dimensions for Wood Poles (ANSI 2051), unless otherwise specified by the engineer.

Treat the wood pole in accordance to the requirements and recommendations of AWP Standard C1 and the applicable AWP Commodity Standards. Do not use Creosote for treatment.

**C Construction**

Install the 12-foot wood pole with 4 feet of the pole length below ground or deeper as required by soil conditions.

Install the 50-foot wood pole with 10 feet of the pole length below ground or deeper as required by soil conditions.

Install all hardware in accordance to the plans. Furnish and install ground rods, wiring, and other components per National Electric Code. Furnish and install conduit and equipment in accordance to the plans.

**D Measurement**

The department will measure Poles Wood 12-FT and Poles Wood 50-FT by 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.0060.402	Poles Wood 12-FT	Each
SPV.0060.403	Poles Wood 50-FT	Each

Payment is full compensation for furnishing and installing the wood pole, furnishing and installing all necessary hardware, making all necessary connections.

**75. Removing and Salvaging Traffic Signal Poles and Intersection Lighting, SPV.0060.450.****A Description**

The work under this item shall consist of removing and salvaging above-ground traffic signal and intersection lighting equipment owned by the City of Edgerton, in accordance to the applicable provisions of standard specs 204, 655 and 659.

Specific removal and salvage items are described in the plans and miscellaneous quantities. This item also includes all other non-itemized materials, labor, and tools required to remove the traffic signal and intersection lighting equipment as shown in the plans.

**B (Vacant)****C Construction**

Inspect the traffic signal and intersection equipment prior to removing from the existing base. Inform the engineer of any items of concern or potential problems that may interfere with the reuse of the pole, arm or luminaire. Arrange for the removal of the traffic signal and intersection equipment after receiving approval from the engineer that it can be removed. Bases will be paid as a separate item and are not included herein.

Items identified in the plans and Miscellaneous Quantities to be returned to the city shall be delivered to the Edgerton City Garage, 315 W. High Street. All conductors and wire shall be removed and properly disposed of. Conduit shall be removed or abandoned in place. Conduit may be abandoned in place only if it does not interfere with new construction or present a risk of damage to newly constructed items.

All work shall be in accordance to the latest Standard Specifications, City of Edgerton Standards, and the plans.

**D Measurement**

The department will measure Removing and Salvaging Traffic Signal Poles and Intersection Lighting by each individual pole 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
SPV.0060.450	Removing and Salvaging Traffic Signal Poles and Intersection Lighting	Each

Payment is full compensation for removing, relocating, and/or disassembling street lighting (as needed), scrapping of some materials, storing salvaged items on site, disposing of scrap material, and for delivering the indicated materials to the city.

**76. Removing and Reinstalling Traffic Signal Arm, Item SPV.0060.451.**

**A Description**

The work under this item shall consist of removing and reinstalling traffic signal trombone arms owned by the City of Edgerton, in accordance to the applicable provisions of standard specs 204, 655 and 659.

Specific removal and reinstallation items are described in the plans and miscellaneous quantities. This item also includes all other non-itemized materials, labor, and tools required to remove and reinstall the equipment as shown in the plans.

**B (Vacant)**

**C Construction**

Inspect the equipment prior to removing from the existing traffic signal pole. Inform the engineer of any items of concern or potential problems that may interfere with the reuse of the equipment. Arrange for the removal of the equipment after receiving approval from the engineer that the existing equipment can be removed. Minimize the time between removal from the existing pole and reinstallation on the new pole. Reinstall the pole assembly on a new base as shown in the plans. Prepare assembly for proper signal cable connection to traffic signal cabinet. Bases and lighting cable will be paid as separate items and are not included herein.

All work shall be in accordance to the latest Standard Specifications, City of Edgerton Standards, and the plans.

**D Measurement**

The department will measure Remove and Reinstall Traffic Signal Arm by each individual traffic signal arm, acceptably removed and reinstalled per plan.

**E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.451	Removing and Reinstalling Traffic Signal Arm	Each

Payment is full compensation for removing and/or disassembling the traffic signal arm (as needed), reinstalling the signal arm as shown on the plans, reattaching existing street signs (as needed), storing salvaged items on site, and disposing of scrap material.

**77. Decorative Traffic Signal Pole, 4-FT, Item SPV.0060.452; Decorative Traffic Signal Pole, 16-FT, Item SPV.0060.453.**

**A Description**

This special provision describes furnishing and installing decorative traffic signal poles, complete in place at the locations as designated on the plans, or as directed by the engineer, and as herein after provided.

**B Materials**

The Decorative Traffic Signal Pole shall match style of the existing decorative poles, manufactured by Visco Lighting, Inc. The decorative pole shall be heavy wall, copper free, cast aluminum construction. The base material shall be certified ASTM 356.1 ingot per ASTM B179-95A or ASTM B26-95, formed true to the pattern with complete detail. All exposed hardware shall be tamper resistant stainless steel. The extruded shaft shall be ASTM 6063 alloy heat treated to T6 temper. The shaft shall be double welded to the base casting and shipped as one piece for maximum structural integrity. The shaft shall be circumferentially welded inside the base casting at the top of the access door and externally where the shaft exits the base. All exposed welds below 8' shall be ground smooth. All welding shall be per ANSI/AWS D1.2-90. All welders shall be certified per section 5 of ANSI/AWS D1.2-90

The pole shall be topped by a decorative finial. The pole shall be supplied with a means to mount to the existing anchorage. The pole shall be capable of supporting the traffic signal assemblies as detailed in the plan set.

The pole and all accessories shall be factory prime and finish painted specified color with polyester powder paint applied after a seven stage pretreatment process to ensure maximum durability. Color shall match HB Fuller #IF6591 black powder coat and

Sherwin Williams #F78XXB3213 Black wet paint. Pole shall be rated for 90 mph sustained wind velocity and 117 mph gust velocity when fully loaded with assemblies as shown in plan set.

**C Construction**

Prior to construction and installation, engineer must approve shop drawings, product information or catalog drawings. Install in accordance to manufacturer's recommendations and in accordance to the pertinent provisions of standard specs 655 and 659.

**D Measurement**

The department will measure Decorative Traffic Signal Pole (Size) by each individual 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.0060.452	Decorative Traffic Signal Pole, 4-FT	Each
SPV.0060.453	Decorative Traffic Signal Pole, 16-FT	Each

Payment is full compensation for furnishing and installing all necessary materials.

**78. Remove, Salvage, and Reinstall Traffic Signal Heads, Item SPV.0060.454.**

**A Description**

This special provision describes removing existing traffic signal heads in accordance to the pertinent provisions of standard spec 204 and as hereinafter provided, storing the equipment on-site, and reinstalling them on new or relocated traffic signal poles.

**B (Vacant)**

**C Construction**

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

Notify the City of Edgerton at (608) 884-4811 at least five working days prior to the removal of the traffic signal heads. Complete the removal work as soon as possible following de-energizing of the traffic signal heads.

Make any necessary traffic signal cable disconnections. Remove the traffic signal head and backplate, if present, per plan from the traffic signal pole. Leave the mounting hardware and cabling in place for future traffic signal head installation.

City of Edgerton Contact:  
City of Edgerton Public Works Department  
(414) 884-4811  
12 Albion St, Edgerton, WI 53534

#### **D Measurement**

The department will measure Remove, Salvage, and Reinstall Traffic Signal Heads by each individual unit, acceptably completed.

#### **E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.454	Remove, Salvage, and Reinstall Traffic Signal Heads	Each

Payment is full compensation for removing traffic signal heads; for storing the materials on –site; and for reinstalling the equipment on new or relocated traffic signal poles.

### **79. Install 5.8 GHz Ethernet Bridge, Item SPV.0060.455.**

#### **A Description**

This special provision describes installing or reinstalling a department-furnished, 5.8 GHz Ethernet radio and associated external antenna at a new or existing cabinet or new or existing pole.

#### **B Materials**

Materials will include department-furnished materials and contractor furnished materials.

Department-furnished materials include the following:

- One solar panel, battery enclosure and mounting equipment (for remote locations only)
- One 5.8 GHz Ethernet bridge with integral antenna
- One 5.8 GHz Ethernet bridge power converter
- One 5.8 GHz Ethernet bridge mounting bracket
- One 5.8 GHz Ethernet bridge external antenna where directed by the plans or by the engineer

Contractor-furnished materials include the following:

- Mounting hardware
- Outdoor rated Category 6 communications cable
- Inline network cable surge suppressor
- Coax cable from 5.8 GHz Ethernet bridge to external antenna

All contractor-furnished equipment listed above shall be considered incidental to this bid item.



### **C Construction**

Bond the surge suppressor to the cabinet grounding system.

Install the 5.8 GHz Ethernet Bridge in a point-to-point or point-to-multipoint configuration as shown on the plans and as directed by the engineer.

Use the manufacturer's set-up software to configure the Ethernet bridge radio for its intended use. Use the signal strength indicator on the radio to find the optimum position. Also perform a frequency analysis to determine the optimal hop pattern of the radios and test the continuity of the link by polling the radios using the software provided. The position of the radio and the hop pattern shall be adjusted until the polls show at least 200 consecutive polling intervals have been successfully transmitted and received. Demonstrate to the engineer that the hop pattern selected corresponds to the optimal noise free frequencies identified in the frequency analysis. Deliver three copies of the final test results for signal strength, frequency analysis, and test polling.

Install additional units listed as undistributed as required if determined by signal strength testing. Mount additional units on 50-foot wood poles under a separate item. The engineer shall approve use of all undistributed quantities.

### **D Measurement**

The department will measure Install 5.8 GHz Ethernet Bridge as each individual unit, acceptably completed.

### **E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.455	Install 5.8 GHz Ethernet Bridge	Each

Payment is full compensation for installing, setting up, configuring, and testing the 5.8 GHz Ethernet bridge radio, surge suppressor, cables, and connections; and transportation.

## **80. Remove Traffic Signal Cabinet, Item SPV.0060.457.**

### **A Description**

This special provision describes removing and salvaging an existing traffic signal cabinet.

### **B (Vacant)**

### **C Construction**

Refer to the Prosecution and Progress article in these special provisions for additional information regarding the removal and replacement of traffic signal cabinets.

Remove existing signal cabinets, coordinate electrical service modifications, salvage existing equipment as specified.

City of Janesville signal cabinets may be salvaged and delivered for stockpile at the City of Janesville Service Center.

WisDOT signal cabinets may be salvaged and delivered for stockpile. Contact the department at least seven days prior to arrange delivery.

**D Measurement**

The department will measure Remove Traffic Signal Cabinet as each individual unit, acceptably completed.

**E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.457	Remove Traffic Signal Cabinet	Each

Payment is full compensation for removals, salvage, delivery, stockpile and/or disposal as required above.

**81. Remove Traffic Signal Head, Item SPV.0060.458.**

**A Description**

This special provision describes removing and salvaging an existing traffic signal head.

**B (Vacant)**

**C Construction**

Remove existing signal heads and salvage mounting hardware and cabling for reuse.

**D Measurement**

The department will measure Remove Traffic Signal Head as each individual unit, acceptably completed.

**E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.458	Remove Traffic Signal Head	Each

Payment is full compensation for removals, salvage, delivery, stockpile and/or disposal as required above.

**82. Traffic Signal Maintenance Mobilization Type 1, Item SPV.0060.459;  
Traffic Signal Maintenance Mobilization Type 2, Item SPV.0060.460.**

**A Description**

This special provision describes performing routine and urgent electrical maintenance and repair work for WisDOT-maintained traffic signals for the duration of the project.

**B Materials**

The engineer must authorize the use of undistributed bid items in this contract to be installed in conjunction with the mobilization items. The use of undistributed bid items shall be evaluated by the engineer and authorized by each individual maintenance effort. Provide a list of undistributed bid items required to perform and complete the maintenance effort for authorization by the engineer.

Materials furnished under this bid item shall consist of incidental items required to provide a complete and working assembly. Incidental items include fittings and caps, banding, wire connections, fasteners, hardware, site restoration items and all materials outside of contract bid items necessary for a completed mobilization.

**C Construction**

Perform all work under this item as authorized and directed by the engineer. Each individual maintenance mobilization requires approval and shall be considered a unique occurrence.

The engineer may authorize mobilizations to complete work on any traffic signal or interconnect system components within the limits of Project 5569-00-72. This includes existing traffic signal components and new traffic signal components which have been previously completed and accepted.

Maintenance and repair of any new traffic signal components prior to acceptance shall be considered incidental to the new traffic signal item. Maintenance and repair of temporary traffic signals and other items which specifically identify ongoing operational responsibility shall not be authorized under this item.

Conditions for mobilizations (Type) include the following:

Authorization and Acceptance: The engineer will identify and authorize all mobilizations. Do not complete any work without documented authorization including a description of the following:

1. Description of the maintenance activity
2. Location of the maintenance activity
3. Response time required
4. Timeframe for completion
5. Bid items authorized for installation
6. Estimate of personnel, equipment and incidental materials required to complete the maintenance activity

The engineer will provide documented acceptance of each mobilization upon the successful completion of the item.

Response Time: All response times will be determined by the engineer. Maintenance items authorized under this item require a minimum response time as follows:

1. Type 1: 48-hours minimum or greater
2. Type 2: 4-hours minimum to 48-hours maximum

Response time shall commence at which point the maintenance work begins on site and does not include prior correspondence with project stakeholders or to complete the maintenance activity.

Level of Effort: Maintenance items authorized under this item shall be limited to one mobilization effort completed by the successful installation or repair of the authorized maintenance item. This item includes an assumed level of effort up to one 12-hour working day regardless of number of personnel and equipment required. Efforts beyond this level shall be considered for a separate mobilization authorization.

Each mobilization effort shall include an initial response, coordination and correspondence with project stakeholders, travel, equipment, personnel and incidental materials to complete the maintenance item.

Installation of Undistributed Items: Install items authorized from undistributed quantities under the pertinent provisions of the individual items and not included as part of this item. This work shall be paid per contract bid price.

#### **D Measurement**

The department will measure Traffic Signal Maintenance Mobilization (Type) as each individual unit, acceptably completed.

#### **E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.459	Traffic Signal Maintenance Mobilization Type 1	Each
SPV.0060.460	Traffic Signal Maintenance Mobilization Type 2	Each

Payment is full compensation for furnishing all work, personnel, equipment and incidentals as required to complete each maintenance activity. Failure to mobilize within the designated timeframe noted in the engineer's written order will result in a \$300.00 per calendar day deduction from payment due under the contract for each calendar day of delay. The engineer may extend the designated timeframe for delays not the contractor's fault.

Items authorized from undistributed quantities under the pertinent provisions of the individual items are not included as part of this item. This work shall be paid per contract bid price.

**83. Remove and Abandon Existing Electrical Service, Item SPV.0060.461.**

**A Description**

This special provision describes removing an in-place electrical service meter breaker pedestal, additional enclosures and attachments, and restoring the site to match the surroundings.

**B Materials**

Provide all materials necessary to remove the in-place meter breaker pedestal and to restore the surroundings.

**C Construction**

Prior to removing the meter breaker pedestal, contact the department for WisDOT installations, Tom Hartzell of the City of Edgerton at (608) 884-3341, or the City of Janesville to arrange for disconnection of the service lateral and salvaging/removal of the meter housing by the electrical utility.

After disconnection of the service lateral and salvaging/removal of the meter housing by the electrical utility, carefully remove the meter breaker pedestal including any base or foundation. Properly dispose of meter breaker pedestal components off right-of-way.

Backfill the removal site with material similar to surrounding material and match the surrounding grade.

**D Measurement**

The department will measure Remove and Abandon Existing Electrical Service by each individual unit, acceptably completed.

**E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.461	Remove and Abandon Existing Electrical Service	Each

Payment is full compensation for removal, backfill, and disposal as required above.

**84. Remove Pedestrian Signal Head, Item SPV.0060.462.**

**A Description**

This special provision describes removing existing pedestrian signal heads.

**B (Vacant)**

**C Construction**

Contact the city to determine whether any existing equipment is to be salvaged. Carefully remove signal head, mounting brackets and banding from the existing signal poles. Retain existing cables within the pole for re-use. Completely seal all openings which will not be re-used with the replacement equipment. Properly dispose of all equipment that is not salvaged.

**D Measurement**

The department will measure Remove Pedestrian Signal Head as each individual unit, acceptably completed.

**E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.462	Remove Pedestrian Signal Head	Each

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

**85. Remove Pedestrian Push Button, Item SPV.0060.463.****A Description**

This special provision describes removing existing pedestrian push buttons.

**B (Vacant)****C Construction**

Contact the city to determine whether any existing equipment is to be salvaged. Carefully remove push button, sign, banding and wiring from the existing signal poles. Completely seal all openings which will not be re-used with the replacement equipment. Properly dispose of all equipment that is not salvaged.

**D Measurement**

The department will measure Remove Pedestrian Push Button as each individual unit, acceptably completed.

**E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.463	Remove Pedestrian Push Button	Each

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

## **86. Install Solar-Powered Bluetooth Sensor, Item SPV.0060.464.**

### **A Description**

This special provision describes installing a department-furnished solar-powered bluetooth sensor with onboard cellular modem, solar panel and solar panel mounting hardware, as specified in standard specs 651, 670, 674, and 675, as shown on the plans, and as provided hereinafter.

### **B Materials**

The department will furnish the solar-powered bluetooth sensor with onboard cellular modem and solar panel with mounting hardware.

Provide all necessary cables and connectors between the solar-powered bluetooth sensor and other devices.

### **C Construction**

Install the solar-powered bluetooth sensor as indicated on the plans and in accordance to the manufacturer's recommendations. Mount the antenna to maximize signal strength.

### **D Measurement**

The department will measure Install Solar-Powered Bluetooth Sensor as each individual install solar-powered Bluetooth sensor, 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.0060.464	Install Solar-Powered Bluetooth Sensor	Each

Payment is full compensation for coordinating pick-up from WisDOT, transporting, installation of the solar-powered bluetooth sensor and cellular modem, furnishing and installing all necessary hardware, and making all necessary connections.

## **87. Furnish and Install Wood Post Support, Item SPV.0060.465.**

### **A Description**

This special provision describes furnishing and installing wooden sign posts for bluetooth detector supports.

### **B Materials**

Furnish wooden sign posts in accordance to the pertinent requirements of standard spec 634.2. Furnish stainless steel banding as required to secure two 4 x 6-inch x 20-foot sign posts as a single unit.

### **C Construction**

Install wooden sign posts in accordance to the pertinent requirements of standard spec 634.3.

**D Measurement**

The department will measure Furnish and Install Wood Post Support as each individual install wood post support, 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.0060.465	Furnish and Install Wood Post Support	Each

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

- 88. Poles Type 3 Black, Item SPV.0060.466; Poles Type 4 Black, Item SPV.0060.467; Trombone Arms 15-FT Black, Item SPV.0060.468; Luminaire Arms Single Member 4-Inch Clamp 6-FT Black, Item SPV.0060.469; Luminaires Utility LED C Black, Item SPV.0060.470; Transformer Bases 11 1/2-Inch Bolt Circle, Black, Item SPV.0060.471.**

**A Description**

This item includes furnishing, delivering, and installing black powder coated traffic signal equipment to match existing signal equipment at the USH 51 intersection with STH 59 in the City of Edgerton.

**B Materials**

Furnish materials in accordance to standard specs 657 and 659, with the following additions:

*Append standard spec 657.2.2.1.1 with the following:*

Poles Type 3 Black, Poles Type 4 Black, Trombone Arms 15-FT Black, and Transformer Bases 11 1/2-Inch Bolt Circle Black at the USH 51 intersection with STH 59 shall have a black exterior finish to match the existing traffic signal equipment, factory applied and powder-coated.

*Append standard spec 659.2 with the following:*

Luminaire Arms Single Member 4-Inch Clamp 6-FT Black, and Luminaires Utility LED C Black at the USH 51 intersection with STH 59 shall have a black exterior finish to match the existing traffic signal equipment, factory applied and powder-coated.

**C Construction**

Install equipment in accordance to standard specs 657 and 659, with the following additions:



*Append standard spec 657.3.1.1 with the following:*

Deliver spare traffic signal equipment (items not shown for installation in plans or miscellaneous quantities) to City of Edgerton Garage, 315 W. High Street.

*Append standard spec 659.3.1 with the following:*

Deliver spare lighting equipment (items not shown for installation in plans or miscellaneous quantities) to City of Edgerton Garage, 315 W. High Street.

#### **D Measurement**

The department will measure Poles Type 3 Black, Poles Type 4 Black, Trombone Arms 15-FT Black, Luminaire Arms Single Member 4-Inch Clamp 6-FT Black, and Luminaires Utility LED C, Black and Transformer Bases 11 ½-Inch Bolt Circle Black by each individual unit, acceptably completed.

#### **E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.466	Poles Type 3 Black	Each
SPV.0060.467	Poles Type 4 Black	Each
SPV.0060.468	Trombone Arms 15-FT Black	Each
SPV.0060.469	Luminaire Arms Single Member 4-Inch Clamp 6-FT Black	Each
SPV.0060.470	Luminaires Utility LED C Black	Each
SPV.0060.471	Transformer Bases 11 1/2-Inch Bolt Circle Black	Each

Payment is full compensation for furnishing, delivering, and installing the bid items listed in this special provision; for powder coating all items; for providing all necessary mounting hardware, brackets, shims, grounding lugs, fittings, luminaires, and other components as required for installation; and for delivering spare equipment to the City of Edgerton Garage.

### **89. Adjusting Water Valve Boxes, Item SPV.0060.650.**

#### **A Description**

This special provision describes adjusting water valve boxes to match new pavement elevations and conforms to the Standard Specifications for Sewer and Water Construction in Wisconsin, latest edition, and as hereinafter provided.

#### **B Materials**

Valve box adjustment ring sections shall be of similar manufacture to existing valve box to ensure compatibility of parts.

#### **C Construction**

This work shall be accomplished by adding valve box adjustment sections to existing valve box. Contractor may alternatively move the existing adjustable water valve box

sleeve up or down as necessary by lifting or turning the valve box top as the case may be according to the valve box mechanical design. Any excavation or backfilling required to acceptably accomplish the adjustment is considered incidental to this item. This work shall also be done so as not to damage the valve, or the valve box, or detrimentally affect the valve box alignment. The valve box shall be realigned if disturbed during any construction operations so it is centered over the operating unit. If the valve box is not adequate in length to provide proper adjustment, the contractor shall provide the proper length valve box adjustment section, and shall install and adjust the new section. Leave all valve boxes centered over the valve operating nut and free of dirt and debris.

#### **D Measurement**

The department will measure Adjusting Water Valve Box per each adjustment, completed and accepted.

#### **E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.650	Adjusting Water Valve Boxes	Each

Payment is full compensation for furnishing all materials, including adjustment rings, adjusting the valve box; excavating, backfilling, and compacting as required; for disposal of waste materials; and for furnishing all labor, tools, equipment and incidentals necessary to complete the contract work.

### **90. Adjusting Sanitary Manholes, Item SPV.0060.651.**

#### **A Description**

This special provision describes the adjustment of sanitary manholes to an elevation as determined by the engineer as well as the installation of an internal/external seal and conforms with the Standard Specifications for Sewer and Water Construction in Wisconsin, latest, and as hereinafter provided. Masonry adjusting rings and mortar shall be added or removed as needed. This item applies to those structures that must be lowered less than 6 inches or raised less than 12 inches.

#### **B Materials**

##### **B.1 Adjusting Rings**

Adjustment rings shall be concrete with steel reinforcement in conformance with ASTM C-478. Precast concrete rings shall have an inside diameter to match the manhole opening, be not less than 2 inches nor more than 6 inches high, and have a wall thickness of 6 inches unless otherwise specified. The rings shall contain a minimum of one No. 2 reinforcing rod centered within the ring. No cracked or broken rings shall be used. The top of precast manhole cones shall be set a maximum of 18 inches lower than established grade in unimproved areas, with the top of the manhole cover being ringed up flush with the existing ground. The minimum number of adjusting rings shall be one 2-inch ring. The maximum height of adjusting rings shall be 8 inches in paved areas. All joints between the adjusting rings shall be filled with grout or mortar, including between the cone and the

adjusting ring and the adjusting ring and the frame. Where necessary, rings shall be grooved to receive a step.

## **B.2 Manhole**

Precast manholes and tops shall conform with ASTM Specifications, C478, latest revision.

## **B.3 Manhole Seal**

Sanitary manhole seal – internal/external, shall meet the material requirements of section 8.42.3 and the performance requirements of section 8.42.4 of the Standard Specifications for Sewer and Water Construction, latest edition.

## **C Construction**

Engineer must approve prior to beginning work, any method of adjustment of sanitary manhole.

Build up manholes so that the frames and cover when placed will be at the established required grade; the existing frame and cover shall be removed and reinstalled.

Install seals in accordance to the manufacturer's recommended installation procedures.

Granular Backfill conforming to section 6.43.4 of the Standard Specifications for Sewer and Water Construction in Wisconsin shall be used as backfill in the manhole excavation area and shall be compacted by mechanical vibration to achieve uniform consolidation in conformance with section 2.6.14(b) of the Standard Specifications for Sewer and Water Construction in Wisconsin.

## **D Measurement**

The department will measure Adjusting Sanitary Manholes per each adjustment, completed and accepted.

## **E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.651	Adjusting Sanitary Manholes	Each

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

## **91. Adjusting Water Valve Vault, Item SPV.0060.652.**

### **A Description**

This special provision describes adjusting water valve vaults to the proposed grade, in accordance to the Standard Specifications for Sewer and Water Construction in Wisconsin, latest edition, and as hereinafter provided. This item applies to those structures that must be lowered less than 6 inches or raised less than 12 inches.

### **B Materials**

#### **B.1 Adjustment Rings**

Adjustment rings shall be concrete with steel reinforcement in conformance with ASTM C-478. Precast concrete rings shall have an inside diameter to match the manhole opening, be not less than 2 inches nor more than 6 inches high, and have a wall thickness of 6 inches unless otherwise specified. The rings shall contain a minimum of one No. 2 reinforcing rod centered within the ring. No cracked or broken rings shall be used. The top of pre-cast manhole cones shall be set a maximum of 18 inches lower than established grade in unimproved areas, with the top of the manhole cover being ringed up flush with the existing ground. The minimum number of adjusting rings shall be one 2-inch ring. The maximum height of adjusting rings shall be 8 inches in paved areas. All joints between the adjusting rings shall be filled with grout or mortar, including between the cone and the adjusting ring and the adjusting ring and the frame. Where necessary, rings shall be grooved to receive a step.

#### **B.2 Manhole**

Manholes shall be constructed with a Type I Frame/Chimney Joint per subsection 3.5.4(f)1 of the Standard Specifications for Sewer and Water Construction in Wisconsin.

### **C Construction**

#### **C.1 General**

Engineer must approve prior to beginning work, any method of adjustment of valve vaults.

#### **C.2 Frame and Cover**

Build up manholes so that the frames and cover when placed will be at the established required grade; the existing frame and cover shall be removed and reinstalled.

#### **C.3 Backfill**

Granular Backfill conforming to section 6.43.4 of the Standard Specifications for Sewer and Water Construction in Wisconsin shall be used as backfill in the manhole excavation area and shall be compacted by mechanical vibration to achieve uniform consolidation in conformance with section 2.6.14(b) of the Standard Specifications for Sewer and Water Construction in Wisconsin

### **D Measurement**

The department will measure Adjusting Water Valve Vault per each adjustment, completed and accepted.

**E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.652	Adjusting Water Valve Vault	Each

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

**92. Removing HMA Pavement Notched Wedge Longitudinal Joint Milling, Item SPV.0090.001.**

**A Description**

This special provision describes removing the notched wedge longitudinal joint prior to paving the adjacent lane in order to create a vertical longitudinal joint.

**B (Vacant)****C Construction**

Remove the notched wedge longitudinal joint constructed according to standard spec 450.3.2.8 prior to paving the adjacent lane. Provide a uniform milled surface that is reasonably plane, free of excessively large scarification marks, and has the grade and transverse slope the plans show or the engineer directs. Do not damage the remaining pavement.

Use a self-propelled milling machine with depth, grade, and slope controls. Shroud the drum to prevent discharging loosened material onto adjacent work areas or live traffic lanes. Provide an engineer-approved dust control system.

Maintain one lane of the roadway for traffic at all times during working hours. Do not windrow or store material on the roadway. Clear the roadway of all materials and equipment during non-working hours.

**D Measurement**

The department will measure Removing HMA Pavement Notched Wedge Longitudinal Joint Milling 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.0090.001	Removing HMA Pavement Notched Wedge Longitudinal Joint Milling	LF

Payment is full compensation for removing HMA pavement; and for hauling and disposal of materials.

**93. Concrete Curb and Gutter 30-Inch Type A Special, Item SPV.0090.002.**

**A Description**

This special provision describes constructing concrete curb and gutter in accordance to the pertinent requirements of standard spec 601 and the construction details shown in the plans.

**B Materials**

Materials shall be in accordance to standard spec 601.2.

**C Construction**

Construction shall be in accordance to the plans and to standard spec 601.3.

**D Measurement**

The department will measure Concrete Curb and Gutter 30-Inch Type A Special 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.0090.002	Concrete Curb and Gutter 30-Inch Type A Special	LF

Payment is full compensation according to standard spec 601.5.

**94. Furnish and Install Equivalent Lighting Conductors, Item SPV.0090.350.**

**A Description**

This special provision describes furnishing and installing electrical conductors to match existing street lighting circuits.

**B Materials**

Furnish electrical conductors equivalent to conductors in existing lighting circuits and incidentals in accordance to the pertinent requirements of standard spec 655.2. Furnish various sizes/types of electrical conductors to match all existing systems within the project limits. All sizes and types of electrical conductors shall be paid under this bid item.

**C Construction**

Perform a pre-construction site assessment with the City of Janesville and the engineer for all areas where this item is used. The site assessment shall include written documentation of existing service points, circuiting patterns, number of conductors and the conductor size/type.

This item includes the removal and abandonment of any existing conductors which preclude the ability to run new conductors in existing conduit.

Install electrical conductors in accordance to the pertinent requirements of standard spec 655.3.

#### **D Measurement**

The department will measure Furnish and Install Equivalent Lighting Conductors in length by the linear foot of tape, measured along the centerline of the conduit multiplied by the number of conductors used.

#### **E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.350	Furnish and Install Equivalent Lighting Conductors	LF

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

### **95. Install Camera Power Cable, Item SPV.0090.450; Install Cat-5e Cable, Item SPV.0090.451.**

#### **A Description**

This special provision describes the transporting and installing of department furnished Camera Power Cable, Cat-5e Cable.

#### **B Materials**

Pick up the department furnished Camera Power Cable, Cat-5e cable, and ethernet repeaters at the department's electrical shop. Notify the department's electrical field unit to make arrangements for picking up the department furnished materials at least five working days prior to material pick-up.

Furnish all other necessary materials (connectors including wire nuts, splice kits, tape, insulating varnish or sealant and ground lug fasteners) ensuring all materials are in compliance with the WisDOT Qualified Electrical Products List.

#### **C Construction**

Install all cables per the cable routing plan. Neatly coil a minimum of 15-feet of extra cable in the traffic signal cabinet. Provide an extra 6-foot loop of cable in each pull box and an extra 10-feet in the traffic signal pole pedestal or transformer base.

Install the Camera Power Cable (without splices) from the video detection cameras to the cabinet. Terminate the ends of the cable and connect the cable to the video detection cameras per the Adaptive traffic signal video detection camera manufacturer's specifications.

Install the Cat-5e Cable from the video detection cameras and microwave detectors to the cabinet. All cable runs less than or equal to 300-feet shall be installed continuously (without splices) from the traffic signal cabinet to the units plus additional length for coils left in pull boxes or bases. Cable runs longer than 300-feet require a repeater; install the cable continuously (without splices) from the traffic signal cabinet to the pull box, pedestal or transformer base identified in the cable routing plan for the repeater. Install the repeater and install the cable continuously (without splices) from the repeater to the units.

All open field ends shall be taped and covered with a sealant in accordance to standard spec 655.3.1. Terminate the ends of the cable and connect the cable to the video detection cameras and microwave detectors per the manufacturer's specifications. Install ethernet repeaters per the manufacturer's specifications.

Install all required equipment and make all final connections in the traffic signal cabinet. Mark the cabinet end of the Camera Power Cable and Cat-5e Cable appropriately to indicate the equipment label (i.e. VID1, VID2, etc.) in the traffic signal control cabinet.

#### **D Measurement**

The department will measure Install Camera Power Cable and Install Cat-5e Cable by the linear foot of cable, 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.0090.450	Install Camera Power Cable	LF
SPV.0090.451	Install Cat-5e Cable	LF

Payment is full compensation for transporting and installing the Video Camera Power Cable, Cat-5e Cable, for making all connections; for furnishing and installing all connectors, including wire nuts, splice kits, tape, insulating varnish or sealant and ground lug fasteners; and for testing.

### **96. Fiber Optic Tracer Cable, Item SPV.0090.452.**

#### **A Description**

This special provision describes furnishing and installing fiber optic tracer cable in all conduit containing fiber optic cable.

#### **B Materials**

Provide the tracer cable with a black insulation cover, No. 14 AWG, XLP, USE rated, 600 VAC, single conductor, copper wire.

#### **C Construction**

Install the tracer cable in all conduit containing fiber optic cable, running continuously through all pull boxes. Install the tracer cable to each control cabinet, but do not enter the



cabinet. The tracer cable may be spliced only in pull boxes. Make splices only between full rolls of wire. For the cable splice use a Western Union Splice soldered with resin core flux. All exposed surfaces of the solder shall be smooth. Solder splices using a soldering iron. Cover the splice with a WCSMW 30/100 heat shrink tube, minimum length 4-inches, and with a minimum one-inch coverage over the XLP insulation, underwater grade.

#### **D Measurement**

The department will measure Fiber Optic Tracer Cable in length by the linear foot of cable, measured along the centerline of the conduit.

#### **E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.452	Fiber Optic Tracer Cable	LF

Payment is full compensation for furnishing and installing the tracer cable; splicing; properly disposing of surplus materials.

### **97. Fiber Optic Warning Tape, Item SPV.0090.453.**

#### **A Description**

This special provision describes furnishing and installing fiber optic warning tape above all conduit containing fiber optic cable. Warning tape will not be placed above conduit installed by directional bore.

#### **B Materials**

Provide underground warning mesh that is constructed of polypropylene and is fluorescent orange in color. Provide 6-inch detectable marking tape that has the words "Buried Fiber Optic Cable" and is orange in color.

#### **C Construction**

Lay underground warning mesh above all underground conduits installed by open trench, 12-inches below grade. The width of the warning mesh shall be the same as the width of the trench. Lay directly above the underground warning mesh, a 6-inch detectable marking tape that has the words "Buried Fiber Optic Cable" and is orange in color.

#### **D Measurement**

The department will measure Fiber Optic Warning Tape in length by the linear foot of tape, measured along the centerline of the conduit.

#### **E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.453	Fiber Optic Warning Tape	LF

Payment is full compensation for furnishing and installing the marking tape; and for properly disposing of surplus materials.

**98. Sawing Pavement Deck Preparation Areas, Item SPV.0090.700.**

**A Description**

This special provision describes sawing the boundaries of the existing concrete on the bridge deck that has been sounded and marked for deck preparation. These boundaries will be at least 2-inches and not greater than 6-inches outside of the unsound or disintegrated areas of concrete, as directed or marked by the engineer in the field.

**B (Vacant)**

**C Construction**

Make the saw cuts, a minimum of 1-inch in depth, at the locations marked.

Use a diamond blade for sawing that will allow the concrete to be sawed dry. Upon completion of the daily sawing, remove the dust deposits from the deck.

**D Measurement**

The department will measure Sawing Pavement Deck Preparation Areas by the linear foot, acceptably completed.

The department will not measure for payment over-cuts.

**E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.700	Sawing Pavement Deck Preparation Areas	LF

Payment is full compensation for making all saw cuts.

**99. Survey Project 5390-00-72, Item SPV.0105.001; Survey Project 5390-00-73, Item SPV.0105.002; Survey Project 5569-00-72, Item SPV.0105.003.**

**A Description**

Perform work conforming to standard spec 105.6 and 650.

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 1/2-mile intervals for vertical control. Control points will be provided as a hard copy and in 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 in accordance 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.0105.001	Survey Project 5390-00-72	LS
SPV.0105.002	Survey Project 5390-00-73	LS
SPV.0105.003	Survey Project 5569-00-72	LS

Payment is full compensation for performing all survey work required to layout and construct all work under this contract.

## **100. Concrete Pavement Joint Layout, Item SPV.0105.004.**

### **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 (traditional and roundabouts) 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 in accordance 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 as a single complete lump sum unit of work, completed in accordance to the contract and accepted.

### **E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.004	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.

## **101. Electrical Service Meter Breaker Pedestal Special (USH 14 and Lexington Drive), Item SPV.0105.350; Electrical Service Meter Breaker Pedestal Special (STH 26 and Morse Street), Item SPV.0105.351.**

### **A Description**

Perform work in accordance to the requirements of standard spec 656, the plans, standard detail drawings, and as hereinafter provided.

### **B Materials**

In accordance to the plans and standard spec 656.2 and as hereinafter provided:

*Amend standard spec 656.2.3, Meter Breaker Pedestal Service, by adding the following paragraphs:*

- (2) Furnish meter pedestal with provisions for a minimum of two 30A double-pole breakers in a water-tight outdoor rated enclosure. Furnish and install breakers as required to reestablish existing lighting circuits.
- (3) Furnish stainless steel square tubing, concrete masonry and steel reinforcement as the plans show for rigidly mounting the meter pedestal.
- (4) Furnish lighting controls integral with the meter pedestal enclosure.

#### **C Construction**

In accordance to the plans and standard spec 656.3 and as hereinafter provided:

1. Obtain a City of Janesville Electrical Permit from the Housing, Building, and Neighborhood Services Department prior to performing any work. Pay all permit fees.
2. Ensure that electrical service is installed and energized a minimum of one week prior to the system activation deadline.

#### **D Measurement**

The department will measure Electrical Service Meter Breaker Pedestal Special (Location) as a single lump sum unit of work for each service, acceptably completed.

#### **E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.350	Electrical Service Meter Breaker Pedestal Special (USH 14 and Lexington Drive)	LS
SPV.0105.351	Electrical Service Meter Breaker Pedestal Special (STH 26 and Morse Street)	LS

Payment is full compensation for furnishing and installing all materials; for excavation, backfill, and for disposal of surplus materials.

### **102. Furnish and Install Traffic Signal Cabinet, Controller, and Battery Backup System USH 51 and STH 59, Item SPV.0105.450.**

#### **A Description**

This specification describes furnishing and installing an equipped NEMA TS2 Type 1 traffic signal control cabinet at the USH 51 intersection with STH 59 in the City of Edgerton. Cabinet components, including, but not limited to the traffic signal controller, malfunction management unit (MMU), bus interface units (BIU), flash transfer relays,

battery backup system, and railroad preemption interface will also be furnished and installed as part of this bid item. The police access panel shall be considered a separate pay item.

The traffic signal cabinet shall be manufactured by Siemens Energy and Automation, Inc and include an Eagle/EPAC M50 Series Traffic Signal Controller.

## **B Materials**

Furnish and install equipment and assemble the cabinet conforming to the latest revision of NEMA Standards Publication TS 2-2003, *Traffic Controller Assemblies with NTCIP Requirements*, National Electrical Manufacturers Association, hereinafter called NEMA TS2 Standard, except where modified in this specification. Conform all work to the Wisconsin State Electrical Code (WSEC).

Provide cabinets designed for TS2 Type 1 operation. Pre-wire cabinets for a minimum of sixteen phases as specified herein.

Furnish and install at no extra cost any equipment and materials not specifically described but required in order to perform the intended functions in the cabinet.

## **C Construction**

### **C.1 Cabinet**

#### **C.1.1 Design**

Furnish a door-in-door ground mounted (without anchor bolts) aluminum cabinet of clean-cut design and appearance. Provide a cabinet of minimum size 44 inches wide, minimum 24 inches deep, and minimum 52 inches to maximum 60 inches high. The size of the cabinet shall provide ample space for housing the controller, all of the associated devices which are to be furnished with the controller, all other auxiliary devices herein specified, and all equipment to be furnished and installed by others as listed in the Description section of this specification.

The cabinet shall comply with the environmental and operating standards outlined in the NEMA TS2 Standard. The cabinet shall provide reasonable vandalism protection. The cabinet shall have a NEMA 3R rating.

Construct the cabinet from type 5052-H32 aluminum with a minimum thickness of 0.125 inches. Furnish the cabinet with a natural, uncoated, aluminum finish inside and a black exterior finish, anodized and factory applied to match the existing traffic signal equipment. Continuously weld all seams. The surface shall be smooth, free of marks and scratches. Use stainless steel for all external hardware.

On the top of the cabinet, incorporate a 1-inch slope toward the rear to prevent rain accumulation. Incorporate a rain channel into the design of the main door opening to prevent liquids from entering the enclosure.

Include an exhaust plenum with a vent screen into the roof of the cabinet. Perforations in the vent screen shall not exceed 0.125 inches in diameter.

Equip the lower section of the cabinet door with a louvered air entrance. The air inlet shall be large enough to allow sufficient air flow per the rated fan capacity. Louvers must satisfy the NEMA rod entry test for Type 3R ventilated enclosures. Secure a washable, fiberglass, removable air filter to the air entrance. The filter shall fit snugly against the cabinet door wall. Attach an aluminum, easily removable, gasketed cover over the air filter and louver.

### **C.1.2 Doors**

The cabinet door opening shall be a minimum of 80 percent of the front surface of the cabinet. The main door and police door-in-door shall each close against a weatherproof and dust-proof, closed-cell neoprene gasket seal. The gasket material for the main door shall be a minimum of 0.188 inches thick by 1.00 inch wide. The gasket material for the police door shall be a minimum of 0.188 inches thick by 0.500 inches wide. Permanently bond the gaskets to the cabinet.

Equip the main door with a three-point latching mechanism. The upper and lower locking points of the latching mechanism shall each have a pair of nylon rollers. The handle on the main door shall utilize a shank of stainless steel 3/4 inches minimum diameter. The handle shall include a hasp for the attachment of an optional padlock. The cabinet door handle may turn either clockwise or counterclockwise to open, and shall not extend outwards past the edge of the door at any time. Position the lock assembly so the key will not cause any interference with the handle, or a person's hand on the handle, when opening the cabinet door.

Include on the main door a solid stainless steel rod stop and catch mechanism capable of rigidly holding the door open at approximately 90, 120, and 180 degrees under windy conditions. The operator must be able to engage and disengage the catch with a shoed or booted foot.

The main door hinge shall be a one-piece, continuous piano hinge with a minimum 0.25 inch stainless steel pin running the entire length of the right side of the door (right-handed). Attach the hinge in such a manner that no rivets or bolts are exposed.

Equip the main door with a brass Corbin tumbler lock No. 2, swing away dust cap, and provide two keys No. 2. Equip the police door-in-door with a standard police lock and provide one key.

### **C.1.3 Shelves and Mountings**

Mount a minimum of three vertical "C" channels, compatible with Unistrut channel nuts, on each interior side wall of the cabinet for the purpose of mounting the cabinet components. The channels shall accommodate spring mounted nuts or studs. Install three vertical "C" channels or three slotted rails on the interior back wall of the cabinet. All mounting channels and rails shall extend to within 7 inches of the top and bottom of the cabinets and shall be of sufficient strength to rigidly hold specified shelves and equipment.

Provide two full-width, 11-inch deep, fully adjustable, aluminum shelves to support the controller and other equipment. Mount the lower shelf at a height above the bottom of the cabinet such that the shelf and attached drawer does not interfere with the ability to tilt the terminal facility forward on its hinges for maintenance purposes. Mount the top shelf at least 13 inches above the surface of the lower shelf.

Locate the controller and MMU on the top shelf. Locate the loop detector racks and other auxiliary equipment on the lower shelf. The power supply may be mounted on either shelf.

Provide an under-shelf drawer under the lower shelf. The drawer shall be approximately 20 inches wide and the full depth of the shelf. The drawer shall operate easily and smoothly, and shall have a stop to prevent inadvertently pulling the drawer out of its support. Design the stop to allow purposeful complete removal of the drawer without the use of tools.

#### **C.1.4 Auxiliary Cabinet Equipment**

Ventilate the cabinet by means of a 120 VAC, 60HZ, tube axial compact type fan located in the top of the cabinet plenum. The fan's free delivery airflow shall be equal to or greater than 100 cubic feet per minute. The magnetic field of the fan motor shall not affect the performance of control equipment. The fan bearings shall operate freely. The fan unit shall not crack, creep, warp, or have bearing failure within a seven year duty cycle. The maximum noise level shall be less than 40 decibels. The fan unit shall be corrosion resistant. The thermostat's turn on setting shall be adjustable from 90 to 120 degrees F. The fan shall run until the cabinet temperature decreases below the turn-on temperature setting by approximately 30 degrees F. The fan shall be fused.

Mount an incandescent lamp and socket in the cabinet to sufficiently illuminate the field terminals. Wire the lamp to a 15-amp ON/OFF toggle switch mounted as specified in the Cabinet Switches section of this specification.

Provide a 250 watt element heater. Install the heater on the face of the aluminum, louvered air filter cover such that feed air is supplied through the cover. Provide a protective, ventilated cover over the heater. Provide a cord and twist-off plug to an electrical receptacle on the cabinet door. Provide a thermostat with an adjustable setting from 0 to 100 degrees F. Install the thermostat on the interior ceiling of the cabinet well away from the cabinet light or any heat source. Provide a thermal limit switch to prevent the heater's protective cover shall be from exceeding 170 degrees F.

Furnish a police hand cord. Include a 150 foot long, stranded two-wire, coiled cord and a hand held push button unit for advancing the signal phasing. Modify the cabinet space to accommodate the cord length. The cord shall extend from the exterior of the cabinet and shall be composed of weatherproof materials to maintain functionality.



## **C.2 Terminals and Facilities**

### **C.2.1 Terminal Facility**

The terminal facility panel constructed from 5052-H32 brushed aluminum of 0.125 inches minimum thickness and formed so as to eliminate any flexing when plug-in components are installed.

Mount the bottom of the terminal facility a minimum of nine inches from the bottom of the cabinet. Hinge the terminal facility at the bottom to allow easy access with simple tools to all wiring on the rear of the panel. It shall not be necessary to remove the lower shelf, the shelf drawer, or any shelf-mounted equipment to hinge down the terminal facility. Provide sufficient slack in the load bay wiring to allow for dropping the load bay.

Fully wire the terminal facility with sixteen load switch sockets: eight phases of vehicular, four phases of pedestrian, and four phases of overlap operation; eight flash transfer relay sockets; one flasher socket; and two terminal facility BIU rack slots. The use of printed circuit boards is not acceptable on the terminal facility, except printed circuit boards are acceptable for the BIU interface with the load bay. Position the 16 load switch sockets in two horizontal rows of eight sockets each. Support the load switches and flasher by a bracket or shelf extending at least three inches from the terminal facility.

Label all terminals, load switches, and flash transfer relay sockets. Label reference designators by silk-screening on the front and rear of the terminal facility to match drawing designations.

Provide rack mounted BIU's. Provide a dual-row, 64-pin female DIN 41612 Type B connector for each BIU rack position. Provide card guides for both edges of the BIU. Terminal and facilities BIU mounting shall be an integral part of the terminal facility.

Provide two each 16-channel, 8-position, TS2 detector racks, each with an integrally mounted BIU mounting. Racks shall be addressable. Power each detector rack by the cabinet power supply. Fasten the loop detector racks towards the left side of the lower shelf.

For BIU rack connectors, provide pre-wired address pins or jumper plugs corresponding to the requirements of the NEMA TS2 Standard. The address pins or jumper plugs shall control the BIU mode of operation. BIUs shall be capable of being interchanged with no additional programming.

For the terminal facility, contain all field wires within one or two rows of horizontally-mounted Marathon heavy duty terminal blocks. Terminate all field output circuits on an unfused terminal block with a minimum rating of 10 amps. Use mechanical connector lugs rated for copper wire. Angle the lower section of the terminal block out from the back of the cabinet at approximately a 45 degree angle.

Identify all field input/output (I/O) terminals by permanent alphanumeric labels. All labels shall use standard nomenclature per the NEMA TS2 Standard.

All field flash sequence programming at the field terminals shall be able to be accomplished with the use of only a screwdriver.

Wire field terminal blocks to use three positions per vehicle or overlap phase (green, yellow, red).

Wire one RC network in parallel with each flash transfer relay coil.

Permanently label all logic-level, NEMA-controller and MMU input and output terminations on the terminal facility. Identity the function of each terminal position on the cabinet drawings.

Terminal blocks for DC signal interfacing shall have a number 6-32 x 7/32 inch screw as minimum. Functions to be terminated shall be as specified in the listing of Input/ Output Terminals in Section 5 of the NEMA TS2 Standard.

Conform all terminal facility and cabinet wiring to the WSEC. The green/ walk, yellow, and red/ don't walk load switch outputs shall be minimum 16 gauge wire. The MMU (other than AC power), controller I/O, and logic ground shall be minimum 22 gauge wire. All wire colors shall be consistent in all cabinets furnished in one order.

### **C.3 Auxiliary Panels**

#### **C.3.1 Vehicle Detection Interface Panel**

Provide a 32-position interface panel or two 16-position panels. Each interface panel shall allow for the connection of 32 or 16 independent field loops, respectively. The panels shall have barrier strip type terminals using 8-32 screws and be rated for 20 inch pounds of torque. Provide a ground bus terminal between each loop pair terminal to provide a termination for the loop lead-in cable ground wire. Secure the interface panels to a mounting plate attached to the left interior side wall of the cabinet.

Provide a cable consisting of 20 AWG twisted pair wires to enable connection to and from the interface panel to a detector rack. The twisted pair wires shall be color-coded wires. Provide a cable of sufficient length to allow the detector rack to be placed on either shelf.

Identify all termination points by a unique number silk screened on the panel.

#### **C.3.2 Intersection Lighting Control Panel**

Provide an intersection lighting control panel as described. The intersection lighting control panel shall consist of an aluminum panel 0.125 inches thick and approximately 5 inches by 10 inches. Determine the actual panel size by the cabinet's mounting rail placement. Attach to the panel a 2 pole-30 amp contactor-120vac coil (Square D #8910DPA32V02 or equal), and a heavy duty six position terminal block (Marathon DJ1606 or equal). Use wire sizes 10AWG for power and load wiring, and 16AWG for control wires. Wire the terminal strip as follows:

- § Control coil
- § L1 in
- § L2 in
- § Neutral in and control coil
- § L1 out
- § L2 out

Protect each output by a MOV (V150LA20A) wired between the output and neutral. Include a photo control (Intermatic #K4021C or equal). Mount the photo control just above the cabinet door and approximately 12 inches from the right side of the cabinet. Wire the photo control to a 3 position terminal switch using 16AWG wire color coded to match the photo control wiring connected to the intersection lighting control panel.

### **C.3.3 Conductors and Cabling**

All conductors in the cabinet shall be copper 22 AWG or larger. All 14 AWG and smaller wire shall conform to MIL-W-16878/1, Type B, 600V, 19-strand tinned copper. The wire shall have a minimum of 0.010 inches thick PVC insulation without clear nylon jacket and rated to 105 degrees Celsius. All 12 AWG and larger wire shall be UL listed THHN/THWN 90 degrees Celsius, 600V, 0.020 inches thick PVC insulation, and clear nylon jacketed.

Provide controller and MMU cables of sufficient length to allow the units to be placed on either cabinet shelf in the operating mode. Connecting cables shall be sleeved in a braided nylon mesh. Exposed tie-wraps and interwoven cables are unacceptable.

Provide the cabinet configuration with enough SDLC RS-485 Port 1 communication cables to allow full capabilities of that cabinet. Each communication cable connector shall be a 15-pin metal shell D subminiature type. The cable shall be a shielded cable suitable for RS-485 communications. Secure all connecting cables and wire runs by mechanical clamps. Stick-on type clamps are not acceptable.

Pre-wire the terminal facility for a Type 16 MMU.

All wiring shall be neat in appearance. Stow excess cable behind the terminal facility or below the shelves in order to allow easy access to the terminal facility and cabinet components. All cabinet wiring shall be continuous from its point of origin to its termination point. Butt type connections/splices are not acceptable.

Wire the grounding system in the cabinet into three separate circuits: AC Neutral, Earth Ground, and Logic Ground.

Optoisolate all pedestrian pushbutton inputs from the field to the controller through the BIU and operate at 12 VAC.

Hook or loop all wire, size 16 AWG or smaller, at solder joints around the eyelet or terminal block post prior to soldering to ensure circuit integrity. Lap joint soldering is not acceptable.

### C.3.4 Cabinet Switches

Locate the following switches on a maintenance panel on the inside of the cabinet door:

- a. Controller On/Off
- b. Cabinet Light
- c. Stop Time (Three Position)
- d. Manual Detector Switches (Three Position)

Position	Switch Label	Function
Upper	Stop Time	Place stop time on the controller
Center	Run	Remove the stop time input to the controller
Lower	Normal	Connects the MMU to the controller stop time input

Provide manual detector switches. Provide a minimum of 16 vehicle detector switches, and four pedestrian detector switches. The switches shall be spring loaded and automatically return to the center position. Wire the vehicle detector switches to detector BIU slot 1. Wire the pedestrian switches to the T&F BIU slot 1. The switches shall operate as follows:

Position	Function
Up	Detector Disabled
Center	Detector Enabled
Down	Detector Called

### C.3.5 Railroad Preemption Interface Panel

Furnish equipment conforming to the latest revision of NEMA Standards Publication TS 2-2003, *Traffic Controller Assemblies with NTCIP Requirements*, National Electrical Manufacturers Association, hereinafter called NEMA TS2 Standard, except where modified in this specification. Conform all work to the Wisconsin State Electrical Code (WSEC). Conform all work to standard spec 651 as supplemented in this specification.

Provide a railroad preempt interconnect panel built to meet WisDOT and railroad requirements for the intersection where the railroad preempt is being installed. Contact the WisDOT electrical shop supervisor in Madison at (608) 246-3269 to request the requirements. The interconnect panel shall be capable of providing a full 8-wire interconnect with both advance and gate-down preempt sequences. The interface panel shall also be capable of operating with a minimum 2-wire interconnect, single sequence preempt.

Install the interface panel on the left inside wall of the signal cabinet. Furnish and install any cabling necessary for interconnection with the devices in the signal cabinet with which the interface panel is intended to communicate. Make the interface panel fully operational.

Contact WisDOT State Traffic Signal Systems Engineer, Joanna Bush, at (608) 261-5845 to request a review and approval of the traffic signal controller programming for the railroad preemption operation. WisDOT personnel shall be present at the time of final traffic signal turn on. Contact Joanna Bush at least two weeks prior to final traffic signal turn on to make arrangements.

## **C.4 Power Panel**

### **C.4.1 Design**

The power panel shall consist of a separate module, securely fastened to the interior right side wall of the cabinet. Wire the power panel to provide the necessary power to the cabinet, controller, MMU, cabinet power supply, and all auxiliary equipment. Manufacture the power panel from 0.090-inch, 5052-H32 aluminum. Panel layout shall facilitate field inspection and maintenance accessibility without excessive disassembly or special tools.

Provide a light, tough, transparent, weather-resistant, non-yellowing, thermoplastic cover, rigidly mounted over the full power panel, with access holes for circuit breakers and other equipment, and open on the sides for ventilation.

### **C.4.2 Bus Bar**

Provide a minimum 20-position neutral bus bar capable of connecting three #12 AWG wires per position.

### **C.4.3 Circuit Breakers**

House in the power panel the following vertically mounted, single pole, 120 volts AC, 60 Hertz, circuit breakers, with the ON position being up:

- One 30-amp signal breaker. This breaker shall supply power for all cabinet functions not powered through one of the other breakers or fuses listed below. Streetlights will be powered from outside the cabinet in the meter breaker pedestal. This breaker shall feed a signal bus supplied through a solid state bus relay and a radio interference line filter. The bus relay, in all cases, shall be a solid state contactor and shall not be jack mounted. Breakers shall be thermal magnetic type, UL listed, with a minimum of 22,000 amp interrupting capacity.
- One 15-amp auxiliary breaker. This breaker shall supply power to the fan and heater.
- One 10-amp breaker. This breaker shall supply power for control equipment: controller, MMU, and cabinet power supply.
- One 20-amp circuit breaker for future use.

Power the cabinet light through the GFI fuse, not a circuit breaker.

### **C.4.4 Radio Interference Suppressor**

Equip each control cabinet with a single radio interference suppressor (RIS) of sufficient ampere rating to handle the load requirements. Install the RIS at the input power point. The RIS shall minimize interference in both the broadcast and the aircraft frequencies, and shall provide a maximum attenuation of 50 DB over a frequency range from 200 KHZ to

75 MHZ, when used in connection with normal installations. The RIS shall be hermetically sealed in a substantial metal case filled with a suitable insulating compound. The terminals shall be nickel-plated brass studs of sufficient external length to provide space to connect two #8 AWG wires and shall be so mounted that they cannot be turned in the case. Ungrounded terminals shall be properly insulated from each other, and shall maintain a surface leakage distance of not less than 6.35 mm between any exposed current conductor and any other metallic parts. The terminals shall have an insulation factor of 100-200 megohms dependent upon external conditions. The RIS shall be rated at minimum 50 amperes. Design the RIS for operation on 115 VAC +/- 10%, 60HZ, single-phase circuits, and to meet the standards of UL and Radio Manufacturer's Association.

#### **C.4.5 Bus Relay**

Provide a normally-open, 60 amp, solid state relay.

#### **C.4.6 Surge Protector**

Install a plug-in type EDCO SHA-1250, or Atlantic/Pacific approved equal, surge protector across the load terminal of the 10-amp circuit breaker. Install a General Electric Varistor, catalog #V130PA20A, at the load terminals of the circuit breaker from the hot line to the grounded current carrying neutral conductor. Provide one additional uninstalled surge protector for every 20 cabinets delivered.

#### **C.4.7 Power receptacles**

Mount a 120 VAC 20 amp, NEMA 5-20R GFCI convenience duplex outlet at each of these two locations:

- § On the interior right side wall above the power panel. The outlet shall be fully operational and fuse protected.
- § Near the power panel where it will not interfere with power panel maintenance. This outlet is to be wired by field installation personnel.

#### **C.4.8 Suppressors and RC Network**

Provide a suppressor for each 120 VAC circuit that serves an inductive device, such as a fan motor or a mechanical relay, to protect the controller's solid state devices from excessive voltage surges. Such suppressors shall be in addition to the surge protector at the input power point. Wire one RC network in parallel with each inductive device.

### **C.5 Auxiliary Devices**

#### **C.5.1 Load Switches**

Provide solid state load switches conforming to the requirements of Section 6.2 of the NEMA TS2 Standard.

Supply all 16 load switches with each cabinet.

#### **C.5.2 Flashers**

Provide a solid state flasher conforming to the requirements of section 6.3 of the NEMA TS2 Standard.

### **C.5.3 Cabinet Power Supply**

Supply one cabinet power supply with each cabinet, meeting the requirements of Section 5.3.5 of the NEMA TS2 Standard. Provide LED indicators for the 12 VDC, 12 VAC, and 24 VDC outputs. Provide jack plugs on the front panel for access to the +24 VDC for test purposes.

### **C.5.4 Battery Backup System (BBS)**

Furnish a BBS that will provide uninterruptible reliable emergency power to a traffic signal system in the event of a power failure or interruption. The BBS shall be capable of providing power for full run-time operation and for flashing mode operation of all traffic signals at an intersection. The BBS system shall have a shelf mounted configuration and shall include:

- Inverter/charger
- Automatic power transfer switch
- Automatic bypass switch
- Manually operated non-electronic bypass switch
- Manually operated non-electronic generator transfer switch
- All auxiliary equipment, hardware, and wiring to provide a complete operating BBS system
- Cabinet and cabinet equipment
- Batteries and battery equipment

The system shall be designed for outdoor applications, shall meet the environmental requirements of NEMA Standards Publication TS2 – 2003v02.06 – Traffic Controller Assemblies with NTCIP Requirements, except as modified herein, and shall be capable of receiving power from a generator.

Configure the BBS to provide a minimum of two hours of full run-time operation for an intersection using LED traffic signals, LED pedestrian signals, and LED blank out message signs with a total operating load of 1500 watts minimum.

#### **C.5.4.1 Uninterruptible Power Supply**

##### **C.5.4.1.1. Features**

The UPS shall be an inverter/charger complying with UL 1778.

When utilizing battery power, the BBS output voltage shall be between 110 VAC and 125 VAC, pure sine wave output with THD < 3% at 60 Hz +/- 3 Hz.

Provide buck and boost capability to provide constant output voltage without battery input.

The range of operating temperatures for the inverter/charger shall be -34° C to +74° C.

The UPS shall be fully programmable and controllable, both locally using the UPS touch pad and remotely using a standard personal computer USB interface with Windows XP operating system, including all UPS features listed in this specification; all settings, controls, logs, tests, and counters; and all other electronic features.

Provide a backlit LCD display to indicate current battery charge status, input/output voltages, power output, battery temperature, faults, alarms, date, time, and settings of the various relays.

UPS shall be fully SNMP Ethernet ready, including a RJ-45 (also known as an 8P8C) Ethernet connector port, for future activation. A SNMP card is not required with this specification.

Provide on the UPS a resettable inverter event counter and a cumulative inverter timer.

All controls and external connections shall be on the front panel. The UPS unit shall sit horizontally on a shelf. All controls and labels shall be oriented to read horizontally.

Provide lightning/ surge protection complying with ANSI/IEEE C.62.41 and C.62.45 Cat A & B and UL 1449.

Equip the UPS with an event log for at minimum the last 100 events. The events shall be time and date stamped. The event log shall be retrievable via the USB port and the last event in the log shall be viewable from the LCD screen.

The UPS shall be capable of performing a SELF-TEST of the BBS. The duration of the SELF-TEST shall be programmable in 1-minute increments from one minute to four hours.

The operation of the flash mode shall be field programmable to activate at various times, battery capacities, or alarm conditions.

Provide password protection for certain maintenance controls such as Battery Test, BBS inverter ON/OFF, viewing the Event log, and changing default settings. Furnish the UPS with a default password and the ability for the user to change the password.

Use the following LED lights conditions to indicate current status:

Red LED Flashing	for ALARM
Red LED steady ON	for FAULT
Green LED Flashing	for battery back-up mode
Green LED steady ON	for normal line mode operation

Provide on the UPS at least four sets of NO / NC panel-mounted and potential free contact relays rated 1 Amp, 120 VAC, and labeled 1 through 4. Each relay's setting shall be either preset or programmable to activate under any number of conditions. The available settings for the relays shall be:



- ON BATTERY – relay activates when BBS switches to battery power
- LOW BATTERY – relay activates when batteries have reached a certain level of remaining useful capacity while on battery power. This number is adjustable by battery voltage.
- TIMER – relay activates after being on battery power for a given amount of time. This number is adjustable from 0 to 8 hours.
- UPS FAILURE – relay activates in the event of UPS inverter/charger failure to be able to run according to these specifications

#### **C.5.4.1.2 Specifications**

Battery String Voltage 48 Vdc

##### Input Specifications

Nominal Input Voltage 120 VAC, Single Phase  
 Input Voltage Range 120 VAC +/- 25%  
 Input Frequency 60 Hz +/- 5%

##### Output Specifications

Nominal Output Voltage 120 VAC, Single Phase  
 Power Rating 2000 VA minimum at 25° C (1500 Watts at 74° C)  
 Output Frequency 60 Hz (+/- 3%)  
 Voltage Wave Form Pure Sine Wave, THD < 3.0%  
 Efficiency (nominal) Minimum 85% at 100% load

#### **C.5.4.2 Switches**

The four switches listed in this section may be in separate units or may be integrated into one or more units.

The range of operating temperatures for all switches shall be -34° C to +74° C.

##### **C.5.4.2.1 Automatic Transfer Switch**

Provide an automatic transfer switch to transfer the critical load to the UPS when the utility line fails or is out of tolerance range. The transfer from utility power to battery power shall not interfere with the normal operations of the traffic controller, conflict monitor, or any other peripheral devices within the traffic control system. The automatic transfer switch shall automatically disconnect the battery heater pads when the critical load is operating from the UPS.

##### Input / Output Specifications

Nominal Voltage 120 VAC, Single Phase  
 Voltage Range 92 to 135 VAC  
 Input Frequency 60 Hz +/- 5%  
 Current 20 A minimum

#### **C.5.4.2.2 Automatic Bypass Switch**

Furnish an automatic bypass switch to transfer the critical load to the utility line if there is a fault on the UPS, if there is battery failure, and upon complete battery discharge. The transfer from battery power to utility power shall not interfere with the normal operations of the traffic controller, conflict monitor, or any other peripheral devices within the traffic control system.

##### Input / Output Specifications

Nominal Voltage	120 VAC, Single Phase
Voltage Range	92 to 135 VAC
Input Frequency	60 Hz +/- 5%
Current	20 A minimum

#### **C.5.4.2.3 Manual Bypass Switch**

Furnish a manual bypass switch to provide a mechanical bypass of the UPS without any interruption of power to the intersection.

##### Input / Output Specifications

Nominal Voltage	120 VAC, Single Phase
Voltage Range	92 to 135 VAC
Input Frequency	60 Hz +/- 5%
Current	20 A minimum

#### **C.5.5.2.4 Generator Transfer Switch**

Furnish a generator transfer switch to automatically transfer the input to the UPS from the utility line to a portable AC generator. The switch shall break both line and neutral to the utility, and prevent back-feeding the utility lines.

##### Input / Output Specifications

Nominal Voltage	120 VAC, Single Phase
Voltage Range	92 to 135 VAC
Input Frequency	60 Hz +/- 5%
Current	20 A minimum

#### **C.5.4.3 Other Equipment**

Furnish all equipment, mounting hardware, wire, cable, fasteners, and connectors not otherwise specified to provide a complete and operational BBS, including but not limited to, the cable connections to the batteries.

#### **C.5.4.4 Operation**

##### **C.5.4.4.1 Loss / Restoration of Utility Power**

The BBS shall transfer the load to battery power when the utility line voltage is outside the High and Low Limits. Set the default high and low limits as 130 and 100 VAC, respectively. Operate in the Buck and Boost modes for partial line voltage correction.

For the low line voltage condition, the BBS shall return to line mode when the utility power has been restored to above 105 VAC for the specified line qualification time. This line qualification time shall be user adjustable from 3 to 30 seconds.

For the high line voltage condition, the BBS shall return to line mode when the utility power has been restored to below 125 VAC for the specified line qualification time. This line qualification time shall be user adjustable from 3 to 30 seconds. In cases where the nominal voltage is between 125 and 130 VAC, the BBS shall return to line mode when the utility power is back to nominal.

The maximum transfer time allowed, from disruption of normal utility line voltage to stabilized inverter line voltage from batteries, shall be 65 milliseconds. The same maximum allowable transfer time shall also apply when switching from inverter line voltage to utility line voltage.

#### **C.5.4.4.2 Battery Operation**

In the event of UPS failure, battery failure, or complete battery discharge, the automatic power transfer switch shall revert to the NC (and de-energized) state, where utility power is supplying the cabinet.

Provide a temperature compensated battery charging system. The charging system shall compensate over a wide range of 2.5 to 4 mV / °C / Cell. The charger shall be rated 10 amps at 48 VDC. Batteries shall not be charged when battery temperature exceeds manufacturer's recommendations for the specific batteries being used. The charging system shall fully recharge the batteries within 20 hours.

#### **C.5.4.4.3 Product Compatibility**

The BBS shall be compatible with all of the following for full phase operation mode, flash operation mode, or a combination of both full and flash mode operation:

- NEMA TS2 controllers and cabinet components

The complete BBS system including batteries shall fit inside and be compatible with a NEMA type traffic control cabinet of minimum size 26-inch wide X 40-inch high X 13-inch deep and maximum size 32-inch wide X 51-inch high X 18-inch deep, with minimum 3-inches in the front and minimum 1-inch air space on the top, back, and sides of a shelf mounted UPS.

#### **C.5.4.4.4 Electrical Protections**

The BBS shall be equipped to prevent a malfunction feedback to the cabinet or from feeding back to the utility service per UL 1778, Section 48 "Back-feed Protection Test". The upstream back-feed voltage from the BBS system shall be less than 1 volt AC.

#### **C.5.4.4.5 Maintenance**

The individual BBS parts shall be easily replaced and installed (complete turnkey system with all necessary hardware). The BBS shall not require any special tools for removal or installation.

#### **C.5.4.4.6 Cabinet**

Furnish a non-ground mounted, aluminum, outdoor rated, NEMA type 3R traffic control cabinet of minimum size 26-inch wide X 40-inch high X 13-inch deep and maximum size 32-inch wide X 51-inch high X 18-inch deep. The size of the cabinet shall be of sufficient size to provide ample space for housing all equipment specified herein, all equipment furnished with the Uninterruptible Power Supply (UPS) specification, and all batteries. Provide a minimum clear space of 3-inches in the front of a shelf mounted UPS, and minimum 1-inch on both sides, back, and top of the UPS. Slope the top of the cabinet towards the door with a 2-inch drip lip over the door and cabinet front. All sheet metal parts shall be 0.125-inch thick aluminum of type 5052-H32. All seams shall be continuously welded.

Provide an access door on the front of the cabinet with a continuous hinge, door latch assembly with 3-point locking mechanism, #2 Corbin lock, dust cap, and two #2 keys. The door shall have a closed-cell neoprene gasket on all four edges. The continuous hinge shall be heavy gauge aluminum with 1/4-inch diameter stainless steel hinge pin. Secure hinge with 1/4-inch X 20 TPI stainless steel carriage bolts and stainless steel nylon locking nuts. The 3-point locking system shall have 1/2-inch X 1/4-inch X length required latch bars and nylon rollers. Door handle shall be a 3/4-inch solid stainless steel inward-turning handle with provisions for padlocking. Provide a steel rod door holder. All hardware shall be stainless steel, unless otherwise specified.

Provide ventilation louvers on the front of the cabinet of sufficient open area to provide air flow for the cabinet fan. Provide a 1/2-inch air filter over all the louver area. Air filter shall slide into a channel and shall be easily removed and replaced.

Provide installed a minimum of three full width and depth, aluminum shelves sufficient to hold all equipment furnished with the Uninterruptible Power Supply specification, and all batteries. All shelves shall have neoprene (or similar material) pads. The shelves shall not be the swing out type. The shelf locations shall be adjustable to within six inches of the top of the cabinet and 12 inches from the bottom of the cabinet. The shelves shall be capable of supporting up to 180 pounds.

#### **C.5.4.4.7 Cabinet Equipment**

Provide and install a power distribution terminal block for wire connections, wire size up to #8AWG, from the traffic signal cabinet. Locate the block on one side of the UPS cabinet between one and two feet from the top of the cabinet.

Provide a generator connection outlet installed on one side of the cabinet placement shall not interfere with the installation or use of batteries, UPS, or any switches. The outlet shall be a Marincos 125/250 V 50A turn and pull or equivalent, back wired, surface mounted, twist lock receptacle with a watertight cover and meter seal tabs, or equal.

Ventilate the UPS cabinet by means of an installed 120 VAC, 60HZ, tube axial compact type fan. The fan's free delivery airflow shall be greater than 2.83 cubic meters per minute. The magnetic field of the fan motor shall not affect the performance of control equipment. The fan bearings shall operate freely. The fan unit shall not crack, creep, warp, or have bearing failure within a 7-year duty cycle. The maximum noise level shall be less than 40 decibels. The fan unit shall be corrosion resistant. The fan shall be thermostatically controlled. Thermostat shall be set to manufacturer required settings. The fan shall be fused.

Provide installed and operational heating pads for the batteries. Heating pads shall be 120 volt, 70 watt, polyester, G30200X, P07141A2 D0452, PowerBack pads from Hi-Heat, Industries, Inc., Lewiston, MT, or equal. Provide a temperature sensor bonded to the pad, electrical power cord, and a thermal fuse in each power cord.

Provide a battery voltage balancer, battery cable for each battery, and interface cable of the size compatible with the battery string. Balancer shall be ALPHAGuard Charge Management SC, 48-volt, compatible with the battery string, or equal.

In all controller cabinets and auxiliary cabinets, the AC common, the logic ground, and the chassis ground shall be isolated from each other as detailed by NEMA Standard.

Each 120 VAC circuit that serves an inductive device, such as a fan motor or a mechanical relay, shall have a suppressor to protect the controller's solid state devices from excessive voltage surges. Such suppressors shall be in addition to the surge protector at the input power point.

#### **C.5.4.4.8 Batteries**

Furnish four batteries for each cabinet as recommended by the UPS supplier. Batteries shall be newly built and fully charged when delivered.

#### **C.5.4.4.9 Equipment Installation**

Install the furnished BBS, batteries, and battery equipment according to manufacturer's requirements. Bolt the BBS cabinet firmly to the back or side of the traffic signal control cabinet as required by the design of each signal cabinet. Use a minimum of four bolts of the size recommended by the BBS cabinet manufacturer. Use fender washers on the inside of both cabinets. Use all stainless steel hardware.

Furnish and install from the electrical service to the BBS cabinet and back to the signal cabinet, the larger of 1) #10 AWG, 600 volt, electric wire, 2) the wire size recommended by the UPS manufacturer, 3) the largest size wire used in the signal cabinet for the power connections, or 4) the wire size required by WSEC. Install the wire through a 3/4-inch hole drilled between the cabinets and install two 3/4-inch bushings in the hole. Provide grounding, suppressors and lightning arrestors according to the WSEC requirements.

Program and/or enter configuration settings for the equipment and make the equipment fully operational.

#### **C.5.4.4.10 Certification**

Provide a written certification with the cabinet delivery that the equipment meets the requirements of the plans and specifications and will fully operate the traffic signal cabinet. The certification shall be on the contractor's company letterhead, shall be addressed to both the City of Edgerton and the construction contractor, if there is one, and shall be signed by a company officer authorized to legally obligate the company. Cabinet testing and quality control documents may accompany the certification.

#### **C.5.4.4.11 Documentation**

Submit detailed equipment layout drawings and inter-equipment wiring diagrams furnished under this specification to WisDOT and the City of Edgerton for approval. Two sets of approved equipment layout drawings and inter-equipment wiring diagrams shall be contained in a heavy-duty clear plastic envelope mounted on the inside of the front door.

For the cabinet and cabinet equipment, at the time of the delivery, furnish two printed sets, and one .pdf file on a CD-ROM or flash drive, of cabinet installation, operations, and maintenance manuals per cabinet and an itemized price list for each type of equipment, and their replacement parts. The manuals shall as a minimum include the following information: a) table of contents, b) operating procedure, c) step-by-step maintenance and trouble-shooting information for the entire assembly, d) part numbers, and e) maintenance checklists. Also provide two prints and the .dgn or CADD file of the as-built cabinet design and layout.

For the installed equipment, at the time of the delivery, furnish two printed sets, and one .pdf file on a CD-ROM or flash drive, of equipment installation, operations, and maintenance manuals per cabinet and an itemized price list for each type of equipment, their sub-assemblies, and their replacement parts. The manuals shall as a minimum include the following information for each piece of equipment: a) table of contents, b) startup procedure, c) operating procedure, d) step by step maintenance and trouble-shooting information for the entire assembly, e) circuit wiring diagrams, f) pictorial diagrams of parts locations, g) part numbers, h) theory of operation, and i) maintenance checklists. The instructional manuals shall include an itemized parts list. The itemized parts list shall include the manufacturer's name and part numbers for all components (such as IC's, diodes, switches, relays, etc.) used in each piece of equipment. The list shall include cross-references to part numbers of other manufacturers who make the same replacement parts. Also provide the .dgn CAD files for the equipment layout drawings and inter-equipment wiring diagrams.

### **C.6 Documentation**

#### **C.6.1 Shop Drawings**

For each cabinet order, submit two sets of 22X34-inch detailed printed shop/drawings of the control cabinet, equipment layout drawings, and wiring diagrams of all equipment installed in the controller cabinet to WisDOT and the City of Edgerton for review and approval, a minimum of 60 days before the designated cabinet delivery date. Also provide all drawings as .dgn or .dwg files. Revise the files and drawings in accordance to WisDOT or City of Edgerton comments and resubmit, both printed and .dgn/.dwg files. If cabinet designs change

within an order with the permission of the City of Edgerton, resubmit all drawings and files for review, comment, and approval.

#### **C.6.2 Manuals**

At the time of the cabinet delivery, furnish the following:

- One set of installation, operations, and maintenance manuals per cabinet for each type of equipment and their replacement parts. The manuals shall as a minimum include the following information: a) table of contents, b) operating procedure, c) step-by-step maintenance and trouble-shooting information for the entire assembly, d) part numbers, and e) maintenance checklists.
- Two sets of cabinet wiring diagrams per cabinet

#### **C.7 Cabinet Delivery**

Deliver the fully wired and equipped cabinets the project site and securely store the materials if not immediately installing the equipment. Contact the construction leader a minimum of one 24-hour business day ahead of the desired delivery date to confirm the site is ready for installation.

#### **C.8 Manufacturer Warranty**

The contractor shall certify that the equipment meets the required specification and shall supply a complete catalog description. Provide a manufacturer's warranty statement which stipulates that the cabinet and all supplied equipment are warranted for two years from the date of final installation on the job site. The warranty shall provide for full repair or replacement of the failed item, as determined by the City of Edgerton, at no cost to the City of Edgerton. Shipping costs, both to the factory or an Authorized Repair Depot, and return to the City of Edgerton, shall be paid by the manufacturer.

#### **D Measurement**

The department will measure Furnish and Install Traffic Signal Cabinet, Controller, and Battery Backup System USH 51 and STH 59 as a lump sum unit of work for each intersection, acceptably completed.

#### **E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.450	Furnish and Install Traffic Signal Cabinet, Controller, and Battery Backup System USH 51 and STH 59	LS

Payment is full compensation for furnishing and installing the signal controller (including programming an initial timing program provided by the city) and conflict monitor together with cabinet, all required control units, all additional harnesses for preemption, switches for flashing operation, and fittings as are necessary to assure that the controller will perform the said functions.

### **103. Emergency Vehicle Egress Warning System USH 51 and Swift Street, Item SPV.0105.451.**

#### **A Description**

This item includes furnishing, delivering, and installing an emergency vehicle egress warning system as shown in the plans at the intersection of USH 51 and Swift Street in the City of Edgerton.

The manufacturer shall provide a solar-powered BlinkerBeacon™ Light-Emitting Diode (LED) Beacon assembly.

The manufacturer shall provide the following upgrades for compatibility with the City of Edgerton's existing emergency vehicle warning equipment:

- Emergency Vehicle Pre-emption Activation (EVP)
- 418 MHz Communication Capability

The BlinkerBeacon™ LED Beacon shall be fully compliant with the Federal Highway Administration (FHWA) Manual on Uniform Traffic Control Devices (MUTCD).

Per FHWA MUTCD guidelines, when flashed, the LED Beacons shall flash simultaneously at a rate of more than 50 and less than 60 times per minute. When installed, the solar panel collector must face south for optimal performance of the unit.

#### **B Materials**

The manufacturer shall provide a complete solar-powered BlinkerBeacon™ LED Beacon assembly. The BlinkerBeacon™ LED Beacon assembly shall include, but is not limited to the following items:

1. LED Beacon
2. Solar Panel
3. BlinkerBeam® Wireless Transceiver Radio
4. Controller
5. Battery
6. Five remote key fobs for beacon operation from vehicle fleet
7. W11-8 Emergency Vehicle Sign (item paid for as separate bid item)

The system also includes all wiring, brackets, controller cabinet, and other supplementary equipment necessary to make the system fully operational.

#### **C Construction**

Prior to construction and installation, engineer shall approve shop drawings, product information or catalog drawings.

Install the LED Beacon Assembly components on the proposed traffic signal equipment as shown in the plans and per the manufacturer's recommendations.



Contact the City of Edgerton Fire Department at (608) 884-3327 to arrange installation and testing of the wireless communication devices located within its facility at 621 N. Main Street, Edgerton, WI 53534. The system shall be tested for full compatibility with the existing emergency vehicle warning system.

**D Measurement**

The department will measure Emergency Vehicle Egress Warning System (Location) as a lump sum item for each complete system (two approaches) acceptably furnished, installed, and fully operational at an intersection.

**E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.451	Emergency Vehicle Egress Warning System USH 51 and Swift Street	LS

Payment is full compensation for furnishing, delivering, and installing the Emergency Vehicle Egress Warning System as shown in the plans. Payment also includes all necessary programming and communications testing to make the system fully operational and compatible with the city's existing wireless communication and emergency vehicle warning system.

**104. Remove Traffic Signals USH 51 and STH 59, Item SPV.0105.452.**

**A Description**

This special provision describes removing the existing traffic signal cabling and traffic signal cabinet at the intersection of N. Main Street (US 51) and W. Fulton Street (STH 59) in accordance to the pertinent provisions of standard spec 204 and as hereinafter provided. Specific removal items are noted in the plans.

**B (Vacant)**

**C Construction**

Notify the City of Edgerton Public Works Department at (608) 884-4811 at least five working days prior to the removal of the traffic signals.

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

Remove the traffic signal cabinet and wiring/cabling and deliver the remaining materials to the City of Edgerton. Contact the City Public Works department at (608) 884-4811 at least five working days prior to delivery to make arrangements.

Minimize the time of traffic signal shutdown when the existing traffic signal cabinet is removed and replaced. The traffic signal shutdown shall occur during the USH 51 roadway closure required for the Wisconsin and Southern and Railroad Spur Crossing work as specified in the Prosecution and Progress. Traffic control during shutdown will be as specified in the traffic control plans. The contractor shall obtain approval from the City of Edgerton and engineer if the traffic signal shutdown will last longer than seven working days.

#### **D Measurement**

The department will measure Remove Traffic Signal USH 51 and STH 59 as a single lump sum unit of work for each intersection, acceptably completed.

#### **E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.452	Remove Traffic Signal USH 51 and STH 59	LS

Payment is full compensation for removing and disassembling traffic signals, removing the traffic signal cabinet, disposing of scrap material; and for delivering the requested materials to the department.

### **105. Furnish and Install Microwave Detection System USH 51 and STH 59, Item SPV.0105.453.**

#### **A Description**

This special provision describes furnishing and installing of a microwave traffic signal vehicle detection system for installation on traffic signal poles or arms.

#### **B Materials**

Furnish a MS SEDCO TC-CK1-SB Microwave-Based Motion and Presence Sensor System for Intersection Control. All microwave sensor units, cabling, mounting brackets, repeaters, cabinet equipment, controller programming, and other accessories necessary for full operation of the microwave detection system shall be supplied.

#### **C Construction**

##### **C.1. Installation**

Coordinate the locations of the microwave units with the city, WisDOT, and the product vendor prior to installation.

Install the pole/arm mounting brackets, extension arms (if required), cabinet equipment, accessories, and microwave units per manufacturer recommendations. Install the cable per the cable routing plan. All cable runs less than or equal to 300-feet shall be installed continuously (without splices) from the traffic signal cabinet to the microwave units plus an additional 6-feet in each pull box and an extra 10-feet in the traffic signal pole pedestal or transformer base. Cable runs longer than 300-feet require a repeater; install the cable

continuously (without splices) from the traffic signal cabinet to the pedestal or, transformer base identified in the cable routing plan for the repeater plus an additional 6 feet in each pull box and an extra 10-feet in the pedestal or transformer base. Install the repeater in the pedestal or transformer base and install the cable continuously (without splices) from the repeater to the microwave units plus an additional 6 feet in each pull box and an extra 10-feet in the traffic signal pole pedestal or transformer base. Terminate the ends of the cables, if required, and make all connections to the repeaters and microwave units. Install all required cabinet equipment in the traffic signal control cabinet. Make all final connections in the traffic signal cabinet.

Mark each end of the lead in the traffic signal cabinet and each cable in the traffic signal pole handhole to indicate the equipment label (i.e. M1, M2, etc.).

Notify the city and WisDOT upon completion of the installation.

Coordinate directly with the microwave detection system vendor to arrange for the vendor to program the microwave detection system on-site. Notify the city and vendor at least five working days prior to the date of programming. Assist the city and vendor with adjusting the microwave units during the microwave detection system programming.

## **C.2. Training**

Provide a training session for City of Edgerton staff to provide an overview of the product and conduct field demonstrations. Coordinate with the City of Edgerton regarding a time and location to provide the training. The intent of the training is to provide city staff with instruction on product features, maintenance, and troubleshooting. Provide any product manuals, customer support information, or software that may be used for future reference. Provide training materials for up to 12 staff members.

## **D Measurement**

The department will measure Furnish and Install Microwave Detection System USH 51 and STH 59 as a single lump sum unit of work for each intersection, acceptably completed.

## **E Payment**

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.453	Furnish and Install Microwave Detection System USH 51 and STH 59	LS

Payment is full compensation for transporting and installing the microwave detection system, cable, cable repeaters, mounting hardware, and microwave units; installing all required cabinet equipment; making all connections; arranging for and providing programming and training by the vendor; and for assisting the city and vendor during the microwave detection system programming.

## **106. Furnish and Install Cellular Modem Assembly, Item SPV.0105.454.**

### **A Description**

This special provision describes furnishing and installing a cellular modem assembly within the traffic signal cabinet.

### **B Materials**

Furnish a cellular modem assembly and antenna that meets the following requirements:

1. Full duplex transceiver.
2. 4G Long Term Evolution (LTE) Frequency Band and Cellular Network Interface.
3. Tri-band support for 700/1900/2100 Megahertz (MHz).
4. Backward compatible with Evolved High Speed Packet Access (HSPA+), High Speed Packet Access (HSPA), Enhanced Data-rates for GSM Evolution (EDGE), General Packet Radio Service (GPRS) or Evolution Data Only (EV-DO) (Rev. A), Code Division Multiple Access (CDMA) EV-DO (Rev. 0), CDMA 1x Radio Transmission Technology (RTT) based on the selected provider's network.
5. Ethernet Interfaces.
  - 1) Support Transmission Control Protocol (TCP)/IP and User Datagram Protocol (UDP)/IP.
  - 2) Registered Jacks (RJ)-45, IEEE 802.3 standard 10 Base-T Ethernet port for 3G cellular modems and 100 Base-TX Ethernet ports for 4G modems.
  - 3) Provide network cables that are Electronic Industries Alliance (EIA)/Telecommunications Industry Association (TIA)-568-A compliant.
6. Provide DB-9 integrated serial port that is EIA232 real port compatible and preconfigured for on-street master controller applications.
7. Antenna.
  - 1) Modem mountable omnidirectional external antennas rated for outdoor usage.
  - 2) 50 Ohm SMA male connector.
  - 3) Provide an antenna cable with required adapters per the manufacturer's recommendation. Signal loss due to cable length must be minimized in order to meet throughput requirements.
  - 4) Minimum Antenna gain of 2 dBi.
  - 5) Right-angle swivel connector that allows for the antenna to be upright when connected to the cellular modem.
  - 6) Operating Frequencies of 698-896 and 1700-2700 MHz.
8. Management, Security and Diagnostic.
  - 1) Light-emitting diode (LED) indicators for Ethernet, power, cellular link/activity and signal strength.
  - 2) Support signals for Transmit Data (TXD), Receive Data (RXD), Request To Send (RTS), Clear To Send (CTS), Data Terminal Ready (DTR), Data Set Ready (DSR), Data Carrier Detect (DCD) and hardware and software flow control.
  - 3) Provide compatibility with Hypertext Transfer Protocol (HTTP)/HTTP Secure (HTTPS), Dynamic Host Communications Protocol (DHCP), Simple Network Management Protocol (SNMP) v2 or v3, Simple Mail Transfer Protocol (SMTP), Secure Socket Layer (SSL), Secure Shell (SSH)-2.

- 4) Web-based Graphical User Interface (GUI).
- 5) Command Line Interface (CLI) access via TELNET connection.
- 6) SNMP Management Information Base (MIB)-II and SNMP Traps.
9. Power.
  - 1) Ensure required power supply is supplied with device.
10. Environment.
  - 1) Operating Temperature for Cellular Modem, Power Supply, Antenna, and all connectors. -22 degrees F to 158 degrees F.
  - 2) Storage Temperature for Cellular Modem, Power Supply, Antenna, and all connectors. -22 degrees F to 158 degrees F.
11. Relative humidity for Cellular Modem, Power Supply, Antenna, and all connectors. 5 percent to 95 percent non-condensing.
12. Warranty.
  - 1) Provide cellular modem with a standard manufacturer's warranty, transferable to the City of Edgerton. The cellular modem must carry a warranty (parts, software, and labor) of five years from the date of shipment. Furnish warranty and other applicable documents from the manufacturer and a copy of the invoice showing the date of shipment to the engineer prior to final written acceptance.

### **C Construction**

Install the cellular modem assembly per the manufacturer's recommendations. 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 Furnish and Install Cellular Modem as a lump sum unit of work, acceptably completed and fully functional with the traffic signal controller.

### **E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.454	Furnish and Install Cellular Modem Assembly	LS

Payment is full compensation for furnishing and installing a cellular modem assembly including antenna, furnishing and installing all necessary hardware, making all necessary connections, testing the cellular modem, and making the cellular modem fully operational to allow remote traffic signal controller changes from the vendor.

**107. Transporting and Installing State Furnished Adaptive Traffic Signal Cameras USH 14 and USH 51, Item SPV.0105.455; USH 14 and Newville Road, Item SPV.0105.456; USH 14 and Kennedy Road, Item SPV.0105.457; USH 14 and Bell Street, Item SPV.0105.458; USH 14 and STH 26, Item SPV.0105.459; USH 14 and Lexington Drive, Item SPV.0105.460; USH 14 and Pontiac Drive, Item SPV.0105.461; USH 14 and IH 39 SB Ramp, Item SPV.0105.462; USH 14 and IH 39 NB Ramp, Item SPV.0105.463; USH 14 and Deerfield Drive, Item SPV.0105.464; USH 14 and Wright Road, Item SPV.0105.465; STH 26 and Morse Street, Item SPV.0105.466; STH 26 and Kettering Drive, Item SPV.0105.467.**

**A Description**

This special provision describes the transporting and installing of department furnished Adaptive Traffic Signal Cameras and mounting hardware.

**B Materials**

Pick up the department furnished Adaptive Traffic Signal Cameras and mounting hardware at the department's Electrical Shop. Notify the department's Electrical field unit to make arrangements for picking up the department furnished materials at least five working days prior to material pick-up.

Furnish all mounting equipment and hardware required for a completed installation.

**C Construction**

Notify the department's Electrical field unit at least five working days prior to the installation of the cameras.

Install the pole/arm mounting brackets, extension arm (if required) and cameras as shown on the plans (the final determination of location will be made by the department's electrical personnel to ensure best line of sight) per manufacturer recommendations.

Assist the department and Vendor with aiming and programming the cameras during the adaptive traffic signal turn-on. The department will schedule the adaptive traffic signal turn-on and provide notification a minimum of five working days prior to turn-on.

**D Measurement**

The department will measure Transporting and Installing State Furnished Adaptive Traffic Signal Cameras [Location] as a single lump sum unit of work for each intersection, acceptably completed.

**E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.455	Transporting and Installing State Furnished Adaptive Traffic Signal Cameras USH 14 and USH 51	LS
SPV.0105.456	Transporting and Installing State Furnished Adaptive Traffic Signal Cameras USH 14 and Newville Road	LS
SPV.0105.457	Transporting and Installing State Furnished Adaptive Traffic Signal Cameras USH 14 and Kennedy Road	LS
SPV.0105.458	Transporting and Installing State Furnished Adaptive Traffic Signal Cameras USH 14 and Bell Street	LS
SPV.0105.459	Transporting and Installing State Furnished Adaptive Traffic Signal Cameras USH 14 and STH 26	LS
SPV.0105.460	Transporting and Installing State Furnished Adaptive Traffic Signal Cameras USH 14 and Lexington Drive	LS
SPV.0105.461	Transporting and Installing State Furnished Adaptive Traffic Signal Cameras USH 14 and Pontiac Drive	LS
SPV.0105.462	Transporting and Installing State Furnished Adaptive Traffic Signal Cameras USH 14 and IH 39 SB Ramp	LS
SPV.0105.463	Transporting and Installing State Furnished Adaptive Traffic Signal Cameras USH 14 and IH 39 NB Ramp	LS
SPV.0105.464	Transporting and Installing State Furnished Adaptive Traffic Signal Cameras USH 14 and Deerfield Drive	LS
SPV.0105.465	Transporting and Installing State Furnished Adaptive Traffic Signal Cameras USH 14 and Wright Road	LS
SPV.0105.466	Transporting and Installing State Furnished Adaptive Traffic Signal Cameras STH 26 and Morse Street	LS
SPV.0105.467	Transporting and Installing State Furnished Adaptive Traffic Signal Cameras STH 26 and Kettering Drive	LS

Payment is full compensation for transporting and installing the State Furnished Adaptive Traffic Signal System cameras and mounting hardware; for assisting the vendor and department with aiming and programming the cameras.

- 108. Install Fiber Optic Communications in Cabinet USH 14 and Newville Road, Item SPV.0105.468; USH 14 and Kennedy Road, Item SPV.0105.469; USH 14 and Bell Street, Item SPV.0105.470; USH 14 and STH 26, Item SPV.0105.471; USH 14 and Lexington Drive, Item SPV.0105.472; USH 14 and Deerfield Drive, Item SPV.0105.476; USH 14 and Wright Road, Item SPV.0105.477; STH 26 and Morse Street, Item SPV.0105.478.**

#### **A Description**

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

**B Materials**

The department will furnish pre-terminated fiber optic patch panels and Ethernet switches. The patch panels will have pre-terminated fiber optic cable pigtails. Provide two each 1-meter lengths of ST-ST single mode fiber jumper (2 fibers per jumper) from the patch panel to the Ethernet switch. Provide a 1-meter length of Cat-5e cable from the Ethernet switch to the controller. Provide a 1-meter length of Cat-5e cable from the Ethernet switch to the Interface Panel. Cat-5e patch cords shall have factory pre-terminated RJ45 / 8P8C connectors on both ends per TIA/EIA T568B. Provide all patch panel, Ethernet switch, and Interface Panel attachment hardware.

Provide a 14 AWG XLP insulated, stranded, copper, 600 volt AC locate wire through the conduit run from the communication vault to the traffic signal cabinet. Connect the locate wire by using a silicone filled wire nut at each pull box, vault or other access point. Alternatively, use a single wire through the access points, leaving a 6 foot coil in each pull box, vault or other access point for splicing. All material under this item shall meet the requirements of standard spec 655.

**C Construction**

Pick up all the department furnished materials at the department's Electrical Shop. Notify the department's Electrical field unit to make arrangements for picking up the department furnished materials at least five working days prior to material pick-up.

Install the patch panel and ethernet switch on the side of the traffic signal cabinet opposite the electrical service at a location as approved by the engineer. With approval by the engineer, the ethernet switch may be placed on a shelf near the patch panel. Install the pre-terminated fiber optic cable in conduit from the patch panel to the communication vault as specified in standard spec 678.3.1. Fiber optic cable ends shall be covered securely to protect open ends during installation in raceways. Leave the remainder of the fiber optic cable coiled in the communication vault.

Install the fiber jumpers and Cat-5e cable and provide a communications link from the communication vault to the controller for WisDOT owned traffic signals. Install the Cat5-e cable from the Interface Panel to the Ethernet switch.

Connect the locate wire by using a wire nut at each access point. Alternatively, use a single wire through the access points.

**D Measurement**

The department will measure Install Fiber Optic Communications in Cabinet (Location) 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.0105.468	Install Fiber Optic Communications in Cabinet USH 14 and Newville Road	LS
SPV.0105.469	Install Fiber Optic Communications in Cabinet USH 14 and Kennedy Road	LS
SPV.0105.470	Install Fiber Optic Communications in Cabinet USH 14 and Bell Street	LS
SPV.0105.471	Install Fiber Optic Communications in Cabinet USH 14 and STH 26	LS
SPV.0105.472	Install Fiber Optic Communications in Cabinet USH 14 and Lexington Drive	LS
SPV.0105.476	Install Fiber Optic Communications in Cabinet USH 14 and Deerfield Drive	LS
SPV.0105.477	Install Fiber Optic Communications in Cabinet USH 14 and Wright Road	LS
SPV.0105.478	Install Fiber Optic Communications in Cabinet STH 26 and Morse Street	LS

Payment is full compensation for transporting and installing pre-terminated patch panels, Ethernet switches, and fiber optic cable in conduit; furnishing and installing attachment hardware, fiber jumpers, Cat-5e cable, and locate wire.

- 109. Install State Furnished Traffic Signal Cabinet USH 14 and USH 51, Item SPV.0105.479; USH 14 and Newville Road, Item SPV.0105.480; USH 14 and Kennedy Road, Item SPV.0105.481; USH 14 and Bell Street, Item SPV.0105.482; USH 14 and STH 26, Item SPV.0105.483; USH 14 and Lexington Drive, Item SPV.0105.484; USH 14 and Pontiac Drive, Item SPV.0105.485; USH 14 and IH 39 SB Ramp, Item SPV.0105.486; USH 14 and IH 39 NB Ramp, Item SPV.0105.487; USH 14 and Deerfield Drive, Item SPV.0105.488; USH 14 and Wright Road, Item SPV.0105.489; STH 26 and Morse Street, Item SPV.0105.490; STH 26 and Kettering Drive, Item SPV.0105.491.**

#### **A Description**

This special provision describes the transportation, configuring and installing of the department furnished cabinet for traffic signals.

#### **B Materials**

Use materials furnished by the department including: the traffic signal controller and the traffic signal cabinet, adaptive system components and communications equipment. The department will provide notification at the preconstruction meeting of the Traffic Signal Cabinet vendor and provide the vendor's contact information.

Pick up the department furnished materials at the department's Electrical Shop. Notify the department's Electrical Field Unit and make arrangements for picking up the department furnished materials five working days prior to picking up the materials.

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

Furnish a double-pole / double-throw type relay for the traffic signal cabinet at USH 14 and Kennedy Road only; no other cabinets require this relay. The signal cabinet relay will direct the railroad preemption call to both the signal controller and the signal cabinet.

*Append standard spec 651.3.3 (6) with the following:*

Operate the completed traffic signal installation for 30 days consecutively, using the specified signal sequence(s) and all special functions, such as preemption as the plans show or as specified by the engineer.

### **C Construction**

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

This work includes participation with the Vendor, Traffic Signal Systems Integrator and the department for the purpose of cabinet assembly, testing and adjusting for field conditions. Cabinet assembly is anticipated to take place at Southwest Region facilities.

Install cabinet on new or existing concrete bases and terminate all field wiring. This item includes documenting existing cabling for reinstallation. Provide additional masonry anchors as required to secure the cabinet to the base.

Install a double-pole / double-throw type relay for the traffic signal cabinet at USH 14 and Kennedy Road only; no other cabinets require this relay. Coordinate the installation, wiring, operation and testing of the relay in the signal cabinet as part of the assembly process discussed above.

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

Coordinate directly with the department's Traffic Signal Cabinet vendor to schedule the cabinet acceptance testing. Notify the department's Electrical Field Unit and participate in the acceptance testing. The department has the final determination of the cabinet acceptance testing date and time. The acceptance testing procedures will be provided by the department. The department shall not be responsible for project delays and costs due to the delays of delivery by the vendor or by the failure of the Traffic Signal Cabinet to pass acceptance testing.

**D Measurement**

The department will measure Install State Furnished Traffic Signal Cabinet [Location] 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.0105.479	Install State Furnished Traffic Signal Cabinet USH 14 and USH 51	LS
SPV.0105.480	Install State Furnished Traffic Signal Cabinet USH 14 and Newville Road	LS
SPV.0105.481	Install State Furnished Traffic Signal Cabinet USH 14 and Kennedy Road	LS
SPV.0105.482	Install State Furnished Traffic Signal Cabinet USH 14 and Bell Street	LS
SPV.0105.483	Install State Furnished Traffic Signal Cabinet USH 14 and STH 26	LS
SPV.0105.484	Install State Furnished Traffic Signal Cabinet USH 14 and Lexington Drive	LS
SPV.0105.485	Install State Furnished Traffic Signal Cabinet USH 14 and Pontiac Drive	LS
SPV.0105.486	Install State Furnished Traffic Signal Cabinet USH 14 and IH 39 SB Ramp	LS
SPV.0105.487	Install State Furnished Traffic Signal Cabinet USH 14 and IH 39 NB Ramp	LS
SPV.0105.488	Install State Furnished Traffic Signal Cabinet USH 14 and Deerfield Drive	LS
SPV.0105.489	Install State Furnished Traffic Signal Cabinet USH 14 and Wright Road	LS
SPV.0105.490	Install State Furnished Traffic Signal Cabinet STH 26 and Morse Street	LS
SPV.0105.491	Install State Furnished Traffic Signal Cabinet STH 26 and Kettering Drive	LS

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

- 110. Install State Furnished Microwave Vehicle Detection USH 14 and USH 51, Item SPV.0105.492; USH 14 and Newville Road, Item SPV.0105.493; USH 14 and Kennedy Road, Item SPV.0105.494; USH 14 and Bell Street, Item SPV.0105.495; USH 14 and STH 26, Item SPV.0105.496; USH 14 and Lexington Drive, Item SPV.0105.497; USH 14 and Pontiac Drive, Item SPV.0105.498; USH 14 and IH 39 SB Ramp, Item SPV.0105.499; USH 14 and IH 39 NB Ramp, Item SPV.0105.500; USH 14 and Deerfield Drive, Item SPV.0105.501; USH 14 and Wright Road, Item SPV.0105.502; STH 26 and Morse Street, Item SPV.0105.503; STH 26 and Kettering Drive, Item SPV.0105.504.**

**A Description**

This special provision describes installing and operating department furnished microwave vehicle detection systems for use at existing signalized intersections throughout construction.

**B Materials**

All materials including, but not limited to: microwave sensor(s), detector card(s) and mounting hardware shall be furnished by the department. Furnish all remaining hardware, fasteners and wiring connections as incidental to this item.

**C Construction**

**C.1 General**

Coordinate directly with the department's assigned project electrician for all activities associated with this bid item. The department will provide contact information for the designated project electrician at the preconstruction meeting. Contact the department at least five (5) working days prior to the scheduled installation of the detection system and all subsequent changes in operation.

Install the sensors to permanent and/or temporary signal supports in accordance to the on-site discretion of the department's electrician and equipment specifications. Re-aim sensors as needed for all changes in temporary signal operations throughout construction to provide detection areas as shown on the plans.

Provide emergency maintenance response in accordance to standard spec 661.3.1.4 paragraph (3).

**D Measurement**

The department will measure Install State Furnished Microwave Vehicle Detection (Location) as a single complete lump sum unit of work, completed in accordance to the contract accepted.

**E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.492	Install State Furnished Microwave Vehicle Detection USH 14 and USH 51	LS
SPV.0105.493	Install State Furnished Microwave Vehicle Detection USH 14 and Newville Road	LS
SPV.0105.494	Install State Furnished Microwave Vehicle Detection USH 14 and Kennedy Road	LS
SPV.0105.495	Install State Furnished Microwave Vehicle Detection USH 14 and Bell Street	LS
SPV.0105.496	Install State Furnished Microwave Vehicle Detection USH 14 and STH 26	LS
SPV.0105.497	Install State Furnished Microwave Vehicle Detection USH 14 and Lexington Drive	LS
SPV.0105.498	Install State Furnished Microwave Vehicle Detection USH 14 and Pontiac Drive	LS
SPV.0105.499	Install State Furnished Microwave Vehicle Detection USH 14 and IH 39 SB Ramp	LS
SPV.0105.500	Install State Furnished Microwave Vehicle Detection USH 14 and IH 39 NB Ramp	LS
SPV.0105.501	Install State Furnished Microwave Vehicle Detection USH 14 and Deerfield Drive	LS
SPV.0105.502	Install State Furnished Microwave Vehicle Detection USH 14 and Wright Road	LS
SPV.0105.503	Install State Furnished Microwave Vehicle Detection STH 26 and Morse Street	LS
SPV.0105.504	Install State Furnished Microwave Vehicle Detection STH 26 and Kettering Drive	LS

Payment is full compensation for installing, operating, and maintaining the complete installation.

- 111. Remove and Reinstall Traffic Signals USH 14 and STH 26, Item SPV.0105.505; USH 14 and Lexington Drive, Item SPV.0105.506; USH 14 and Pontiac Drive, Item SPV.0105.507; USH 14 and IH 39 SB Ramp, Item SPV.0105.508; USH 14 and IH 39 NB Ramp, Item SPV.0105.509; USH 14 and Deerfield Drive, Item SPV.0105.510.**

**A Description**

This special provision describes removing and reinstalling existing traffic signal equipment in accordance to the plans and as hereinafter provided. Additional specific removal items are noted in the plans.

**B Materials**

This item includes the removal and reinstallation of existing traffic signal equipment only. Items included under this bid item include transformer/pedestal bases, poles, standards, signal heads, backplates, signal mounting hardware, traffic signal cabinets, emergency vehicle preemption equipment, luminaire arms and luminaires.

**C Construction**

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

Contact the appropriate personnel (as noted in *Street Lighting and Traffic Signal Systems – General Provisions* article) at least 7 days prior to the removal of the traffic signals. Complete the removal work as soon as possible following shut down of this equipment.

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

Remove and/or salvage existing cables and wiring as required. Salvage and retain all cables and wiring unless construction activities require reconstruction of an existing section of conduit. Remove cables and wiring from sections of conduit which are to be removed. Quantities for new cable and wire are included for new relocated bases and sections of conduit only.

Remove all standards and poles per plan from their concrete footings and disassemble out of traffic. Remove the transformer bases from each pole. Remove the emergency vehicle preemption heads (evp) from each signal standard or pole. Ensure that all access hand hole doors and all associated hardware remain intact. Dispose of the underground signal cable, internal wires and street lighting cable off the state right-of-way.

Reinstall all items in accordance to the pertinent provisions of standard specs 657, 658 and 659.

**D Measurement**

The department will measure Remove and Reinstall Traffic Signals (Location) as a single lump sum unit of work for each intersection, acceptably completed.

**E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.505	Remove and Reinstall Traffic Signals USH 14 and STH 26	LS
SPV.0105.506	Remove and Reinstall Traffic Signals USH 14 and Lexington Drive	LS
SPV.0105.507	Remove and Reinstall Traffic Signals USH 14 and Pontiac Drive	LS
SPV.0105.508	Remove and Reinstall Traffic Signals USH 14 and IH 39 SB Ramp	LS
SPV.0105.509	Remove and Reinstall Traffic Signals USH 14 and IH 39 NB Ramp	LS
SPV.0105.510	Remove and Reinstall Traffic Signals USH 14 and Deerfield Drive	LS

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

**112. Temporary Vehicle Detection (USH 14 and IH 39 SB Ramp), Item SPV.0105.511; (USH 14 and IH 39 NB Ramp), Item SPV.0105.512; (USH 14 and Deerfield Drive), Item SPV.0105.513.**

**A Description**

This special provision describes furnishing, installing and maintaining vehicle detection systems in conjunction with temporary traffic signals as shown in the plans. The desired vehicle detection zones and their operational parameters are show in the plans.

**B Materials**

Provide all necessary equipment for the approved method of temporary vehicle detection.

Select, with prior approval of the engineer, the vehicle detection technology best suited for the site conditions and the anticipated construction work zones and activities. The engineer reserves the right to request a demonstration of any or all temporary vehicle detection technologies prior to said approval. Vehicle detection technologies considered shall include; but are not limited to, temporary inductive loops, microwave detection, or video detection. Detection technology shall provide for true presence detection.

**C Construction**

Damage to new pavement for temporary detection loops will not be allowed. Any pavement damaged during installation shall be replaced at the contractor's expense.

Provide immediate response, 24-hour/7-days per week, to maintain any aspect of the temporary vehicle detection that is defective, completing repairs or adjustments the same day as notification.

Adjust, relocate, add, or remove temporary vehicle detection equipment for each traffic control stage or sub stage as shown in the plans, request by the engineer, or as modified by the contractor's operations to maintain the required traffic and complete the proposed work.

**D Measurement**

The department will measure Temporary Vehicle Detection (Intersection), 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.0105.511	Temporary Vehicle Detection (USH 14 and IH 39 SB Ramp)	LS
SPV.0105.512	Temporary Vehicle Detection (USH 14 and IH 39 NB Ramp)	LS
SPV.0105.513	Temporary Vehicle Detection (USH 14 and Deerfield Drive)	LS

Payment is full compensation for demonstrating and selecting the vehicle detector technology, furnishing, installing and adjusting or moving the equipment, including all required materials, tools and supplies; and for clean-up and waste disposal.

**113. Transporting State Furnished Monotube Equipment, USH 14 and Deerfield Drive, Item SPV.0105.514.**

**A Description**

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

**B Materials**

Load and transport materials furnished by the department including: monotube poles, monotube arms, luminaire arms (to be installed on monotube assemblies), and required pole assembly hardware.

Pick up the department furnished materials at the department's designated location. Notify the department's Electrical Field Unit and make arrangements for picking up the department furnished materials at least five working days prior to picking up the materials.

**C (Vacant)**

**D Measurement**

The department will measure Transporting Signal and Lighting Materials (USH 14 and Deerfield Drive) 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.0105.514	Transporting State Furnished Monotube Equipment, (USH 14 and Deerfield Drive)	LS

Payment is full compensation for loading and transporting the monotube poles, monotube arms and luminaire arms (to be installed on monotubes) and unloading at the project site. Installation of these materials is included under a separate pay item.

**114. Traffic Signal Systems Integrator, Item SPV.0105.515.****A Description**

This special provision describes personnel qualifications, contract roles, construction methods, testing and documentation requirements used to perform traffic signal work. ITS integration is not included under this bid item.

**B Materials**

Materials shall be in accordance to standard spec 651.2 and as hereinafter provided:

Facilitate all contractor and department-furnished item approvals and orders for scheduling of installation activities.

**C Construction**

Construction shall be in accordance to standard spec 670.3 with the exception of the term “ITS” being replaced by “Traffic Signal”, and as hereinafter provided:

Delete the requirement for the Integrator to be selected from the department’s approved field system integrator list. The Traffic Signal Systems Integrator may be on the list but shall also demonstrate qualifications necessary to provide management, assistance and expertise in the areas listed under standard spec 670.3.2.1. The Integrator shall also have experience with assembling components of traffic signal systems to include the following:

- Standard equipment as furnished by the department or furnished under this contract for traffic signals
- Adaptive signal equipment as furnished by the department
- Microwave and camera detection equipment as furnished by the department
- Fiber optic, cellular and wireless communication equipment
- Traffic signal interconnection systems
- Railroad preemption
- Street lighting controls
- Bluetooth detection

Provide an ongoing role as Integrator beginning with the compilation, review and approval of material submittals; through installation, testing, trouble-shooting and final acceptance of the working traffic signal system and all components. The Integrator role includes participation in weekly progress meetings as required by construction activities.

Provide a management role during the traffic signal cabinet assembly and testing process, prior to field installation. Cabinet assembly is anticipated to include various levels of support provided by the Integrator, department electrical staff, the engineer and the contractor. Ensure all equipment is delivered and properly installed within the specified timeframes enforced under this contract.

Provide for allowance to participate in cabinet installation during overnight hours as described in the Prosecution and Progress article in this special provisions document.

#### **D Measurement**

The department will measure Traffic Signal Systems Integrator as a single lump sum unit for all services, acceptably completed under the contract.

#### **E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.515	Traffic Signal Systems Integrator	LS

Payment is full compensation for providing specified expertise, assistance, assembly and documentation. The department will pay separately for other traffic signal work under the various bid items in the contract.

### **115. Install State Furnished Emergency Vehicle Preemption Equipment USH 14 and IH 39 SB Ramp, Item SPV.0105.516; USH 14 and IH 39 NB Ramp, SPV.0105.517.**

#### **A Description**

This special provision describes installing a state furnished Emergency Vehicle Preemption (EVP) System at the location shown on the plans and as provided hereinafter.

#### **B Materials**

Provide polycarbonate traffic signal face mounting brackets, reducing bushings, lock rings, pinnacles (cap), pole grommets (or chase nipple), and any incidental items necessary for installation not furnished by the department.

Card rack and discriminator equipment will be installed and supplied by the department.

#### **C Construction**

Mount detectors and confirmation lights on the trombone arms and signal poles as shown on the plans.

Mount the EVP receiver and confirmation light just above the traffic signal head when mounting on a signal pole and as shown on plans when mounting to a trombone arm. Install the cable from the traffic signal control cabinet to the EVP receiver. Include a six foot loop of cable in the pull box nearest the mounting pole. Allow three days for scheduling of test for final acceptance. The department will supply, install, and terminate the card rack and discriminator equipment in the cabinet.

#### **D Measurement**

The department will measure Install State Furnished Emergency Vehicle Preemption Equipment (Location) as a single lump sum unit of work, completed in accordance to the contract and accepted.

#### **E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.516	Install State Furnished Emergency Vehicle Preemption Equipment USH 14 and IH 39 SB Ramp	LS
SPV.0105.517	Install State Furnished Emergency Vehicle Preemption Equipment USH 14 and IH 39 NB Ramp	LS

Payment is full compensation for furnishing and installing all EVP detector equipment and cable; furnishing and installing the mounting hardware and any miscellaneous items necessary to complete the entire system at the specified intersection; coordination with the department for delivery and installation of department furnished components; and for furnishing all labor, tools, equipment, and incidentals necessary to complete the contract work.

### **116. Brick Paver Band, Item SPV.0165.001.**

#### **A Description**

This special provision describes installing unit pavers Type 1, 2 and 3 on a concrete base and sand setting bed as shown in the plans, and as herein provided.

#### **B Materials**

The pavers shall have a factory sealed finish, rounded corners, beveled edges and spacer lugs. The paver colors and proportion of each paver color shall match the the existing brick paver band on STH 59 immediately adjacent to the project.

#### **B.1 Paver Type 1, 2, and 3**

Furnish clay pavers that meet the minimum material and physical properties set forth in ASTM C 902-98, Class SX, Type 1, Application PS, 8,000 psi minimum average compressive strength, 6% maximum average absorption for walkways. Minimum static coefficient of friction shall be .60 for wet and .70 for dry tested in accordance to

ASTM C 1028-96. Type 1 and Type 2 pavers shall be true 4" x 8" x 2-1/4" and Type 3 shall be true 8" x 8" x 2-1/4". Clay pavers shall be vacuum dry-press solid (uncored) hard-burned, clay pavers. Full size samples of clay pavers shall be submitted to indicate color and shape selections. All clay pavers shall be from the same manufacturer.

### B.3 Other Materials

Furnish Concrete Base 4-Inch in accordance to standard spec 320.

Furnish a crushed limestone leveling course that meets the gradation requirements of ASTM C 33 as shown below.

LEVELING COURSE  
GRADING REQUIREMENTS

ASTM C 33	
Sieve Size	Percent Passing
9.5 mm	100
4.75 mm	95 to 100
2.36 mm	85 to 100
1.18 mm	50 to 85
600 µm	25 to 60
300 µm	10 to 30
150 µm	2 to 10

Joint sand shall be clean, non-plastic, and free from deleterious or foreign matter. The sand shall be natural or manufactured from crushed rock and shall conform to the grading requirements of ASTM C 144 as shown below:

JOINT SAND  
GRADING REQUIREMENTS

ASTM C 144		
	Natural Sand	Manufactured Sand
Sieve Size	Percent Passing	Percent Passing
4.75 mm	100	100
2.36 mm	95 – 100	95 to 100
1.18 mm	70 – 100	70 to 100
600 µm	40 – 75	40 to 75
300 µm	10 – 35	20 to 40
150 µm	2 – 15	10 to 25
75 µm	0	0 to 10

Joint Sand Stabilizer Additive shall be one of the following:

1. SandLock by Pave Tech/Pave Chem, P.O. Box 576, Prior Lake, MN 55372, Phone (800) 728-3832
2. Resiblock '22' by Resiblock Ltd., Resiblock House, Archers Fields Close, Basildon, Essex SS13 1DW, UK, Phone 44 (0) 1268 273344.
3. Techni-Seal Polymetric Sand available from Unilock Chicago, Inc., 301 East Sullivan Road, Aurora, IL 60504, Phone (800)-UNILOCK
4. Approved Equal

Furnish a filter fabric meeting the requirements of Geotextile Fabric Type DF Schedule A in accordance to standard spec 645.

## **C Construction**

### **C.1 General**

Installation shall be by a contractor and crew with at least 5 years of experience in placing interlocking unit pavers on projects of similar nature or dollar cost. Install a 5 foot x 5 foot mock-up paver area to illustrate joint sizes, lines, pattern(s), color(s) and texture of the project. Include paver types 1, 2, and 3 in mock-ups. Approval of mock up is required prior to completing this work. Failure to receive mock up approval may result in rejection of work. The approved mock up shall be the standard from which the work will be judged and approved by the engineer.

### **C.2 Paver Installation**

Install geotextile over concrete base and wrap up edges one-inch. Spread leveling course evenly over the geotextile fabric and screed. Set pavers high enough to allow for settling that will occur during final compaction. The screeded leveling course shall not be disturbed. Place sufficient leveling course in order to stay ahead of the laid pavers. Do not use leveling course to fill depressions in the concrete base. Pavers shall be free of foreign material before installation. Inspect pavers for color distribution and replace all chipped, damaged or discolored pavers. Lay the pavers in the patterns as shown on the drawings and make adjustments allow for whole paver use as often as possible. Maintain straight pattern lines. Joints between the pavers shall be between 1/16-inch and 5/32-inch wide. Pavers shall be cut with a double blade paver splitter or masonry saw. Install edge restraints before placing unit pavers. Install edge restraints to comply with manufacturer's written instructions. Install stakes at intervals required to hold edge restraints in place during and after unit paver installation. Use edge restraints along all unrestrained paver edges and supported on a minimum of 6-inches of aggregate base. Sweep the paver surface clean of all debris before compacting, in order to avoid damage from point loads. Use a low amplitude, high frequency plate compactor with compactive effort of 3000 lbs to compact the pavers into the leveling course. Compact the pavers and sweep dry joint sand and joint sand stabilizer additive into the joints according to manufacturer's recommendations. All work to within 3 feet (1 m) of the laying face must be left fully compacted with sand-filled joints at the completion of each day.

**D Measurement**

The department will measure Brick Paver Band by the square foot of surface area, 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.0165.001	Brick Paver Band	SF

Payment is full compensation for furnishing all materials except base aggregate dense, including accent pavers, concrete base, geotextile fabric, leveling course, joint sand and additive, and edging; delivering, installing, placing, and finishing.

**117. Remove and Replace Decorative Stone Driveway, Item SPV.0165.002.****A Description**

This special provision describes removing a portion of an existing decorative stone driveway, salvaging the decorative stone, and replacing the decorative stone at the new driveway grade.

**B Materials**

Construct the driveway using decorative stone salvaged from the existing driveway. Salvaged material shall be free of any other type of stone, earth, or other debris.

If additional decorative stone is needed to complete the driveway the contractor shall supply decorative stone that matches the color and gradation of the existing decorative stone. Additional stone will be incidental to the construction of the driveway.

**C Construction****C.1 Decorative Stone Removal**

Remove the existing decorative shown to the limits shown on the plan. Remove the decorative stone so that the decorative stone does not become mixed with any underlying material.

**C.2 Excavation**

Remove underlying material in locations shown on the plans so that the driveway will match the adjacent concrete sidewalk once decorative stone is placed.

**C.3 Decorative Stone Placement**

Use salvaged decorative stone to construct the driveway so that the driveway will match the adjacent concrete sidewalk. Place stone so that it matches the slope of the adjacent land. The decorative stone shall be uniformly compacted using a compaction method of the contractor's choice.

**D Measurement**

The department will measure Remove and Replace Decorative Stone Driveway by the square foot, acceptably completed.

**E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0165.002	Remove and Replace Decorative Stone Driveway	SF

Payment is full compensation for removing existing decorative stone; excavating underlying material; placing salvaged decorative stone; compacting the decorative stone; and for disposing excess materials.

If additional decorative stone is needed to complete the driveway the additional stone shall be incidental to the item Remove and Replace Decorative Stone Driveway.

**118. Curb Ramp Detectable Warning Field Yellow Temporary, Item SPV.0165.200.****A Description**

This special provision describes providing and installing a temporary detectable warning field.

**B Materials**

Furnish a 2'x4' truncated dome mat that meets the Americans with Disabilities Act (ADA) Accessibility Guidelines. The truncated dome mat shall be placed directly on top of the existing concrete pavement and adhered to the concrete pavement.

Furnish an adhesive that can be removed without scarring, staining, or otherwise damaging the existing concrete pavement that the adhesive is placed on.

At the completion of the project the truncated dome mat becomes the property of the contractor.

**C Construction**

Install the truncated dome mat in locations shown on the plans. The truncated dome mat shall be adhered to the concrete pavement using an adhesive of the contractor's choice. Install the truncated dome mat in a manner that does not damage the existing concrete pavement.

At the completion of the construction work that required the closure of the permanent curb ramp, remove the truncated dome mat in a manner that will not damage the existing pavement. All adhesive shall be removed from the pavement in a manner that does not damage the existing pavement.

If the engineer determines that the existing concrete pavement has been damaged the contractor shall replace the concrete pavement with no additional compensation.

**D Measurement**

The department will measure Curb Ramp Detectable Warning Field Yellow Temporary by the square foot, acceptably completed.

**E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0165.200	Curb Ramp Detectable Warning Field Yellow Temporary	SF

Payment is full compensation for providing truncated dome mats and adhesive; installing the truncated dome mats; removing truncated dome mats and adhesive; and for disposing of the truncated dome mat.

If the engineer determines that the concrete pavement under the truncated dome mat has been damaged by the contractor, the contractor shall replace the concrete pavement with no additional compensation.





### ADDITIONAL SPECIAL PROVISION 3 DISADVANTAGED BUSINESS ENTERPRISE PROGRAM

#### 1. Description

##### General

- a. The disadvantaged business enterprise (DBE) requirements of 49 CFR Part 26 apply to this contract. The department's DBE goal is shown on the cover of the bidding proposal. The contractor can meet the specified contract DBE goal by procuring services or materials from a DBE or by subcontracting work to a DBE. The department calculates the DBE participation as the dollar value of DBE participation included in the bid expressed as a percentage of the total contract bid amount.
- b. Under the contract, the contractor agrees to provide the assistance to participating DBE's in the following areas:
  - i. Produce accurate and complete quotes.
  - ii. Understand highway plans applicable to their work.
  - iii. Understand specifications and contract requirements applicable to their work.
  - iv. Understand contracting reporting requirements.
- c. The department encourages the contractor to assist and develop DBE firms to become fully knowledgeable contractors to successfully perform on its contracts.
- d. For information on the disadvantaged business program, visit the department's Civil Rights and Compliance Section website at:

<http://www.dot.wisconsin.gov/business/engrserv/dbe-main.htm>

#### 2. Definitions

- a. Interpret these terms, used throughout this additional special provision, as follows:
  - i. **Bid Percentage:** The DBE percentage indicated in the bidding proposal at the time of bid.
  - ii. **DBE:** A disadvantaged business enterprise (DBE) certified as a DBE by the department and included on the department's list of certified DBE's who are determined to be ready, willing and able.
  - iii. **DBE goal:** The amount of DBE participation expected in the contract as shown on the cover of the Highway Work Proposal.
  - iv. **Discretionary Goal:** A contractor assigned DBE goal, typically abbreviated as "Disc" on the cover of the Highway Work Proposal, which is enforced as committed.
  - v. **Manufacturer:** A firm that operates or maintains a factory or establishment that produces, on the premises, the materials, supplies, articles, or equipment required under the contract.
  - vi. **Supplier:** A firm that owns, operates, or maintains a store, warehouse, or other establishment in which the materials, supplies, articles or equipment required under the contract are bought, kept in stock, and regularly sold or leased to the public.
  - vii. **Voluntary Achievement:** The amount of DBE participation achieved and reported in the contract in excess of the assigned goal.

#### 3. DBE Percentage Required at Bid Submission

Indicate the bid percentage (i.e. 0% through 100%) of DBE participation on the completed bidding proposal, including projects with discretionary goals. For electronic submittals, show the percentage in the miscellaneous data folder, Item 3, DBE Percent. For paper submittals, show the percentage on the sheet included after the schedule of items. By submission of the bid, the bidder contractually commits to DBE participation at or above the bid percentage, or certifies that they have utilized

comprehensive good faith efforts to solicit and utilize DBE firms to meet the DBE participation requirements of this contract proposal, and that the bid percentage is reflective of these good faith efforts. If the bidder does not indicate the bid percentage of DBE participation on the completed bidding proposal, the department will consider the bid irregular and may reject the bid.

#### **4. Department's DBE Evaluation Process**

##### **a. Documentation Submittal**

Within 10 business days after the notification of contract award, the contractor is to identify, by name, the DBE firms whose utilization is intended to satisfy this provision, the items of work of the DBE subcontract or supply agreement and the dollar value of those items of work by completing the Commitment to Subcontract to DBE Form [DT1506] and all necessary attachment A forms, as well as, Good Faith Waiver Form [DT1202] and supporting documentation as necessary. If the contractor fails to furnish the required forms within the specified time, the department may cancel the award. Delay in fulfilling this requirement is not a cause for extension of the contract time and shall not be used as a tool to delay execution.

##### **i. Bidder Meets DBE Goal**

If the bidder indicates that the contract DBE goal is met, after award and before execution, the department will evaluate the Commitment to Subcontract to DBE Form DT1506 and attachment A(s) to verify the actual DBE percentage achieved. If the DBE commitment is verified, the contract is eligible for execution with respect to the DBE commitment.

##### **ii. Bidder Does Not Meet DBE Goal**

- (1) If the bidder indicates a bid percentage on the Commitment to Subcontract to DBE Form [DT1506] that does not meet the contract DBE goal, the bidder must submit a Good Faith Waiver Form [DT1202] and supporting documentation. After award and before execution, the department will evaluate the bidder's DBE commitment and consider the bidder's good faith waiver request.
- (2) The department will review the bidder's good faith waiver request and notify the bidder of one of the following:
  - a. If the department grants a good faith waiver, the bid is eligible for contract execution with respect to DBE commitment.
  - b. If the department rejects the good faith waiver request, the department may declare the bid ineligible for execution. The department will provide a written explanation of why the good faith waiver request was rejected. The bidder may appeal the department's rejection as allowed under 7 a. & b.

#### **5. Department's Criteria for Good Faith Effort**

The Code of Federal Regulations {CFR}, 49 CFR Part 26-Appendix A, is the guiding regulation concerning good faith efforts. However, the federal regulations do not define "good faith" but states that bidder must actively and aggressively attempt to meet the goal. The federal regulations are general and do not include every factor or effort that can be considered. As a result, each state must establish its own processes and consider the factors established in its own process when making a determination of good faith.

- a. The department will only grant a good faith waiver if the bidder has made the effort, given the relevant circumstances under the contract that a bidder actively and aggressively seeking to meet the goal would make. The department will evaluate the bidder's good faith effort to determine whether a good faith waiver will be granted. The bidder must demonstrate, on the DT1202 that they have aggressively solicited DBE participation in an attempt to meet the contract DBE goal and attaining the stated DBE goal is not feasible.

- b. The department, in conjunction with industry stakeholders, has developed the following guidance for contractor good faith effort. The guidance and the attached appendices provide a framework for the actions required by all parties in the processing and evaluation of bidder's total efforts to achieve the project specific DBE goal prior to the bid letting date.
- c. Prime Contractors should:
  - i. Document all efforts and decisions made toward achieving the DBE goal on the contract. The bidder should use the Civil Rights & Compliance System [CRCS] and related WisDOT-approved DBE outreach tools, including the Bid Express Small Business Network, to foster DBE participation on all applicable contracts.
  - ii. Request quotes by identifying potential items to subcontract and solicit. Prime contractors are strongly encouraged to include in their initial contacts a single page including a detailed list of items for which they are accepting quotes, by project, within a letting. *See attached sample entitled "Sample Contractor Solicitation Letter" in Appendix A.* Prime contractors should also indicate a willingness to accept quotes in areas they are planning to perform themselves, **as required by federal rules**. In some cases, it might be appropriate to use DBE's to do work in a prime contractor's area of specialization.
    - (1) Solicit quotes through all reasonable and available means from certified DBE firms who match 'possible items to subcontract' and send copies to DBESS office, highlighting areas in which you are seeking quotes. Email is acceptable.
    - (2) SBN is the preferred outreach tool. <https://www.bidx.com/wi/main>. Other acceptable means include postal mail, email, fax, phone call.
      - a. Primes must ask DBE firms for a response in their solicitations. *See Sample Contractors Solicitation Letter* in Appendix. This letter can be included as an attachment to the SBN sub-quote request.
      - b. Solicit quotes at least 10 calendar days prior to the letting date {ideally two Fridays before the letting} to allow DBE firms sufficient time to respond. Prime contractors should contact DBE firms early, asking them if they need help in putting together a quote, or helping to arrange for equipment needs, or solve other problems.
    - (3) Second solicitation should take place within 5 days
      - a. An email solicitation is highly recommended for this second solicitation
    - (4) Upon request, provide interested DBE firms with adequate information about plans, specifications and the requirements of the contract by letter, information session, email, phone call and/or referral.
    - (5) When potential exists, advise interested DBE firms on how to obtain bonding, line of credit or insurance as may be requested.
    - (6) Document DBE firm's interest in quoting by taking appropriate steps to follow up initial solicitation with:
      - a. Email to all prospective DBE firms in relevant work areas
      - b. Phone call log to DBE firms who express interest via written response or call.
      - c. Fax/letter confirmation
      - d. Copy of the DBE quotes
      - e. Signed copy of Bid Express SBN Record of Subcontractor Outreach Effort.
- d. Evaluate DBE quotes as documentation is critical if the prime does not utilize the DBE firm's quote for any reason.
  - i. Evaluate DBE firm's capability to perform 'possible items to subcontract' using legitimate reasons, including but not limited to, **a discussion with the DBE firm** regarding its

- capabilities prior to the bid letting. If lack of capacity is your reason for not utilizing the DBE quote, you are required to contact the DBE directly regarding their ability to perform the work indicated in the UCP directory as their work area [NAICS code]; only the work area and/or NAICS code listed in the UCP directory will be counted for DBE credit. Documentation of the conversation is required.
- ii. In striving to meet a DBE conscious contract goal, prime contractors are expected to use DBE quotes that are responsive and reasonable. This includes DBE quotes that are not the low quote.
  - iii. **Special Circumstance:** Evaluation of DBE quotes with tied bid items. "Tied quotes are the condition in which a subcontractor submits quotes including multiple areas of expertise across multiple work areas noting that the items and price are tied. Typically this type of quoting represents a cost saving to the prime but is not clearly stated as a discount; tied quotes are usually presented as 'all or none' quote to the prime." When non-DBE subcontractors submit tied bid items in their quotes to the prime, the DBE firms' quote may seem not competitive. In such a case, the following steps are taken in comparing the relevant quotes. These are qualitative examples.
    - (1) Compare bid items common to both quotes, noting the reasonableness in the price comparison.
    - (2) Review quotes from other firms for the bid items not quoted by the DBE firm to see if combining both can provide the same competitive advantage that the tied bid items offered.
- e. After notification of contract award, submit '**Commitment to Subcontract**' form within the time period specified in the contract.
    - i. Provide the following information along with department form DT1202:
      - (1) The names, addresses, e-mail addresses, telephone numbers of DBE's contacted. The dates of both initial and follow-up contact. A printed copy of SBN solicitation is acceptable.
      - (2) A description of information provided to the DBE's regarding the plans, specifications, and estimated quantities for portions of the work to be performed by that DBE.
      - (3) Photocopies or electronic copies of all written solicitations to DBE's.
      - (4) Documentation of each quote received from a DBE and, if rejected, the reason for that rejection.
      - (5) Bidder attendance at any pre-solicitation or pre-bid meetings the department held to inform DBE's of participation opportunities available on the project.
  - f. The department's DBE Support Services Office is available by phone, email or in writing to request assistance in meeting the DBE goal:

DBE Support Services Office  
6150 Fond du Lac Ave.  
Milwaukee, WI 53218  
Phone: 414-438-4583 / 608-266-6961  
Fax: 414-438-5392  
E-mail: [DOTDBESupportServices@dot.wi.gov](mailto:DOTDBESupportServices@dot.wi.gov)

## 6. Bidder's Appeal Process

- a. A bidder can appeal the department's decision to deny the bidder's good faith waiver request. The bidder must provide written documentation refuting the specific reasons for rejection as stated in the department's rejection notice. The bidder may meet in person with the department if so

requested. Failure to appeal within 7 calendar days after receiving the department's written notice of rejection of a good faith waiver request under constitutes a forfeiture of the bidder's right of appeal. If the bidder does not appeal, the department may declare the bid ineligible for execution.

- b. The department will appoint a representative, who did not participate in the original determination, to assess the bidder's appeal. The department will issue a written decision within 7 calendar days after the bidder presents all written and oral testimony. In that written decision, the department will explain the basis for finding that the bidder did or did not meet the contract DBE goal or make an adequate good faith effort to meet the contract DBE goal. The department's decision is final. If the department finds that the bidder did not meet the contract DBE goal or did not make adequate efforts to meet the DBE goal, the department may declare the bid ineligible for execution.

## **7. Department's Criteria for DBE Participation**

### **Department's DBE List**

- a. The department maintains a DBE list on the department's website at <http://app.mylcm.com/wisdot/Reports/WisDotUCPDirectory.aspx>
- b. The DBE office is also available to assist at 414-438-4583 or 608-266-6961.

## **8. Counting DBE Participation**

### **Assessing DBE Work**

- a. The department will only count the DBE usage towards the contract DBE goal if the DBE firm is certified as a DBE by one of the unified certification program agencies. If a firm becomes DBE certified before entering into a subcontract, the department may consider that DBE usage towards the contract goal. The department only counts the value of the work a DBE actually performs towards the DBE goal. The department assesses the DBE work as follows:
- b. The department counts work performed by the DBE's own resources. The department includes the cost of materials and supplies the DBE obtains for the work. The department also includes the cost of equipment the DBE leases for the work. The department will not include the cost of materials, supplies, or equipment the DBE purchases or leases from the prime contractor or its affiliate, except the department will count non-project specific leases the DBE has in place before the work is advertised.
- c. The department counts fees and commissions the DBE charges for providing a bona fide professional, technical, consultant, or managerial services. The department also counts fees and commissions the DBE charges for providing bonds or insurance. The department will only count costs the engineer deems reasonable based on experience or prevailing market rates.
- d. If a DBE subcontracts work, the department counts the value of the subcontracted work only if the DBE's subcontractor is also a DBE.
- e. The contractor shall maintain records and may be required to furnish periodic reports documenting its performance under this item.
- f. It is the prime contractor's responsibility to determine the DBE's ability to perform the work with the use of the UCP directory.

## **9. Commercially Useful Function**

- a. The department counts expenditures of a DBE toward the DBE goal only if the DBE is performing a commercially useful function on that contract.
- b. A DBE is performing a commercially useful function if the following conditions are met:
- c. For contract work, the DBE is responsible for executing a distinct portion of the contract work and it is carrying out its responsibilities by actually performing, managing, and supervising that work.
- d. For materials and supplies, the DBE is responsible for negotiating price, determining quality and quantity, ordering, and paying for those materials and supplies.

**10. Trucking**

All bidders are expected to adhere to the department's current trucking policy posted on the HCCI website at

<http://www.dot.wisconsin.gov/business/engrserv/docs/dbe-trucking-notice.pdf>

**11. Manufacturers and Suppliers**

The department counts material and supplies a DBE provides under the contract. The department will give full credit toward the DBE goal if the DBE is a manufacturer of those materials or supplies. The department will give 60 percent credit toward the DBE goal if the DBE is merely a supplier of those materials or supplies. It is the bidder's responsibility to find out if the DBE is considered a supplier or a manufacturer before listing them on Commitment to Subcontract to DBE form DT1506.

**12. DBE Prime**

If the prime contractor is a DBE, the department will only count the work the contractor performs with its own forces, the work DBE subcontractors perform, and the work DBE suppliers or manufacturers perform.

**13. Joint Venture**

If a DBE performs as a participant in a joint venture, the department will only count that portion of the total dollar value of the contract equal to that portion of the work that the DBE performs with its own forces.

**14. Mentor Protégé**

- a. If a DBE performs as a participant in a mentor protégé agreement, the department will credit the portion of the work performed by the DBE protégé firm
- b. On every other project that the mentor protégé team identifies itself on.
- c. For no more than one half of the total contracted DBE goal on any WisDOT project.

**15. DBE Replacement**

In the event a Prime Contractor needs to replace a DBE firm originally listed on the approved DBE Commitment Form DT1506, the Prime Contractor must comply with the department's DBE Replacement Policy located on the DBE page on the following web site:

<http://www.dot.wi.gov/business/dbe/docs/policyreplacingdbe.pdf>

**16. Changes to the approved DBE Commitment Form DT1506**

If there are any changes to the approved Commitment to Subcontract to DBE Form DT1506, the prime contractor must submit a revised DBE Commitment Form DT1506 and relevant attachment A(s) to the DBE Programs Office within 5 business days.

**17. Contract Modifications**

When additional opportunity is available by contract modifications, the Prime Contractor shall utilize DBE Subcontractors, that were committed to equal work items, in the original contract.

**18. Payment**

Costs for conforming to this Additional Special Provision (ASP) and any associated DBE requirements are incidental to the contract.

**APPENDIX A**  
**Sample Contractor Solicitation Letter Page 1**  
*This sample is provided as a guide not a requirement*

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GFW SAMPLE MEMORANDUM

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TO: DBE FIRMS  
FROM: POTENTIAL PRIME CONTRACTOR OR MAJOR SUBCONTRACTOR  
SUBJECT: REQUEST FOR DBE QUOTES  
LET DATE & TIME  
DATE: MONTH DAY YEAR  
CC: DBE OFFICE ENGINEER

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Our company is considering bidding on the projects indicated on the next page, as a prime and/or a subcontractor for the Wisconsin Department of Transportation Month- date -year Letting. Page 2 lists the projects and work items that we may subcontract for this letting. We are interested in obtaining subcontractor quotes for these projects and work categories. Also note that we are willing to accept quotes in areas we may be planning to perform ourselves as required by federal rules.

Please review page 2, respond whether you plan to quote, highlight the projects and work items you are interested in performing and return it via fax or email within 3 days. Plans, specifications and addenda are available through WisDOT at the DBE Support Services office or at the Highway Construction Contract Information (HCCI) site at <http://roadwaystandards.dot.wi.gov/hcci/>

Your quote should include all of the costs required to complete the items you propose to perform including labor, equipment, material, and related bonding or insurance. The quote should note items that you are DBE certified to perform, tied items, and any special terms. Page 2, with the indicated projects and items you plan to quote, should be used as a cover sheet for your quote.

Please make every effort to have your quotes into our office by time deadline the prior to the letting date. **Make sure the correct letting date, project ID and proposal number, unit price and extension are included in your quote.** We prefer quotes be sent via SBN but prime's alternative's are acceptable. Our office hours are include hours and days. Please call our office as soon as possible prior to the letting if you need information/clarification to prepare your quote at contact number.

If you wish to discuss or evaluate your quote in more detail, contact us after the contract is awarded. Status of the contract can be checked at WisDOT's HCCI site at <http://roadwaystandards.dot.wi.gov/hcci/>

All questions should be directed to:

Project Manager, John Doe,  
Phone: (000) 123-4567  
Email: [Joe@joetheplumber.com](mailto:Joe@joetheplumber.com)  
Fax: (000) 123- 4657



## Sample Contractor Solicitation Letter Page 2

*This sample is provided as a guide not a requirement*

### REQUEST FOR QUOTATION

Prime's Name: \_\_\_\_\_

Letting Date: \_\_\_\_\_

Project ID: \_\_\_\_\_

**Please check all that apply**

- .. Yes, we will be quoting on the projects and items listed below
- .. No, we are not interested in quoting on the letting or its items referenced below
- .. Please take our name off your monthly DBE contact list
- .. We have questions about quoting this letting. Please have some one contact me at this number

**Prime Contractor 's Contact Person**

Phone: _____
Fax: _____
Email: _____
_____

**DBE Contractor Contact Person**

Phone _____
Fax _____
Email _____
_____

**Please circle the jobs and items you will be quoting below**

Proposal No.	1	2	3	4	5	6	7
County							

**WORK DESCRIPTION:**

Clear and Grub	X		X	X		X	X
Dump Truck Hauling	X		X	X		X	X
Curb & Gutter/Sidewalk, Etc.	X		X	X		X	X
Erosion Control Items	X		X	X		X	X
Signs and Posts/Markers	X		X	X		X	X
Traffic Control		X	X	X		X	X
Electrical Work/Traffic Signals		X	X	X		X	
Pavement Marking		X	X	X	X	X	X
Sawing Pavement		X	X	X	X	X	X
QMP, Base	X	X		X	X	X	X
Pipe Underdrain	X			X			
Beam Guard				X	X	X	X
Concrete Staining							X
Trees/Shrubs	X						X

Again please make every effort to have your quotes into our office by time deadline prior to the letting date.

We prefer quotes be sent via SBN but prime's preferred alternative's are acceptable.

If there are further questions please direct them to the prime contractor's contact person at phone number.

**APPENDIX B**  
**BEST PRACTICES FOR PRIME CONTRACTOR & DBE**  
**SUBCONTRACTOR GOOD FAITH EFFORT**

*This list is not a set of requirements; it is a list of potential strategies*

**Primes**

- Ø Prime contractor open houses inviting DBE firms to see the bid “war room” or providing technical assistance
- Ø Participate in speed networking and mosaic exercises as arranged by DBE office
- Ø Host information sessions not directly associated with a bid letting;
- Ø Participate in a formal mentor protégé or joint venture with a DBE firm
- Ø Participate in WisDOT advisory committees i.e. TRANSAC, or Mega Project committee meetings
- Ø Facilitate a small group DBE ‘training session’ Clarifying how your firm prepares for bid letting, evaluates subcontractors, preferred qualifications and communication methods
- Ø Encourage subcontractors to solicit and highlight DBE participation in their quotes to you
- Ø Quality of communication, not quantity creates the best results. Contractors should do as thorough a job as possible in communicating with DBE firms before the bid and provide any assistance requested to assure best possible bid.

**DBE**

- Ø DBE firms should contact primes as soon as possible with questions regarding their quotes or bid; seven days prior is optimal.
- Ø Continually check for contract addendums on the HCCI website through the Thursday prior to letting to stay abreast of changes.
- Ø Review the status of contracts on the HCCI website reviewing the ‘apparent low bidder’ list, and bid tabs at a minimum.
- Ø Prepare a portfolio or list of related projects and prime and supplier references; be sure to note transportation-related projects of similar size and scope, firm expertise and staffing.
- Ø Participate in DBE office assessment programs
- Ø Participate on advisory and mega-project committees
- Ø Sign up to receive the DBE Contracting Update
- Ø Consider membership in relevant industry or contractor organizations
- Ø Active participation is a must. Quote as many projects as you can reasonably work on; quoting the primes and bidding as a prime with the department are the only ways to get work.

## APPENDIX C

### Types of Efforts considered in determining GFE

*This list represents concepts being assessed; analysis requires additional steps*

1. Whether the contractor attended any pre-solicitation or pre-bid meetings that were scheduled by WisDOT to inform DBEs of contracting and subcontracting opportunities;
2. Whether the contractor provided written notice to a reasonable number of specific DBEs that their interest in the contract was being solicited, in sufficient time to allow the DBEs to participate effectively;
3. Whether the contractor followed up initial solicitations of interest by contacting DBEs to determine if the DBEs were interested; returned the phone calls of interested DBE firms.
4. Whether the contractor selected portions of the work to be performed by DBEs in order to increase the likelihood of meeting the DBE goal;
5. Whether the contractor provided interested DBEs with adequate information about the plans, specifications and requirements of the contract;
6. Whether the contractor negotiated in good faith with interested DBEs, not rejected DBEs as unqualified without sound reasons based on a thorough investigation of their capabilities;
7. Whether the contractor made efforts to assist interested DBEs in being more competitive.
8. Whether the contractor effectively used the services of available minority community organizations: minority contractors groups, local, state, and Federal minority business assistance offices, and other organizations that provide assistance to small businesses and DBE firms.
9. Whether Prime used CRCS to identify DBE who specialize in relevant work areas.
10. Whether the contractor used available resources including contacting the DBE office, using WisDOT's website
11. Whether the contractor returned calls of firms expressing interest in a timely manner.

**APPENDIX D**  
**Good Faith Effort Evaluation Guidance**  
*Excerpt from Appendix A of 49 CFR Part 26*

**APPENDIX A TO PART 26 -- GUIDANCE CONCERNING GOOD FAITH EFFORTS**

- I. When, as a recipient, you establish a contract goal on a DOT assisted contract, a bidder must, in order to be responsible and/or responsive, make good faith efforts to meet the goal. The bidder can meet this requirement in either of two ways. First, the bidder can meet the goal, documenting commitments for participation by DBE firms sufficient for this purpose. Second, even if it doesn't meet the goal, the bidder can document adequate good faith efforts. This means that the bidder must show that it took all necessary and reasonable steps to achieve a DBE goal or other requirement of this part which, by their scope, intensity, and appropriateness to the objective, could reasonably be expected to obtain sufficient DBE participation, even if they were not fully successful.
- II. In any situation in which you have established a contract goal, part 26 requires you to use the good faith efforts mechanism of this part. As a recipient, it is up to you to make a fair and reasonable judgment whether a bidder that did not meet the goal made adequate good faith efforts. It is important for you to consider the quality, quantity, and intensity of the different kinds of efforts that the bidder has made. The efforts employed by the bidder should be those that one could reasonably expect a bidder to take if the bidder were actively and aggressively trying to obtain DBE participation sufficient to meet the DBE contract goal. Mere pro forma efforts are not good faith efforts to meet the DBE contract requirements. We emphasize, however, that your determination concerning the sufficiency of the firm's good faith efforts is a judgment call: meeting quantitative formulas is not required.
- III. The Department also strongly cautions you against requiring that a bidder meet a contract goal (i.e., obtain a specified amount of DBE participation) in order to be awarded a contract, even though the bidder makes an adequate good faith efforts showing. This rule specifically prohibits you from ignoring bona fide good faith efforts.
- IV. The following is a list of types of actions which you should consider as part of the bidder's good faith efforts to obtain DBE participation. It is not intended to be a mandatory checklist, nor is it intended to be exclusive or exhaustive. Other factors or types of efforts may be relevant in appropriate cases.
  - A. Soliciting through all reasonable and available means (e.g. attendance at pre-bid meetings, advertising and/or written notices) the interest of all certified DBEs who have the capability to perform the work of the contract. The bidder must solicit this interest within sufficient time to allow the DBEs to respond to the solicitation. The bidder must determine with certainty if the DBEs are interested by taking appropriate steps to follow up initial solicitations.
  - B. Selecting portions of the work to be performed by DBEs in order to increase the likelihood that the DBE goals will be achieved. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate DBE participation, even when the prime contractor might otherwise prefer to perform these work items with its own forces.
  - C. Providing interested DBEs with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation.

- D.
  - (1) Negotiating in good faith with interested DBEs. It is the bidder's responsibility to make a portion of the work available to DBE subcontractors and suppliers and to select those portions of the work or material needs consistent with the available DBE subcontractors and suppliers, so as to facilitate DBE participation. Evidence of such negotiation includes the names, addresses, and telephone numbers of DBEs that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional agreements could not be reached for DBEs to perform the work.
  - (2) A bidder using good business judgment would consider a number of factors in negotiating with subcontractors, including DBE subcontractors, and would take a firm's price and capabilities as well as contract goals into consideration. However, the fact that there may be some additional costs involved in finding and using DBEs is not in itself sufficient reason for a bidder's failure to meet the contract DBE goal, as long as such costs are reasonable. Also, the ability or desire of a prime contractor to perform the work of a contract with its own organization does not relieve the bidder of the responsibility to make good faith efforts. Prime contractors are not, however, required to accept higher quotes from DBEs if the price difference is excessive or unreasonable.
- E. Not rejecting DBEs as being unqualified without sound reasons based on a thorough investigation of their capabilities. The contractor's standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. non-union employee status) are not legitimate causes for the rejection or non solicitation of bids in the contractor's efforts to meet the project goal.
- F. Making efforts to assist interested DBEs in obtaining bonding, lines of credit, or insurance as required by the recipient or contractor.
- G. Making efforts to assist interested DBEs in obtaining necessary equipment, supplies, materials, or related assistance or services.
- H. Effectively using the services of available minority/women community organizations; minority/women contractors' groups; local, state, and Federal minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBEs.
- V. In determining whether a bidder has made good faith efforts, you may take into account the performance of other bidders in meeting the contract. For example, when the apparent successful bidder fails to meet the contract goal, but others meet it, you may reasonably raise the question of whether, with additional reasonable efforts, the apparent successful bidder could have met the goal. If the apparent successful bidder fails to meet the goal, but meets or exceeds the average DBE participation obtained by other bidders, you may view this, in conjunction with other factors, as evidence of the apparent successful bidder having made good faith efforts.

## Appendix E

### Small Business Network [SBN] Overview

The Small Business Network is a part of the Bid Express® service that was created to ensure that prime bidders have a centralized online location to find subs - including small and disadvantaged business enterprises (DBEs). It is available for prime bidders to use as part of their Basic Service subscription. Within the Small Business Network, **Prime Contractors** can:

1. Easily select proposals, work types and items:
  - a. After adding applicable work types, select items that you wish to quote. Enter the sub-quote quantities and add comments, if desired. Adding or removing items and work types can be done quickly. If needed, you can save the sub-quote for completion at a later time.
2. Create sub-quotes for the subcontracting community:
  - a. Create sub-quotes with ease using the intuitive sub-quote creator. In seven short steps, you can rapidly create a custom sub-quote directed to all subcontractors that bid on the applicable work types. Steps include: provide contact information and sub-quote expiration date, select letting and proposal, add work types and items, specify terms and conditions, upload attachments, and select vendors.
  - b. Create a sub-quote to send to subcontractors or suppliers that lists the items in a proposal that you want quoted
  - c. Create an unlimited number of sub-quotes for items you want quoted, and optionally mark them as a DBE-preferred request
  - d. Add attachments to sub-quotes
3. View sub-quote requests & responses:
  - a. After logging into the Bid Express service, you can quickly review all of your sub-quote requests and all unsolicited sub-quote requests from subcontractors. To simplify the Small Business Network home screen, sub-quote requests can be hidden with one click if they are not applicable.
  - b. View or receive unsolicited sub-quotes that subcontractors have posted, complete with terms, conditions and pricing
4. View Record of Subcontractor Outreach Effort:
  - a. For each sub-quote produced, a *Record of Subcontractor Outreach Effort* is generated that shows the response statistics for a particular sub-quote. If accepted by the letting agency, this report may serve as proof of a “Good Faith” effort in reaching out to the DBE community.
  - b. Easily locate pre-qualified and certified small and disadvantaged businesses
  - c. Advertise to small and disadvantaged businesses more efficiently and cost effectively
  - d. Document your interactions with subs/DBEs by producing an Outreach Report (may be accepted as proof of DBE outreach at the discretion of each agency)

The Small Business Network is a part of the Bid Express® service that was created to ensure that small businesses have a centralized area to access information about upcoming projects. It can help small businesses learn more about opportunities, compete more effectively, network with other contractors and subcontractors, and win more jobs.

1. View and reply to sub-quote requests from primes:
  - a. After logging into the Bid Express service, you can quickly review all incoming sub-quote requests and all unsolicited sub-quotes created by your company. Receive notifications by selected work type. To simplify on the Small Business Network home screen, sub-quote requests can be filtered by work types relevant to your interests, or hidden with one click if they are not applicable.
2. Select items when responding to sub-quote requests from primes:
  - a. You have the freedom to choose and price any number of items when responding to a sub-quote request. Quantities can be modified, and per-item comments are also available.
  - b. View requests for sub-quotes for work that primes have posted for projects they are bidding, add your pricing, terms, and conditions, and submit completed sub-quotes to the requesting primes
  - c. Add attachments to a sub-quote
3. Create and send unsolicited sub-quotes to specific contractors:
  - a. Create unsolicited sub-quotes with ease using the intuitive sub-quote creator. In eight short steps, you can rapidly create a custom sub-quote directed at any number of specific vendors of your choosing. Steps include: provide contact information and sub-quote expiration date, select letting and proposal, add work types and items, specify terms and conditions, upload attachments, and select vendors.
4. Easily select and price items for unsolicited sub-quotes:
  - a. After adding applicable work types, select items that you wish to quote. The extended price calculates automatically, cutting out costly calculation errors. Comments can be provided on an per-item basis as well.
  - b. Create an unsolicited sub-quote that lists the items from a proposal that you want to quote, include pricing, terms and conditions, and send it to selected prime/plan holder
  - c. Add attachments to a sub-quote
  - d. Add unsolicited work items to sub-quotes that you are responding to
5. Easy Access to Valuable Information
  - a. Receive a confirmation that your sub-quote was opened by a prime
  - b. View Bid Tab Analysis data from past bids, including the high, average and low prices of items.
  - c. View important notices and publications from DOT targeted to small and disadvantaged businesses
6. Accessing Small Business Network for WisDOT contracting opportunities
  - a. If you are a contractor not yet subscribing to the Bid Express service, go to **www.bidx.com** and select "Order Bid Express." The Small Business Network is a part of the Bid Express Basic Service.
  - b. DBE firms can request a Bid Express Small Business Network Account at no cost by calling 414-438-4588

## **ADDITIONAL SPECIAL PROVISION 4**

### **Payment to First-Tier Subcontractors**

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

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

### **Payment to Lower-Tier Subcontractors**

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

### **Release of Routine Retainage**

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

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

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

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



## ADDITIONAL SPECIAL PROVISION 6

### ASP 6 - Modifications to the standard specifications

Make the following revisions to the standard specifications:

---

#### 450.3.2.1 General

Replace the entire text with the following effective with the January 2015 letting:

- (1) Do not place asphaltic mixture when the air temperature approximately 3 feet above grade, in shade, and away from artificial heat sources is less than 36 F for upper layers or 32 F for lower layers unless the engineer allows in writing. The contractor should place HMA pavement for projects on or north of STH 29 between May 1 and October 15 inclusive and for projects south of STH 29 between April 15 and November 1 inclusive. Notify the engineer at least one business day before paving.
  - (2) Unless the contract specifies otherwise, conform to the following:
    - Keep the road open to all traffic during construction.
    - Prepare the existing foundation for treatment as specified in 211.
    - Incorporate loose roadbed aggregate as a part of preparing the foundation, in shoulder construction, or dispose of as the engineer approves.
  - (3) Place asphaltic mixture only on a prepared, firm, and compacted base, foundation layer, or existing pavement substantially surface-dry and free of loose and foreign material. Do not place over frozen subgrade or base, or where the roadbed is unstable.
- 

#### 450.5 Payment

Replace the entire text with the following effective with the January 2015 letting:

- (1) All costs of furnishing, maintaining, and operating the truck scale or other weighing equipment and furnishing the weigh tickets are incidental to the contract.
  - (2) Nonconforming material allowed to remain in place is subject to price adjustment under 105.3.2.
  - (3) Full-depth sawing to remove integrally placed safety edge where not required is incidental to the contract.
  - (4) The contractor is responsible for pavement performance. If because of an excusable compensable delay under 108.10.3, the engineer directs the contractor to pave when the temperature is less than 36 F for the upper layer or less than 32 F for lower layers, the department:
    - Will relieve the contractor of responsibility for damage and defects the engineer attributes to cold weather paving.
    - Will not assess disincentives for density or ride.
- 

#### 455.3.2.1 General

Replace paragraphs one and two with the following effective with the January 2015 letting:

- (1) Apply tack coat only when the air temperature is 32 F or more unless the engineer approves otherwise in writing. Before applying tack coat ensure that the surface is dry and reasonably free of loose dirt, dust, or other foreign matter. Do not apply if weather or surface conditions are unfavorable or before impending rains.
- (2) Use tack material of the type and grade the contract specifies. The contractor may, with the engineer's approval, dilute tack material as allowed under 455.2.4. Provide calculations using the asphalt content as-received from the supplier and subsequent contractor dilutions to show that as-placed material has 50 percent or more residual asphalt content. Apply at 0.050 to 0.070 gallons per square yard, after dilution, unless the contract designates otherwise. The engineer may adjust the application rate based on surface conditions. Limit application each day to the area the contractor expects to pave during that day.

**460.2.2.3 Aggregate Gradation Master Range**

*Replace paragraph one with the following effective with the December 2014 letting:*

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

**TABLE 460-1 AGGREGATE GRADATION MASTER RANGE AND VMA REQUIREMENTS**

SIEVE	PERCENTS PASSING DESIGNATED SIEVES						
	NOMINAL SIZE						
	37.5 mm	25.0 mm	19.0 mm	12.5 mm	9.5 mm	SMA 12.5 mm	SMA 9.5 mm
50.0-mm	100						
37.5-mm	90 – 100	100					
25.0-mm	90 max	90 - 100	100				
19.0-mm	—	90 max	90 - 100	100		100	
12.5-mm	—	—	90 max	90 - 100	100	90 - 97	100
9.5-mm	—	—	—	90 max	90 - 100	58 - 72	90 - 100
4.75-mm	—	—	—	—	90 max	25 - 35	35 - 45
2.36-mm	15 – 41	19 - 45	23 - 49	28 - 58	20 - 65	15 - 25	18 - 28
75-µm	0 – 6.0	1.0 - 7.0	2.0 - 8.0	2.0 - 10.0	2.0 - 10.0	8.0 - 12.0	10.0 - 14.0
% MINIMUM VMA	11.0	12.0	13.0	14.0 <sup>[1]</sup>	15.0 <sup>[2]</sup>	16.0	17.0

<sup>[1]</sup> 14.5 for E-0.3 and E-3 mixes.

<sup>[2]</sup> 15.5 for E-0.3 and E-3 mixes.

**460.3.4 Cold Weather Paving**

*Add a new subsection as follows effective with the January 2015 letting:*

**460.3.4 Cold Weather Paving****460.3.4.1 Cold Weather Paving Plan**

- (1) Submit a written cold weather paving plan to the engineer at the preconstruction meeting. In that plan outline material, operational, and equipment changes for paving when the air temperature approximately 3 feet above grade, in shade, and away from artificial heat sources is less than 40 F. Include the following:
- Use a department-accepted HMA mix design that incorporates a warm mix additive from the department's approved products list. Do not use a foaming process.
  - Use additional rollers.

- (2) Engineer written acceptance is required for the cold weather paving plan. Engineer acceptance of the plan does not relieve the contractor of responsibility for pavement performance except as specified in 450.5(4).

**460.3.4.2 Cold Weather Paving Operations**

- (1) Do not place asphaltic mixture when the air temperature approximately 3 feet above grade, in shade, and away from artificial heat sources is less than 40 F unless a valid engineer-accepted cold weather paving plan is in effect.
- (2) If the national weather service forecast for the construction area predicts ambient air temperature less than 40 F at the projected time of paving within the next 24 hours, confirm or submit revisions to a previously engineer-accepted cold weather paving plan for engineer validation. Upon validation of the plan, the engineer will allow paving for the next day. Once in effect, pave conforming to the engineer-accepted cold weather paving plan for the balance of that work day or shift regardless of the temperature at the time of paving.

**460.4 Measurement**

*Add paragraph two as follows effective with the January 2015 letting:*

- (2) The department will measure HMA Cold Weather Paving by the ton of HMA mixture for pavement placed conforming to an engineer-accepted cold weather paving plan.

**460.5.1 General**

*Revise paragraph one as follows effective with the January 2015 letting:*

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

<u>ITEM NUMBER</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
460.1100	HMA Pavement Type E-0.3	TON
460.1101	HMA Pavement Type E-1	TON
460.1103	HMA Pavement Type E-3	TON
460.1110	HMA Pavement Type E-10	TON
460.1130	HMA Pavement Type E-30	TON
460.1132	HMA Pavement Type E-30X	TON
460.1700	HMA Pavement Type SMA	TON
460.2000	Incentive Density HMA Pavement	DOL
460.4000	HMA Cold Weather Paving	TON

**460.5.2.2 Disincentive for HMA Pavement Density**

*Revise paragraph two as follows effective with the January 2015 letting:*

- (2) The department will not assess density disincentives for pavement placed in cold weather because of a department-caused delay as specified in 450.5(4).

**460.5.2.4 Cold Weather Paving**

*Add a new subsection as follows effective with the January 2015 letting:*

**460.5.2.4 Cold Weather Paving**

- (1) Payment for HMA Cold Weather Paving is full compensation for additional materials and equipment specified for cold weather paving under 460.3.4 including costs for preparing, administering, and following the contractor's cold weather paving plan.
- (2) If HMA pavement is placed under 460.3.4 and the HMA Cold Weather Paving bid item is not in the contract, the department will pay for the additional costs specified in 460.5.2.4(1) as extra work. The department will pay separately for HMA pavement under the appropriate HMA Pavement bid items.

**465.2 Materials**

*Replace paragraph two with the following effective with the December 2014 letting:*

- (2) Under the other section 465 bid items, the contractor need not submit a mix design. Furnish aggregates mixed with a type AC asphaltic material, except under the Asphaltic Curb bid item furnish PG58-28 asphaltic material. Use coarse and fine mineral aggregates uniformly coated and mixed with the asphaltic material in an engineer-approved mixing plant. The contractor may include reclaimed asphaltic pavement materials in the mixture.

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**Bid Items Added**

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*Add the following new bid item effective with the January 2015 letting:*

<u>ITEM NUMBER</u>	<u>DESCRIPTION</u>	<u>UNIT</u>
460.4000	HMA Cold Weather Paving	TON

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**Errata**

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*Make the following corrections to the standard specifications:*

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**501.3.2.4.4 Water Reducer**

*Correct errata by deleting the reference to footnote 6 for grade D concrete.*

- (1) Add a water reducing admixture conforming to 501.2.3. Determine the specific type and rate of use based on the atmospheric conditions, the desired properties of the finished concrete and the manufacturer's recommended rate of use. The actual rate of use shall at least equal the manufacturer's recommended rate, and both the type and rate used require the engineer's approval before use.

**ADDITIONAL SPECIAL PROVISION 7**

- A. Reporting 1<sup>st</sup> 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://www.dot.wi.gov/business/civilrights/laborwages/index.htm>

(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://www.dot.wi.gov/business/civilrights/laborwages/docs/crc-payroll-manual.pdf>





## REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS

- I. General
- II. Nondiscrimination
- III. Nonsegregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Compliance with Governmentwide Suspension and Debarment Requirements
- XI. Certification Regarding Use of Contract Funds for Lobbying

### ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

### I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

### II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding \$10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

**1. Equal Employment Opportunity:** Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under

this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

**2. EEO Officer:** The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

**3. Dissemination of Policy:** All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

**4. Recruitment:** When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

**5. Personnel Actions:** Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

**6. Training and Promotion:**

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are

applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

**7. Unions:** If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

**8. Reasonable Accommodation for Applicants / Employees with Disabilities:** The contractor must be familiar

with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

**9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment:** The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

#### **10. Assurance Required by 49 CFR 26.13(b):**

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.

**11. Records and Reports:** The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on [Form FHWA-1391](#). The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor

will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

### III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

### IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding \$2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

#### 1. Minimum wages

a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions

of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b. (1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or



will notify the contracting officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program. Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

## **2. Withholding**

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

## **3. Payrolls and basic records**

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-

Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b. (1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency..

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

#### **4. Apprentices and trainees**

##### **a. Apprentices (programs of the USDOL).**

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly

rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

##### **b. Trainees (programs of the USDOL).**

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

**5. Compliance with Copeland Act requirements.** The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

**6. Subcontracts.** The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

**7. Contract termination: debarment.** A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

**8. Compliance with Davis-Bacon and Related Act requirements.** All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

**9. Disputes concerning labor standards.** Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

**10. Certification of eligibility.**

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

**V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT**

The following clauses apply to any Federal-aid construction contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

**1. Overtime requirements.** No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

**2. Violation; liability for unpaid wages; liquidated damages.** In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.

**3. Withholding for unpaid wages and liquidated damages.** The FHWA or the contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2.) of this section.

**4. Subcontracts.** The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

## VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term "perform work with its own organization" refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:

(1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;

(2) the prime contractor remains responsible for the quality of the work of the leased employees;

(3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and

(4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is

evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

## VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C.3704).

## VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:



"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

## **IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT**

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.

2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

## **X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION**

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost \$25,000 or more – as defined in 2 CFR Parts 180 and 1200.

### **1. Instructions for Certification – First Tier Participants:**

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this

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

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

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

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

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

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

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

\* \* \* \* \*

## **2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:**

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

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

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

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification; and

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

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

## **2. Instructions for Certification - Lower Tier Participants:**

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost \$25,000 or more - 2 CFR Parts 180 and 1200)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which

this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. "First Tier Covered Transactions" refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). "Lower Tier Covered Transactions" refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). "First Tier Participant" refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). "Lower Tier Participant" refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

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

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the \$25,000 threshold.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (<https://www.epls.gov/>), which is compiled by the General Services Administration.

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

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the

department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

\* \* \* \* \*

**Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:**

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

\* \* \* \* \*

**XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING**

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed \$100,000 (49 CFR 20).

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.

**ATTACHMENT A - EMPLOYMENT AND MATERIALS  
PREFERENCE FOR APPALACHIAN DEVELOPMENT  
HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS  
ROAD CONTRACTS**

This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

SEPTEMBER 2002

**NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE  
EQUAL EMPLOYMENT OPPORTUNITY (EXECUTIVE ORDER 11246)**

1. The Offeror's or Bidder's attention is called to the "Employment Practices" and "Equal Opportunity Clause" set forth in the Required Contract Provisions, FHWA 1273.
2. The goals and timetables for minority and female participation expressed in percentage terms for the contractor's aggregate work force in each trade, on all construction work in the covered area, are as follows:

**Goals for Minority Participation for Each Trade:**

<u>County</u>	<u>%</u>	<u>County</u>	<u>%</u>	<u>County</u>	<u>%</u>
Adams	1.7	Iowa	1.7	Polk	2.2
Ashland	1.2	Iron	1.2	Portage	0.6
Barron	0.6	Jackson	0.6	Price	0.6
Bayfield	1.2	Jefferson	7.0	Racine	8.4
Brown	1.3	Juneau	0.6	Richland	1.7
Buffalo	0.6	Kenosha	3.0	Rock	3.1
Burnett	2.2	Kewaunee	1.0	Rusk	0.6
Calumet	0.9	La Crosse	0.9	St. Croix	2.9
Chippewa	0.5	Lafayette	0.5	Sauk	1.7
Clark	0.6	Langlade	0.6	Sawyer	0.6
Columbia	1.7	Lincoln	0.6	Shawano	1.0
Crawford	0.5	Manitowoc	1.0	Sheboygan	7.0
Dane	2.2	Marathon	0.6	Taylor	0.6
Dodge	7.0	Marinette	1.0	Trempealeau	0.6
Door	1.0	Marquette	1.7	Vernon	0.6
Douglas	1.0	Menominee	1.0	Vilas	0.6
Dunn	0.6	Milwaukee	8.0	Walworth	7.0
Eau Claire	0.5	Monroe	0.6	Washburn	0.6
Florence	1.0	Oconto	1.0	Washington	8.0
Fond du Lac	1.0	Oneida	0.6	Waukesha	8.0
Forest	1.0	Outagamie	0.9	Waupaca	1.0
Grant	0.5	Ozaukee	8.0	Waushara	1.0
Green	1.7	Pepin	0.6	Winnebago	0.9
Green Lake	1.0	Pierce	2.2	Wood	0.6

**Goals for female participation for each trade: 6.9%**

These goals are applicable to all the contractor's construction work, (whether or not it is federal or federally assisted), performed in the covered area. If the contractor performs construction work in the geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and nonfederally involved construction.

The contractor's compliance with the Executive Order and the Regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from contractor to contractor or from project to project for the sole purpose of meeting the contractor's goals shall be a violation of the contract, the Executive Order and the Regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within ten (10) working days of award of any construction subcontract in excess of \$10,000.00 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor, employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed.

As referred to in this section, the Director means:

Director  
Office of Federal Contract Compliance Programs  
Ruess Federal Plaza  
310 W. Wisconsin Ave., Suite 1115  
Milwaukee, WI 53202

The "Employer Identification Number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941.

4. As used in this notice, and in the contract resulting from solicitation, the "covered area" is the county(ies) in Wisconsin to which this proposal applies.

**APRIL 2013**

**ADDITIONAL FEDERAL-AID PROVISIONS**

**NOTICE TO ALL BIDDERS**

To report bid rigging activities call:

**1-800-424-9071**

The U.S. Department of Transportation (DOT) operates the above toll-free "hotline" Monday through Friday, 8:00 a.m. to 5:00 p.m., Eastern Time. Anyone with knowledge of possible bid rigging, bidding collusion, or other fraudulent activities should use the "hotline" to report such activities.

The "hotline" is part of the DOT's continuing effort to identify and investigate highway construction contract fraud and abuse and is operated under the direction of the DOT Inspector General. All information will be treated confidentially and caller anonymity will be respected.

**DECEMBER 2013**

**BUY AMERICA PROVISION**

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

<http://roadwaystandards.dot.wi.gov/standards/cmm/cm-02-28.pdf#cm2-28.5>

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

<http://roadwaystandards.dot.wi.gov/standards/forms/ws4567.doc>



**Effective with September 2004 Letting**

**WISCONSIN DEPARTMENT OF TRANSPORTATION  
DIVISION OF HIGHWAYS AND TRANSPORTATION FACILITIES**

**SUPPLEMENTAL REQUIRED CONTRACT PROVISIONS**

- I. Wage Rates, Hours of labor and payment of Wages
- II. Payroll Requirements
- III. Postings at the Site of the Work
- IV. Affidavits
- V. Wage Rate Redistribution
- VI. Additional Classifications

**I. WAGE RATES, HOURS OF LABOR AND PAYMENT OF WAGES**

The schedule of "Minimum Wage Rates" attached hereto and made a part hereof furnishes the prevailing wage rates that have been determined pursuant to Section 103.50 of the Wisconsin Statutes. These wage rates are the minimum required to be paid to the various laborers, workers, mechanics and truck drivers employed by contractors and subcontractors on the construction work embraced by the contract and subject to prevailing hours and wages under Section 103.50, Stats. If necessary to employ laborers, workers, mechanics or truck drivers whose classification is not listed on the schedule, they shall be paid at rates conformable to those listed for similar classifications. Apprentices shall be paid at rates not less than those prescribed in their state indenture contracts.

While the wage rates shown are the minimum rates required by the contract to be paid during its life, this is not a representation that labor can be obtained at these rates. It is the responsibility of bidders to inform themselves as to the local labor conditions and prospective changes or adjustments of wage rates. No increase in the contract price shall be allowed or authorized on account of the payment of wage rates in excess of those listed herein.

Pursuant to Section 103.50 of the Wisconsin Statutes, the prevailing hours of labor have been determined to be up to 10 hours per day and 40 hours per calendar week Monday through Friday. If any laborer, worker, mechanic or truck driver is permitted or required to work more than the prevailing number of hours per day or per calendar week on this contract, they shall be paid for all hours in excess of the prevailing hours at a rate of at least one and one-half (1 1/2) times their hourly rate of pay. All work on Saturday, Sunday and the following holidays is to be paid at time and a half: (1) January 1, (2) the last Monday in May, (3) July 4, (4) the first Monday in September, (5) the fourth Thursday in November, (6) December 25, (7) the day before if January 1, July 4 or December 25 falls on a Saturday and (8) the day following if January 1, July 4 or December 25 falls on a Sunday.

All laborers, workers, mechanics and truck drivers shall be paid unconditionally not less often than once a week. Persons who own and operate their own trucks must receive the prevailing truck driver rate for the applicable type of truck (i.e. 2 axle, 3 or more axle, articulated, eculid or dumptor) he or she operates, plus an agreed upon amount for the use of his or her truck. Every owner-operator MUST be paid separately for their driving and for the use of their truck.

For those projects subject to the requirements of the Davis-Bacon Act, the Secretary of Labor will also have determined "Minimum Wage Rates" for work to be performed under the contract. These rates are, for all or most of the labor, worker, mechanic or truck driver classifications, identical to those established under Section 103.50 of the Wisconsin Statutes. In the event the rates are not identical, the higher of the two rates will govern.

## **II. PAYROLL REQUIREMENTS**

All contractors and subcontractors must submit weekly Certified Payrolls and Compliance Statement verifying that all laborers, workers, mechanics and truck drivers working on the project have been paid the prevailing wage rates for all work performed under the contract required by Section 103.50 of the Wisconsin Statutes.

## **III. POSTINGS AT THE SITE OF THE WORK**

In addition to the required postings furnished by the Department, the contractor shall post the following in at least one conspicuous place at the site of work:

- a. "NOTICE TO EMPLOYEES," which provides information required to be posted by the provisions of Section 103.50 of the Wisconsin Statutes.
- b. A copy of the State of Wisconsin Minimum Wages Rates. (Four pages.)
- c. A copy of the contractor's Equal Employment Opportunity Policy.
- d. On any project involving federal aid, in addition to the furnished postings, the contractor shall post a copy of the "Davis-Bacon Act, Minimum Wage Rates". (Three pages.)

## **IV. WAGE RATE REDISTRIBUTION**

The amount specified as the hourly basic rate of pay and the amount(s) specified as the fringe benefit contribution(s), for all classes of laborers, workers, mechanics or truck drivers may be redistributed, when necessary, to conform to those specified in any applicable collective bargaining agreement, provided that both parties to such agreement

request and receive the approval for any such redistribution from both the Department of Transportation and the Department of Workforce Development prior to the implementation of such redistribution.

## **V. ADDITIONAL CLASSIFICATIONS**

Any unlisted laborer or mechanic classification that is needed to perform work on this project, and is not included within the scope of any of the classifications listed in the application prevailing wage rate determination, may be added after award only if all of the following criteria have been met:

1. The affected employer(s) must make a written request to WisDOT Central Office to utilize the unlisted classification on this project.
2. The request must indicate the scope of the work to be performed by the unlisted classification and must indicate the proposed wage/fringe benefit package that the unlisted classification is to receive.
3. The work to be performed by the unlisted classification must not be performed by a classification that is included in the applicable prevailing wage rate determination.
4. The unlisted classification must be commonly employed in the area where the project is located.
5. The proposed wage/fringe benefit package must bear a reasonable relationship to those set forth in the applicable prevailing wage rate determination.
6. The request should be made prior to the actual performance of the work by the unlisted classification.
7. DWD must approve the use of the unlisted classification and the proposed wage/fringe benefit package. USDOL also must approve the use of the unlisted classification and the proposed wage/fringe benefit package on federal aid projects.
8. WisDOT and DWD may amend the proposed wage/fringe benefit package, as deemed necessary, and may set forth specific employment ratios and scope of work requirements in the approval document.

The approved wage/fringe benefit package shall be paid to all laborers, workers, mechanics or truck drivers performing work within the scope of that performed by the unlisted classification, from the first day on which such work is performed. In the event that work is performed by the unlisted classification prior to approval, the wage/fringe benefit package to be paid for such work must be in conformance with the wage/fringe

benefit package approved for such work. Under this arrangement a retroactive adjustment in wages and/or fringe benefits may be required to be made to the affected laborers, workers, mechanics or truck drivers by the affected employer(s).

**ANNUAL PREVAILING WAGE RATE DETERMINATION  
FOR ALL STATE HIGHWAY PROJECTS  
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, 2014

**CLASSIFICATION:** Contractors are required to call the Department of Workforce Development if there are any questions regarding the proper trade or classification to be used for any worker on a public works project.

**OVERTIME:** Time and one-half must be paid for all hours worked over 10 hours per day and 40 hours per calendar week and for all hours worked on Saturday, Sunday and the following six (6) holidays: January 1; the last Monday in May; July 4; the 1st Monday in September; the 4th Thursday in November; December 25; the day before if January 1, July 4 or December 25 falls on a Saturday; the day following if January 1, July 4 or December 25 falls on a Sunday.

**FUTURE INCREASE:** If indicated for a specific trade or occupation, the full amount of such increase MUST be added to the "TOTAL" indicated for such trade or occupation on the date(s) such increase(s) becomes effective.

**PREMIUM PAY:** If indicated for a specific trade or occupation, the full amount of such pay MUST be added to the "HOURLY BASIC RATE OF PAY" indicated for such trade or occupation, whenever such pay is applicable.

**SUBJOURNEY:** Wage rates may be available for some of the classifications indicated below. Any employer that desires to use any subjourney classification on a project MUST request the applicable wage rate from the Department of Workforce Development PRIOR to the date such classification is used on such project. Form ERD-10880 is available for this purpose and can be obtained by writing to the Department of Workforce Development, Equal Rights Division, P.O. Box 8928, Madison, WI 53708.

<u>TRADE OR OCCUPATION</u>	<u>HOURLY BASIC RATE OF PAY</u>	<u>HOURLY FRINGE BENEFITS</u>	<u>TOTAL</u>
	\$	\$	\$
Bricklayer, Blocklayer or Stonemason	32.01	17.35	49.36
Carpenter	30.48	15.90	46.38
Cement Finisher	33.51	16.13	49.64
Future Increase(s): Add \$1.87 on 6/1/14; Add \$1.87 on 6/1/15; Add \$1.75 on 6/1/16.			
Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.40/hr when the Wisconsin Department of Transportation or responsible governing agency requires that work be performed at night under artificial illumination with traffic control and the work is completed after sunset and before sunrise.			
Electrician	34.07	19.25	53.32
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	24.72	0.00	24.72
Ironworker	31.25	19.46	50.71
Line Constructor (Electrical)	38.25	17.31	55.56
Painter	21.87	11.37	33.24
Pavement Marking Operator	30.00	0.00	30.00
Piledriver	30.98	15.90	46.88
Roofer or Waterproofing	29.40	6.25	35.65
Teledata Technician or Installer	21.89	11.85	33.74
Tuckpointer, Caulker or Cleaner	35.25	13.15	48.40
Underwater Diver (Except on Great Lakes)	34.48	15.90	50.38
Heavy Equipment Operator - ELECTRICAL LINE CONSTRUCTION ONLY	34.43	15.24	49.67
Light Equipment Operator -ELECTRICAL LINE CONSTRUCTION ONLY	35.50	15.89	51.39
Heavy Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	26.78	13.63	40.41
Light Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	24.86	12.97	37.83

<b><u>TRADE OR OCCUPATION</u></b>	<b><u>HOURLY BASIC RATE OF PAY</u></b>	<b><u>HOURLY FRINGE BENEFITS</u></b>	<b><u>TOTAL</u></b>
	<b><u>\$</u></b>	<b><u>\$</u></b>	<b><u>\$</u></b>
Groundman - ELECTRICAL LINE CONSTRUCTION ONLY	21.75	12.70	34.45

**TRUCK DRIVERS**

Single Axle or Two Axle	34.22	19.90	54.12
Three or More Axle	24.52	17.77	42.29
Future Increase(s): Add \$1.30/hr on 6/1/2014. Premium Pay: DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.			
Articulated, Euclid, Dumptror, Off Road Material Hauler	29.27	20.40	49.67
Future Increase(s): Add \$1.75/hr on 6/1/14; Add \$1.25/hr on 6/1/15; Add \$1.30/hr on 6/1/16; Add \$1.25/hr on 6/1/17. 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: <a href="http://www.dot.wi.gov/business/civilrights/laborwages/pwc.htm">http://www.dot.wi.gov/business/civilrights/laborwages/pwc.htm</a> .			
Pavement Marking Vehicle	23.31	17.13	40.44
Shadow or Pilot Vehicle	34.22	19.90	54.12
Truck Mechanic	23.31	17.13	40.44

**LABORERS**

General Laborer	29.32	14.63	43.95
Future Increase(s): Add \$1.60/hr on 6/1/2014. 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	24.36	14.44	38.80
Landscaper	29.32	14.63	43.95
Future Increase(s): Add \$1.60/hr on 6/1/14. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.25/hr for work on projects involving temporary traffic control setup, for lane and shoulder closures, when work under artificial illumination conditions is necessary as required by the project provisions (including prep time prior to and/or cleanup after such time period).			
Flagperson or Traffic Control Person	25.67	14.63	40.30
Future Increase(s): Add \$1.60/hr on 6/1/2014. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.25/hr when the Wisconsin Department of Transportation or responsible governing agency requires that work be performed at night under artificial illumination with traffic control and the work is completed after sunset and before sunrise.			
Fiber Optic Laborer (Outside, Other Than Concrete Encased)	18.31	12.67	30.98
Railroad Track Laborer	23.46	3.30	26.76

<u>TRADE OR OCCUPATION</u>	<u>HOURLY BASIC RATE OF PAY</u>	<u>HOURLY FRINGE BENEFITS</u>	<u>TOTAL</u>
	\$	\$	\$
<b>HEAVY EQUIPMENT OPERATORS</b>			
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 \$1.75/hr on 6/1/2014); 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: <a href="http://www.dot.wi.gov/business/civilrights/laborwages/pwc.htm">http:// www.dot.wi.gov/business/civilrights/laborwages/pwc.htm</a> .	36.72	20.40	57.12
Backhoe (Track Type) Having a Mfr.'s Rated Capacity of 130,000 Lbs. or Over; Caisson Rig; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 175 Ft or Under; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With or Without Attachments, With a Lifting Capacity of 100 Tons or Under, Self-Erecting Tower Crane With A Lifting Capacity Of 4,000 Lbs., & Under; Dredge (NOT Performing Work on the Great Lakes); Licensed Boat Pilot (NOT Performing Work on the Great Lakes); Pile Driver. Future Increase(s): Add \$1.75/hr on 6/1/2014); 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: <a href="http://www.dot.wi.gov/business/civilrights/laborwages/pwc.htm">http:// www.dot.wi.gov/business/civilrights/laborwages/pwc.htm</a> .	36.22	20.40	56.62
Air Track, Rotary or Percussion Drilling Machine &/or Hammers, Blaster; Asphalt Heater, Planer & Scarifier; Asphalt Milling Machine; Asphalt Screed; Automatic Subgrader (Concrete); Backhoe (Track Type) Having a Mfr.'s Rated Capacity of Under 130,000 Lbs., Backhoe (Mini, 15,000 Lbs. & Under); Bituminous (Asphalt) Plant & Paver, Screed; Boatmen (NOT Performing Work on the Great Lakes); Boring Machine (Directional, Horizontal or Vertical); Bridge (Bidwell) Paver; Bulldozer or Endloader; Concrete Batch Plant, Batch Hopper; Concrete Breaker (Large, Auto, Vibratory/Sonic, Manual or Remote); Concrete Bump Cutter, Grinder, Planing or Grooving Machine; Concrete Conveyor System; Concrete Laser/Screed; Concrete Paver (Slipform); Concrete Pump, Concrete Conveyor (Rotec or Bidwell Type); Concrete Slipform Placer Curb & Gutter Machine; Concrete Spreader & Distributor; Crane (Carry Deck, Mini) or Truck Mounted Hydraulic Crane (10 Tons or Under); Crane With a Lifting Capacity of 25 Tons or Under; Forestry Equipment, Timbco, Tree Shear, Tub Grinder, Processor; Gradall (Cruz-Aire Type); Grader or Motor Patrol; Grout Pump; Hydro-Blaster (10,000 PSI or Over); Loading Machine (Conveyor); Material or Stack Hoist; Mechanic or Welder; Milling Machine; Post Hole Digger or Driver; Roller (Over 5 Ton); Scraper (Self Propelled or Tractor Drawn) 5 cu yds or More Capacity; Shoulder Widener; Sideboom; Skid Rig; Stabilizing or Concrete Mixer (Self-Propelled or 14S or Over); Straddle Carrier or Travel Lift; Tractor (Scraper, Dozer, Pusher, Loader); Tractor or Truck Mounted Hydraulic Backhoe; Trencher (Wheel Type or Chain Type); Tube Finisher; Tugger (NOT Performing Work on the Great Lakes); Winches	35.72	20.40	56.12

<u>TRADE OR OCCUPATION</u>	<u>HOURLY BASIC RATE OF PAY</u>	<u>HOURLY FRINGE BENEFITS</u>	<u>TOTAL</u>
	\$	\$	\$
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& A- Frames.			
Future Increase(s): Add \$1.75/hr on 6/1/2014); 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: <a href="http://www.dot.wi.gov/business/civilrights/laborwages/pwc.htm">http:// www.dot.wi.gov/business/civilrights/laborwages/pwc.htm</a> .			
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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 Sawyer (Multiple Blade); Launch (NOT Performing Work on the Great Lakes); Lift Slab Machine; Mechanical Float; Mulcher; Power Subgrader; Robotic Tool Carrier (With or Without Attachments); Roller (Rubber Tire, 5 Ton or Under); Self Propelled Chip Spreader; Shouldering Machine; Skid Steer Loader (With or Without Attachments); Telehandler; Tining or Curing Machine.	35.46	20.40	55.86
Future Increase(s): Add \$1.75/hr on 6/1/2014); 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: <a href="http://www.dot.wi.gov/business/civilrights/laborwages/pwc.htm">http:// www.dot.wi.gov/business/civilrights/laborwages/pwc.htm</a> .			
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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.	35.17	20.40	55.57
Future Increase(s): Add \$1.75/hr on 6/1/2014); 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: <a href="http://www.dot.wi.gov/business/civilrights/laborwages/pwc.htm">http:// www.dot.wi.gov/business/civilrights/laborwages/pwc.htm</a> .			
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Fiber Optic Cable Equipment.	26.69	16.65	43.34
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**ANNUAL PREVAILING WAGE RATE DETERMINATION  
FOR ALL STATE HIGHWAY PROJECTS  
ROCK 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, 2014

**CLASSIFICATION:** Contractors are required to call the Department of Workforce Development if there are any questions regarding the proper trade or classification to be used for any worker on a public works project.

**OVERTIME:** Time and one-half must be paid for all hours worked over 10 hours per day and 40 hours per calendar week and for all hours worked on Saturday, Sunday and the following six (6) holidays: January 1; the last Monday in May; July 4; the 1st Monday in September; the 4th Thursday in November; December 25; the day before if January 1, July 4 or December 25 falls on a Saturday; the day following if January 1, July 4 or December 25 falls on a Sunday.

**FUTURE INCREASE:** If indicated for a specific trade or occupation, the full amount of such increase MUST be added to the "TOTAL" indicated for such trade or occupation on the date(s) such increase(s) becomes effective.

**PREMIUM PAY:** If indicated for a specific trade or occupation, the full amount of such pay MUST be added to the "HOURLY BASIC RATE OF PAY" indicated for such trade or occupation, whenever such pay is applicable.

**SUBJOURNEY:** Wage rates may be available for some of the classifications indicated below. Any employer that desires to use any subjourney classification on a project MUST request the applicable wage rate from the Department of Workforce Development PRIOR to the date such classification is used on such project. Form ERD-10880 is available for this purpose and can be obtained by writing to the Department of Workforce Development, Equal Rights Division, P.O. Box 8928, Madison, WI 53708.

<u>TRADE OR OCCUPATION</u>	<u>HOURLY BASIC RATE OF PAY</u>	<u>HOURLY FRINGE BENEFITS</u>	<u>TOTAL</u>
	\$	\$	\$
Bricklayer, Blocklayer or Stonemason	32.06	17.30	49.36
Carpenter	30.48	16.00	46.48
Cement Finisher	33.51	16.13	49.64
Future Increase(s): Add \$1.87 on 6/1/14; Add \$1.87 on 6/1/15; Add \$1.75 on 6/1/16.			
Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.40/hr when the Wisconsin Department of Transportation or responsible governing agency requires that work be performed at night under artificial illumination with traffic control and the work is completed after sunset and before sunrise.			
Electrician	43.47	8.66	52.13
Fence Erector	24.72	0.00	24.72
Ironworker	31.25	19.46	50.71
Line Constructor (Electrical)	38.42	12.68	51.10
Painter	21.87	11.37	33.24
Pavement Marking Operator	30.00	0.00	30.00
Piledriver	30.98	16.00	46.98
Roofer or Waterproofing	38.35	0.14	38.49
Teledata Technician or Installer	21.89	12.37	34.26
Tuckpointer, Caulker or Cleaner	35.25	13.18	48.43
Underwater Diver (Except on Great Lakes)	34.48	15.90	50.38
Heavy Equipment Operator - ELECTRICAL LINE CONSTRUCTION ONLY	34.43	15.24	49.67
Light Equipment Operator -ELECTRICAL LINE CONSTRUCTION ONLY	35.50	15.89	51.39
Heavy Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	26.78	13.63	40.41
Light Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	24.86	12.97	37.83
Groundman - ELECTRICAL LINE CONSTRUCTION ONLY	21.75	12.70	34.45

<u>TRADE OR OCCUPATION</u>	<u>HOURLY BASIC RATE OF PAY</u>	<u>HOURLY FRINGE BENEFITS</u>	<u>TOTAL</u>
	\$	\$	\$
<b>TRUCK DRIVERS</b>			
Single Axle or Two Axle	34.22	19.90	54.12
Three or More Axle	24.52	17.77	42.29
Future Increase(s): Add \$1.30/hr on 6/1/2014. Premium Pay: DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.			
Articulated, Euclid, Dumptor, Off Road Material Hauler	29.27	20.40	49.67
Future Increase(s): Add \$1.75/hr on 6/1/14); Add \$1.25/hr on 6/1/15); Add \$1.30/hr on 6/1/16); Add \$1.25/hr on 6/ 1/ 17. 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: <a href="http://www.dot.wi.gov/business/civilrights/laborwages/pwc.htm">http:// www.dot.wi.gov/ business/ civilrights/ laborwages/ pwc. htm</a> .			
Pavement Marking Vehicle	23.31	17.13	40.44
Shadow or Pilot Vehicle	34.22	19.90	54.12
Truck Mechanic	23.31	17.13	40.44

**LABORERS**

General Laborer	29.04	14.63	43.67
Future Increase(s): Add \$1.60/hr on 6/1/2014. 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	24.36	14.81	39.17
Landscaper	29.32	14.63	43.95
Future Increase(s): Add \$1.60/hr on 6/1/14. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.25/hr for work on projects involving temporary traffic control setup, for lane and shoulder closures, when work under artificial illumination conditions is necessary as required by the project provisions (including prep time prior to and/or cleanup after such time period).			
Flagperson or Traffic Control Person	23.50	15.10	38.60
Fiber Optic Laborer (Outside, Other Than Concrete Encased)	18.31	12.67	30.98
Railroad Track Laborer	22.75	0.00	22.75

**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	36.72	20.40	57.12
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<u>TRADE OR OCCUPATION</u>	<u>HOURLY BASIC RATE OF PAY</u>	<u>HOURLY FRINGE BENEFITS</u>	<u>TOTAL</u>
	\$	\$	\$
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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 \$1.75/hr on 6/1/2014); 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: <a href="http://www.dot.wi.gov/business/civilrights/laborwages/pwc.htm">http:// www.dot.wi.gov/ business/ civilrights/ laborwages/ pwc. htm</a> .			
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Backhoe (Track Type) Having a Mfr.'s Rated Capacity of 130,000 Lbs. or Over; Caisson Rig; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 175 Ft or Under; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With or Without Attachments, With a Lifting Capacity of 100 Tons or Under, Self-Erecting Tower Crane With A Lifting Capacity Of 4,000 Lbs., & Under; Dredge (NOT Performing Work on the Great Lakes); Licensed Boat Pilot (NOT Performing Work on the Great Lakes); Pile Driver. Future Increase(s): Add \$1.75/hr on 6/1/2014); 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: <a href="http://www.dot.wi.gov/business/civilrights/laborwages/pwc.htm">http:// www.dot.wi.gov/ business/ civilrights/ laborwages/ pwc. htm</a> .	36.22	20.40	56.62
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Air Track, Rotary or Percussion Drilling Machine &/or Hammers, Blaster; Asphalt Heater, Planer & Scarifier; Asphalt Milling Machine; Asphalt Screed; Automatic Subgrader (Concrete); Backhoe (Track Type) Having a Mfr.'s Rated Capacity of Under 130,000 Lbs., Backhoe (Mini, 15,000 Lbs. & Under); Bituminous (Asphalt) Plant & Paver, Screed; Boatmen (NOT Performing Work on the Great Lakes); Boring Machine (Directional, Horizontal or Vertical); Bridge (Bidwell) Paver; Bulldozer or Endloader; Concrete Batch Plant, Batch Hopper; Concrete Breaker (Large, Auto, Vibratory/Sonic, Manual or Remote); Concrete Bump Cutter, Grinder, Planing or Grooving Machine; Concrete Conveyor System; Concrete Laser/Screed; Concrete Paver (Slipform); Concrete Pump, Concrete Conveyor (Rotec or Bidwell Type); Concrete Slipform Placer Curb & Gutter Machine; Concrete Spreader & Distributor; Crane (Carry Deck, Mini) or Truck Mounted Hydraulic Crane (10 Tons or Under); Crane With a Lifting Capacity of 25 Tons or Under; Forestry Equipment, Timbco, Tree Shear, Tub Grinder, Processor; Gradall (Cruz-Aire Type); Grader or Motor Patrol; Grout Pump; Hydro-Blaster (10,000 PSI or Over); Loading Machine (Conveyor); Material or Stack Hoist; Mechanic or Welder; Milling Machine; Post Hole Digger or Driver; Roller (Over 5 Ton); Scraper (Self Propelled or Tractor Drawn) 5 cu yds or More Capacity; Shoulder Widener; Sideboom; Skid Rig; Stabilizing or Concrete Mixer (Self-Propelled or 14S or Over); Straddle Carrier or Travel Lift; Tractor (Scraper, Dozer, Pusher, Loader); Tractor or Truck Mounted Hydraulic Backhoe; Trencher (Wheel Type or Chain Type); Tube Finisher; Tugger (NOT Performing Work on the Great Lakes); Winches & A- Frames. Future Increase(s): Add \$1.75/hr on 6/1/2014); 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: <a href="http://www.dot.wi.gov/business/civilrights/laborwages/pwc.htm">http:// www.dot.wi.gov/ business/ civilrights/ laborwages/ pwc. htm</a> .	35.72	20.40	56.12
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<b><u>TRADE OR OCCUPATION</u></b>	<b><u>HOURLY BASIC RATE OF PAY</u></b>	<b><u>HOURLY FRINGE BENEFITS</u></b>	<b><u>TOTAL</u></b>
	<b>\$</b>	<b>\$</b>	<b>\$</b>
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 Sawyer (Multiple Blade); Launch (NOT Performing Work on the Great Lakes); Lift Slab Machine; Mechanical Float; Mulcher; Power Subgrader; Robotic Tool Carrier (With or Without Attachments); Roller (Rubber Tire, 5 Ton or Under); Self Propelled Chip Spreader; Shouldering Machine; Skid Steer Loader (With or Without Attachments); Telehandler; Tining or Curing Machine. Future Increase(s): Add \$1.75/hr on 6/1/2014); 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: <a href="http://www.dot.wi.gov/business/civilrights/laborwages/pwc.htm">http:// www.dot.wi.gov/ business/ civilrights/ laborwages/ pwc. htm</a> .	35.46	20.40	55.86
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; Oilier; 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 \$1.75/hr on 6/1/2014); 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: <a href="http://www.dot.wi.gov/business/civilrights/laborwages/pwc.htm">http:// www.dot.wi.gov/ business/ civilrights/ laborwages/ pwc. htm</a> .	35.17	20.40	55.57
Fiber Optic Cable Equipment.	26.69	16.65	43.34

SUPERSEDES DECISION WI20120010  
U. S. DEPARTMENT OF LABOR  
(DAVIS-BACON ACT, MINIMUM WAGE RATES)

STATE: Wisconsin

GENERAL DECISION NUMBER: WI140010

DESCRIPTION OF WORK: Highways and Airport Runway and Taxiway Construction

DATE: November 28, 2014

LABORERS CLASSIFICATION:		Basic Hourly Rates	Fringe Benefits		Basic Hourly Rates	Fringe Benefits
Group 1:	General Laborer; Tree Trimmer; Conduit Layer; Demolition and Wrecking Laborer; Guard Rail, Fence and Bridge Builder; Landscaper, Multiplate Culvert Assembler; Stone Handler; Bituminous Worker (Shoveler, Loader, Utility Man); Batch Truck Dumper; or Cement Handler; Bituminous Worker; (Dumper, Ironer, Smoother, Tamper); Concrete Handler .....	\$30.41 .....	15.04	Truck Drivers:		
				1 & 2 Axles .....	25.18 .....	18.31
				Three or More Axles; Euclids, Dumptr & Articulated, Truck Mechanic.....	25.38 .....	18.31
Group 2:	Air Tool Operator; Joint Sawyer and Filler (Pavement); Vibrator or Tamper Operator (Mechanical Hand Operated); Chain Saw Operator; Demolition Burning Torch Laborer .....	30.51 .....	15.04			
Group 3:	Bituminous Worker (Raker and Luteman); Formsetter (Curb, Sidewalk, and Pavement); Strike Off man.....	30.56 .....	15.04			
Group 4:	Line and Grade Specialist .....	30.76 .....	15.04			
Group 5:	Blaster and Powderman .....	30.61 .....	15.04			
Group 6:	Flagperson and Traffic Control Person.....	26.76 .....	15.04			

CLASSES OF LABORER AND MECHANICS

Bricklayer .....	28.41 .....	12.81
Carpenter .....	30.48 .....	15.80
Millwright .....	32.11 .....	15.80
Piledriverman .....	30.98 .....	15.80
Ironworker .....	31.50 .....	20.03
Cement Mason/Concrete Finisher .....	32.09 .....	16.13
Electrician .....		See Page 3
Line Construction		
Lineman.....	40.81 .....	32% + 5.00
Heavy Equipment Operator .....	38.77 .....	32% + 5.00
Equipment Operator.....	32.65 .....	32% + 5.00
Heavy Groundman Driver .....	26.78 .....	14.11
Light Groundman Driver .....	24.86 .....	13.45
Groundsman .....	22.45 .....	32% + 5.00
Painter, Brush .....	24.50 .....	16.27
Painter, Spray, Structural Steel,Bridges.....	25.50 .....	16.27
Well Drilling:		
Well Driller.....	16.52 .....	3.70

Notes: Welders receive rate prescribed for craft performing operation to which welding is incidental. Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29 CFR, 5.5(a)(1)(ii)). Includes Modification #0, dated January 3, 2014; Modification #1, dated February 7, 2014; Modification #2, dated March 14, 2014; Modification #3, dated May 2, 2014; Modification #4, dated June 27, 2014; Modification #5, dated July 4, 2014; Modification #6, dated July 25, 2014; Modification #7, dated August 1, 2014; Modification #8, dated November 28, 2014.

SUPERSEDES DECISION WI20120010  
U. S. DEPARTMENT OF LABOR  
(DAVIS-BACON ACT, MINIMUM WAGE RATES)

STATE: Wisconsin

GENERAL DECISION NUMBER: WI140010

DESCRIPTION OF WORK: Highways and Airport Runway and Taxiway Construction

DATE: November 28, 2014

LABORERS CLASSIFICATION:	Basic Hourly Rates	Fringe Benefits		Basic Hourly Rates	Fringe Benefits
Group 1: General Laborer; Tree Trimmer; Conduit Layer; Demolition and Wrecking Laborer; Guard Rail, Fence and Bridge Builder; Landscaper, Multiplate Culvert Assembler; Stone Handler; Bituminous Worker (Shoveler, Loader, Utility Man); Batch Truck Dumper; or Cement Handler; Bituminous Worker; (Dumper, Ironer, Smoother, Tamper); Concrete Handler .....	\$29.04 .....	14.53			
Group 2: Air Tool Operator; Joint Sawyer and Filler (Pavement); Vibrator or Tamper Operator (Mechanical Hand Operated); .....	29.14 .....	14.53			
Group 3: Bituminous Worker (Raker and Luteman); Formsetter (Curb, Sidewalk, and Pavement); Strike Off man .....	29.19 .....	14.53			
Group 4: Line and Grade Specialist .....	29.39 .....	14.53			
Group 5: Blaster and Powderman .....	29.24 .....	14.53			
Group 6: Flagperson; Traffic Control .....	25.67 .....	14.53			

Truck Drivers:

1 & 2 Axles .....	25.18 .....	18.31
Three or More Axles; Euclids, Dumptr & Articulated, Truck Mechanic .....	25.38 .....	18.31

CLASSES OF LABORER AND MECHANICS

Bricklayer .....	32.14 .....	18.25
Carpenter .....	30.48 .....	15.80
Millwright .....	32.11 .....	15.80
Piledriverman .....	30.98 .....	15.80
Ironworker (South of Edgerton and Milton) .....	34.34 .....	25.72
Ironworker (Northern Area, Vicinity of Edgerton and Milton) .....	31.50 .....	20.03
Cement Mason/Concrete Finisher .....	32.09 .....	16.13
Electrician .....	See Page 3	
Line Construction		
Lineman .....	40.81 .....	32% + 5.00
Heavy Equipment Operator .....	38.77 .....	32% + 5.00
Equipment Operator .....	32.65 .....	32% + 5.00
Heavy Groundman Driver .....	26.78 .....	14.11
Light Groundman Driver .....	24.86 .....	13.45
Groundsman .....	22.45 .....	32% + 5.00
Painter, Brush .....	24.50 .....	16.27
Painter, Spray, Structural Steel, Bridges .....	25.50 .....	16.27
Well Drilling:		
Well Driller .....	16.52 .....	3.70

Notes: Welders receive rate prescribed for craft performing operation to which welding is incidental. Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29 CFR, 5.5(a)(1)(ii)). Includes Modification #0, dated January 3, 2014; Modification #1, dated February 7, 2014; Modification #2, dated March 14, 2014; Modification #3, dated May 2, 2014; Modification #4, dated June 27, 2014; Modification #5, dated July 4, 2014; Modification #6, dated July 25, 2014; Modification #7, dated August 1, 2014; Modification #8, dated November 28, 2014.

SUPERSEDES DECISION WI20120010  
U. S. DEPARTMENT OF LABOR  
(DAVIS-BACON ACT, MINIMUM WAGE RATES)

STATE: Wisconsin

GENERAL DECISION NUMBER: WI140010

DESCRIPTION OF WORK: Highways and Airport Runway and Taxiway Construction

DATE: November 28, 2014

<u>POWER EQUIPMENT OPERATORS CLASSIFICATION:</u>	<u>Basic Hourly Rates</u>	<u>Fringe Benefits</u>	<u>POWER EQUIPMENT OPERATORS CLASSIFICATION: (Continued)</u>	<u>Basic Hourly Rates</u>	<u>Fringe Benefits</u>
Group 1: Cranes, tower cranes and derricks, with or without attachments, with a lifting capacity of over 100 tons or cranes, tower cranes and derricks with boom, leads and/or jib lengths measuring 176 feet or longer .....	\$37.72	\$20.93	(scraper, dozer, pusher, loader); scraper - rubber tired (single or twin engine); endloader hydraulic backhoe (tractor-type); trenching machine; skid rigs; tractor, side boom (heavy); drilling or boring machine (mechanical heavy); roller (over 5 tons); percussion or rotary drilling machine; air track; blaster; loading machine (conveyor); tugger; boatmen; winches and A-frames; post driver; material hoist operator. ....	\$36.72	\$20.93
Group 2: Cranes, tower cranes and derricks, with or without attachments, with a lifting capacity of 100 tons or less or cranes, tower cranes and derricks with boom, leads and/or jib lengths measuring 175 feet or less, and backhoes (excavators) having a manufacturer's rated capacity of 3 cu. yds. and over, caisson rigs, pile driver, dredge operator, dredge engineer. ....	\$37.22	\$20.93	Group 4: Greaser, roller steel (5 tons or less); roller (pneumatic tired) - self-propelled; tractor (mounted or towed compactors and light equipment); shouldering machine; self-propelled chip spreader; concrete spreader; finishing machine; mechanical float; curing machine; power subgrader; joint saw (multiple blade) belting machine; burlap machine; texturing machine; tractor, endloader (rubber tired) - light; jeep digger; fork lift; mulcher; launch operator; fireman; environmental burner. ....	\$36.46	\$20.93
Group 3: Mechanic or welder - heavy duty equipment, cranes with a lifting capacity of 25 tons or less, concrete breaker (manual or remote); vibrator/sonic concrete breaker; concrete laser screed; concrete slipform paver; concrete batch plant operator; concrete pavement spreader - heavy duty (rubber tired); concrete spreader and distributor, automatic subgrader (concrete); concrete grinder and planing machine; concrete slipform curb and gutter machine; slipform concrete placer; tube finisher; hydro blaster (10,000 psi and over); bridge paver; concrete conveyor system; concrete pump; stabilizing mixer (self propelled); shoulder widener; asphalt plant engineer; bituminous paver; bump cutter and grooving machine; milling machine; screed (bituminous paver); asphalt heater, planer and scarifier; backhoes (excavators) having a manufacturers rated capacity of under 3 cu. yds.; grader or motor patrol; tractor			Group 5: Air compressor; power pack; vibratory hammer and extractor; heavy equipment, leadman; tank car heaters; stump chipper; curb machine operator; concrete proportioning plants generators; mudjack operator; rock breaker; crusher or screening plant; screed (milling machine); automatic belt conveyor and surge bin; pug mill operator; oiler; pump (over 3 inches); drilling machine helper. ....	\$36.17	\$20.93
			Group 6: Off - road material hauler with or without ejector.....	\$30.27	\$20.93
			Premium Pay: EPA Level "A" protection - \$3.00 per hour EPA Level "B" protection - \$2.00 per hour EPA Level "C" protection - \$1.00 per hours		

SUPERSEDES DECISION WI20120010  
U. S. DEPARTMENT OF LABOR  
(DAVIS-BACON ACT, MINIMUM WAGE RATES)

STATE: Wisconsin

GENERAL DECISION NUMBER: WI140010

DESCRIPTION OF WORK: Highways and Airport Runway and Taxiway Construction

DATE: November 28, 2014

LABORERS CLASSIFICATION:

Rates

Benefits

			Area 4 -	BROWN, DOOR, KEWAUNEE, MANITOWOC (except Schleswig), MARINETTE (Wausauke and area south thereof), OCONTO, MENOMINEE (East of a line 6 miles West of the West boundary of Oconto County), SHAWANO (except area North of Townships of Aniwa and Hutchins) COUNTIES.
Electricians				
Area 1 .....	\$29.00	26.5%+ 9.15		
Area 2:				
Electricians.....	30.59	18.43	Area 5 -	ADAMS, CLARK (Colby, Freemont, Lynn, Mayville, Sherman, Sherwood, Unity), FOREST, JUNEAU, LANGLADE, LINCOLN, MARATHON, MARINETTE (Area North of the town of Wausauke), MENOMINEE (Area West of a line 6 miles West of the West boundary of Oconto County), ONEIDA, PORTAGE, SHAWANO (Area North of the townships of Aniwa and Hutchins), VILAS AND WOOD COUNTIES
Area 3:				
Electrical contracts under \$130,000 .....	26.24	16.85		
Electrical contracts over \$130,000 .....	29.41	16.97		
Area 4: .....	28.50	28.75% + 9.27	Area 6 -	KENOSHA COUNTY
Area 5 .....	28.96	24.85% + 9.70		
Area 6 .....	35.25	19.30	Area 8 -	DODGE, (Emmet Township only), GREEN, JEFFERSON, LAFAYETTE, RACINE (Burlington township), ROCK and WALWORTH COUNTIES
Area 8				
Electricians.....	31.10	24.95% + 10.41	Area 9 -	COLUMBIA, DANE, DODGE, (area west of Hwy. 26, except Chester & Emmet Townships), GREEN LAKE (except townships of Berlin, Seneca and St. Marie), IOWA, MARQUETTE (except townships of Neshkoka, Crystal Lake, Newton and Springfield), and SAUK COUNTIES
Area 9:				
Electricians.....	34.82	19.575	Area 10 -	CALUMET (Township of New Holstein), DODGE (East of Hwy. 26 including Chester Township), FOND DU LAC, MANITOWOC (Schleswig), and SHEBOYGAN COUNTIES
Area 10 .....	29.64	20.54	Area 11 -	DOUGLAS COUNTY
Area 11 .....	32.54	24.07	Area 12 -	RACINE (except Burlington township) COUNTY
Area 12 .....	32.87	19.23	Area 13 -	MILWAUKEE, OZAUKEE, WASHINGTON and WAUKESHA COUNTIES
Area 13 .....	33.93	22.67	Area 14 -	Statewide.
Teledata System Installer			Area 15 -	DODGE (East of Hwy 26 including Chester Twp, excluding Emmet Twp), FOND DU LAC (Except Waupun), MILWAUKEE, OZAUKEE, MANITOWOC (Schleswig), WASHINGTON, AND WAUKESHA COUNTIES.
Area 14				
Installer/Technician .....	22.50	12.72		
Sound & Communications				
Area 15				
Installer .....	16.47	14.84		
Technician .....	25.63	17.21		
Area 1 -	CALUMET (except township of New Holstein), GREEN LAKE (N. part, including Townships of Berlin, St. Marie and Seneca), MARQUETTE (N. part, including Townships of Crystal Lake, Neshkoro, Newton & Springfield), OUTAGAMIE, WAUPACA, WAUSHARA and WINNEBAGO COUNTIES.			
Area 2 -	ASHLAND, BARRON, BAYFIELD, BUFFALO, BURNETT, CHIPPEWA, CLARK (except Mayville, Colby, Unity, Sherman, Fremont, Lynn and Sherwood), CRAWFORD, DUNN, EAU CLAIRE, GRANT, IRON, JACKSON, LA CROSSE, MONROE, PEPIN, PIERCE, POLK, PRICE, RICHLAND, RUSK, ST. CROIX, SAWYER, TAYLOR, TREMPLEAU, VERNON and WASHBURN COUNTIES			
Area 3 -	FLORENCE (townships of Aurora, Commonwealth, Fern, Florence and Homestead), MARINETTE (Niagara township)			



**FEBRUARY 1999**

**NOTICE TO BIDDERS  
WAGE RATE DECISION**

The wage rate decision of the Secretary of Labor which has been incorporated in these advertised specifications is incomplete in that the classifications may be omitted from the Secretary of Labor's decision.

Since the bidder is responsible, independently, for ascertaining area practice with respect to the necessity, or lack of necessity, for the use of these classifications in the prosecution of the work contemplated by this project, no inference may be drawn from the omission of these classifications concerning prevailing area practices relative to their use. Further, this omission will not, per se, be construed as establishing any governmental liability for increased labor cost if it is subsequently determined that such classifications are required.

There may be omissions and/or errors in the federal wage rates. The bidder is responsible for evaluating and determining the correct applicable rate. The higher of state or federal rate will apply.



## SCHEDULE OF ITEMS

CONTRACT:

PROJECT(S):

FEDERAL ID(S):

20150210006

5390-00-72

N/A

5390-00-73

N/A

5569-00-72

WISC 2015086

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS

## SECTION 0001 CONTRACT ITEMS

0010	201.0105 CLEARING	7.000				
		STA	.		.	
0020	201.0120 CLEARING	74.000				
		ID	.		.	
0030	201.0205 GRUBBING	9.000				
		STA	.		.	
0040	201.0220 GRUBBING	74.000				
		ID	.		.	
0050	203.0100 REMOVING SMALL PIPE CULVERTS	13.000				
		EACH	.		.	
0060	203.0200 REMOVING OLD STRUCTURE (STATION) 001. STA 258+50 'HWA'	LUMP	LUMP			.
0070	204.0100 REMOVING PAVEMENT	16,305.000				
		SY	.		.	
0080	204.0105 REMOVING PAVEMENT BUTT JOINTS	650.000				
		SY	.		.	
0090	204.0110 REMOVING ASPHALTIC SURFACE	2,200.000				
		SY	.		.	

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5390-00-72

N/A

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N/A

5569-00-72

WISC 2015086

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0100	204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS	3,255.000 SY	.		.	
0110	204.0120 REMOVING ASPHALTIC SURFACE MILLING	92,573.000 SY	.		.	
0120	204.0150 REMOVING CURB & GUTTER	2,825.000 LF	.		.	
0130	204.0155 REMOVING CONCRETE SIDEWALK	960.000 SY	.		.	
0140	204.0165 REMOVING GUARDRAIL	1,402.000 LF	.		.	
0150	204.0180 REMOVING DELINEATORS AND MARKERS	2.000 EACH	.		.	
0160	204.0185 REMOVING MASONRY	3.000 CY	.		.	
0170	204.0195 REMOVING CONCRETE BASES	67.000 EACH	.		.	
0180	204.0210 REMOVING MANHOLES	1.000 EACH	.		.	
0190	204.0220 REMOVING INLETS	12.000 EACH	.		.	

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CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0200	204.0245 REMOVING STORM SEWER (SIZE) 001. 12-INCH	285.000 LF	.		.	
0210	204.0245 REMOVING STORM SEWER (SIZE) 002. 15-INCH	165.000 LF	.		.	
0220	204.0245 REMOVING STORM SEWER (SIZE) 003. 18-INCH	80.000 LF	.		.	
0230	204.0280 SEALING PIPES	2.000 EACH	.		.	
0240	205.0100 EXCAVATION COMMON	27,383.000 CY	.		.	
0250	208.1100 SELECT BORROW	5,243.000 CY	.		.	
0260	211.0100 PREPARE FOUNDATION FOR ASPHALTIC PAVING (PROJECT) 001. 5390-00-72	LUMP	LUMP		.	
0270	211.0100 PREPARE FOUNDATION FOR ASPHALTIC PAVING (PROJECT) 002. 5390-00-73	LUMP	LUMP		.	
0280	211.0100 PREPARE FOUNDATION FOR ASPHALTIC PAVING (PROJECT) 003. 5569-00-72	LUMP	LUMP		.	

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CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0290	211.0400 PREPARE FOUNDATION FOR ASPHALTIC SHOULDERS	113.000 STA	.		.	
0300	213.0100 FINISHING ROADWAY (PROJECT) 001. 5390-00-72	1.000 EACH	.		.	
0310	213.0100 FINISHING ROADWAY (PROJECT) 002. 5390-00-73	1.000 EACH	.		.	
0320	213.0100 FINISHING ROADWAY (PROJECT) 003. 5569-00-72	1.000 EACH	.		.	
0330	305.0110 BASE AGGREGATE DENSE 3/4-INCH	4,950.000 TON	.		.	
0340	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH	28,355.000 TON	.		.	
0350	305.0130 BASE AGGREGATE DENSE 3-INCH	14,595.000 TON	.		.	
0360	305.0500 SHAPING SHOULDERS	10.000 STA	.		.	
0370	312.0110 SELECT CRUSHED MATERIAL	815.000 TON	.		.	
0380	415.0210 CONCRETE PAVEMENT GAPS	3.000 EACH	.		.	

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CONTRACTOR : \_\_\_\_\_

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			DOLLARS	CTS	DOLLARS	CTS
0390	415.1090 CONCRETE PAVEMENT HES 9-INCH	3,710.000 SY	.		.	
0400	415.1100 CONCRETE PAVEMENT HES 10-INCH	675.000 SY	.		.	
0410	416.0170 CONCRETE DRIVEWAY 7-INCH	15.000 SY	.		.	
0420	416.0270 CONCRETE DRIVEWAY HES 7-INCH	60.000 SY	.		.	
0430	416.0610 DRILLED TIE BARS	4,251.000 EACH	.		.	
0440	416.0620 DRILLED DOWEL BARS	11,323.000 EACH	.		.	
0450	416.1010 CONCRETE SURFACE DRAINS	1.000 CY	.		.	
0460	416.1715 CONCRETE PAVEMENT REPAIR SHES	4,015.000 SY	.		.	
0470	416.1725 CONCRETE PAVEMENT REPLACEMENT SHES	5,420.000 SY	.		.	
0480	420.1000.S CONCRETE PAVEMENT CONTINUOUS DIAMOND GRINDING	2,950.000 SY	.		.	

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CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0490	440.4410.S INCENTIVE IRI RIDE	8,930.000 DOL	1.00000		8930.00	
0500	455.0105 ASPHALTIC MATERIAL PG58-28	720.500 TON	.		.	
0510	455.0120 ASPHALTIC MATERIAL PG64-28	263.500 TON	.		.	
0520	455.0605 TACK COAT	7,854.500 GAL	.		.	
0530	460.1100 HMA PAVEMENT TYPE E-0.3	340.000 TON	.		.	
0540	460.1103 HMA PAVEMENT TYPE E-3	10,690.000 TON	.		.	
0550	460.1110 HMA PAVEMENT TYPE E-10	6,500.000 TON	.		.	
0560	460.2000 INCENTIVE DENSITY HMA PAVEMENT	11,020.000 DOL	1.00000		11020.00	
0570	465.0110 ASPHALTIC SURFACE PATCHING	9,530.000 TON	.		.	
0580	465.0120 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES	10.000 TON	.		.	



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			DOLLARS	CTS	DOLLARS	CTS
0590	465.0125 ASPHALTIC SURFACE TEMPORARY	52.000 TON	.		.	
0600	465.0315 ASPHALTIC FLUMES	135.000 SY	.		.	
0610	504.0900 CONCRETE MASONRY ENDWALLS	3.000 CY	.		.	
0620	509.0301 PREPARATION DECKS TYPE 1	0.700 SY	.		.	
0630	509.5100.S POLYMER OVERLAY	2,650.000 SY	.		.	
0640	520.8000 CONCRETE COLLARS FOR PIPE	15.000 EACH	.		.	
0650	521.0112 CULVERT PIPE CORRUGATED STEEL 12-INCH	8.000 LF	.		.	
0660	521.0118 CULVERT PIPE CORRUGATED STEEL 18-INCH	14.000 LF	.		.	
0670	521.0124 CULVERT PIPE CORRUGATED STEEL 24-INCH	14.000 LF	.		.	
0680	521.1024 APRON ENDWALLS FOR CULVERT PIPE STEEL 24-INCH	1.000 EACH	.		.	

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N/A  
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CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0690	522.0124 CULVERT PIPE REINFORCED CONCRETE CLASS III 24-INCH	48.000 LF	.		.	
0700	522.0136 CULVERT PIPE REINFORCED CONCRETE CLASS III 36-INCH	16.000 LF	.		.	
0710	522.0518 CULVERT PIPE REINFORCED CONCRETE CLASS V 18-INCH	140.000 LF	.		.	
0720	522.1015 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 15-INCH	4.000 EACH	.		.	
0730	522.1018 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 18-INCH	9.000 EACH	.		.	
0740	522.1024 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH	1.000 EACH	.		.	
0750	523.0419 CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-IV 19X30-INCH	64.000 LF	.		.	
0760	523.0429 CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-IV 29X45-INCH	16.000 LF	.		.	
0770	523.0519 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL 19X30-INCH	4.000 EACH	.		.	

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0780	524.0618 APRON ENDWALLS FOR CULVERT PIPE SALVAGED 18-INCH	1.000 EACH	.		.	
0790	524.0624 APRON ENDWALLS FOR CULVERT PIPE SALVAGED 24-INCH	2.000 EACH	.		.	
0800	524.0636 APRON ENDWALLS FOR CULVERT PIPE SALVAGED 36-INCH	1.000 EACH	.		.	
0810	601.0110 CONCRETE CURB TYPE D	170.000 LF	.		.	
0820	601.0155 CONCRETE CURB INTEGRAL TYPE J	50.000 LF	.		.	
0830	601.0407 CONCRETE CURB & GUTTER 18-INCH TYPE D	30.000 LF	.		.	
0840	601.0409 CONCRETE CURB & GUTTER 30-INCH TYPE A	2,745.000 LF	.		.	
0850	601.0411 CONCRETE CURB & GUTTER 30-INCH TYPE D	4,485.000 LF	.		.	
0860	601.0413 CONCRETE CURB & GUTTER 6-INCH SLOPED 30-INCH TYPE G	135.000 LF	.		.	
0870	601.0415 CONCRETE CURB & GUTTER 6-INCH SLOPED 30-INCH TYPE J	300.000 LF	.		.	

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0880	601.0553 CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE D	890.000 LF	.		.	
0890	601.0600 CONCRETE CURB PEDESTRIAN	80.000 LF	.		.	
0900	602.0410 CONCRETE SIDEWALK 5-INCH	8,875.000 SF	.		.	
0910	602.0505 CURB RAMP DETECTABLE WARNING FIELD YELLOW	384.000 SF	.		.	
0920	603.8000 CONCRETE BARRIER TEMPORARY PRECAST DELIVERED	2,438.000 LF	.		.	
0930	603.8125 CONCRETE BARRIER TEMPORARY PRECAST INSTALLED	3,350.000 LF	.		.	
0940	606.0200 RIPRAP MEDIUM	124.000 CY	.		.	
0950	608.0312 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH	230.000 LF	.		.	
0960	608.0315 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 15-INCH	619.000 LF	.		.	
0970	608.0318 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 18-INCH	109.000 LF	.		.	

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			DOLLARS	CTS	DOLLARS	CTS
0980	608.0324 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 24-INCH	36.000 LF	.		.	
0990	608.0415 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 15-INCH	73.000 LF	.		.	
1000	608.0418 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 18-INCH	477.000 LF	.		.	
1010	608.0512 STORM SEWER PIPE REINFORCED CONCRETE CLASS V 12-INCH	385.000 LF	.		.	
1020	608.0515 STORM SEWER PIPE REINFORCED CONCRETE CLASS V 15-INCH	271.000 LF	.		.	
1030	608.0518 STORM SEWER PIPE REINFORCED CONCRETE CLASS V 18-INCH	308.000 LF	.		.	
1040	610.0119 STORM SEWER PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 19X30-INCH	121.000 LF	.		.	
1050	611.0420 RECONSTRUCTING MANHOLES	1.000 EACH	.		.	
1060	611.0530 MANHOLE COVERS TYPE J	1.000 EACH	.		.	
1070	611.0624 INLET COVERS TYPE H	25.000 EACH	.		.	

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
1080	611.0627 INLET COVERS TYPE HM	4.000 EACH	.		.	
1090	611.0633 INLET COVERS TYPE HM-GJ-S	1.000 EACH	.		.	
1100	611.0639 INLET COVERS TYPE H-S	4.000 EACH	.		.	
1110	611.0642 INLET COVERS TYPE MS	1.000 EACH	.		.	
1120	611.0654 INLET COVERS TYPE V	1.000 EACH	.		.	
1130	611.2004 MANHOLES 4-FT DIAMETER	3.000 EACH	.		.	
1140	611.2006 MANHOLES 6-FT DIAMETER	3.000 EACH	.		.	
1150	611.3004 INLETS 4-FT DIAMETER	2.000 EACH	.		.	
1160	611.3225 INLETS 2X2.5-FT	1.000 EACH	.		.	
1170	611.3230 INLETS 2X3-FT	26.000 EACH	.		.	

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			DOLLARS	CTS	DOLLARS	CTS
1180	611.3901 INLETS MEDIAN 1 GRATE	1.000 EACH	.		.	
1190	611.8110 ADJUSTING MANHOLE COVERS	26.000 EACH	.		.	
1200	611.8115 ADJUSTING INLET COVERS	18.000 EACH	.		.	
1210	611.8120.S COVER PLATES TEMPORARY	2.000 EACH	.		.	
1220	611.9710 SALVAGED INLET COVERS	3.000 EACH	.		.	
1230	612.0108 PIPE UNDERDRAIN 8-INCH	100.000 LF	.		.	
1240	612.0406 PIPE UNDERDRAIN WRAPPED 6-INCH	30.000 LF	.		.	
1250	612.0700 DRAIN TILE EXPLORATION	100.000 LF	.		.	
1260	614.0220 STEEL THRIE BEAM BULLNOSE TERMINAL	2.000 EACH	.		.	
1270	614.0230 STEEL THRIE BEAM	400.000 LF	.		.	

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			DOLLARS	CTS	DOLLARS	CTS
1280	614.0305 STEEL PLATE BEAM GUARD CLASS A	225.000 LF	.		.	
1290	614.0370 STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL	1.000 EACH	.		.	
1300	614.0400 ADJUSTING STEEL PLATE BEAM GUARD	25.000 LF	.		.	
1310	614.0905 CRASH CUSHIONS TEMPORARY	3.000 EACH	.		.	
1320	614.0950 REPLACING GUARDRAIL POSTS AND BLOCKS	4.000 EACH	.		.	
1330	614.0951 REPLACING GUARDRAIL RAIL AND HARDWARE	13.000 LF	.		.	
1340	614.2300 MGS GUARDRAIL 3	200.000 LF	.		.	
1350	614.2610 MGS GUARDRAIL TERMINAL EAT	1.000 EACH	.		.	
1360	614.2620 MGS GUARDRAIL TERMINAL TYPE 2	1.000 EACH	.		.	
1370	616.0700.S FENCE SAFETY	2,000.000 LF	.		.	



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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
1380	618.0100 MAINTENANCE AND REPAIR OF HAUL ROADS (PROJECT) 001. 5390-00-72	1.000 EACH	.		.	
1390	618.0100 MAINTENANCE AND REPAIR OF HAUL ROADS (PROJECT) 002. 5390-00-73	1.000 EACH	.		.	
1400	618.0100 MAINTENANCE AND REPAIR OF HAUL ROADS (PROJECT) 003. 5569-00-72	1.000 EACH	.		.	
1410	619.1000 MOBILIZATION	1.000 EACH	.		.	
1420	620.0300 CONCRETE MEDIAN SLOPED NOSE	440.000 SF	.		.	
1430	623.0200 DUST CONTROL SURFACE TREATMENT	10,500.000 SY	.		.	
1440	624.0100 WATER	1,244.000 MGAL	.		.	
1450	625.0100 TOPSOIL	4,625.000 SY	.		.	
1460	625.0500 SALVAGED TOPSOIL	40,770.000 SY	.		.	
1470	627.0200 MULCHING	33,190.000 SY	.		.	

## SCHEDULE OF ITEMS

CONTRACT:  
20150210006PROJECT(S):  
5390-00-72  
5390-00-73  
5569-00-72FEDERAL ID(S):  
N/A  
N/A  
WISC 2015086

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
1480	628.1104 EROSION BALES	100.000 EACH	.		.	
1490	628.1504 SILT FENCE	5,160.000 LF	.		.	
1500	628.1520 SILT FENCE MAINTENANCE	2,643.000 LF	.		.	
1510	628.1905 MOBILIZATIONS EROSION CONTROL	39.000 EACH	.		.	
1520	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL	30.000 EACH	.		.	
1530	628.2004 EROSION MAT CLASS I TYPE B	12,989.000 SY	.		.	
1540	628.2023 EROSION MAT CLASS II TYPE B	2,063.000 SY	.		.	
1550	628.6510 SOIL STABILIZER TYPE B	2.000 ACRE	.		.	
1560	628.7005 INLET PROTECTION TYPE A	35.000 EACH	.		.	
1570	628.7010 INLET PROTECTION TYPE B	4.000 EACH	.		.	

## SCHEDULE OF ITEMS

REVISED:

CONTRACT:  
20150210006PROJECT(S):  
5390-00-72  
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5569-00-72FEDERAL ID(S):  
N/A  
N/A  
WISC 2015086

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
1580	628.7015 INLET PROTECTION TYPE C	66.000 EACH	.		.	
1590	628.7020 INLET PROTECTION TYPE D	11.000 EACH	.		.	
1600	628.7504 TEMPORARY DITCH CHECKS	1,665.000 LF	.		.	
1610	628.7555 CULVERT PIPE CHECKS	150.000 EACH	.		.	
1620	628.7560 TRACKING PADS	4.000 EACH	.		.	
1630	628.7570 ROCK BAGS	100.000 EACH	.		.	
1640	629.0205 FERTILIZER TYPE A	25.000 CWT	.		.	
1650	629.0210 FERTILIZER TYPE B	163.000 CWT	.		.	
1660	630.0120 SEEDING MIXTURE NO. 20	795.000 LB	.		.	
1670	630.0130 SEEDING MIXTURE NO. 30	320.000 LB	.		.	

## SCHEDULE OF ITEMS

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N/A  
N/A  
WISC 2015086

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
1680	630.0140 SEEDING MIXTURE NO. 40	161.000 LB	.		.	
1690	630.0200 SEEDING TEMPORARY	1,285.000 LB	.		.	
1700	631.0300 SOD WATER	29.000 MGAL	.		.	
1710	631.1000 SOD LAWN	830.000 SY	.		.	
1720	633.0200 DELINEATORS FLEXIBLE	11.000 EACH	.		.	
1730	633.5200 MARKERS CULVERT END	21.000 EACH	.		.	
1740	634.0612 POSTS WOOD 4X6-INCH X 12-FT	6.000 EACH	.		.	
1750	634.0614 POSTS WOOD 4X6-INCH X 14-FT	25.000 EACH	.		.	
1760	634.0616 POSTS WOOD 4X6-INCH X 16-FT	70.000 EACH	.		.	
1770	634.0618 POSTS WOOD 4X6-INCH X 18-FT	20.000 EACH	.		.	

## SCHEDULE OF ITEMS

CONTRACT:

PROJECT(S):

FEDERAL ID(S):

20150210006

5390-00-72

N/A

5390-00-73

N/A

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CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
1780	637.0620 SIGN FLAGS PERMANENT TYPE II	4.000 EACH	.		.	
1790	637.1220 SIGNS TYPE I REFLECTIVE SH	155.000 SF	.		.	
1800	637.2210 SIGNS TYPE II REFLECTIVE H	1,330.970 SF	.		.	
1810	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING	258.400 SF	.		.	
1820	637.2230 SIGNS TYPE II REFLECTIVE F	110.500 SF	.		.	
1830	638.2101 MOVING SIGNS TYPE I	1.000 EACH	.		.	
1840	638.2102 MOVING SIGNS TYPE II	19.000 EACH	.		.	
1850	638.2601 REMOVING SIGNS TYPE I	5.000 EACH	.		.	
1860	638.2602 REMOVING SIGNS TYPE II	186.000 EACH	.		.	
1870	638.3000 REMOVING SMALL SIGN SUPPORTS	109.000 EACH	.		.	

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N/A  
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CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
1880	638.3100 REMOVING STRUCTURAL STEEL SIGN SUPPORTS	2.000 EACH	.		.	
1890	638.3210 REVISING SIGNS TYPE I	7.000 EACH	.		.	
1900	638.4000 MOVING SMALL SIGN SUPPORTS	25.000 EACH	.		.	
1910	641.8100 OVERHEAD SIGN SUPPORT (STRUCTURE) 001. S-53-96	LUMP	LUMP		.	
1920	642.5201 FIELD OFFICE TYPE C	1.000 EACH	.		.	
1930	643.0100 TRAFFIC CONTROL (PROJECT) 001. 5390-00-72	1.000 EACH	.		.	
1940	643.0100 TRAFFIC CONTROL (PROJECT) 002. 5390-00-73	1.000 EACH	.		.	
1950	643.0100 TRAFFIC CONTROL (PROJECT) 003. 5569-00-72	1.000 EACH	.		.	
1960	643.0300 TRAFFIC CONTROL DRUMS	55,864.000 DAY	.		.	
1970	643.0420 TRAFFIC CONTROL BARRICADES TYPE III	5,378.000 DAY	.		.	

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CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
1980	643.0453 TRAFFIC CONTROL BARRICADES PERMANENT TYPE III	8.000 EACH	.		.	
1990	643.0500 TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS	11.000 EACH	.		.	
2000	643.0600 TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER BASES	11.000 EACH	.		.	
2010	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A	9,881.000 DAY	.		.	
2020	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C	7,658.000 DAY	.		.	
2030	643.0800 TRAFFIC CONTROL ARROW BOARDS	826.000 DAY	.		.	
2040	643.0900 TRAFFIC CONTROL SIGNS	14,723.000 DAY	.		.	
2050	643.0910 TRAFFIC CONTROL COVERING SIGNS TYPE I	4.000 EACH	.		.	
2060	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II	26.000 EACH	.		.	
2070	643.1050 TRAFFIC CONTROL SIGNS PCMS	1,820.000 DAY	.		.	

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## SCHEDULE OF ITEMS

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N/A

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N/A

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CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
2080	643.2000 TRAFFIC CONTROL DETOUR (PROJECT) 001. 5390-00-73	1.000 EACH	.		.	
2090	643.2000 TRAFFIC CONTROL DETOUR (PROJECT) 002. 5569-00-72	1.000 EACH	.		.	
2100	643.3000 TRAFFIC CONTROL DETOUR SIGNS	1,905.000 DAY	.		.	
2110	645.0120 GEOTEXTILE FABRIC TYPE HR	382.000 SY	.		.	
2120	646.0106 PAVEMENT MARKING EPOXY 4-INCH	211,005.000 LF	.		.	
2130	646.0126 PAVEMENT MARKING EPOXY 8-INCH	18,980.000 LF	.		.	
2140	646.0136 PAVEMENT MARKING EPOXY 12-INCH	460.000 LF	.		.	
2150	646.0406 PAVEMENT MARKING SAME DAY EPOXY 4-INCH	22,600.000 LF	.		.	
2160	646.0600 REMOVING PAVEMENT MARKINGS	35,530.000 LF	.		.	
2170	647.0110 PAVEMENT MARKING RAILROAD CROSSINGS EPOXY	12.000 EACH	.		.	



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CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
2180	647.0156 PAVEMENT MARKING ARROWS EPOXY TYPE 1	5.000 EACH	.		.	
2190	647.0166 PAVEMENT MARKING ARROWS EPOXY TYPE 2	109.000 EACH	.		.	
2200	647.0176 PAVEMENT MARKING ARROWS EPOXY TYPE 3	8.000 EACH	.		.	
2210	647.0356 PAVEMENT MARKING WORDS EPOXY	62.000 EACH	.		.	
2220	647.0456 PAVEMENT MARKING CURB EPOXY	600.000 LF	.		.	
2230	647.0566 PAVEMENT MARKING STOP LINE EPOXY 18-INCH	1,705.000 LF	.		.	
2240	647.0606 PAVEMENT MARKING ISLAND NOSE EPOXY	24.000 EACH	.		.	
2250	647.0726 PAVEMENT MARKING DIAGONAL EPOXY 12-INCH	3,405.000 LF	.		.	
2260	647.0766 PAVEMENT MARKING CROSSWALK EPOXY 6-INCH	4,305.000 LF	.		.	
2270	647.0955 REMOVING PAVEMENT MARKINGS ARROWS	14.000 EACH	.		.	

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CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
2280	647.0960 REMOVING PAVEMENT MARKINGS SYMBOLS	3.000 EACH	.		.	
2290	647.0965 REMOVING PAVEMENT MARKINGS WORDS	4.000 EACH	.		.	
2300	648.0100 LOCATING NO-PASSING ZONES	10.177 MI	.		.	
2310	649.0100 TEMPORARY PAVEMENT MARKING 4-INCH	21,760.000 LF	.		.	
2320	649.0200 TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH	1,600.000 LF	.		.	
2330	649.0400 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH	61,850.000 LF	.		.	
2340	649.0600 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 6-INCH	60.000 LF	.		.	
2350	649.0801 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH	200.000 LF	.		.	
2360	649.1200 TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 18-INCH	585.000 LF	.		.	
2370	652.0215 CONDUIT RIGID NONMETALLIC SCHEDULE 40 1 1/4-INCH	220.000 LF	.		.	

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N/A  
N/A  
WISC 2015086

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
2380	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	10,918.000 LF	.		.	
2390	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH	1,699.000 LF	.		.	
2400	652.0240 CONDUIT RIGID NONMETALLIC SCHEDULE 40 4-INCH	690.000 LF	.		.	
2410	652.0605 CONDUIT SPECIAL 2-INCH	5,948.000 LF	.		.	
2420	652.0615 CONDUIT SPECIAL 3-INCH	757.000 LF	.		.	
2430	652.0625 CONDUIT SPECIAL 4-INCH	1,702.000 LF	.		.	
2440	652.0700.S INSTALL CONDUIT INTO EXISTING ITEM	40.000 EACH	.		.	
2450	652.0800 CONDUIT LOOP DETECTOR	5,622.000 LF	.		.	
2460	652.0900 LOOP DETECTOR SLOTS	2,412.000 LF	.		.	
2470	653.0130 PULL BOXES STEEL 18X36-INCH	1.000 EACH	.		.	

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N/A  
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WISC 2015086

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
2480	653.0135 PULL BOXES STEEL 24X36-INCH	26.000 EACH	.		.	
2490	653.0140 PULL BOXES STEEL 24X42-INCH	107.000 EACH	.		.	
2500	653.0900 ADJUSTING PULL BOXES	16.000 EACH	.		.	
2510	653.0905 REMOVING PULL BOXES	64.000 EACH	.		.	
2520	654.0101 CONCRETE BASES TYPE 1	52.000 EACH	.		.	
2530	654.0102 CONCRETE BASES TYPE 2	24.000 EACH	.		.	
2540	654.0105 CONCRETE BASES TYPE 5	9.000 EACH	.		.	
2550	654.0110 CONCRETE BASES TYPE 10	4.000 EACH	.		.	
2560	654.0113 CONCRETE BASES TYPE 13	2.000 EACH	.		.	
2570	654.0217 CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL	8.000 EACH	.		.	

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20150210006

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CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
2580	655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG	14,679.000 LF	.		.	
2590	655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG	4,853.000 LF	.		.	
2600	655.0250 CABLE TRAFFIC SIGNAL 9-14 AWG	7,767.000 LF	.		.	
2610	655.0260 CABLE TRAFFIC SIGNAL 12-14 AWG	4,068.000 LF	.		.	
2620	655.0270 CABLE TRAFFIC SIGNAL 15-14 AWG	1,701.000 LF	.		.	
2630	655.0305 CABLE TYPE UF 2-12 AWG GROUNDED	8,475.000 LF	.		.	
2640	655.0320 CABLE TYPE UF 2-10 AWG GROUNDED	804.000 LF	.		.	
2650	655.0505 ELECTRICAL WIRE TRAFFIC SIGNALS 14 AWG	388.000 LF	.		.	
2660	655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG	12,809.000 LF	.		.	
2670	655.0610 ELECTRICAL WIRE LIGHTING 12 AWG	6,228.000 LF	.		.	

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CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
2680	655.0625 ELECTRICAL WIRE LIGHTING 6 AWG	1,248.000 LF	.		.	
2690	655.0635 ELECTRICAL WIRE LIGHTING 2 AWG	600.000 LF	.		.	
2700	655.0700 LOOP DETECTOR LEAD IN CABLE	37,887.000 LF	.		.	
2710	655.0800 LOOP DETECTOR WIRE	20,496.000 LF	.		.	
2720	655.0900 TRAFFIC SIGNAL EVP DETECTOR CABLE	5,380.000 LF	.		.	
2730	656.0100 ELECTRICAL SERVICE METER SOCKET (LOCATION) 401. CCTV-53-0114, CCTV-53-0118	LUMP	LUMP		.	
2740	656.0200 ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 001. CCTV-53-0119	LUMP	LUMP		.	
2750	656.0200 ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 002. CCTV-53-0122	LUMP	LUMP		.	
2760	656.0200 ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 450. USH 51 & STH 59	LUMP	LUMP		.	

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
2770	656.0200 ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 451. USH 14 & USH 51	LUMP	LUMP			.
2780	656.0200 ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 452. USH 14 & KENNEDY ROAD	LUMP	LUMP			.
2790	656.0200 ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 453. USH 14 & STH 26	LUMP	LUMP			.
2800	656.0200 ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 454. USH 14 & LEXINGTON DRIVE	LUMP	LUMP			.
2810	656.0200 ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 455. USH 14 & PONTIAC DRIVE	LUMP	LUMP			.
2820	656.0200 ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 456. USH 14 & IH 39 SB RAMP	LUMP	LUMP			.
2830	656.0200 ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 457. USH 14 & IH 39 NB RAMP	LUMP	LUMP			.
2840	656.0200 ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 458. USH 14 & DEERFIELD DRIVE	LUMP	LUMP			.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
2850	656.0200 ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 459. USH 14 & WRIGHT ROAD	LUMP	LUMP			.
2860	656.0200 ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 460. STH 26 & MORSE STREET	LUMP	LUMP			.
2870	656.0200 ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 461. STH 26 & KETTERING STREET	LUMP	LUMP			.
2880	656.0200 ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 462. PONTIAC DRIVE & PONTIAC PLACE	LUMP	LUMP			.
2890	656.0200 ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 463. USH 14 & BELL STREET	LUMP	LUMP			.
2900	656.0500 ELECTRICAL SERVICE BREAKER DISCONNECT BOX (LOCATION) 001. CCTV-53-0119	LUMP	LUMP			.
2910	656.0500 ELECTRICAL SERVICE BREAKER DISCONNECT BOX (LOCATION) 002. CCTV-53-0120	LUMP	LUMP			.



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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
2920	656.0500 ELECTRICAL SERVICE BREAKER DISCONNECT BOX (LOCATION) 003. CCTV-53-0121	LUMP	LUMP			.
2930	656.0500 ELECTRICAL SERVICE BREAKER DISCONNECT BOX (LOCATION) 004. CCTV-53-0122	LUMP	LUMP			.
2940	656.0500 ELECTRICAL SERVICE BREAKER DISCONNECT BOX (LOCATION) 401. CCTV-53-0114, CCTV-53-0118	LUMP	LUMP			.
2950	657.0100 PEDESTAL BASES	33.000 EACH		.		.
2960	657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE	12.000 EACH		.		.
2970	657.0305 POLES TYPE 2	2.000 EACH		.		.
2980	657.0310 POLES TYPE 3	6.000 EACH		.		.
2990	657.0322 POLES TYPE 5-ALUMINUM	4.000 EACH		.		.

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N/A  
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CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
3000	657.0415 TRAFFIC SIGNAL STANDARDS ALUMINUM 11-FT	11.000 EACH	.		.	
3010	657.0420 TRAFFIC SIGNAL STANDARDS ALUMINUM 13-FT	14.000 EACH	.		.	
3020	657.0425 TRAFFIC SIGNAL STANDARDS ALUMINUM 15-FT	12.000 EACH	.		.	
3030	657.0585 TROMBONE ARMS 15-FT	2.000 EACH	.		.	
3040	657.0590 TROMBONE ARMS 20-FT	2.000 EACH	.		.	
3050	657.0595 TROMBONE ARMS 25-FT	2.000 EACH	.		.	
3060	657.0615 LUMINAIRE ARMS SINGLE MEMBER 4 1/2-INCH CLAMP 8-FT	10.000 EACH	.		.	
3070	657.1345 INSTALL POLES TYPE 9	1.000 EACH	.		.	
3080	657.1350 INSTALL POLES TYPE 10	3.000 EACH	.		.	
3090	657.1355 INSTALL POLES TYPE 12	2.000 EACH	.		.	

## SCHEDULE OF ITEMS

CONTRACT:

PROJECT(S):

FEDERAL ID(S):

20150210006

5390-00-72

N/A

5390-00-73

N/A

5569-00-72

WISC 2015086

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
3100	657.1515 INSTALL MONOTUBE ARMS 15-FT	3.000 EACH	.		.	
3110	657.1520 INSTALL MONOTUBE ARMS 20-FT	1.000 EACH	.		.	
3120	657.1545 INSTALL MONOTUBE ARMS 45-FT	2.000 EACH	.		.	
3130	657.1808 INSTALL LUMINAIRE ARMS STEEL 8-FT	6.000 EACH	.		.	
3140	658.0110 TRAFFIC SIGNAL FACE 3-12 INCH VERTICAL	58.000 EACH	.		.	
3150	658.0115 TRAFFIC SIGNAL FACE 4-12 INCH VERTICAL	42.000 EACH	.		.	
3160	658.0160 TRAFFIC SIGNAL FACE 4-12 INCH HORIZONTAL	1.000 EACH	.		.	
3170	658.0215 BACKPLATES SIGNAL FACE 3 SECTION 12-INCH	63.000 EACH	.		.	
3180	658.0220 BACKPLATES SIGNAL FACE 4 SECTION 12-INCH	43.000 EACH	.		.	
3190	658.0416 PEDESTRIAN SIGNAL FACE 16-INCH	45.000 EACH	.		.	

## SCHEDULE OF ITEMS

CONTRACT:

PROJECT(S):

FEDERAL ID(S):

20150210006

5390-00-72

N/A

5390-00-73

N/A

5569-00-72

WISC 2015086

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
3200	658.0500 PEDESTRIAN PUSH BUTTONS	54.000 EACH	.		.	
3210	658.0600 LED MODULES 12-INCH RED BALL	47.000 EACH	.		.	
3220	658.0605 LED MODULES 12-INCH YELLOW BALL	43.000 EACH	.		.	
3230	658.0610 LED MODULES 12-INCH GREEN BALL	29.000 EACH	.		.	
3240	658.0615 LED MODULES 12-INCH RED ARROW	59.000 EACH	.		.	
3250	658.0620 LED MODULES 12-INCH YELLOW ARROW	105.000 EACH	.		.	
3260	658.0625 LED MODULES 12-INCH GREEN ARROW	80.000 EACH	.		.	
3270	658.0635 LED MODULES PEDESTRIAN COUNTDOWN TIMER 16-INCH	45.000 EACH	.		.	
3280	658.5069 SIGNAL MOUNTING HARDWARE (LOCATION) 450. USH 51 & STH 59	LUMP	LUMP		.	
3290	658.5069 SIGNAL MOUNTING HARDWARE (LOCATION) 451. USH 14 & KENNEDY ROAD	LUMP	LUMP		.	

## SCHEDULE OF ITEMS

CONTRACT:

PROJECT(S):

FEDERAL ID(S):

20150210006

5390-00-72

N/A

5390-00-73

N/A

5569-00-72

WISC 2015086

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
3300	658.5069 SIGNAL MOUNTING HARDWARE (LOCATION) 452. USH 14 & STH 26	LUMP	LUMP		.	
3310	658.5069 SIGNAL MOUNTING HARDWARE (LOCATION) 453. USH 14 & LEXINGTON DRIVE	LUMP	LUMP		.	
3320	658.5069 SIGNAL MOUNTING HARDWARE (LOCATION) 454. USH 14 & PONTIAC DRIVE	LUMP	LUMP		.	
3330	658.5069 SIGNAL MOUNTING HARDWARE (LOCATION) 455. USH 14 & IH 39 SB RAMP	LUMP	LUMP		.	
3340	658.5069 SIGNAL MOUNTING HARDWARE (LOCATION) 456. USH 14 & IH 39 NB RAMP	LUMP	LUMP		.	
3350	658.5069 SIGNAL MOUNTING HARDWARE (LOCATION) 457. USH 14 & DEERFIELD DRIVE	LUMP	LUMP		.	
3360	658.5069 SIGNAL MOUNTING HARDWARE (LOCATION) 458. USH 14 & WRIGHT ROAD	LUMP	LUMP		.	
3370	658.5069 SIGNAL MOUNTING HARDWARE (LOCATION) 459. STH 26 & MORSE STREET	LUMP	LUMP		.	
3380	658.5069 SIGNAL MOUNTING HARDWARE (LOCATION) 460. STH 26 & KETTERING STREET	LUMP	LUMP		.	
3390	659.0802 PLAQUES SEQUENCE IDENTIFICATION	24.000 EACH		.	.	

## SCHEDULE OF ITEMS

CONTRACT:  
20150210006PROJECT(S):  
5390-00-72  
5390-00-73  
5569-00-72FEDERAL ID(S):  
N/A  
N/A  
WISC 2015086

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
3400	659.1125 LUMINAIRES UTILITY LED C	47.000 EACH	.		.	
3410	661.0100 TEMPORARY TRAFFIC SIGNALS FOR BRIDGES (STRUCTURE) 001. B-53-145	LUMP	LUMP		.	
3420	661.0200 TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS (LOCATION) 450. USH 14 & IH 39 SB RAMP	LUMP	LUMP		.	
3430	661.0200 TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS (LOCATION) 451. USH 14 & IH 39 NB RAMP	LUMP	LUMP		.	
3440	661.0200 TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS (LOCATION) 452. USH 14 & DEERFIELD DRIVE	LUMP	LUMP		.	
3450	670.0100 FIELD SYSTEM INTEGRATOR 001. 5390-00-73	LUMP	LUMP		.	
3460	670.0100 FIELD SYSTEM INTEGRATOR 002. 5569-00-72	LUMP	LUMP		.	
3470	670.0200 ITS DOCUMENTATION 001. 5390-00-73	LUMP	LUMP		.	
3480	670.0200 ITS DOCUMENTATION 002. 5569-00-72	LUMP	LUMP		.	

## SCHEDULE OF ITEMS

CONTRACT:

PROJECT(S):

FEDERAL ID(S):

20150210006

5390-00-72

N/A

5390-00-73

N/A

5569-00-72

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CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
3490	670.0200 ITS DOCUMENTATION 003. SIGNAL INTERCONNECT SYSTEM	LUMP	LUMP			.
3500	673.0105 COMMUNICATION VAULT TYPE 1	9.000 EACH	.		.	
3510	673.0225.S INSTALL POLE MOUNTED CABINET	5.000 EACH	.		.	
3520	674.0106 CABLE ITS COMMUNICATION 6 PAIR	232.000 LF	.		.	
3530	675.0400.S INSTALL ETHERNET SWITCH	9.000 EACH	.		.	
3540	677.0200 INSTALL CAMERA ASSEMBLY	6.000 EACH	.		.	
3550	677.0300.S INSTALL VIDEO ENCODER	6.000 EACH	.		.	
3560	678.0036 INSTALL FIBER OPTIC CABLE OUTDOOR PLANT 36-CT	10,800.000 LF	.		.	
3570	678.0200 FIBER OPTIC SPLICE ENCLOSURE	13.000 EACH	.		.	
3580	678.0300 FIBER OPTIC SPLICE	104.000 EACH	.		.	

## SCHEDULE OF ITEMS

CONTRACT:

PROJECT(S):

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20150210006

5390-00-72

N/A

5390-00-73

N/A

5569-00-72

WISC 2015086

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
3590	678.0500 COMMUNICATION SYSTEM TESTING 002. SIGNAL INTERCONNECT SYSTEM	LUMP	LUMP			.
3600	690.0150 SAWING ASPHALT	124,925.000 LF	.			.
3610	690.0250 SAWING CONCRETE	33,400.000 LF	.			.
3620	SPV.0035 SPECIAL 700. CONCRETE MASONRY DECK PATCHING	0.100 CY	.			.
3630	SPV.0045 SPECIAL 200. TEMPORARY CROSSWALK ACCESS	132.000 DAY	.			.
3640	SPV.0060 SPECIAL 001. BASELINE CPM PROGRESS SCHEDULE	1.000 EACH	.			.
3650	SPV.0060 SPECIAL 002. CPM PROGRESS SCHEDULE UPDATES AND ACCEPTED REVISIONS	1.000 EACH	.			.
3660	SPV.0060 SPECIAL 003. COVER PLATES PERMANENT	2.000 EACH	.			.
3670	SPV.0060 SPECIAL 201. TRAFFIC CONTROL, ONE SIDED VERTICAL PANELS	35.000 EACH	.			.



## SCHEDULE OF ITEMS

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20150210006PROJECT(S):  
5390-00-72  
5390-00-73  
5569-00-72FEDERAL ID(S):  
N/A  
N/A  
WISC 2015086

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
3680	SPV.0060 SPECIAL 202. TRAFFIC CONTROL, ONE SIDED VERTICAL PANEL REPLACEMENTS	20.000 EACH	.		.	
3690	SPV.0060 SPECIAL 350. REMOVE STREET LIGHT	6.000 EACH	.		.	
3700	SPV.0060 SPECIAL 351. REINSTALL STREET LIGHT	5.000 EACH	.		.	
3710	SPV.0060 SPECIAL 352. UTILITY LINE OPENING	15.000 EACH	.		.	
3720	SPV.0060 SPECIAL 401. INSTALL CELLULAR MODEM	14.000 EACH	.		.	
3730	SPV.0060 SPECIAL 402. POLES WOOD 12-FT	1.000 EACH	.		.	
3740	SPV.0060 SPECIAL 403. POLES WOOD 50-FT	6.000 EACH	.		.	
3750	SPV.0060 SPECIAL 450. REMOVING AND SALVAGING TRAFFIC SIGNAL POLES AND INTERSECTION LIGHTING	3.000 EACH	.		.	
3760	SPV.0060 SPECIAL 451. REMOVING AND REINSTALLING TRAFFIC SIGNAL ARM	1.000 EACH	.		.	

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N/A

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N/A

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CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
3770	SPV.0060 SPECIAL 452. DECORATIVE TRAFFIC SIGNAL POLE 4-FT	3.000 EACH	.		.	
3780	SPV.0060 SPECIAL 453. DECORATIVE TRAFFIC SIGNAL POLE 16-FT	1.000 EACH	.		.	
3790	SPV.0060 SPECIAL 454. REMOVE, SALVAGE & REINSTALL TRAFFIC SIGNAL HEADS	7.000 EACH	.		.	
3800	SPV.0060 SPECIAL 455. INSTALL 5.8 GHZ ETHERNET BRIDGE	16.000 EACH	.		.	
3810	SPV.0060 SPECIAL 457. REMOVE TRAFFIC SIGNAL CABINET	13.000 EACH	.		.	
3820	SPV.0060 SPECIAL 458. REMOVE TRAFFIC SIGNAL HEAD	53.000 EACH	.		.	
3830	SPV.0060 SPECIAL 459. TRAFFIC SIGNAL MAINTENANCE MOBILIZATION TYPE 1	30.000 EACH	.		.	
3840	SPV.0060 SPECIAL 460. TRAFFIC SIGNAL MAINTENANCE MOBILIZATION TYPE 2	15.000 EACH	.		.	
3850	SPV.0060 SPECIAL 461. REMOVE AND ABANDON EXISTING ELECTRICAL SERVICE	16.000 EACH	.		.	

## SCHEDULE OF ITEMS

CONTRACT:  
20150210006PROJECT(S):  
5390-00-72  
5390-00-73  
5569-00-72FEDERAL ID(S):  
N/A  
N/A  
WISC 2015086

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
3860	SPV.0060 SPECIAL 462. REMOVE PEDESTRIAN SIGNAL HEAD	26.000 EACH	.		.	
3870	SPV.0060 SPECIAL 463. REMOVE PEDESTRIAN PUSH BUTTON	26.000 EACH	.		.	
3880	SPV.0060 SPECIAL 464. INSTALL SOLAR POWERED BLUETOOTH SENSOR	6.000 EACH	.		.	
3890	SPV.0060 SPECIAL 465. FURNISH AND INSTALL WOOD POST SUPPORT	3.000 EACH	.		.	
3900	SPV.0060 SPECIAL 466. POLES TYPE 3 BLACK	2.000 EACH	.		.	
3910	SPV.0060 SPECIAL 467. POLES TYPE 4 BLACK	2.000 EACH	.		.	
3920	SPV.0060 SPECIAL 468. TROMBONE ARMS 15-FT BLACK	1.000 EACH	.		.	
3930	SPV.0060 SPECIAL 469. LUMINAIRE ARMS SINGLE MEMBER 4-INCH CLAMP 6-FT BLACK	2.000 EACH	.		.	
3940	SPV.0060 SPECIAL 470. LUMINAIRES UTILITY LED C	2.000 EACH	.		.	
3950	SPV.0060 SPECIAL 471. TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE BLACK	4.000 EACH	.		.	

## SCHEDULE OF ITEMS

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PROJECT(S):

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20150210006

5390-00-72

N/A

5390-00-73

N/A

5569-00-72

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CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
3960	SPV.0060 SPECIAL 650. ADJUSTING WATER VALVE BOXES	10.000 EACH	.		.	
3970	SPV.0060 SPECIAL 650. ADJUSTING WATER VALVES	12.000 EACH	.		.	
3980	SPV.0060 SPECIAL 651. ADJUSTING SANITARY MANHOLES	13.000 EACH	.		.	
3990	SPV.0060 SPECIAL 652. ADJUSTING WATER VALVE VAULT	3.000 EACH	.		.	
4000	SPV.0090 SPECIAL 001. REMOVING HMA PAVEMENT NOTCHED WEDGE LONGITUDINAL JOINT MILLING	20,429.000 LF	.		.	
4010	SPV.0090 SPECIAL 002. CONCRETE CURB & GUTTER 30-INCH TYPE A SPECIAL	250.000 LF	.		.	
4020	SPV.0090 SPECIAL 002. CONCRETE CURB & GUTTER 30-INCH TYPE A SPECIAL	250.000 LF	.		.	
4030	SPV.0090 SPECIAL 350. FURNISH AND INSTALL EQUIVALENT LIGHTING CONDUCTORS	13,172.000 LF	.		.	
4040	SPV.0090 SPECIAL 450. INSTALL CAMERA POWER CABLE	18,631.000 LF	.		.	
4050	SPV.0090 SPECIAL 451. INSTALL CAT-5E CABLE	39,224.000 LF	.		.	

## SCHEDULE OF ITEMS

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20150210006

5390-00-72

N/A

5390-00-73

N/A

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CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
4060	SPV.0090 SPECIAL 452. FIBER OPTIC TRACER CABLE	9,900.000 LF	.		.	
4070	SPV.0090 SPECIAL 453. FIBER OPTIC WARNING TAPE	3,500.000 LF	.		.	
4080	SPV.0090 SPECIAL 700. SAWING PAVEMENT DECK PREPARATION AREAS	16.000 LF	.		.	
4090	SPV.0105 SPECIAL 001. SURVEY PROJECT 5390-00-72	LUMP	LUMP		.	
4100	SPV.0105 SPECIAL 002. SURVEY PROJECT 5390-00-73	LUMP	LUMP		.	
4110	SPV.0105 SPECIAL 003. SURVEY PROJECT 5569-00-72	LUMP	LUMP		.	
4120	SPV.0105 SPECIAL 004. CONCRETE PAVEMENT JOINT LAYOUT	LUMP	LUMP		.	
4130	SPV.0105 SPECIAL 350. ELECTRICAL SERVICE METER BREAKER PEDESTAL SPECIAL USH 14 & LEXINGTON DR	LUMP	LUMP		.	
4140	SPV.0105 SPECIAL 351. ELECTRICAL SERVICE METER BREAKER PEDESTAL SPECIAL STH 26 & MORSE STREET	LUMP	LUMP		.	

## SCHEDULE OF ITEMS

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20150210006

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N/A

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N/A

5569-00-72

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CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
4150	SPV.0105 SPECIAL 450. FURNISH AND INSTALL TRAFFIC SIGNALCABINET CONTROLLER USH 51 & USH 59	LUMP	LUMP			.
4160	SPV.0105 SPECIAL 451. EMERGENCY VEHICLE EGRESS WARNING SYSTEM USH 51 & SWIFT STREET	LUMP	LUMP			.
4170	SPV.0105 SPECIAL 452. REMOVE TRAFFIC SIGNAL USH 51 & STH 59	LUMP	LUMP			.
4180	SPV.0105 SPECIAL 453. FURNISH AND INSTALL MICROWAVE DETECTION SYSTEM	LUMP	LUMP			.
4190	SPV.0105 SPECIAL 454. FURNISH AND INSTALL CELLULAR MODEM ASSEMBLY	LUMP	LUMP			.
4200	SPV.0105 SPECIAL 455. TRANS & INSTALL STATE FURN ADAPTIVE TRAFFIC SIGNAL CAMERA, USH 14 & USH 51	LUMP	LUMP			.
4210	SPV.0105 SPECIAL 456. TRANS & INSTALL STATE FURN ADAPTIVE TRAFFIC SIGNAL C, USH 14 & NEWVILLE ROAD	LUMP	LUMP			.
4220	SPV.0105 SPECIAL 457. TRANS & INSTALL STATE FURN ADAPTIVE TRAFFIC SIGNAL CAM, USH 14 & KENNEDY RD	LUMP	LUMP			.

## SCHEDULE OF ITEMS

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N/A

5390-00-73

N/A

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CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
4230	SPV.0105 SPECIAL 458. TRANS & INSTALL STATE FURN ADAPTIVE TRAFFIC SIGNAL CAMERA, USH 14 & BELL ST	LUMP	LUMP			.
4240	SPV.0105 SPECIAL 459. TRANS & INSTALL STATE FURN ADAPTIVE TRAFFIC SIGNAL CAMERA, USH 14 & STH 26	LUMP	LUMP			.
4250	SPV.0105 SPECIAL 460. TRANS & INSTALL STATE FURN ADAPTIVE TRAFFIC SIGNAL CAM, USH 14 & LEXINGTON	LUMP	LUMP			.
4260	SPV.0105 SPECIAL 461. TRANS & INSTALL STATE FURN ADAPTIVE TRAFFIC SIGNAL CAM, USH 14 & PONTIAC DR	LUMP	LUMP			.
4270	SPV.0105 SPECIAL 462. TRANS & INSTALL STATE FURN ADAPTIVE TRAFFIC SIG CAM, USH 14 & IH 39 SB RAMP	LUMP	LUMP			.
4280	SPV.0105 SPECIAL 463. TRANS & INSTALL STATE FURN ADAPTIVE TRAFFIC SIG CAM, USH 14 & IH 39 NB RAMP	LUMP	LUMP			.
4290	SPV.0105 SPECIAL 464. TRANS & INSTALL STATE FURN ADAPTIVE TRAFFIC SIG CAM, USH 14 & DEERFIELD DR	LUMP	LUMP			.

## SCHEDULE OF ITEMS

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20150210006

5390-00-72

N/A

5390-00-73

N/A

5569-00-72

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CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
4300	SPV.0105 SPECIAL 465. TRANS & INSTALL STATE FURN ADAPTIVE TRAFFIC SIGNAL CAM, USH 14 & WRIGHT RD	LUMP	LUMP			.
4310	SPV.0105 SPECIAL 466. TRANS & INSTALL STATE FURN ADAPTIVE TRAFFIC SIGNAL CAMERA, STH 26 & MORSE ST	LUMP	LUMP			.
4320	SPV.0105 SPECIAL 467. TRANS & INSTALL STATE FURN ADAPTIVE TRAFFIC SIG CAM, STH 26 & KETTERING ST	LUMP	LUMP			.
4330	SPV.0105 SPECIAL 468. INSTALL FIBER OPTIC COMMUNICATIONS IN CABINET, USH 14 & NEWVILLE ROAD	LUMP	LUMP			.
4340	SPV.0105 SPECIAL 469. INSTALL FIBER OPTIC COMMUNICATIONS IN CABINET, USH 14 & KENNEDY ROAD	LUMP	LUMP			.
4350	SPV.0105 SPECIAL 470. INSTALL FIBER OPTIC COMMUNICATIONS IN CABINET, USH 14 & BELL STREET	LUMP	LUMP			.
4360	SPV.0105 SPECIAL 471. INSTALL FIBER OPTIC COMMUNICATIONS IN CABINET, USH 14 & STH 26	LUMP	LUMP			.



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N/A

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N/A

5569-00-72

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CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
4370	SPV.0105 SPECIAL 472. INSTALL FIBER OPTIC COMMUNICATIONS IN CABINET, USH 14 & LEXINGTON DRIVE	LUMP	LUMP			.
4380	SPV.0105 SPECIAL 476. INSTALL FIBER OPTIC COMMUNICATIONS IN CABINET, USH 14 & DEERFIELD DRIVE	LUMP	LUMP			.
4390	SPV.0105 SPECIAL 477. INSTALL FIBER OPTIC COMMUNICATIONS IN CABINET, USH 14 & WRIGHT ROAD	LUMP	LUMP			.
4400	SPV.0105 SPECIAL 478. INSTALL FIBER OPTIC COMMUNICATIONS IN CABINET, STH 26 & MORSE STREET	LUMP	LUMP			.
4410	SPV.0105 SPECIAL 479. INSTALL STATE FURNISHED TRAFFIC SIGNAL CABINET, USH 14 & USH 51	LUMP	LUMP			.
4420	SPV.0105 SPECIAL 480. INSTALL STATE FURNISHED TRAFFIC SIGNAL CABINET, USH 14 & NEWVILLE ROAD	LUMP	LUMP			.
4430	SPV.0105 SPECIAL 481. INSTALL STATE FURNISHED TRAFFIC SIGNAL CABINET, USH 14 & KENNEDY ROAD	LUMP	LUMP			.

## SCHEDULE OF ITEMS

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5390-00-72

N/A

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N/A

5569-00-72

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CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
4440	SPV.0105 SPECIAL 482. INSTALL STATE FURNISHED TRAFFIC SIGNAL CABINET, USH 14 & BELL STREET	LUMP	LUMP			.
4450	SPV.0105 SPECIAL 483. INSTALL STATE FURNISHED TRAFFIC SIGNAL CABINET, USH 14 & STH 26	LUMP	LUMP			.
4460	SPV.0105 SPECIAL 484. INSTALL STATE FURNISHED TRAFFIC SIGNAL CABINET, USH 14 & LEXINGTON DRIVE	LUMP	LUMP			.
4470	SPV.0105 SPECIAL 485. INSTALL STATE FURNISHED TRAFFIC SIGNAL CABINET, USH 14 & PONTIAC DRIVE	LUMP	LUMP			.
4480	SPV.0105 SPECIAL 486. INSTALL STATE FURNISHED TRAFFIC SIGNAL CABINET, USH 14 & IH 39 SB RAMP	LUMP	LUMP			.
4490	SPV.0105 SPECIAL 487. INSTALL STATE FURNISHED TRAFFIC SIGNAL CABINET, USH 14 & IH 39 NB RAMP	LUMP	LUMP			.
4500	SPV.0105 SPECIAL 488. INSTALL STATE FURNISHED TRAFFIC SIGNAL CABINET, USH 14 & DEERFIELD DRIVE	LUMP	LUMP			.
4510	SPV.0105 SPECIAL 489. INSTALL STATE FURNISHED TRAFFIC SIGNAL CABINET, USH 14 & WRIGHT ROAD	LUMP	LUMP			.

## SCHEDULE OF ITEMS

CONTRACT:

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20150210006

5390-00-72

N/A

5390-00-73

N/A

5569-00-72

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CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
4520	SPV.0105 SPECIAL 490. INSTALL STATE FURNISHED TRAFFIC SIGNAL CABINET, STH 26 & MORSE STREET	LUMP	LUMP			.
4530	SPV.0105 SPECIAL 491. INSTALL STATE FURNISHED TRAFFIC SIGNAL CABINET, STH 26 & KETTERING ST	LUMP	LUMP			.
4540	SPV.0105 SPECIAL 492. INSTALL STATE FURNISHED MICROWAVE VEHICLE DETECTION, USH 14 & USH 51	LUMP	LUMP			.
4550	SPV.0105 SPECIAL 493. INSTALL STATE FURNISHED MICROWAVE VEHICLE DETECTION, USH 14 & NEWVILLE RD	LUMP	LUMP			.
4560	SPV.0105 SPECIAL 494. INSTALL STATE FURNISHED MICROWAVE VEHICLE DETECTION, USH 14 & KENNEDY RD	LUMP	LUMP			.
4570	SPV.0105 SPECIAL 495. INSTALL STATE FURNISHED MICROWAVE VEHICLE DETECTION, USH 14 & BELL STREET	LUMP	LUMP			.
4580	SPV.0105 SPECIAL 496. INSTALL STATE FURNISHED MICROWAVE VEHICLE DETECTION, USH 14 & STH 26	LUMP	LUMP			.

## SCHEDULE OF ITEMS

CONTRACT:

20150210006

PROJECT(S):

5390-00-72

5390-00-73

5569-00-72

FEDERAL ID(S):

N/A

N/A

WISC 2015086

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
4590	SPV.0105 SPECIAL 497. INSTALL STATE FURNISHED MICROWAVE VEHICLE DETECTION, USH 14 & LEXINGTON DR	LUMP	LUMP			.
4600	SPV.0105 SPECIAL 498. INSTALL STATE FURNISHED MICROWAVE VEHICLE DETECTION, USH 14 & PONTIAC DR	LUMP	LUMP			.
4610	SPV.0105 SPECIAL 499. INSTALL STATE FURNISHED MICROWAVE VEH DETECTION, USH 14 & IH 39 SB RAMP	LUMP	LUMP			.
4620	SPV.0105 SPECIAL 500. INSTALL STATE FURNISHED MICROWAVE VEH DETECTION, USH 14 & IH 39 NB RAMP	LUMP	LUMP			.
4630	SPV.0105 SPECIAL 501. INSTALL STATE FURNISHED MICROWAVE VEHICLE DETECTION, USH 14 & DEERFIELD DR	LUMP	LUMP			.
4640	SPV.0105 SPECIAL 502. INSTALL STATE FURNISHED MICROWAVE VEHICLE DETECTION, USH 14 & WRIGHT ROAD	LUMP	LUMP			.
4650	SPV.0105 SPECIAL 503. INSTALL STATE FURNISHED MICROWAVE VEHICLE DETECTION, STH 26 & MORSE ST	LUMP	LUMP			.

## SCHEDULE OF ITEMS

CONTRACT:

PROJECT(S):

FEDERAL ID(S):

20150210006

5390-00-72

N/A

5390-00-73

N/A

5569-00-72

WISC 2015086

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
4660	SPV.0105 SPECIAL 504. INSTALL STATE FURNISHED MICROWAVE VEHICLE DETECTION, STH 26 & KETTERING ST	LUMP	LUMP			.
4670	SPV.0105 SPECIAL 505. REMOVE AND REINSTALL TRAFFIC SIGNALS, USH 14 & STH 26	LUMP	LUMP			.
4680	SPV.0105 SPECIAL 506. REMOVE AND REINSTALL TRAFFIC SIGNALS, USH 14 & LEXINGTON DRIVE	LUMP	LUMP			.
4690	SPV.0105 SPECIAL 507. REMOVE AND REINSTALL TRAFFIC SIGNALS, USH 14 & PONTIAC DRIVE	LUMP	LUMP			.
4700	SPV.0105 SPECIAL 508. REMOVE AND REINSTALL TRAFFIC SIGNALS, USH 14 & IH 39 SB RAMP	LUMP	LUMP			.
4710	SPV.0105 SPECIAL 509. REMOVE AND REINSTALL TRAFFIC SIGNALS, USH 14 & IH 39 NB RAMP	LUMP	LUMP			.
4720	SPV.0105 SPECIAL 510. REMOVE AND REINSTALL TRAFFIC SIGNALS, USH 14 & DEERFIELD DRIVE	LUMP	LUMP			.
4730	SPV.0105 SPECIAL 511. TEMPORARY VEHICLE DETECTION, USH 14 & IH 39 SB RAMP	LUMP	LUMP			.

## SCHEDULE OF ITEMS

CONTRACT:

PROJECT(S):

FEDERAL ID(S):

20150210006

5390-00-72

N/A

5390-00-73

N/A

5569-00-72

WISC 2015086

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
4740	SPV.0105 SPECIAL 512. TEMPORARY VEHICLE DETECTION, USH 14 & IH 39 NB RAMP	LUMP	LUMP			.
4750	SPV.0105 SPECIAL 513. TEMPORARY VEHICLE DETECTION, USH 14 & DEERFIELD DRIVE	LUMP	LUMP			.
4760	SPV.0105 SPECIAL 514. TRANSPORTING STATE FURNISHED MONOTUBE EQUIPMENT	LUMP	LUMP			.
4770	SPV.0105 SPECIAL 515. TRAFFIC SIGNAL SYSTEM INTEGRATOR	LUMP	LUMP			.
4780	SPV.0105 SPECIAL 516. INSTALL STATE FURN EMERG VEH PREEMP EQUIPMENT USH 14 & IH 39 SB RAMP	LUMP	LUMP			.
4790	SPV.0105 SPECIAL 517. INSTALL STATE FURN EMERG VEH PREEMP EQUIPMENT USH 14 & IH 39 NB RAMP	LUMP	LUMP			.
4800	SPV.0165 SPECIAL 001. BRICK PAVER BAND	SF 460.000	.		.	.
4810	SPV.0165 SPECIAL 002. REMOVE AND REPLACE DECORATIVE STONE DRIVEWAY	SF 265.000	.		.	.
4820	SPV.0165 SPECIAL 200. CURB RAMP DETECTABLE WARNING FIELD YELLOW TEMPORARY	SF 16.000	.		.	.
	SECTION 0001 TOTAL				.	.
	TOTAL BID				.	.

**PLEASE ATTACH SCHEDULE OF ITEMS HERE**