

**HIGHWAY WORK PROPOSAL**

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

Proposal Number:

**27**

<u>COUNTY</u>	<u>STATE PROJECT ID</u>	<u>FEDERAL PROJECT ID</u>	<u>PROJECT DESCRIPTION</u>	<u>HIGHWAY</u>
Marathon	1170-01-70	WISC 2012 708	Wausau - Merrill CTH K/B51 Interchange	USH 51
Marathon	1170-01-71		Wausau - Merrill CTH U Overhead	USH 51
Marathon	1170-01-73	WISC 2012 709	Wausau - Merrill Bridge Street to Decator Drive	USH 51
Marathon	6999-18-70	WISC 2012 714	Merrill Avenue/County Road U City of Wausau Business 51 to Westwood Drive	USH 51

# ADDENDUM REQUIRED ATTACHED AT BACK

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, \$ 640,000.00 Payable to: Wisconsin Department of Transportation Bid Submittal Due Date: December 11, 2012 Time (Local Time): 9:00 AM Contract Completion Time November 14, 2014 Assigned Disadvantaged Business Enterprise Goal <div style="text-align: right;">10 %</div>	Attach Proposal Guaranty on back of this PAGE. Firm Name, Address, City, State, Zip Code <div style="text-align: center; font-size: 2em; font-weight: bold;">SAMPLE</div> <div style="text-align: center; font-weight: bold;">NOT FOR BIDDING PURPOSES</div> This contract is exempt from federal oversight.
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This certifies that the undersigned bidder, duly sworn, is an authorized representative of the firm named above; that the bidder has examined and carefully prepared the bid from the plans, Highway Work Proposal, and all addenda, and has checked the same in detail before submitting this proposal or bid; and that the bidder or agents, officer, or employees have not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with this proposal bid.

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

Subscribed and sworn to before me this date \_\_\_\_\_

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

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

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

Notary Seal

\_\_\_\_\_  
 (Bidder Signature)

\_\_\_\_\_  
 (Print or Type Bidder Name)

\_\_\_\_\_  
 (Bidder Title)

### For Department Use Only

Type of Work	
Grading, base aggregate dense, concrete pavement, HMA pavement, Structures B-37-0153, B-37-0154, B-37-0167, B-37-0156, B-37-436, C-37-0027, C-37-4, S-37-64 and S-37-91.	
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)





**FEBRUARY 1999**

**LIST OF SUBCONTRACTORS**

Section 66.29(7), Wisconsin Statutes, provides that a bidder, as a part of his proposal, shall submit a list of the subcontractors he proposes to contract with and the class of work to be performed by each, provided that to qualify for such listing each subcontractor must first submit his bid in writing to the general contractor at least 48 hours prior to the time of bid closing. It further provides that a proposal of a bidder shall not be invalid if any subcontractor, and the class of work to be performed by such subcontractor, has been omitted from a proposal.

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.

<b>Name of Subcontractor</b>	<b>Class of Work</b>	<b>Estimated Value</b>
<hr/>	<hr/>	<hr/>
<hr/>	<hr/>	<hr/>
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**DECEMBER 2000**

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

Instructions for Certification

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

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

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

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

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

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## **SPECIAL PROVISIONS**

### **1. General.**

Perform the work under this construction contract for Project 1170-01-70, Wausau – Merrill, USH 51, CTH K/B51 Interchange, Marathon County, Wisconsin; 1170-01-71, Wausau – Merrill, USH 51, CTH U Overhead, Marathon County, Wisconsin; 1170-01-73, Wausau – Merrill, USH 51, Bridge Street to Decator Drive, Marathon County, Wisconsin; 6999-18-70, Merrill Avenue/County Road U, City of Wausau, Business 51 to Westwood Drive, Marathon County, Wisconsin as the plans show and execute the work as specified in the State of Wisconsin, Department of Transportation, Standard Specifications for Highway and Structure Construction, 2013 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 (20120615)

### **2. Scope of Work.**

#### **1170-01-70**

The work under this contract shall consist of grading, base aggregate dense, select crushed material, concrete pavement, curb and gutter, HMA pavement, Structure B-37-0153, B-37-0154, C-37-4, S-37-91, storm sewer and all incidental items necessary to complete the work as shown on the plans and included in the proposal and contract.

104-005 (20090901)

#### **1170-01-71**

The work under this contract shall consist of Structure B-37-436 and all incidental items necessary to complete the work as shown on the plans and included in the proposal and contract.

104-005 (20090901)

#### **1170-01-73**

The work under this contract shall consist of grading, base aggregate dense, select crushed material, concrete pavement, HMA pavement, cable guard, B-37-0167, C-37-0027, B-37-0156, S-37-64 and all incidental items necessary to complete the work as shown on the plans and included in the proposal and contract.

104-005 (20090901)

**6999-18-70**

The work under this contract shall consist of grading, base aggregate dense, select crushed material, concrete pavement, HMA pavement, curb and gutter, storm sewer and all incidental items necessary to complete the work as shown on the plans and included in the proposal and contract.

104-005 (20090901)

**3. Prosecution and Progress.**

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

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

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

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

**Definitions**

A weekday is a calendar day from Monday 6:00 AM to Friday 12:00 PM.

A weekend day is a calendar day from Friday 12:01 PM to Monday 4:59 AM.

Peak, Off-Peak and Night Time Hours are defined as follows:

<b>For:</b>							
<b>May 28, 2013 – September 3, 2013 and May 27, 2014 – September 2, 2014</b>							
	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Northbound							
Night Time	12:00 AM-5:00 AM	12:00 AM-5:00 AM	12:00 AM-5:00 AM	12:00 AM-5:00 AM	12:00 AM-5:00 AM	12:00 AM-5:00 AM	12:00 AM-5:00 AM
Off-Peak	5:00 AM-7:00 PM	5:00 AM-6:00 AM	5:00 AM-6:00 AM	5:00 AM-6:00 AM	5:00 AM-6:00 AM	5:00 AM-6:00 AM	5:00 AM-12:00 PM
Peak Hour		6:00 AM-10:00 AM	6:00 AM-10:00 AM	6:00 AM-10:00 AM	6:00 AM-10:00 AM	6:00 AM-10:00 AM	12:00 PM-10:00 PM
Off-Peak		10:00 AM-4:00 PM	10:00 AM-4:00 PM	10:00 AM-4:00 PM	10:00 AM-4:00 PM	10:00 AM-12:00 PM	
Peak Hour		4:00 PM-7:00 PM	4:00 PM-7:00 PM	4:00 PM-7:00 PM	4:00 PM-7:00 PM	12:00 PM-10:00 PM	
Off-Peak	7:00 PM-10:00 PM	7:00 PM-10:00 PM	7:00 PM-10:00 PM	7:00 PM-10:00 PM	7:00 PM-10:00 PM		
Night Time	10:00 PM-12:00 AM	10:00 PM-12:00 AM	10:00 PM-12:00 AM	10:00 PM-12:00 AM	10:00 PM-12:00 AM	10:00 PM-12:00 AM	10:00 PM-12:00 AM
Southbound							
Night Time	12:00 AM-5:00 AM	12:00 AM-5:00 AM	12:00 AM-5:00 AM	12:00 AM-5:00 AM	12:00 AM-5:00 AM	12:00 AM-5:00 AM	12:00 AM-5:00 AM
Off-Peak	5:00 AM-12:00 PM	5:00 AM-6:00 AM	5:00 AM-6:00 AM	5:00 AM-6:00 AM	5:00 AM-6:00 AM	5:00 AM-6:00 AM	5:00 AM-12:00 PM
Peak Hour	12:00 PM-10:00 PM	6:00 AM-10:00 AM	6:00 AM-10:00 AM	6:00 AM-10:00 AM	6:00 AM-10:00 AM	6:00 AM-10:00 AM	12:00 PM-10:00 PM
Off-Peak		10:00 AM-4:00 PM	10:00 AM-4:00 PM	10:00 AM-4:00 PM	10:00 AM-4:00 PM	10:00 AM-12:00 PM	
Peak Hour		4:00 PM-7:00 PM	4:00 PM-7:00 PM	4:00 PM-7:00 PM	4:00 PM-7:00 PM	12:00 PM-10:00 PM	
Off-Peak		7:00 PM-10:00 PM	7:00 PM-10:00 PM	7:00 PM-10:00 PM	7:00 PM-10:00 PM		
Night Time	10:00 PM-12:00 AM	10:00 PM-12:00 AM	10:00 PM-12:00 AM	10:00 PM-12:00 AM	10:00 PM-12:00 AM	10:00 PM-12:00 AM	10:00 PM-12:00 AM

<b>For:</b> <b>All Other Time Periods</b>							
	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
Northbound							
Night Time	12:00 AM-5:00 AM	12:00 AM-5:00 AM	12:00 AM-5:00 AM	12:00 AM-5:00 AM	12:00 AM-5:00 AM	12:00 AM-5:00 AM	12:00 AM-5:00 AM
Off-Peak	5:00 AM-7:00 PM	5:00 AM-6:00 AM	5:00 AM-6:00 AM	5:00 AM-6:00 AM	5:00 AM-6:00 AM	5:00 AM-6:00 AM	5:00 AM-12:00PM
Peak Hour		6:00 AM-10:00 AM	6:00 AM-10:00 AM	6:00 AM-10:00 AM	6:00 AM-10:00 AM	6:00 AM-10:00 AM	12:00 PM-10:00 PM
Off-Peak		10:00 AM-4:00 PM	10:00 AM-4:00 PM	10:00 AM-4:00 PM	10:00 AM-4:00 PM	10:00 AM-12:00 PM	
Peak Hour		4:00 PM-7:00 PM	4:00 PM-7:00 PM	4:00 PM-7:00 PM	4:00 PM-7:00 PM	12:00 PM-8:00 PM	
Off-Peak	7:00 PM - 10:00 PM	7:00 PM - 10:00 PM	7:00 PM - 10:00 PM	7:00 PM - 10:00 PM	7:00 PM - 10:00 PM		
Night Time	10:00 PM-12:00 AM	10:00 PM-12:00 AM	10:00 PM-12:00 AM	10:00 PM-12:00 AM	10:00 PM-12:00 AM	10:00 PM-12:00 AM	10:00 PM-12:00 AM
Southbound							
Night Time	12:00 AM-5:00 AM	12:00 AM-5:00 AM	12:00 AM-5:00 AM	12:00 AM-5:00 AM	12:00 AM-5:00 AM	12:00 AM-5:00 AM	12:00 AM-5:00 AM
Off-Peak	5:00 AM-12:00 PM	5:00 AM-6:00 AM	5:00 AM-6:00 AM	5:00 AM-6:00 AM	5:00 AM-6:00 AM	5:00 AM-6:00 AM	5:00 AM-12:00 PM
Peak Hour	12:00 PM-10:00 PM	6:00 AM-10:00 AM	6:00 AM-10:00 AM	6:00 AM-10:00 AM	6:00 AM-10:00 AM	6:00 AM - 10:00 AM	12:00 PM-10:00 PM
Off-Peak		10:00 AM-4:00 PM	10:00 AM-4:00 PM	10:00 AM-4:00 PM	10:00 AM-4:00 PM	10:00 AM-12:00 PM	
Peak Hour		4:00 PM-10:00 PM	4:00 PM-10:00 PM	4:00 PM-10:00 PM	4:00 PM-10:00 PM	12:00 PM-10:00 PM	
Off-Peak							
Night Time	10:00 PM-12:00 AM	10:00 PM-12:00 AM	10:00 PM-12:00 AM	10:00 PM-12:00 AM	10:00 PM-12:00 AM	10:00 PM-12:00 AM	10:00 PM-12:00 AM

### **Wood Turtles**

Place silt fence in the project area near Bos Creek to prevent migration of the Wood Turtle into the work zone. Coordinate with the Wisconsin DNR contact in the plans to complete a survey prior to beginning of construction activities to ensure nesting turtles are not present within the work area.

### **Fish Spawning**

There shall be no instream disturbance of Bos Creek as a result of construction activity under or for this contract, from March 15 to June 15 both dates inclusive, in order to avoid adverse impacts upon the spawning of various fish species and mussels.

### **Migratory Birds**

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

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

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

### **General**

Complete construction operations on Overlook Drive and Overlook Drive/CTH U/Westwood Drive Intersection to the stage necessary to reopen it to through traffic prior to 12:01 AM June 15, 2013. Do not reopen until completing the following work: HMA pavement, sidewalk, curb and gutter, pavement parking, and signing.

Complete construction operations on CTH U to the stage necessary to reopen it to through traffic prior to 12:01 AM September 20, 2013. Do not reopen until completing the following work: concrete pavement, HMA pavement, curb and gutter, pavement parking, structure B-37-436, sidewalk, lighting and signing.

Complete construction operations on USH 51 Northbound lanes and B Ramp (Stage 6C ramp closure) to the stage necessary to reopen it to through traffic prior to 12:01 AM October 3, 2014. Do not reopen until completing the following work: concrete pavement, HMA pavement, lighting, curb and gutter, pavement parking, and signing.

Do not close NB USH 51 to a continuous single lane or close the B Ramp until after Wednesday, September 3, 2014.

*Supplement standard spec 108.11 as follows:*

If the contractor fails to complete the work necessary to reopen Overlook Drive and Overlook Drive/CTH U/Westwood Drive Intersection to through traffic prior to 12:01 AM June 15, 2013, the department will assess the contractor \$5,000 in interim liquidated damages for each calendar day that the roadway remains closed after 12:01 AM, June 15, 2013. 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 CTH U to through traffic prior to 12:01 AM September 20, 2013, the department will assess the contractor \$5,000 in interim liquidated damages for each calendar day that the roadway remains closed after 12:01 AM, September 20, 2013. 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 USH 51 Northbound onto new USH 51 NB lanes and the B Ramp (Stage 6C ramp closure) to through traffic prior to 12:01 AM October 3, 2014, the department will assess the contractor \$5,000 in interim liquidated damages for each calendar day that the roadway remains closed after 12:01 AM, October 3, 2014. 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.  
(20090901)

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

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

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

Lane restrictions and closures on USH 51 will occur within the project. Complete operations that will reduce traffic to one lane during Off-peak or Night Time hours except as noted in the "Traffic" article of these special provisions.

Prosecution and progress meetings will be held once a week. The contractor's superintendent or appointed representative shall attend and provide an update of the next week's operations, including proposed roadway and lane closures.

Upon placing traffic on temporary widening or temporary crossovers, monitor the condition of the pavement for a period of not less than 48 hours prior to beginning any work that may take place upon completion of the traffic switch and which would not permit traffic to be shifted back onto the existing roadway. Traffic switches to temporary widening will not be allowed to take place on Fridays, unless the contractor designates a representative to monitor the widening over the weekend.

## **Construction Staging**

### **Stage 1**

Remove the CTH U structure over USH 51. Construct AT and DT temporary ramps. Construct a portion of the NR line adjacent to the AT Ramp (Station 347+00 to 351+50). Construct Overlook Drive from Merrill Avenue to CTH K. Construct the 18<sup>th</sup> Avenue and Cassidy Drive cul-de-sacs. Construction of CTH U from the E ramp to Business 51 can be started in this stage. Construction of CTH U from Westwood Drive to the F ramp

that does not impact traffic can be started in this stage. Construction of Overlook Drive from CTH U to Merrill Avenue can be started in this stage. Construct street widening.

**Stage 1A (Note: Stage 1A, 1B, and 1C can be constructed at any time during the 2013 construction season)**

Construct temporary NM and SM widening towards the median along USH 51 northbound and southbound respectively.

**Stage 1B**

Construct outside lane of USH 51 northbound and southbound from beginning of project to Station 720+00. Construct temporary NW and SW widening towards the outside along USH 51 northbound and southbound respectively.

**Stage 1C**

Construct median lane of USH 51 from beginning of project to Station 720+00. Construct median crossovers NR and SR.

**Stage 2A**

Construct Overlook Drive from CTH U to Merrill Avenue. Construct CTH U from beginning of project through the Westwood Drive/Overlook Drive intersection. Construction of the CT ramp that does not require a shoulder/lane closure on CTH K/Business 51 traffic can be started completed this stage.

**Stage 2B**

Construct new CTH U from Westwood Drive/Overlook Drive to Business 51. Construct portions of new E (Station 746+00 to the ramp terminal) and F (Station 743+00 to ramp terminal) ramps. Construct NR widening along existing USH 51 northbound at available locations (i.e. the NR line cannot be completed in the area of the AT ramp, B ramp or CTH K). Construct Merrill Avenue cul-de-sac.

Construct temporary BT, ET and FT ramps. Construct the EU and FU ramps for use in future stages. Construct median portion of CT ramp. Construct a portion of the CU ramp in the USH 51 median. Construction of the CT ramp that does not require a shoulder/lane closure on CTH K/Business 51 traffic can be started this stage.

**Stage 3A**

Complete the construction of the NR line south of CTH K (Station 351+50 to 361+50) and north of CTH K (Station 364+50 to 381+50). Construct CT line.

Complete construction of Pond B.

**Stage 3B (Winter Shutdown traffic configuration)**

No work during this stage.



**2014**

Provide a start date in writing at least 14 calendar days prior to the planned start of construction in 2014. Upon approval the engineer will issue the notice to proceed within ten calendar days before the approval start date.

**Stage 4**

Do not begin Stage 4 until spring of 2014. Finish construction of NR line (Station 361+50 to 364+50). Begin construction of CTH K/Business 51. Construct CTH K northbound lanes from approximately Station 52+00 to end of project.

**Stage 5A**

Construct southbound USH 51 from Station 720+00 to the north end of the project. Gap construction areas where temporary ramps will be required to keep C and F ramps open to traffic. Begin B-37-0153/0154/0156 structure work. Construct USH 51 northbound lanes from approximately 758+00 to 776+00. Construct median lane of USH 51 northbound from approximately Station 756+50 to 758+00. Begin construction of the D ramp. Finish construction of the F ramp. Continue constructing CTH K/Business 51. Construct the temporary CU and FV ramps. Construct the SR line.

**Stage 5A (Phase 1)**

Construct the north quadrant of the CTH K/Overlook Drive/20<sup>th</sup> Avenue intersection.

**Stage 5A (Phase 2)**

Construct the east quadrant of the CTH K/Overlook Drive/20<sup>th</sup> Avenue intersection.

**Stage 5B**

Construct southbound USH 51 in the areas gapped for CT and FU ramps. Begin construction of CTH K southbound lanes west of the interchange.

**Stage 5B (Phase 1)**

Construct the south quadrant of the CTH K/Overlook Drive/20<sup>th</sup> Avenue intersection.

**Stage 5B (Phase 2)**

Construct the east quadrant of the CTH K/Overlook Drive/20<sup>th</sup> Avenue intersection.

**Stage 6A**

Construct northbound USH 51 from Station 720+00 to 758+00 and Station 776+00 to 806+00. Construct climbing lane from Station 806+00 to the north end of the project. Gaps in construction are required in areas where temporary ramps will be kept open to traffic. Construct CTH K in area where NR line was located. Begin construction of the A ramp. Begin construction of B ramp from 766+00 to 775+50. Complete construction of the E ramp.

**Stage 6B**

Construct northbound USH 51 in the areas gapped for the EU ramp.

**Stage 6C**

Construct northbound USH 51 lanes from Station 776-00 – 785+00 and from Station 806+00 to the end of the project. Complete construction of CTH K/Business 51 and the B ramp.

**Stage 7**

Remove temporary widening adjacent to northbound and southbound USH 51 lanes. Remove temporary ramps. Construct curb and gutter on Overlook Drive median near CTH K/Business 51.

Complete construction of Pond A.

**4. Traffic.**

Maintain traffic with a minimum of 11-foot travel lanes at all times on all roadways unless otherwise noted within this article, or in the plans.

Conduct operations in a manner that will cause the least interference to traffic, pedestrian movements, commercial access, and residential access adjacent to and within the construction area. This includes the following restrictions:

- No vehicle or piece of equipment will be permitted to enter a live traffic roadway against the direction of normal traffic flow, even if the roadway has been declared part of a haul road.
- 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. Any damage done to the above during construction operations shall be repaired or replaced at the contractor's expense.
- Access live traffic lanes only at the ends of the work zone. Temporary access points within the temporary concrete barrier may be allowed at different locations if the engineer approves the location, configuration, and traffic control devices as proposed by the contractor. Do not cut in between traffic control devices to enter USH 51 traffic lanes.
- Provide a minimum 6-foot shoulder along vertical cut areas adjacent to lanes carrying USH 51 traffic unless concrete barrier or beam guard is in place. Provide a minimum 4:1 in slope from the shoulder hinge point unless concrete barrier or beam guard is in place. Provide a minimum shy distance of 2 feet from live traffic lanes to beam guard or concrete barrier.
- Do not park or store equipment, vehicles or construction materials within 30 feet of the edge of the traffic lanes carrying USH 51 traffic during non-working hours unless properly protected as described in the standard specification and supplemental with the traffic control section of these special provisions.

- Do not park or store equipment, vehicles or construction materials within 20 feet of the edge of the traffic lanes carrying local road or ramp traffic during non-working hours unless properly protected as described in the standard specification and supplemental with the traffic control section of these special provisions.
- All construction vehicles and equipment entering or leaving live traffic lanes will yield to through traffic. Unsafe actions will result in an individual's removal from the project unless approved to resume project activities by the engineer. Impediments to traffic due to construction activities or material delivery will be subject to lane rental assessments as determined by the engineer.
- Equip all construction vehicles and equipment entering or leaving the live traffic lanes with a hazard identification beam (flashing amber signal) of 8-inch minimum diameter. Activate the beam when merging into or exiting a live traffic lane.
- Notify the Wisconsin State Patrol, Marathon County Sheriff's Department, local law enforcement, and other emergency services a minimum of two weeks prior to any full roadway or ramp closures, and lane closures on USH 51 that will be in effect through the peak hour.
- Do not use maintenance crossovers to make U-turns.
- Do not store equipment on-site during winter shutdown unless the department approves the location site.
- Provide a winter contact to the engineer. Marathon County Highway Department will be able to address most emergency situations, but the contractor is still responsible for maintaining Temporary Pavement and Traffic Control items within the work zone.

The single lane remaining open to traffic during lane closures on USH 51 shall have a minimum clear width of 16' (including shoulders) from face to face of temporary barrier, beam guard, and/or traffic drums

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

Maintain emergency and local vehicular access at all times to all driveways within the project limits unless otherwise noted below. Notify the property occupants five days in advance of the driveway reconstruction to verify closure or staged driveway construction methods. Construct driveway approaches to commercial businesses in stages or provide temporary access such that access to commercial property is provided at all times during

the life of the project. Temporary access may be constructed with base course at the contract unit price for Base Aggregate Dense 1¼-inch. Maintain at least one access to businesses at all times. Close residential driveways for a maximum of 7 calendar days for grading and placement of base aggregate and concrete paving for each driveway.

Primary access to CTH U for businesses located along CTH U between USH 51 and Business 51 must be provided off Business 51 at all times.

Primary access to CTH U for businesses located along CTH U between Westwood Drive and USH 51 must be provided off Westwood Drive at all times.

Traffic control stage changes will only be allowed during off peak or night time hours.

Coordinate traffic requirements under this project with other adjacent and concurrent department or local municipality projects. Contractor is responsible for implementing and coordinating with other contractors all traffic control as shown on the plans. Modifications to the traffic control plan may be required by the engineer to maintain safety and to be consistent with adjacent work by others.

Post all entrance and exit ramps seven business days in advance of their closure with dates and time of closure.

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

### **Temporary Regulatory Speed Limit Reduction**

A reduction of the posted regulatory speed limit from 65 mph to 55 mph is required when any of the following conditions are created within the project limits:

- Lane(s) closed and workers are present and active in close proximity to an open lane.
- Lane(s) narrowed to less than 12 feet and adjacent shoulder width is reduced.
- Traffic is shifted partly or completely onto a shoulder and/or temporary pavement and shoulder width is reduced.

At all other times the posted regulatory speed limit shall be 65 mph.

During periods when traffic conditions do not require a Temporary Regulatory Speed Reduction, speed limit signs shall be changed to the permanent posted speed limit. This may require posted speed and sign changes twice a day or more.

During approved temporary regulatory speed limit reductions, install regulatory speed limit signs on the inside and outside shoulders of the roadway at the beginning of the reduced regulatory speed zone, after all locations where traffic may enter the highway

segment or every ½ mile within the reduced regulatory speed zone. Signs shall be installed at the end of the temporary regulatory speed zone to designate the end of the temporary regulatory speed zone and inform drivers the posted regulatory speed limit reverts back to 65 mph. To minimize possible confusion to the traveling public and to ensure appropriate speed enforcement, enhanced attention to placement and changing of speed limit signs is required.

When construction activities impede the location of a post mounted regulatory speed limit sign, mount the regulatory speed limit sign on portable supports that meet the “crashworthy” definition and height criteria in the Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD).

### **Protection of Bridge Pier Columns**

Bridge pier columns are to remain protected at all times throughout construction. Remove existing guardrail concurrently with the placement of the temporary concrete barrier so that the bridge pier columns remain protected at all times. Placement of new beamguard shall be completed to a point to provide protection of the pier columns before the temporary concrete barrier is removed. Place remaining beamguard within 24 hours of the temporary concrete barrier being removed.

Maintain access at Westwood Drive.

### **Traffic Staging**

#### **Stage 1 (Construction Year 2013)**

Maintain at least one lane of through traffic on northbound and southbound USH 51 during Off-peak hours and two lanes of through traffic at all other times. Close the outside shoulders of northbound and southbound USH 51 for construction of the temporary AT and DT ramps. Use Off-peak hour outside lane closures for construction activities requiring more space than provided by the shoulder closure.

Closure of northbound and southbound USH 51 will be allowed during Night Time hours (10:00 PM to 5:00 AM) for the removal of beams for Structure B-37-0069. Closure of USH 51 is allowed for 2 nights. Detour northbound traffic onto the E ramp, frontage road, and B ramp. Detour southbound traffic onto the C ramp, frontage road, and F ramp.

Keep all ramps to/from USH 51 and CTH U/CTH K (including the frontage roads) open to traffic.

Keep CTH K/Business 51 open to traffic.

Close CTH U to traffic between the ramp terminals (detour via USH 51/Bridge Street Interchange, existing frontage roads, and Business 51). Close CTH U to through traffic between the E ramp and Business 51.

Close Overlook Drive to through traffic. Close Cassidy Drive to construct Overlook Drive connection to CTH K/Business 51.

Stages 1A, 1B, and 1C are independent of other staging. Complete Stage 1A - 1C prior to the 2013 winter shutdown.

**Stage 1A (flexible timeframe, completed 2013)**

Maintain at least one lane of through traffic on northbound and southbound USH 51 during Off-peak hours, and two lanes of through traffic at all other times. Close the inside shoulders of northbound and southbound USH 51 for construction of the temporary NM and SM widening. Use Off-peak hour inside lane closures for construction activities requiring more space than provided by the shoulder closure.

Keep ramps at Bridge Street open at all times.

**Stage 1B (flexible timeframe, completed 2013)**

Maintain at least one lane of through traffic on northbound and southbound USH 51 during Off-peak hours, and two lanes of through traffic at all other times.

Shift northbound and southbound USH 51 traffic onto temporary NM and SM widening, respectively.

Keep ramps at Bridge Street open at all times.

**Stage 1C (flexible timeframe, completed 2013)**

Maintain at least one lane of through traffic on northbound and southbound USH 51 during Off-peak hours, and two lanes of through traffic at all other times.

Shift northbound and southbound USH 51 traffic onto temporary NW and SW widening, respectively.

Keep ramps at Bridge Street open at all times.

**Stage 2A**

Maintain at least one lane of through traffic on northbound and southbound USH 51 during Off-peak hours, and two lanes of through traffic at all other times (except as described below for beam placement and rock blasting). Close the inside and outside shoulders of northbound USH 51 for construction of the temporary NR widening. Close the inside shoulders of southbound USH 51 for construction of temporary FU ramp, NR widening, and median pier construction for Structure B-37-436. Use Off-peak hour lane closures for construction activities requiring more space than provided by the shoulder closure.

Use short term (up to 15 minutes) closures during night time hours on USH 51 for beam placement for Structure B-37-436.

Use short term closures for rock blasting required along the F and E ramps. See “General Requirements for Blasting Rock” for more information.

Close E and F ramps to traffic and permanently close the existing northbound and southbound frontage roads between CTH U and CTH K to traffic. Open temporary AT ramp to traffic for northbound USH 51 exiting traffic. Open temporary DT ramp to traffic for motorists destined for southbound USH 51. Keep the existing B and C ramps open to traffic.

Keep CTH K/Business 51 open to traffic.

Close CTH U from Overlook Drive to Business 51 to through traffic. Detour traffic via Westwood Drive, Bridge Street, 1<sup>st</sup> Avenue North/3<sup>rd</sup> Avenue North, and Business 51/CTH K.

Open Overlook Drive from Merrill Avenue to CTH K. Do not close CTH U to through traffic between Westwood Drive and USH 51 until Overlook Drive is open to traffic and has HMA pavement, signing and marking from CTH K through the Merrill Avenue intersection.

Do not remove the existing Merrill Avenue connection with CTH U for construction of the Merrill Avenue cul-de-sac until Overlook Drive is open to traffic between Merrill Avenue and CTH K.

Do not close 18<sup>th</sup> Avenue North connection to CTH U until Arthur Avenue connection to new CTH U is graded with base aggregate dense placed and Hammer Head cul-de-sac is completed on 18<sup>th</sup> Avenue North.

## **Stage 2B**

Maintain at least one lane of through traffic on northbound and southbound USH 51 during Off-peak hours, and two lanes of through traffic at all other times (except as described below for beam placement and rock blasting). Close the inside and outside shoulders of northbound USH 51 for construction of the temporary NR widening (only one shoulder closed at a time). Close the inside shoulders of southbound USH 51 for construction of temporary FU ramp, NR widening, and median pier construction for Structure B-37-436. Use Off-peak hour lane closures for construction activities requiring more space than provided by the shoulder closure.

Use short term (up to 15 minutes) closures during night time hours on USH 51 for beam placement for Structure B-37-436.

Use short term closures for rock blasting required along the F and E ramps. See “General Requirements for Blasting Rock” for more information.

Close E and F ramps to traffic. Temporary AT and DT ramps to remain open to traffic. The existing B and C ramps remain open to traffic.

Do not close E and F ramps to traffic prior to opening AT and DT ramps to traffic.

Keep CTH K/Business 51 open to traffic.

Open Overlook Drive from CTH U to Merrill Avenue (segment from Merrill Avenue to CTH K remains open to traffic).

Keep CTH U closed from Overlook Drive to Business 51 to through traffic and detour via Overlook Drive, CTH K/Business 51 and Overlook Drive.

### **Stage 3A**

Maintain at least one lane of through traffic on northbound and southbound USH 51 during Off-peak hours, and two lanes of through traffic at all other times. Close the outside shoulders of northbound USH 51 for construction of the temporary NR widening. Use Off-peak hour lane closures for construction activities requiring more space than provided by the shoulder closure.

Open CTH U and south ramps (ET and FT ramps) to traffic. Open the BT ramp to traffic. Keep the DT ramp open to traffic. Close the AT ramp as traffic will now use the ET ramp and CTH U. C ramp to remain open to traffic.

CTH K/Business 51 remains open to traffic.

### **Stage 3B (Winter Shutdown)**

Keep the all ramps open to traffic except the A ramp during the winter shutdown (detour via ET ramp and CTH U).

### **Stage 4 (Construction Year 2014)**

Maintain at least one lane of through traffic on northbound and southbound USH 51 during Off-peak hours, and two lanes of through traffic at all other times. Except as otherwise noted for rock excavation.

South ramps at CTH U (ET and FT ramps) and the temporary BT ramp remain open to traffic. Keep the existing C ramp open to traffic. Close the temporary DT ramp.

Close CTH K/Business 51 to through traffic between Overlook Drive and Campus Drive. Provide access to Overlook Drive on southbound CTH K/Business 51 lanes from the southbound USH 51 ramp terminal for exiting C ramp traffic. Detour CTH K/Business 51 traffic via CTH U and Overlook Drive. Provide access to temporary BT ramp on existing Westbound CTH K/Business 51.



Use short term closures for rock blasting required along CTH K/Business 51. See “General Requirements for Blasting Rock” for more information.

Keep CTH U open to traffic.

Keep Overlook Drive open to traffic.

#### **Stage 5A**

Shift northbound and southbound USH 51 traffic onto NR line.

Maintain at least one lane of through traffic on northbound and southbound USH 51 during Off-peak hours, and two lanes of through traffic at all other times. Except as otherwise noted for rock excavation.

The temporary ET ramp remains open to traffic. Switch the F ramp traffic onto the FU ramp. Switch B ramp traffic onto the temporary BU ramp. Switch C ramp traffic onto the temporary CT ramp.

Keep CTH K/Business 51 between Overlook Drive and Campus Drive closed to traffic with detour via CTH U and Overlook Drive. Provide access to Overlook Drive on northbound CTH K/Business 51 lanes from the southbound USH 51 ramp terminal for exiting C ramp traffic.

Use short term closures for rock blasting required along CTH K/Business 51. See “General Requirements for Blasting Rock” for more information.

Keep CTH U open to traffic.

Keep Overlook Drive open to traffic.

Decator Drive can be closed from 7:00 AM – 8:00 PM daily to construct B-37-156. Open Decator Drive to traffic from 8:00 PM and 7:00 AM.

#### **Stage 5A Phase 1**

Switch 20<sup>th</sup> Avenue to bidirectional on southbound lanes through the CTH K/Overlook Drive/20<sup>th</sup> Avenue intersection.

#### **Stage 5A Phase 2**

Switch 20<sup>th</sup> Avenue southbound lane onto the existing left turn lane through the CTH K/Overlook Drive/20<sup>th</sup> Avenue intersection.

#### **Stage 5B**

Keep northbound and southbound USH 51 traffic on NR line.

Maintain at least one lane of through traffic on northbound and southbound USH 51 during Off-peak hours, and two lanes of through traffic at all other times. Except as otherwise noted for rock excavation.

The temporary ET and BU ramps remain open to traffic. Switch the F ramp traffic onto the FV ramp. Switch C ramp traffic onto the temporary CU ramp.

Keep CTH K/Business 51 between Overlook Drive and Campus Drive closed to traffic with detour via CTH U and Overlook Drive. Provide access to Overlook Drive on southbound CTH K/Business 51 lanes from the southbound USH 51 ramp terminal for exiting C ramp traffic.

Use short term closures for rock blasting required along Business 51. See “General Requirements for Blasting Rock” for more information.

Keep CTH U open to traffic.

Keep Overlook Drive open to traffic.

#### **Stage 5B Phase 1**

Switch 20<sup>th</sup> Avenue southbound lane onto the existing left turn lane through the CTH K/Overlook Drive/20<sup>th</sup> Avenue intersection.

#### **Stage 5B Phase 2**

Switch 20<sup>th</sup> Avenue to bidirectional on southbound lanes through the CTH K/Overlook Drive/20<sup>th</sup> Avenue intersection.

#### **Stage 6A**

Shift northbound and southbound USH 51 traffic onto the newly reconstructed southbound lanes and temporary widening from the beginning of the project to CTH U. North of CTH U, shift northbound USH 51 traffic onto the newly reconstructed northbound lanes via the SR line. North of CTH K, shift northbound USH 51 traffic onto the temporary median widening (NR line which carried southbound USH 51 Traffic during stage 5B).

Maintain at least one lane of through traffic on northbound and southbound USH 51 during Off-peak hours and two lanes of through traffic at all other times. Except as otherwise noted for rock excavation.

Switch E ramp traffic onto the temporary EU ramp. Switch F and C ramp traffic onto the newly reconstructed ramps. Switch B ramp traffic onto the BV ramp (this alignment uses the existing NR line pavement).

Keep CTH K/Business 51 between Overlook Drive and Campus Drive closed to traffic with detour via CTH U and Overlook Drive. Provide access to Overlook Drive on southbound CTH K/Business 51 lanes from the southbound USH 51 ramp terminal for exiting C ramp traffic.

Use short term closures for rock blasting required along Business 51. See “General Requirements for Blasting Rock” for more information.

Keep CTH U open to traffic.

Keep Overlook Drive open to traffic.

### **Stage 6B**

Keep northbound and southbound USH 51 traffic in the same traffic configuration as stage 6A.

Maintain at least one lane of through traffic on northbound and southbound USH 51 during Off-peak hours and two lanes of through traffic at all other times. Except as otherwise noted for rock excavation.

Switch E ramp traffic onto the temporary EU ramp. Keep B, C and F ramps open to traffic.

Keep CTH K/Business 51 between Overlook Drive and Campus Drive closed to traffic with detour via CTH U and Overlook Drive. Continue to provide access to Overlook Drive on southbound CTH K/Business 51 lanes from the southbound USH 51 ramp terminal for exiting C ramp traffic.

Use short term closures for rock blasting required along Business 51. See “General Requirements for Blasting Rock” for more information.

Keep CTH U open to traffic.

Keep Overlook Drive open to traffic.

### **Stage 6C**

Keep northbound and southbound USH 51 traffic in the same traffic configuration as stage 6A.

Maintain at least one lane of through traffic on southbound USH 51 during Off-peak hours and two lanes of through traffic at all other times. Except as otherwise noted for rock excavation. A continuous single lane closure of northbound USH 51 north of CTH K/Business 51 is allowed for approximately one week during this stage. The lane closure can start at 8:00 PM on a Friday and must be removed by 12:00 PM the following Friday. Lane closures that extend past 12:00 PM on Friday will be subject to lane rental. During Phase 2, maintain at least one lane of through traffic on northbound USH 51 during Off-

peak hours and two lanes of through traffic at all other times. Except as otherwise noted for rock excavation.

Keep E, C and F ramps open to traffic. Detour B ramp traffic via CTH U, Overlook Drive, CTH K, and CTH WW.

Keep CTH K/Business 51 between Overlook Drive and Campus Drive closed to traffic with detour via CTH U and Overlook Drive. Continue to provide access to Overlook Drive on southbound CTH K/Business 51 lanes from the southbound USH 51 ramp terminal for exiting C ramp traffic.

Use short term closures for rock blasting required along Business 51. See “General Requirements for Blasting Rock” for more information.

Keep CTH U open to traffic.

Keep Overlook Drive open to traffic.

#### **Stage 7**

Shift northbound USH 51 traffic onto the newly reconstructed northbound lanes. Keep southbound USH 51 traffic on the reconstructed southbound lanes.

Maintain at least one lane of through traffic on northbound and southbound USH 51 during Off-peak hours and two lanes of through traffic at all other times. Close the inside or outside shoulders of northbound and southbound USH 51 for removal of temporary widening and ramps. Closure of both the inside and outside shoulders at the same time is not allowed. Use Off-peak hour lane closures for construction activities requiring more space than provided by the shoulder closure.

Open ramps A, B, and D ramps to traffic. Keep C, E, and F ramps open to traffic.

Open CTH K/Business 51 to traffic.

Keep CTH U open to traffic.

Close Overlook Drive to traffic between Merrill Avenue and CTH K/Business 51.

### **5. Holiday Work Restrictions.**

Do not perform work on, nor haul materials of any kind along or across any portion of the highway carrying USH 51, Business 51, CTH U and CTH K 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, March 29, 2013 to 6:00 AM Monday, April 1, 2013 for Easter;
- From noon Friday, May 24, 2013 to 6:00 AM Wednesday, May 29, 2013 for Memorial Day;
- From noon Friday, June 28, 2013 to 7:00 PM Monday, July 8, 2013 for Independence Day;
- From noon Friday, August 30, 2013 to 6:00 AM Wednesday, September 4, 2013 for Labor Day;
- From noon Wednesday, November 27, 2013 to 6:00 AM Monday, December 2, 2013 for Thanksgiving;
- From noon Friday, December 20, 2013 to 6:00 AM Thursday, January 2, 2014 for Christmas and New Years;
- From noon Friday, April 18, 2014 to 6:00 AM Monday, April 21, 2014 for Easter;
- From noon Friday, May 23, 2014 to 6:00 AM Wednesday, May 28, 2014 for Memorial Day;
- From noon Friday, June 27, 2014 to 7:00 PM Monday, July 7, 2014 for Independence Day;
- From noon Friday, August 29, 2014 to 6:00 AM Wednesday, September 3, 2014 for Labor Day.

107-005 (20050502)

## 6. Utilities.

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

Follow the requirements for notification and coordination with the utilities of any rock blasting as defined in this article and the article for the General Requirements for Blasting Rock prior to any scheduled blasting activities in the event the utility wants to have a standby person on site during rock blasting operations.

### **Charter Communications (Cable TV)**

Charter Communications has existing underground and overhead cable TV facilities located throughout the project area.

Overhead cable TV facilities are generally located joint on Wisconsin Public Service (WPS) poles along the right side of CTH U from Westwood Drive to Station 30+25U, along the right side of CTH U from USH 51 to Business 51, along the left side of Merrill Avenue north of CTH U, along the east side of 18<sup>th</sup> Avenue, and along the south side of Arlington Avenue. There is an overhead crossing joint on WPS poles across USH 51 at Station 745+38NB. There are overhead service crossings throughout the project area.

There are underground cable TV facilities located along the left side of CTH U from Station 30+25U to Merrill Avenue, along the left side of Merrill Avenue for approximately 300 feet north of CTH U, along the right side of Arthur Avenue from CTH U to 18<sup>th</sup> Avenue, along the right side of Overlook Drive from Station 207+25V to

Station 213+50V, and along the south and north sides of Boot Lane. There are underground services throughout the project area.

There are conflicts with Charter Communication facilities along CTH U and Overlook Drive. Existing underground facilities which are in conflict will be discontinued in place and pedestals will be removed by Charter Communications.

Charter Communications anticipates relocating overhead communication facilities joint on WPS electric poles in the following locations: CTH U between Overlook Drive and USH 51, CTH U from Station 64+73U to Station 71+50U, aerial service drops across CTH U, Merrill Avenue crossing CTH U near Station 44+00U, Overlook Drive from Station 200+75V to Station 202+25V, Overlook Drive from Station 220+89V to Station 223+62V, the right side of Merrill Avenue (ME line) at the Overlook Drive intersection, and the crossing of USH 51 at approximately Station 745+59NB.

Charter proposes to install a new underground communication facility joint with WPS electric in the following locations: along the right side of CTH U from the pole near Station 22+00U to a splice location at Station 24+13U, RT, along the right side of CTH U from Station 52+87U to Station 55+94U, at the service crossing at Station 65+20U, and along the right side of Overlook Drive from Station 209+23V to Station 213+40V.

Charter Communications proposes to install a new communications facility on the south side of Arthur Avenue to 18<sup>th</sup> Avenue joint with WPS gas. Charter Communications also proposes to install a new underground communications facility on the right side of CTH U from Station 55+94U to Station 64+73U joint with WPS gas.

Charter Communications proposes a new underground service crossing at approximately Station 57+48U.

Charter Communications proposes to relocate most of their facilities joint with WPS electric and gas. Relocations are proposed prior to construction and are anticipated to be completed by April 22, 2013. Once the relocation work is completed, no conflicts are anticipated with any of the Charter Communication facilities except those that have been discontinued.

#### **City of Wausau (Lighting)**

The City of Wausau has lighting facilities located at the intersection of Business 51/CTH U, along the right side of CTH U from 12<sup>th</sup> Avenue to Business 51, and along the right side of 14<sup>th</sup> Avenue. One pole at the CTH U intersection near Station 71+50U, RT will be relocated as part of the work items under this contract. No additional conflicts are anticipated.

#### **Frontier Communications (Communications)**

Frontier Communications has underground and overhead communications facilities throughout the project area.

Overhead communications facilities are generally located joint on WPS poles along the right side of CTH U from USH 51 to Arlington Avenue, along the right side of Arthur Avenue, and along the left side of Overlook Drive north of Station 213+80V. There are overhead service crossings throughout the project.

There are underground communications facilities located along the left and right sides of CTH U from Westwood Drive to Station 28+60U, along the left side of CTH U from Station 28+60U to Merrill Avenue, along the right side of CTH U from Arlington Avenue to Business 51, along the east side of 18<sup>th</sup> Avenue, along the east and west sides of Merrill Avenue north of CTH U, along the right side of Overlook Drive from Boot Lane to Station 213+45V, and along the north side of Cassidy Drive. There are underground crossings along Business 51 at Station 31+85KN and along USH 51 at Station 753+69NB. The crossing at Station 753+69NB under the USH 51 mainline and the connector ramps is located within four 4-inch PVC ducts and a steel casing. The steel casing is approximately 180-feet in length and extends between left and right ditch lines of the USH 51 mainline. There are underground services located throughout the project.

There are conflicts with Frontier Communication facilities along CTH U and Overlook Drive. Existing underground facilities which are in conflict will be discontinued in place.

Frontier Communications proposes to install new underground communications facilities on the left side of CTH U approximately 5-feet from the proposed right-of-way from Station 20+25U to Station 43+70U. New underground crossings of CTH U are proposed to be installed at approximately Station 25+10U and Station 39+55U. The crossing at Station 39+55U is proposed to extend to the south side Arthur Avenue and run along the left side of Arthur Avenue south to 18<sup>th</sup> Avenue.

Frontier Communications proposes to install new underground communications facilities on the right side of CTH U approximately 5-feet from the proposed right-of-way from Station 52+80U to Station 60+50U joint with WPS underground electric. New aerial crossings are proposed near Station 60+25U.

New underground communications facilities are proposed to be installed on the left side of CTH U approximately 5-feet from the proposed right-of-way from Station 62+60U to Station 68+80U.

From CTH U at Station 43+70U, LT, Frontier Communications proposes to install new underground communication facility along the west right-of-way line of USH 51 from Station 754+17SB to Station 759+00SB. A new crossing of USH 51 is proposed to be constructed at approximately Station 759+00NB from west right-of-way line to the east right-of-way line of USH 51. From the east right-of-way of USH 51 and Business 51, Frontier Communications will install a new facility approximately 3 to 5-feet from the existing right-of-way from Station 36+00KS, LT south to Station 28+12K, LT. A new crossing of Business 51 will be installed at approximately Station 31+85KN.

Frontier Communications proposes to install a new underground communication facility on the east side of Merrill Avenue and extending to Bovine Lane. Their new facilities are then proposed to follow Bovine Lane and extend to the east side of the USH 51 right-of-way near Station 759+00SB, LT.

Frontier Communications anticipates installing a new underground communication facility approximately 5-feet from the right-of-way line along the north side of Boot Lane and along the right side of Overlook Drive from Station 209+25V to Station 213+45V. Frontier Communication proposes to install a new underground roadway crossing on the left side of Merrill Avenue at Overlook Drive near Station 222+90V.

Underground services will be installed throughout the project.

Relocations are proposed prior to construction and are anticipated to be completed by April 22, 2013. Once the relocation work is completed, no conflicts are anticipated with any of the Frontier Communications facilities except those that have been discontinued.

#### **Wausau Water Works (Sanitary Sewer)**

The Wausau Water Works has underground sanitary sewer facilities throughout the project area.

Sanitary sewer main is generally located within the travel lanes of CTH U east of USH 51. Sanitary sewer mains cross CTH U west of USH 51 near Station 38+75U and Station 44+10U. Sanitary sewer is also located along the left side of Merrill Avenue north of CTH U extending approximately 500-feet north of CTH U, along 12<sup>th</sup> Avenue and 13<sup>th</sup> Avenue south of CTH U, and along 18<sup>th</sup> Avenue south of Arthur Avenue. There are also existing sanitary sewer main crossings on USH 51 at approximately Station 720+34NB and Station 780+05NB; on Business 51 at approximately Station 30+40KN; and on CTH K at approximately Station 68+25KN. There are sanitary laterals located throughout the project area.

There are conflicts with the sanitary sewer, service laterals, and manholes along CTH U. There is also one conflict with the sanitary manhole at Station 230+47V, RT.

Adjustments and relocations of the sanitary sewer and manholes will be completed under the items provided for in this contract and as shown on the utility sheets in the plan.

In addition, new sanitary sewer main is proposed along Overlook Drive from Station 223+25V to Station 230+50V. The work will be completed under the items provided for in this contract and as shown on the utility sheets in the plan.

#### **Wausau Water Works (Water)**

Wausau Water Works has underground water facilities throughout the project area.



Water main is generally located within the travel lanes of CTH U east of USH 51. There is a water main crossing on CTH U west of USH 51 near Station 38+75U. Water main is also located along Merrill Avenue north of CTH U; along Arlington Avenue, 12<sup>th</sup> Avenue and 13<sup>th</sup> Avenue south of CTH U; and along 18<sup>th</sup> Avenue south of Arthur Avenue. There are also existing water main crossings on Business 51 at approximately Station 30+35KN and on CTH K at approximately Station 68+35KN. There are water services located throughout the project area.

There are conflicts with the water main, service laterals, hydrants and valves along CTH U. There is also one conflict with the hydrant and water valve at Station 230+25V, RT.

Except as described below, adjustments, relocations, and installation of the water main, service laterals, valves, hydrants and the new water main along Overlook Drive, from Station 223+50V to Station 230+35V, will be completed under the items provided for in this contract and as shown on the utility portion of the plan.

Wausau Water Works crews will complete the hydrant adjustments and the hydrant relocations during construction once grading has been completed to within one-foot of final elevation. Wausau Water Works anticipates each hydrant adjustment will take a half of working day and hydrant relocations will take one working day.

During construction, Wausau Water Works crews will complete the water lateral extensions in coordination with the contractor. Complete work for excavation and backfilling the water lateral trench as specified in the article for Excavate and Backfill Utility Trench and manage the work to allow the Wausau Water Works crews to complete the necessary water lateral extension work. Wausau Water Works anticipates completing three lateral extensions each day.

Coordinate the anticipated water utility work with Wausau Water Works at the preconstruction meeting. The standard work days for Wausau Water Works crews are Monday through Friday from 7:00 AM to 3:30 PM.

#### **Wisconsin Public Service (Electric)**

Wisconsin Public Service (WPS) has existing underground and overhead electric distribution facilities located throughout the project area.

Overhead electric facilities are generally located along the right side of CTH U from Westwood Drive to Arthur Avenue, along the left and right sides of CTH U from USH 51 to Arlington Avenue, along the right side of CTH U from Arlington Avenue to 12<sup>th</sup> Avenue, and along the left and right sides of CTH U from 12<sup>th</sup> Avenue to Business 51. Overhead electric facilities are also present along the left and right sides of Arthur Avenue, along the east side of 18<sup>th</sup> Avenue, along the right side of Merrill Avenue, along the left side of Overlook Drive north of Station 213+80V, and along the north side of Cassidy Drive. There are crossings of USH 51 at approximately Station 745+38NB and

along Business 51 at approximately Station 30+62KN. There are overhead service crossings throughout the project area.

There are underground facilities along the right side of Overlook Drive from Station 207+35V to Station 208+62V and an underground crossing at Station 213+80V. There are underground electric facilities along the south side of Boot Lane. There are also underground electric facilities along the south side of 20<sup>th</sup> Avenue east of CTH K.

There are conflicts with WPS electric facilities along CTH U and Overlook Drive. Existing overhead facilities which are in conflict will be removed by WPS. Overhead electric to any buildings to be removed near Overlook Drive and CTH K will be removed by WPS. Existing underground facilities which are in conflict will be discontinued in place.

WPS proposes to relocate overhead facilities along the left side of CTH U from Station 21+50U, LT to Station 37+75U, LT. Overhead crossings are proposed at approximately Station 21+75U, Station 22+75U, Station 25+50U, Station 28+00U, and Station 37+00U. The existing crossing at Station 44+25U will be reinstalled at approximately Station 44+05U. WPS proposes to install a new underground electric service 2-feet inside the south right-of-way line of CTH U from the pole near Station 22+00U, RT to a splice location at Station 24+13U, RT.

WPS proposes to install new overhead along the left side of Arthur Avenue beginning at CTH U extending south to the existing electric along the left side of Arlington Lane. A new pole will be set on Arlington Lane west of USH 51 near Station 745+29SB, LT and new overhead crossing of USH 51 will be installed to a new pole near Station 745+57NB, RT. New underground electric is proposed to be installed near the east right-of-way of USH 51 from the proposed pole at Station 745+57NB, RT to Station 750+30NB, RT then along the south right-of-way of CTH U from Station 53+00U, RT to Station 55+96U, RT.

WPS proposes to install new overhead electric along the south side of CTH U from Station 64+73U, RT to Station 67+68U, RT. The overhead crossings near Station 60+50U, Station 62+80U, Station 67+50U, and Station 71+50U will be maintained. A new underground electric crossing is proposed near Station 64+90U.

WPS proposes to install a new overhead electric line between Randolph Street and CTH U on the east side of 12<sup>th</sup> Avenue outside of the project construction limits to feed the electric system along CTH U.

WPS proposes to install a new underground electric line on the north side of Boot lane and on the right side of Overlook Drive from Station 209+23V to Station 213+40V. WPS proposes to install new overhead electric from Station 220+89V, approximately 90-feet LT to Station 223+62V, approximately 82-feet RT with a new crossing over Overlook Drive near Station 221+50V and a new crossing of Merrill Avenue near Station 4+25ME.

WPS proposes to install new poles in line with the existing overhead electric along the right side of Merrill Avenue (ME line) at the Overlook Drive intersection.

WPS will transfer the conductors from the overhead electric crossing of USH 51 at Decator Drive near Station 813+00NB and 813+00SB to new poles near Station 811+55SB LT, Station 812+75SB LT, Station 811+29NB RT, and Station 812+88NB RT. A new underground three-phase electric is proposed to be installed at approximately Station 810+44NB and Station 810+44SB. The relocation at the crossing at Decator Drive is proposed to be completed by WPS by May 20, 2013.

WPS will install electrical service to the lighting control cabinets during construction. Apply for service at least 60 days prior to the date of needing the service and in accordance with the standard specifications. Make applications for any temporary or permanent electrical services to the WPS Business Center at (877) 444-0888.

If pole holding is required during construction at any locations, contact WPS at (800) 450-7260 to request the Wausau Operations office. Contact WPS at least 48 hours in advance of the desired timeline for pole holds to make arrangements.

Do not direct any utility locates through WPS's Wausau office.

Unless otherwise noted, relocations are proposed prior to construction and are anticipated to be completed by April 1, 2013. Once the relocation work is completed, no conflicts are anticipated with any of the WPS (Electric) facilities except those that have been discontinued.

#### **Wisconsin Public Service (Gas)**

Wisconsin Public Service (WPS) has existing underground gas main facilities located throughout the project area.

Facilities are generally located along the right side of CTH U from Westwood Drive to Merrill Avenue, along the left side of CTH U from Merrill Avenue to Arlington Lane, along the right side of CTH U from Arlington Lane to Business 51, and along the right side of Business 51 from CTH U to Campus Drive. There are also gas main facilities on the left side of Business 51 from 24+00K to 29+75K with a main crossing at approximately Station 29+03K. There are existing gas main facilities also located along the right side of Overlook Drive, along the left side of Merrill Avenue north of CTH U, along the west side of 18<sup>th</sup> Avenue, along the left side of Arthur Avenue, and along the south side of Cassidy Drive. There are gas main crossings along Business 51 just south of the Campus Drive intersection and along CTH K near Station 68+70KN. There are service crossings located throughout the project area. There is an existing anode bed located on the gas line along the left side of CTH K from Station 66+35KS to Station 67+70KS.

There is an existing 2-inch wrapped steel main which has been discontinued along the right side of Business 51 from approximately Station 30+00KN to 37+00KN located approximately 25-feet right of the proposed KN reference line.

There are conflicts with WPS gas facilities along CTH U and Overlook Drive. Existing underground facilities which are in conflict will be discontinued in place and not proactively removed by WPS. In addition, existing gas main on Cassidy Drive, Merrill Avenue at the new cul-de-sac at CTH U, and on 18<sup>th</sup> Avenue south of CTH U will also be discontinued in place.

WPS proposed to replace the gas main along the left side of CTH U near the north right-of-way line with new 8-inch gas main between Station 20+00U and Station 39+00U, LT. The gas main will then cross to the right side of CTH U near Station 38+50U at the Arthur Avenue intersection. The 8-inch gas main will then be installed along the south side of Arthur Avenue, west side of 18<sup>th</sup> Avenue, and south side Arlington Lane. The proposed 8-inch gas main will then cross USH 51 near Station 745+35NB over to Arlington Lane east of USH 51. The 8-inch gas main will then proceed along the south side of Arlington Lane east of USH 51 and will intersect CTH U near Station 61+20U. From Station 61+20U, the 8-inch gas main will be installed on the right side of CTH U near the south right-of-way line and will tie into existing gas main near Station 70+00U, RT. WPS also proposes to install a 2-inch gas main along the right side of CTH U near the south right-of-way line. The 2-inch gas main will extend from Station 53+25U to Station 61+20U.

New gas main is proposed to be installed along the right side of entire Overlook Drive from CTH U to CTH K near the east right right-of-way line. Tie-ins will be completed to the proposed gas main at CTH U and the existing gas main at 20<sup>th</sup> Avenue/CTH K near Station 230+70V.

Underground services will be installed throughout the project.

The existing gas mains may contain asbestos wrap. Prior to construction, WPS will perform an asbestos survey. WPS will share the results of the asbestos survey at the preconstruction meeting. During construction, WPS will complete removal and disposal of any discontinued gas facilities that contain asbestos wrap and that are in conflict with the contractor's operations. WPS typical crew work hours are Monday through Friday from 7:00 AM to 3:00 PM. Contact WPS at least four hours prior to needing any discontinued, asbestos wrapped gas facilities removed. If WPS is notified prior to 1:00 PM of each typical work day, they will be on site that day to remove the discontinued, asbestos wrapped gas facilities. If WPS is notified after 1:00 PM but before 3:00 PM, WPS will schedule a crew on site for the next working day to remove the discontinued, asbestos wrapped gas facilities. Discuss and coordinate removal requirements during the preconstruction meeting with the WPS contact.

Notify Fritz Martin at (715) 848-7387 at least 48 hours prior to each individual blasting activity. WPS will perform a leakage survey in blasting areas when underground WPS gas facilities are in the proximity to the blasting area shortly after blasting is completed. Follow-up leakage surveys will be conducted every three months by WPS until the anticipated detrimental settling has stopped in the area of any of their gas facilities.

Planned relocations are proposed prior to construction and are anticipated to be completed by April 1, 2013. Once the relocation work is completed, no conflicts are anticipated with any of the WPS (Gas) facilities except those that have been discontinued.

#### **Village of Brokaw (Water)**

The Village of Brokaw has water main facilities located on 20<sup>th</sup> Avenue north of Bos Creek. There are no conflicts anticipated.

#### **WisDOT – FTMS Facilities**

WisDOT has FTMS facilities within the project limits located along the west side of USH 51 near Station 769+34 SB, LT. No conflicts are anticipated.

### **7. Other Contracts.**

#### **1166-01-77, 1166-01-80 and 1166-01-81**

Pavement replacement of IH 39 Southbound, near Exit 185, reconstruction of the Southbound IH 39 structure over Business 51, and redeck/widening of the Southbound IH 39 structure over the Wisconsin River. Construction activities will take place during the 2013 construction season and into the spring of 2014.

#### **STH 29/CTH O Project**

There is a pavement replacement project on STH 29 between STH 107 and 72<sup>nd</sup> Avenue. The project is scheduled to begin in the summer of 2012 and end in November 2013. Somme traffic control signage will be installed within the limits of this project. The contractor must coordinate with the STH 29 project if they are going to affect any of the traffic control signs.

#### **Marathon County**

Marathon County Highway Department will be pulverizing and overlaying CTH K North of the project during Stages 5 and 6. The County will extend the Box Culvert under CTH K (71+87 KN). Prior to May 1, 2013.

## **8. Other Work Restrictions.**

USH 51 shall be kept open to two lanes of traffic in each direction at all times except for Off-Peak hours, Night Time hours, and specific construction operations requiring lane or roadway closures as described in the “Traffic” article of these provisions.

Construction operations affecting the traveling public’s safety will not be allowed during snow and ice conditions unless approved by the engineer.

USH 51 shall be kept open to two lanes of traffic in each direction at all times during the dates in the article “Holiday Work Restrictions” and also during the following special event periods:

- Opening weekend of the 2013 fishing season: Friday, May 3, 2013 through Monday, May 6, 2013.
- Opening weekend of the 2014 fishing season: Friday, May 2, 2014 through Monday, May 5, 2014.
- Opening weekend of 2013 gun deer hunting season: Friday, November 22, 2013 through Monday November 25, 2013.
- 2013/2014 Tomahawk Fall Ride for MDA: Friday, September 13, 2013 – Sunday, September 15, 2013 and Friday, September 12, 2014 – Sunday, September 14, 2014 (Dates for 2014 to be confirmed). Northbound and southbound USH 51 lane closure restrictions will be determined based the actual dates of the events.

## **9. Information to Bidders, U.S. Army Corps of Engineers Section 404 Permit.**

The department has obtained a U.S. Army Corps of Engineers Section 404 Permit. Comply with the requirements of the permit in addition to requirements of the special provisions. A copy of the permit is available from the region office by contacting Dan Erva at (715) 365-5776. Methods of operations, including preparatory work, staging, site clean-up or storing materials, causing impacts to other wetlands or waters are not permitted.

If the contractor chooses a method of construction that is not covered by the department’s 404 Permit, obtain the proper additional permits required from the U.S. Army Corps of Engineers. It is the contractor’s responsibility to determine if additional permits are required. Obtain the additional permits prior to beginning construction operations requiring the permits. No time extensions as discussed in standard spec 108.10 will be granted for the time required to apply for and obtain the additional permits. The contractor must be aware that the U.S. Army Corps of Engineers may not grant the additional permits.

## **10. Erosion Control.**

*Supplement standard spec 107.20 as follows:*

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.

Replace topsoil on disturbed areas, including spot locations such as cross drains, driveways, guardrail and terminals, and intersections, immediately after grading is completed within those areas. Complete finishing operations, which includes seed, fertilizer, mulch and any other permanent erosion control measures required, within seven calendar days after the placement of topsoil.

Restore as much disturbed area as possible or as directed by the engineer with topsoil, seeding, fertilizer, and mulch or erosion mat at the end of the first construction season to minimize erosion due to spring melt. As directed by the engineer, stabilize areas that cannot be restored with permanent measures at the end of each construction season with the soil stabilizer item provided in the plan.

Prepare an Erosion Control Implementation Plan (ECIP) amendment detailing an over-winter erosion control plan for 2013/2014. Present this ECIP amendment at a pre-winter shut down meeting with DNR and department staff prior to October 15, 2013.

## **11. Environmental Protection - Dewatering.**

*Supplement standard spec 107.18 as follows:*

If dewatering is required, treat the water to remove suspended solids before allowing it to enter any waterway or wetland. Provide a settling basin, or other suitable means approved by the engineer, with sufficient capacity and size to provide an efficient means to filter the water from the dewatering operation before it is discharged back into the wetland or waterway as provided in the standard specifications and these special provisions. Treatment practices may include the use of natural polyacrylamide such as chitosan, as approved by the engineer.

Conform to dewatering guidelines of WisDNR Storm Water Construction Technical Standards, Code #1061, "Dewatering". This document can be found at the WisDNR website: [http://dnr.wi.gov/topic/stormwater/standards/const\\_standards.htm](http://dnr.wi.gov/topic/stormwater/standards/const_standards.htm)

Include the cost of all work and materials associated with water treatment and/or dewatering in the unit bid price for the storm sewer items. Work includes furnishing all materials, excavation, maintenance, cleaning, disposal of surplus material, removal of the basin after completion of dewatering operations, and all labor, tools, equipment and incidentals necessary to complete the work in accordance to the contract.

## 12. Environmental Protection - Aquatic Exotic Species Control.

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

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

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

- Prior to leaving the contaminated site, wash machinery and ensure that the machinery is free of all soil and other substances that could possibly contain exotic invasive species;
- Drain all water from boats, trailers, bilges, live wells, coolers, bait buckets, engine compartments, and any other area where water may be trapped;
- Inspect boat hulls, propellers, trailers and other surfaces. Scrape off any attached mussels, remove any aquatic plant materials (fragments, stems, leaves, seeds, or roots), and dispose of removed mussels and plant materials in a garbage can prior to leaving the area or invested waters; and
- Disinfect your boat, equipment and gear by either:
  - Washing with ~212° F water (steam clean), or
  - Drying thoroughly for five days after cleaning with soap and water and/or high pressure water, or
  - Disinfecting with either 200 ppm (0.5 oz per gallon or 1 Tablespoon per gallon) Chlorine for 10-minute contact time or 1:100 solution (38 grams per gallon) of Virkon Aquatic for 20- to 30-minute contact time. Note: Virkon is not registered to kill zebra mussel veligers nor invertebrates like spiny water flea. Therefore this disinfect should be used in conjunction with a hot water (>104° F) application.

Complete the inspection and removal procedure before equipment is brought to the project site and before the equipment leaves the project site.

107-055 (20110615)



### **13. Erosion Control Structures.**

Within seven calendar days after the commencement of work on the bridge superstructure, place all permanent erosion control devices, including riprap, erosion mat, ditch checks, seed, fertilizer, mulch, soil stabilizer, or any other item required by the contract or deemed necessary by the engineer. These devices shall be in place in the area under the bridge and on both sides of the roadway, from the waterway to a point 100-feet behind the backwall of the abutment. Within said limits, place these devices to a height equivalent to the calculated water elevation resulting from a storm that occurs on the average of once every two years (Q2) as shown on the plan, or as directed by the engineer. Prior to initial construction operations, place turbidity barriers, silt screens, and other temporary erosion control measures as shown on the plans, and remove them after the permanent erosion control devices are in place unless directed otherwise by the engineer.

In the event that construction activity does not disturb the existing ground below the Q2 elevation, the above timing requirements for permanent erosion control shall be waived.

107-070

### **14. Public Convenience and Safety - Lane Closure Notification.**

*Supplement standard spec 107.8 with the following:*

At least 14 days prior to the preconstruction meeting submit to the engineer for approval a schedule of closures necessary for completion of the contract. Identify general information including the construction activity requiring a closure, location of closure, type of closure, duration of closure, and times of closure.

All closures must be in accordance to the contract unless approved by the engineer. Submit any changes to the traffic control plan or other traffic related requirements of the contract to the engineer for approval at a minimum of 14 calendar days prior to the closure.

Review the closure schedule with the engineer at the preconstruction meeting. Within five days after the meeting, the engineer will accept the contractor's initial schedule or request additional information. Provide additional information requested by the engineer within five days after the request. Provide the engineer with an updated closure schedule whenever changes are necessary.

Provide the engineer a detailed closure schedule weekly, by noon on Wednesday, that covers planned closures for the following two weeks. Include detailed information on the construction activity, location, type, duration, and time of closures. Verify with the engineer that the closure is approved in the Wisconsin Lane Closure System prior to implementing the closure. Immediately notify the engineer if there are any changes in the schedule, early completions, or cancellations of scheduled work.

Provide the minimum advance notification to the engineer for the following closures:

Shoulder closures	3 business days
Ramp closures	3 business days
Lane closures	3 business days
Local street closings	7 calendar days
System ramp closures	14 calendar days
Full freeway closures	14 calendar days
Construction stage changes	14 calendar days
Detours	14 calendar days

Non-compliance with the above requirements may result in non-approval of a closure. No time extensions as described in standard spec 108.10 will be granted for non-approval of a closure. The department will not assume damages accrued due to non-approval of a closure, including but not limited to mobilization costs, traffic control costs, and other damages for delays to the contract.

## **15. Public Convenience and Safety.**

*Delete standard spec 107.8 (4) and replace with the following:*

Notify the following organizations and departments at least 48 hours before road closures, detours, or continuous lane closures are put into effect:

Marathon County Sheriff's Department  
Wisconsin State Patrol  
Town of Maine  
City of Wausau  
City of Wausau Fire Department  
City of Wausau Police Department  
Town of Maine Fire Department  
Wausau School District  
City of Wausau Post Office

The Marathon County Sheriff's Department 911 dispatches all area police, fire and ambulance services, and will relay any notification given by the contractor.

## **16. Construction Over or Adjacent to Navigable Waters.**

*Supplement standard spec 107.19 with the following:*

The Bos Creek and the unnamed waterways at Station 723+33NB, 738+75NB, and 755+05NB are classified as navigable waterways.  
107-060 (20040415)

## **17. Coordination with Businesses and Property Owners.**

Coordinate and participate with the engineer in weekly public meetings. The audience of the meetings is intended to be local officials, business people, and property owners affected by the construction project. The first meeting will be conducted a minimum of two weeks prior to the start of work under this contract. Discuss the following at the meetings: schedule of operations, progress of the project, access for businesses and property owners during construction, and any issues associated with vehicular and pedestrian access during construction operations. Arrange for a suitable location for the meetings that provides reasonable accommodation for public involvement. The department will prepare and coordinate publication of the meeting notices and mailings and serve as the lead during the meetings.

## **18. Information to Bidders, Soils Report.**

A copy of the soils report is available from the Region office by contacting Dan Erva at (715) 365-5776.

## **19. Notice to Contractor, Notification of Demolition and/or Renovation No Asbestos Found.**

John Roelke, License Number AII-119523, inspected Structure B-37-69, B-37-153, B-37-154, B-37-156, B-37-167 for asbestos on March 24, 2010 and March 13, 2012. No regulated Asbestos Containing Material (RACM) was found on this structure. A copy of the inspection report is available from: Dan Erva, WisDOT North Central Region, 510 N. Hanson Lake Road, Rhinelander, WI 54501.

In accordance to NR447 and DHS159, ensure that DNR or DHS receives a completed Notification of Demolition and/or Renovation (DNR Form 4500-113 (R 4/11), or subsequent revision) via U.S. mail, hand-delivery, or using the online notification system at least 10 working days prior to beginning any construction or demolition. Pay all associated fees. Provide a copy of the completed 4500-113 form to Dan Erva, WisDOT North Central Region, 510 N. Hanson Lake Road, Rhinelander, WI 54501 and DOT BTS-ESS attn: Hazardous Materials Specialist PO Box 7965, Madison, WI. 53707-7965. In addition, comply with all local or municipal asbestos requirements.

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

- Site Name: Structure B-37-69, CTH U over USH 51; Structure B-37-153, USH 51 northbound over Bus 51/CTH K; Structure B-37-154, USH 51 southbound over Bus 51/CTH K; Structure B-37-156, USH 51 southbound over Decator Drive; Structure B-37-167, USH 51 over Bos Creek.
- Site Address: Section 15&22, T29N, R7E, City of Wausau and Town of Maine.
- Ownership Information: WisDOT North Central Region, 510 N. Hanson Lake Road, Rhinelander, WI 54501.
- Contact: Dan Erva
- Phone: (715) 365-5776

- Age: B-37-69, 51 years. This structure was constructed in 1961. B-37-153, B-37-154, B-37-156, 37 years. These structures were constructed in 1975. B-37-167, 38 years. This structure was constructed in 1974.
- Area: B-37-69, 6,832 SF of deck; B-37-153 18,667 SF of deck; B-37-154, 18,667 SF of deck; B-37-156, 6,123 SF of deck; B-37-167, 5,462 SF of deck.

Insert the following paragraph in Section 6.g.:

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

107-125 (20120615)

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

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

1. Station 40+00 U to 42+00 U from 350-feet LT of centerline to 535-feet LT of centerline.
2. Station 30+80 KN to 32+00 KN from 350-feet RT of centerline to 400-feet RT of centerline.
3. Station 34+00 KN to 37+00 KN from 170-feet RT of centerline to 200-feet RT of centerline.
4. Station 11+20 R, 140-feet RT of centerline.
5. Station 210+35 V to 211+35 V from 180-feet RT of centerline to 235-feet RT of centerline.

The contaminated soils and groundwater 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 or groundwater 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: Dan Erva, WisDOT North Central Region, 510 North Hanson Lake Road, Rhinelander, WI 54501, (715) 365-5776.

## **21. Notice to Contractor – Adjusting Signal Timings.**

Contact Allen Wesolowski, City of Wausau at (715) 261-6740 and Ronald Johnson at (715) 421-8349 a minimum of 3 days prior to needing access to existing traffic signals for adjustments to timings to the city and WisDOT maintained signals, respectively.

**22. Notice to Contractor – Concrete Paving Behind Concrete Barrier.**

Concrete paving in some stages will require a short distance from edge of new concrete pavement to the back of concrete barrier. At no time can workers, equipment, or tools extend beyond the concrete barrier into live lanes of traffic. Completion of work may require off peak lane closure or finishing operations done from a bridge over the concrete pavement. No additional compensation will be paid to alter working operations to adjust to tight working areas.

**23. Notice to Contractor – Regional Traffic Counter.**

At approximately Station 717+00 NB RT there is a regional traffic counter. Contact Shawn Hollenback at (715) 459-3582 one week prior to each traffic shift in this location.

**24. Notice to Contractor – Slopes in Rock Cut Areas.**

Contact Regional soils engineer Chris Peplinski at (715) 421-8374 when rock is encountered. Based on the stability of the rock, back slopes may be modified in plan to increase the slopes and reduce rock excavation.

**25. Notice to Contractor – Septic System Parcel 14 and 16, Plat 1170-01-21.**

On parcel 14 and 16 of plat 1170-01-21 the existing septic system has a pipe connecting the septic tank to the drain field that crosses Overlook Drive at approximately Station 226+00 V. Contact the property owner a minimum of ten calendar days prior to impacting the drain pipe. The property owner will make arrangements to plug the existing pipe and arrange for the septic tank to be pumped until a final connection of the new sanitary link to the house is made as noted below.

Removal of the existing drain pipe required to complete work is considered incidental to Common Excavation. Remove the existing drain pipe in accordance with state statutes and local regulations.

Once the property owner has plugged the septic system, complete the sanitary sewer line between Parcel 14 and the existing sanitary line (along CTH K) within seven calendar days. Mark the location of the sanitary line end at the property line. The property owner is responsible for making the connection from the property line to the house.

**26. Notice to Contractor – Joint Sealing by Others.**

Portions of the concrete on CTH K will be part of a joint sealing test section. Notify James Griesbach with the Marathon County Highway Department, (715) 261-1800 one week prior to placing concrete on Business 51/CTH K in areas requiring sealing as shown on plan. The Marathon County Highway Department will begin to seal the joints once the concrete has cured. Sealing the joints is anticipated to take one week. Do not open concrete pavement to traffic until the joints have been sealed by the Marathon County Highway Department.

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

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

105-001 (20061009)

**28. Property Marks – Protecting and Restoring.**

*Replace standard spec 107.11.3 (1) with the following:*

Protect and carefully preserve all known property and survey marks, land monuments, and right-of-way monuments and marker posts. Notify the engineer of the nature and location of these monuments and markers. Do not disturb or destroy monuments or markers until the engineer has arranged for their referencing or perpetuation.

Reset or replace, to the required standard, any Property and survey marks, land monuments, and right-of-way monuments and marker posts that fall outside the construction limits that are shifted, lost or damaged by the contractor during construction operations, as determined by the engineer. If the contractor fails to restore the disturbed monuments or markers within a reasonable time, the department may, upon 48 hours written notice, restore the disturbed monuments or markers. The department will deduct restoration costs from payments due the contractor under the contract.

**29. Removing Old Structure, Station 49+90 U, Station 765+14.11 NB, Station 766+38.72 SB, Station 812 +08.84 SB.**

*Supplement standard spec 203.3.2 with the following:*

Prepare a removal plan. The contractor shall be responsible for the methods and sequence of demolition, including effects on the overall stability of the structure. Analyze the stability of the structure, based on the methods and sequence of demolition proposed, to ensure that the entire structure is demolished in a controlled manner.

Conduct removal work in a prudent manner and exercise care to preclude damage to any roadway pavement. In addition to general protection, the removal plan shall specifically outline the method and means of protection of the roadway pavement under Structures B-37-69, B-37-153, B-37-154 and B-37-156.

It is understood that other nearby residences, and facilities not noted on plans shall also be adequately protected.

Removal of the existing foundation shall be accomplished in a manner that avoids or minimizes disturbing the bearing area for the new footings.

At least two weeks prior to beginning work on this item, submit method of performing the demolition, removal and disposal work to the engineer. Six copies of this submittal shall be provided to the engineer.

Review of the removal plans by the engineer concurs in no way relieve the contractor of the responsibility of providing a safe and controlled removal operation. Dispose of the removal structure away from the site.

Plans of existing Structures B-37-69, B-37-153, B-37-154 and B-37-156 are available at <http://trust.dot.state.wi.us/hsi/HSIController>.

**30. Removing Old Structure Over Waterway Station 755+02.50 SB, Item 203.0500.S.01; Removing Old Structure Over Waterway Station 788+91.88 NB, Item 203.0500.S.02; Removing Old Structure Over Waterway Station 32+81.96 KS, Item 203.0500.S.03.**

Conform to standard spec 203 as modified in this special provision.

*Add the following to standard spec 203:*

**203.3.6 Removals Over Waterways and Wetlands**

**203.3.6.1 Removing Old Structure Over Waterway**

- (1) Remove the existing Structure B-37-167, C-37-4 and C-37-27 over the Bos Creek and unnamed drainage conforming to the contractor's approved structure removal and clean-up plan. Remove all reinforcing steel, all concrete, and all other debris that falls into the waterway or wetland. Remove large pieces of the structure within 36 hours. The contractor may leave limited amounts of small concrete pieces scattered over the waterway floor or wetland only if the engineer allows.
- (2) Submit a structure removal and clean-up plan as part of the erosion control implementation plan required under standard spec 107.20. Do not start work under the structure removal and clean-up plan without the department's written approval of the plan. Include the following information in the structure removal and clean-up plan:
  - Methods and schedule to remove the structure.
  - Methods to control potentially harmful environmental impacts.
  - Methods for removing piers and abutments. If blasting in water, include restrictions that regulatory agencies and the contract require.
  - Methods for cleaning the waterway or wetlands.
- (3) If stockpiling spoil material, place it on an upland site an adequate distance from the waterway, wetland, or any open water created by excavation. Install silt fence between the spoil pile and the waterway, wetland, or excavation site.

Add the following Removing Old Structure bid item to standard spec 203.5.1:

ITEM NUMBER	DESCRIPTION	UNIT
203.0500.S.01	Removing Old Structure Over Waterway Station 755+02.50 SB	LS
203.0500.S.02	Removing Old Structure Over Waterway Station 788+91.88 NB	LS
203.0500.S.03	Removing Old Structure Over Waterway Station 32+81.96 KS	LS
203-015 (20090105)		

### 31. Abandoning Culvert Pipes.

#### A Description

Abandon culvert pipes in accordance to the pertinent requirements of standard spec 204 and as hereinafter provided.

Abandon culvert pipes by thoroughly filling the pipes with controlled low strength backfill and maintaining drainage until new pipes are bored and jacked into place, where shown on the plans, or as directed by the engineer.

#### B Material

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

Test	Method	Value
Flow (inch)	ASTM PS-28-95	9 min
Compressive	ASTM PS-31-95	20-40 @ 14 days
Strength (psi)		40-80 @ 28 days
		80-120 @ 90 days

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

#### C Construction

Proportion and mix the materials to produce a product that has consistent texture and flow characteristics. The engineer may reject any materials exhibiting a substantial change in properties, appearance, or composition.



Before plugging and filling the pipe to be abandoned, ensure that drainage will be maintained by directing flow to an adjacent inlet, culvert pipe, or temporary pond, or by pumping, as approved by the engineer.

Plug the lower end of the existing culvert pipe to be abandoned to prevent leakage of controlled low strength backfill.

Pumping of controlled low strength backfill into the sewer main is required if it is determined by the engineer that gravity flowage is not adequate.

Fill the abandoned culvert pipe completely with controlled low strength backfill. Be able to demonstrate that the entire pipe to be abandoned has been filled with controlled low strength backfill and that no air voids are present.

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

Do not allow controlled low strength backfill to enter any stream, lake, or sewer system. The contractor is responsible for any clean up or remediation costs resulting from such occurrences.

#### **D Measurement**

The department will measure Abandoning Culvert Pipes in accordance to standard spec 204.4.

#### **E Payment**

*Supplement standard spec 204.5 with the following:*

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

### **32. Removing Cable Guard, Item 204.9090.S.02.**

#### **A Description**

This special provision describes removing Removing Cable Guard in accordance to the pertinent provisions of standard spec 204 and as hereinafter provided.

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

#### **C (Vacant)**

**D Measurement**

The department will measure Removing Cable Guard by the linear foot, acceptably completed.

**E Payment**

Supplement standard spec 204.5 to include the following:

ITEM NUMBER	DESCRIPTION	UNIT
204.9090.S.02	Removing Cable Guard	LF
204-025 (20041005)		

**33. Removing Partial Pipe, Item 204.9060.S.03.****A Description**

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

**B (Vacant)****C Construction**

Remove section(s) of pipe as required by the plan. Remove section(s) of pipe in a maner that does not damage existing pipe to remain.

**D Measurement**

The department will measure Removing Partial Pipe by each individual unit, acceptably completed.

**E Payment**

Supplement standard spec 204.5 to include the following:

ITEM NUMBER	DESCRIPTION	UNIT
204.9060.S.03	Removing Partial Pipe	Each
204-025 (20041005)		

**34. Removing Modular Block Retaining Wall, Item 204.9090.S.01.****A Description**

This special provision describes Removing Modular Block Retaining Wall in accordance to the pertinent provisions of standard spec 204 and as hereinafter provided.

**B (Vacant)****C (Vacant)****D Measurement**

The department will measure Removing Modular Block Retaining Wall by the linear foot, acceptably completed.

## **E Payment**

*Supplement standard spec 204.5 to include the following:*

ITEM NUMBER	DESCRIPTION	UNIT
204.9090.S.01	Removing Modular Block Retaining Wall	LF

## **35. General Requirements for Blasting Rock.**

*Supplement standard spec 205.3.7 as follows:*

Perform all blasting in compliance with the Wisconsin Administrative Code, Chapter COMM 7.

### **Blasting Plan Submittal**

Not less than three weeks prior to the pre-blasting meeting, or at any time when changes to the drilling and blasting methods are proposed, submit a Blasting Plan to the engineer for review. The blasting plan shall contain full details of the drilling and blasting patterns and controls proposed for both the controlled and production blasting. Include the following minimum information in the blasting plan:

1. Station limits of proposed shot.
2. Plan and section views of proposed drill pattern including free face, burden, blasthole spacing, blasthole diameters, blasthole angles, lift height, and subdrill depth.
3. Loading diagram showing type and amount of explosives, primers, initiators, and location and depth of stemming.
4. Initiation sequence of blastholes including delay times and delay system.
5. Manufacturer's data sheets for all explosives, primers, and initiators to be employed.

The blasting plan submittal is for quality control and record keeping purposes. Review of the blasting plan by the engineer does not relieve the contractor of responsibility for the accuracy and adequacy of the plan when implemented in the field.

### **Pre-Blasting Planning Meeting**

Not less than four weeks prior to the pre-construction meeting hold a pre-blasting meeting. Arrange and conduct a meeting between the prime contractor, blasting contractor, the department (PDS, Traffic and RCM) and Mike Bosi of WPS Gas (715-848-7471) to discuss the blasting plan details, schedule, communications plan, work zone traffic control plan, area of influence for blasting, flow chart of roles and responsibilities with communications identified for the blasting event.

### **Blasting Time Restriction**

**Each blast will be treated as a planned event.** Blasting effecting USH 51, USH 51 ramps, and Business 51/CTH K will only be allowed during non-peak travel times at 10:00 AM and 7:00 PM. Blasting will be restricted to Mondays, Tuesdays or Wednesdays and should occur at the same time each day. Blasting may occur on Thursdays also at the discretion of the engineer during April, May, September

and October. No more than two blastings impacting USH 51, USH 51 ramps, and Business 51/CTH K will be allowed each day. The blasting times impacting USH 51, USH 51 ramps, and Business 51/CTH K are subject to approval of the engineer.

Blasting effecting local roadways will be allowed between the times of 10:00 AM to 7:00 PM. Blasting will be restricted to Mondays, Tuesdays or Wednesdays. Blasting may occur on Thursdays also at the discretion of the engineer during April, May, September and October. Blasting times impacting travel on the local roadway system are subject to approval of the engineer.

#### **Communication Plan Submittal**

Outline and submit a communication plan to inform the stakeholders of the blasting location and schedule. Submit the communication plan three weeks prior to the pre-construction meeting. Stakeholders include but are not limited to the prime contractor, blasting contractor, engineer, utilities, emergency services, property owners, and local officials.

The communication plan shall outline the roles and responsibilities of each stakeholder for each blasting event. The communication plan shall include a flow chart with primary contact for each stakeholder in the event of an emergency.

#### **Work Zone Traffic Control Plan**

Develop and submit a work zone traffic control plan for each blast zone location. Submit the work zone traffic control plan three weeks prior to the pre-construction meeting. The contractor, with the proper traffic control devices, will be allowed to stop traffic on USH 51 for as long as a 20 minute period. The work zone traffic control plan will be reviewed and approved by the department's traffic unit. The traffic control plan shall follow the Manual of Uniform Traffic Control Devices.

#### **Utilities**

There are utilities near all of the blast zone areas with existing locations shown on the plans (relocated utilities are not).

#### **Safety**

Immediately notify the engineer of any incidents of fly rock, damage to any personal property, or existing roadway that is open to traffic, and any violations of the COMM 7 statute. Failure to do so shall be considered a safety violation under section 107 of the standard specifications and all work on the project may be stopped under standard spec 105.1(1).

Notify the engineer of the station, location, and size of all blasts at least one hour prior to the blast.

Observe the entire blast area for a minimum of five minutes following a blast to guard against rock or debris fall before commencing work in the area.

The engineer has the authority to prohibit or halt the contractor's blasting operations if it is apparent that through the methods being employed, the required slopes are not being obtained in a stable condition, the safety and convenience of the traveling public is being jeopardized, or vibration levels above the allowable levels occur.

### **Condition Surveys**

Conduct and document pre-blast and post-blast surveys of any nearby buildings or structures as required by the scaled-distance equation specified in chapter COMM 7.61 of the Wisconsin Administrative Code. A Crack and Damage Survey bid item has been included for this purpose. Prior to any blasting, make the pre-blast survey records available to the engineer for review. After completion of blasting operations, perform a post-blast survey and make these records available to the engineer for review. The contractor shall be responsible for any damage resulting from blasting.

These condition surveys shall consist of visually inspecting and recording all existing defects in the structures before and after blasting operations. Photographs and/or videotape may be used to assist in documentation. Submit a written report to the department detailing the visual and photographic investigation of potentially affected structures. This report will include copies of the pre-blast and post-blast surveys and discuss any discrepancies and findings of these surveys.

If at any time during the progress of the work, the methods of drilling and blasting do not produce the desired result of a uniform slope and shear face, within the tolerances specified, drill, blast, and excavate in short sections, not exceeding 100 feet in length, until a technique is arrived at that will produce the desired results. Extra cost resulting from this requirement shall be the contractor's responsibility.

### **Vibration Control and Monitoring**

All vibration control and monitoring shall comply with COMM 7.63, Instrumentation and COMM 7.64, Control of Adverse Effects.

Whenever there is a potential for vibration damage to adjacent buildings, structures, or utilities, monitor each blast with an approved seismograph located, as approved, between the blast area and the closest structure subject to blast damage, and as close as practical to the subject structure. Peak particle velocity shall not be allowed to exceed the safe limits of the nearest structure subject to vibration damage.

A vibration specialist, approved by the engineer, shall perform vibration monitoring. The vibration specialist shall monitor vibration levels in accordance to chapter COMM 7.64(4) of the Wisconsin Administrative Code and interpret the seismograph records to ensure that the seismograph data shall be effectively utilized in the control of the blasting operations with respect to the existing structures and utilities.

In accordance to chapter COMM 7.64(4) – 2 of the Wisconsin Administrative Code consult with the owner of any structure or utility not listed in chapter COMM 7.64(4) – 1

to establish maximum allowable limits on ground vibrations. In no case shall these vibration limits exceed the following criteria:

<b>Structure Type</b>	<b>Maximum Peak Particle Velocity (inches/second)</b>
Reinforced Concrete, Structures, Unoccupied	4.0
Steel Structures, Unoccupied	4.0
Buried Utilities	2.0
Wells and Aquifers	2.0
Green Concrete (Less than 7 days)	1.0

Furnish data recorded for each shot to the engineer prior to the next blast; the data shall include the following:

1. Identification of vibration monitoring instrument used.
2. Name of qualified observer and interpreter.
3. Distance and direction of recording station from blast area.
4. Type of ground at recording station and material on which the instrument is sitting.
5. Peak particle velocity and principal frequency in each component.
6. A dated and signed copy of records of seismograph readings.
7. A comparison of measured seismograph readings to maximum allowable readings identified in chapter COMM 7 of the Wisconsin Administrative Code or as specified in this special provision.

If the recorded vibration data exceeds the allowable levels established in chapter COMM 7 of the Wisconsin Administrative Code or as specified in this special provision, immediately halt blasting operations. Submit a revised blasting plan to the engineer and do not resume blasting operations until the engineer approves the revised plan.

All costs associated with the work described herein shall be considered included in the bid item Excavation Rock.

### **36. Temporary Shoring, Item 206.6000.S.**

#### **A Description**

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

#### **B Materials**

##### **B.1 Shoring Design**

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

### **C Construction**

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

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

### **D Measurement**

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

### **E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
206.6000.S	Temporary Shoring	SF

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

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

## **37. QMP Base Aggregate.**

### **A Description**

#### **A.1 General**

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

- (3) Do not apply this special provision to material placed under the Aggregate Detours, Salvaged Asphaltic Pavement Base, Breaker Run, Select Crushed, Pit Run, Subbase, or Riprap bid items.
- (4) Provide and maintain a quality control program, defined as all activities related to and documentation of the following:
  1. Production and placement control and inspection.
  2. Material sampling and testing.
- (5) Chapter 8 of the department's construction and materials manual (CMM) provides additional detailed guidance for QMP work and describes required sampling and testing procedures. The contractor may obtain the CMM from the department's web site at:

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

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

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

<b>Plan Quantity</b>	<b>Minimum Required Testing</b>
$\leq 1500$ tons	One test from production, load-out, or placement at the contractor's option <sup>[1]</sup>
$> 1500$ tons and $\leq 6000$ 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 $\leq 9000$ tons	Three placement tests <sup>[2] [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 <sup>[1]</sup>
Aggregate Technician IPP Aggregate Assistant Certified Technician (ACT-AGG)	Aggregate Gradation Testing, Aggregate Fractured Particle Testing, Aggregate Liquid Limit and Plasticity Index Testing

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

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

### **B.3 Laboratory**

- (1) Perform QC testing at a department-qualified laboratory. Obtain information on the Wisconsin laboratory qualification program from:  
Materials Management Section  
3502 Kinsman Blvd.  
Madison, WI 53704  
Telephone: (608) 246-5388  
<http://www.dot.state.wi.us/business/engrserv/lab-qualification.htm>

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

#### **B.4.1 General**

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

#### **B.4.2 Records**

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

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

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

## **B.5 Contractor Testing**

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

## **B.6 Test Methods**

### **B.6.1 Gradation**

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

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

### **B.6.2 Fracture**

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

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

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

## **B.7 Corrective Action**

### **B.7.1 General**

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

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

- (1) Do not blend additional material on the roadbed to correct gradation problems.
- (2) Notify the engineer whenever the running average exceeds a warning limit. When 2 consecutive running averages exceed a warning limit, the engineer and contractor will discuss appropriate corrective action. Perform the engineer's recommended corrective action and increase the testing frequency as follows:
  1. For gradation, increase the QC testing frequency to at least one randomly sampled test per 1000 tons placed.
  2. For fracture, increase the QC testing frequency to at least one test per gradation test.

- (3) If corrective action improves the property in question such that the running average after 4 additional tests is within the warning limits, the contractor may return to the testing frequency specified in B.5.3. If corrective action does not improve the property in question such that the running average after 4 additional individual tests is still in the warning band, repeat the steps outlined above starting with engineer notification.
- (4) If the running average exceeds a control limit, material starting from the first running average exceeding the control limit and ending at the first subsequent running average inside the control limit is nonconforming and subject to pay reduction.
- (5) For individual test results significantly outside the control limits, notify the engineer, stop placing base, and suspend other activities that may affect the area in question. The engineer and contractor will jointly review data, data reduction, and data analysis; evaluate sampling and testing procedures; and perform additional testing as required to determine the extent of potentially unacceptable material. The engineer may direct the contractor to remove and replace that material. Individual test results are significantly outside the control limits if meeting one or more of the following criteria:
  1. A gradation control limit for the No. 200 sieve is exceeded by more than 3.0 percent.
  2. A gradation control limit for any sieve, except the No. 200, is exceeded by more than 5.0 percent.
  3. The fracture control limit is exceeded by more than 10.0 percent.

## **B.8 Department Testing**

### **B.8.1 General**

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

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

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

- (1) The department will have an HTCP technician, or ACT working under a certified technician, perform QV sampling and testing. Department verification testing personnel must meet the same certification level requirements specified in B.2 for contractor testing personnel for each test result being verified. The department will notify the contractor before sampling so the contractor can observe QV sampling.
- (2) The department will conduct QV tests of each base aggregate size, source or classification, and type during placement conforming to the following:
  1. One non-random test on the first day of placement.
  2. At least one random test per 30,000 tons, or fraction of 30,000 tons, placed.

- (3) The department will sample randomly, at locations independent of the contractor's QC work, collecting one sample at each QV location. The department will collect QV samples after the material has been bladed, mixed, and shaped but before compacting; except, for 3-inch aggregates, the department will collect samples from the stockpile at load-out. The department will split each sample, test half for QV, and retain half.
- (4) The department will conduct QV tests in a separate laboratory and with separate equipment from the contractor's QC tests. The department will use the same methods specified for QC testing.
- (5) The department will assess QV results by comparing to the appropriate specification limits. If QV test results conform to the specification, the department will take no further action. If QV test results are nonconforming, add the QV to the QC test results as if it were an additional QC test.

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

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

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

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

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

**C (Vacant)**

**D (Vacant)**

**E Payment**

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

301-010 (20100709)

**38. Dense Graded Base.**

*Supplement standard spec 305.3.2 as follows:*

Use a rubber tired roller to compact all shoulder gravel.

**39. Special Cementitious Material Requirements for Mitigation of Alkali-Silica Reactivity for Cast-in-Place Concrete.**

This applies to all cast-in-place concrete in standard spec 390, 415, 416, 501, 509, 601, 602, 603, and 620.

The total alkalies in the Portland cement ( $\text{Na}_2\text{O} + 0.658 \text{ K}_2\text{O}$ ) shall not exceed 0.6 percent. The total alkalies in the cementitious material (including supplementary materials, i.e. fly ash or slag) shall not exceed 5.0 pounds per cubic yard (3.0 kg/m<sup>3</sup>).

If the contractor elects to use coarse aggregate from sources containing significant amounts of felspa-volcanic (including rhyolite, diorite, gneiss or quartzite), and ASTM C1293 test results for the aggregate are not available or indicate the material does not comply with the 0.04 percent expansion limit, the supplementary cementitious material shall be one of the following:

- 30 percent by weight of a fly ash meeting the following requirements: The fly ash used as a supplementary cementitious material in the concrete mixture shall have a minimum  $\text{SiO}_2 + \text{Fe}_2\text{O}_3 + \text{Al}_2\text{O}_3$  of 66.0 percent on a dry weight basis. In addition, it shall have a minimum  $\text{SiO}_2$  content of 38.0 percent.
- 35 percent by weight of Grade 120 ground granulated blast furnace slag.

#### **40. Rout and Seal, Item 415.6000.S.**

##### **A Description**

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

##### **B Materials**

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

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

##### **C Construction**

###### **C.1 Equipment**

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

Make rout cuts in a single pass. Two-pass cutting will not be allowed. Use a self-propelled mechanical router capable of routing the bituminous pavement to provide a 1.0:1.0 depth to width ratio of all routed cracks. The router blade or blades shall be of



such size and configuration to cut the desired joint reservoir in one pass of the rout. No spacers between blades shall be allowed unless the contractor can demonstrate to the engineer that the desired reservoir and rout cut can be obtained with them. Either wet or dry routing will be permitted provided the above conditions are met. Use a pressure distributor for applying sealing material through a hand-operated wand or nozzle according to sealant manufacturer's instructions.

## **C.2 Methods**

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

Rout the longitudinal joint to a minimum width of  $\frac{3}{4}$ -inches and a minimum depth of  $\frac{3}{4}$ -inches. Use a power vacuum or equivalent to immediately remove any routing slurry, dirt, or deleterious matter adhering to the joint walls or remaining in the joint cavity, or both. Prior to sealing, dry the cleaned joints either by air-drying or by using a high capacity torch. Immediately prior to sealing, blow out the dried crack with a blast of compressed air, 80-psi minimum. Continue cleaning until the joint is dry, and until all dirt, dust, or deleterious matter is removed from the joint and adjacent pavement to the satisfaction of the engineer. If the air compressor produces dirt or other residue in the joint cavity, the contractor shall be required to clean the joint again.

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

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

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

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

**D Measurement**

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

Payment is full compensation for rout cutting; cleaning the joint; furnishing and installing all materials, including sealant.

415-100 (20080902)

**41. 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, bridges, approaches, and railroad crossings. Roundabouts, and pavements within 150 feet of the points of curvature of roundabout intersections, are excluded from the testing requirements of this provision.
- (3) Pavements that are excluded from localized roughness according to C.5.2(1), bridges, and roundabout intersections are subject to engineer-directed straightedging according to the standard specifications. All 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-construction conference. 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.
  4. The evaluation process that will be used to make improvements to the construction operations if poor ride quality is found during the process control testing.

5. The methods that will be used to ensure a smooth pavement transition when matching into existing surfaces such as bridges, bridge approaches, or railroad crossings.
6. The segment locations of each profile run used for acceptance testing.
7. The approximate timing of acceptance testing in relation to the paving operations.

## **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 document the results using the methods taught in the HTCP profiling course.

## **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. Calibrate the profiler according to the manufacturer's recommendations. Provide the engineer with a copy of the most recent calibration results, signed by the certified profiler operator.
- (3) Perform daily calibration verification of the profiler using test methods according to the manufacturer's recommendations. Notify the engineer prior to 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 listed on the department's ride web site.

### **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.
- (5) 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 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 including all gaps.
PCC III	Concrete 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.

<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 certified HTCP profiler technician 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. Within 5 business days after completing a final acceptance profile run, submit a copy of the ProVAL smoothness assurance report showing the IRI for each segment and the areas of localized roughness exceeding an IRI of 175 in/mile. The ProVAL software and department-specified inputs are available on the department's web site:

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

- (2) As part of the profiler software outputs and ProVAL reports, document the areas of localized roughness and the locations of individual features including construction joints, structure limits, design features, utility fixtures, and other features that might affect the department's evaluation of ride quality. Field-locate the areas of localized roughness prior to the engineer's assessment for corrective actions.
- (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 .ERD files for each profiler acceptance run. Submit profile data using the department's Materials Reporting System (MRS) software available on the department's web site:

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

### **C.5 Corrective Actions**

#### **C.5.1 General**

- (1) Correct the ride as the engineer directs. The department will independently assess whether a repair will help or hurt the long-term pavement performance and/or public perception of the ride before deciding on corrective action.

#### **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 and will compensate the contractor for the extra work.
- (2) The engineer will review each individual wheel track for areas of localized roughness. The engineer will assess areas of localized roughness that exceed an IRI of 175 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>
> 175	(Length in Feet) x (IRI – 175)

<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 smoothness assurance report 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 the engineer directs: Mill and replace the full lane width of the riding surface excluding the paved shoulder. Correct the full lane width using techniques approved by the engineer.
HMA II:	Correct to an IRI of 85 in/mile using whichever of the following methods the engineer directs: Mill and replace the full lane width of the riding surface excluding the paved shoulder. Correct the full lane width using techniques approved by the engineer.
PCC II:	Correct to an IRI of 85 in/mile using whichever of the following methods the engineer directs: Continuous diamond grinding of the full lane width of the riding surface including adjustment of the paved shoulders Correct the full lane width using techniques approved by the engineer.

- (2) Re-profile corrected segments to verify that the final IRI meets the above correction limits and there are no areas of localized roughness. Submit a revised ProVAL smoothness assurance report for the corrected areas to validate the results. 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.

### **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 before any corrective action is taken. 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 1.03” 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 x IRI)
≥ 35 to < 60	0
≥ 60 to < 75	1000 – (50/3 x 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 x IRI)
≥ 55 to < 85	0
≥ 85 to < 100	(4250/3) – (50/3 x 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>
< 50	250
≥ 50 to < 75	750 – (10 x IRI)
≥ 75	0

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



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

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

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## **42. QMP HMA Pavement Nuclear Density.**

### **A Description**

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

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

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

### **B Materials**

#### **B.1 Personnel**

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

## **B.2 Testing**

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

## **B.3 Equipment**

### **B.3.1 General**

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

### **B.3.2 Correlation of Nuclear Gauges**

#### **B.3.2.1 Correlation of QC and QV Nuclear Gauges**

- (1) Select a representative section of the compacted pavement prior to or on the first day of paving for the correlation process. The section does not have to be the same mix design.
- (2) Correlate the 2 or more gauges used for density measurement (QC, QV). The QC and QV gauge operators will perform the correlation on 5 test sites jointly located. Record each density measurement of each test site for the QC, QV and back up gauges.
- (3) Calculate the average of the difference in density of the 5 test sites between the QC and QV gauges. Locate an additional 5 test sites if the average difference exceeds 1.0 lb/ft<sup>3</sup>. Measure and record the density on the 5 additional test sites for each gauge.
- (4) Calculate the average of the difference in density of the 10 test sites between the QC and QV gauges. Replace one or both gauges if the average difference of the 10 tests exceeds 1.0 lb/ft<sup>3</sup> and repeat correlation process from B.3.2.1 (2).
- (5) Furnish one of the QC gauges passing the allowable correlation tolerances to perform density testing on the project.

### **B.3.2.2 Correlation Monitoring**

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

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

### **B.4.1 Lot and Sublot Requirements**

#### **B.4.1.1 Mainline Traffic Lanes, Shoulders, and Appurtenances**

- (1) A lot consists of the tonnage placed each day for each layer and target density specified in standard spec 460.3.3.1. A lot may include partial sublots.
- (2) Divide the roadway into sublots. A sublot is 1500 lane feet for each layer and target density.
- (3) A sublot may include HMA placed on more than one day of paving. Test sublots at the pre-determined random locations regardless of when the HMA is placed. No additional testing is required for partial sublots at the beginning or end of a day's paving.
- (4) If a resulting partial quantity at the end of the project is less than 750 lane feet, include that partial quantity with the last full sublot of the lane. If a resulting partial quantity at the end of the project is 750 lane feet or more, create a separate sublot for that partial quantity.
- (5) Randomly select test locations for each sublot as specified in CMM 8.15 prior to paving and provide a copy to the engineer. Locate and mark QC density test sites when performing the tests. Perform density tests prior to opening the roadway to traffic.

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

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

**Table 1**

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

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

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

**Table 2**

#### **B.4.2 Pavement Density Determination**

##### **B.4.2.1 Mainline Traffic Lanes and Appurtenances**

- (1) Calculate the average subplot densities using the individual test results in each subplot.
- (2) If all subplot averages are no more than one percent below the target density, calculate the daily lot density by averaging the results of each random QC test taken on that day's material.
- (3) If any subplot average is more than one percent below the target density, do not include the individual test results from that subplot when computing the lot average density and remove that subplot's tonnage from the daily quantity for incentive. The tonnage from any such subplot is subject to disincentive pay according to standard spec 460.5.2.2.

### **B.4.2.2 Mainline Shoulders**

#### **B.4.2.2.1 Width Greater Than 5 Feet**

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

#### **B.4.2.2.2 Width of 5 Feet or Less**

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

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

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

#### **B.4.2.4 Documentation**

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

### **B.4.3 Corrective Action**

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

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

## **B.5 Department Testing**

### **B.5.1 Verification Testing**

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

### **B.5.2 Independent Assurance Testing**

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

## **B.6 Dispute Resolution**

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

## **B.7 Acceptance**

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

## **C (Vacant)**

## **D (Vacant)**

## **E Payment**

### **E.1 QMP Testing**

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

### **E.2 Disincentive for HMA Pavement Density**

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

### **E.3 Incentive for HMA Pavement Density**

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

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

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

#### **43. Concrete.**

*Delete standard spec 501.3.8.2.1(3) and replace with the following:*

The department will permit the addition of ice to the mix as required to reach a target concrete temperature of 80 degrees Fahrenheit if the following conditions are met:

The un-iced concrete temperature exceeds 85 degrees Fahrenheit.

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

The contractor elects to use ice.

#### **44. Expansion Device, Structure B-37-153 and B-37-154.**

##### **A Description**

This special provision describes furnishing and installing an expansion device in accordance to standard spec 502, as shown on the plans, and as hereinafter provided.

##### **B Materials**

The minimum thickness of the polychloroprene strip seal shall be ¼-inch for non-reinforced elastomeric glands and 1/8-inch for reinforced glands. Furnish the strip seal gland in lengths suitable for a continuous one-piece installation at each individual expansion joint location. Provide preformed polychloroprene strip seals that conform to the requirements ASTM D3542, and have the following physical properties:



<b>Property Requirements</b>	<b>Value</b>	<b>Test Method</b>
Tensile Strength, min.	2000 psi	ASTM D412
Elongation @ Break, min	250%	ASTM D412
Hardness, Type A, Durometer	60 ± 5 pts.	ASTM D2240
Compression Set, 70 hours @212°F, max.	35%	D395 Method B Modified
Ozone Resistance, after 70 hrs. at 100°F under 20% Strain with 100 pphm ozone	No Cracks	ASTM D1149 Method A
Mass Change in Oil 3 after 70 hr. 212°F	45%	ASTM D471
Mass Change, max.		

Install the elastomeric strip seal gland with tools recommended by the manufacturer, and with a lubricant adhesive conforming to the requirements of ASTM D4070.

The manufacturer and model number shall be one of the following approved strip seal expansion device products:

<b>Manufacturer</b>	<b>Model Number</b>		
	<b>Strip Seal Gland Size*</b>		
	<b>4-Inch</b>	<b>5-Inch</b>	<b>6-Inch</b>
D.S. Brown	SSA2-A2R-400	SSA2-A2R-XTRA	SSA2-A2R-XTRA
R.J. Watson	RJA-RJ400	RJA-RJ500	RJA-RJ600
Watson Bowman Acme	A-SE400	A-SE500	A-SE800
Commercial Fabricators	A-AS400	-----	-----

\*Expansion device strip seal gland size requirement of 4", 5", and 6" shall be as shown on the plans.

Furnish manufacturer's certification for production of polychloroprene represented showing test results for the cured material supplied, and certifying that it meets all specified requirements.

The steel extrusion or retainer shall conform to ASTM designation A 709 grade 36 steel. After fabrication, steel shall be galvanized conforming to the requirements ASTM A123.

Manufacturer's certifications for adhesive and steel shall attest that the materials meet the specification requirements.  
502-020 (20110615)

#### **45. 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 total thickness of the overlay system shall be 3/8".

## 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
Flexural Strength <sup>B</sup>	>4500 psi @ 7 days	ASTM D790
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	≤0.2%	ASTM C566
Hardness	≥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

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, 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 the item for deck patching. 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.

Just prior to overlay placement, clean all dust, debris, and concrete fines from the deck surface including vertical faces of curbs and barrier walls up to a height of 1 inch above the overlay 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.

Cover the bridge deck drains and bridge expansion joints to prevent materials from adhering and entering.

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;
- Concrete age is less than 28 days unless approved by the engineer.

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.

Course	Minimum Polymer Rate <sup>A</sup> (GAL/100 SF)	Aggregate <sup>B</sup> (LBS/SY)
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	60-64	65-69	70-74	75-79	80-84	85+
1	4 hrs.	3 hrs.	2.5 hrs	2 hrs	1.5 hrs.	1 hr.
2 *	6.5 hrs.	5 hrs.	4 hrs.	3 hrs.	3 hrs.	3 hrs.

\*Cure course 2 for 8 hours if the air temperature drops below 60° F during the curing period.

#### 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 (20120615)

## **46. Structure Repainting General.**

### **A General**

#### **A.1 Inspection**

On all structures in this contract, notify the engineer of any missing or broken bolts or nuts, any missing or broken rivets, or of any cracks or flaws in the steel members while cleaning or painting.

#### **A.2 Date Painted**

At the completion of all painting work, stencil in black paint or contrasting color paint the date of painting the bridge. The numbers shall be three inches (75 mm) in height and shall show the month and year in which the painting was completed: e.g., 11-95 (November 1995). On each bridge painted, stencil the date at two locations. On truss bridges, stencil the date on the cover plates of end posts near and above the top of the railings at the oncoming traffic end. On steel girder bridges, stencil the date on the inside of the outside stringers at the abutments. The date on grade separation bridges shall be readable when going under the structure or at some equally visible surface near the ends of the bridge, as designated by the engineer.

#### **A.3 Graffiti Removal**

Remove any graffiti on concrete abutments, piers, pier caps, parapet railings, slope paving or any other location at the direction of the engineer. Use a brush sandblast to remove graffiti.

The above work will not be measured and paid for separately, but will be considered incidental to other items in the contract.

### **B (Vacant)**

### **C Construction**

#### **C.1 Repainting Methods**

Do not perform blasting, cleaning and painting on days of high winds. Prevailing winds in excess of 15 mph (25 km/hr) shall be considered high winds.

Prior to final acceptance, completely clean and free from spent abrasive and other waste materials resulting from the contractor's operation the bridge deck surfaces, gutter lines, drains, curbs, bridge seats, pier caps, slope paving, roadway below, and all structural members and assemblies.

Place the final field coat of paint on the exterior of the exterior beams as a continuous painting operation. Stop at splices, vertical stiffeners or other appropriate locations so that lap marks are not evident or noticeable.

## **C.2 Inspection**

*Supplement standard spec 105.9 as follows:*

Furnish, erect and move scaffolding and other appropriate equipment to permit the inspector the opportunity to closely observe all affected surfaces. The scaffolding, with appropriate safety devices, shall meet the approval of the engineer.

517-005 (20030820)

### **47. Preparation and Coating of Top Flanges B-37-153, Item 517.0900.S.01; Preparation and Coating of Top Flanges B-37-154, Item 517.0900.S.02.**

#### **A Description**

This special provision describes thoroughly cleaning and coating the top surface and edges of the top flanges, removing loose paint, rust, mill scale, dirt, oil, grease, or other foreign substances until the specified finish is obtained.

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

#### **C Construction**

In accordance to SSPC SP-10, blast clean to a near white finish the top surface and edges of the top flanges that have no paint on them, and paint them with one coat of an approved zinc rich primer. No collection of blast waste material is required.

In accordance to SSPC SP-2 or SP-3, clean all areas of rust and loose paint on the top surface and edges of the top flanges, which have paint on them, by wire brushing, grinding or other mechanical means. Wash the top surface and edges of the top flanges and give them one coat of an approved zinc-rich primer.

Where plans call for the cleaning of other painted structural steel including hanger assemblies, bearings, field splices, and connections, clean areas of loose paint and rust by wire brushing, grinding, or other mechanical means as necessary and in accordance to SSPC SP-2, SP-3, or SP-11. Sound paint need not be removed with the exception of an area 12-inches on either side of hanger assembly centerlines. Clean this area to base metal in accordance to SSPC SP-10, or SP-11.

In accordance to SSPC SP-2, or SP-3, thoroughly clean by wire brushing, grinding or other mechanical means as necessary the surface area of exposed steel members that are to be imbedded in the new concrete, and wash and give one coat of an approved zinc rich primer to these areas.

Furnish and erect tarpaulins or other materials to collect all of the spent paint containing material resulting from blasting or hand and power tool cleaning and coating. Minimize dust during all clean-up activities. Collect and store waste material at the end of each work day or more often if needed. Store waste materials in the hazardous waste containers provided. Lock and secure all waste containers at the end of each work day.



Cover the container(s) at all times except when adding or removing waste material. Store the containers in an accessible and secured area, not located in a storm water runoff course, flood plain or exposed to standing water. Transportation and disposal of such waste material will be the responsibility of the department.

Damage to existing painted surfaces as a result of construction operations, shall be restored to the approval of the engineer at the contractor's expense.

#### **D Measurement**

The department will measure Preparation and Coating of Top Flanges (Structure) as a single complete unit of work for the structure, acceptably completed.

#### **E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
517.0900.S.01	Preparation and Coating of Top Flanges B-37-153	LS
517.0900.S.02	Preparation and Coating of Top Flanges B-37-154	LS

Payment is full compensation for preparing and cleaning the designated surfaces; and for furnishing and applying the coating.

517-010 (20100709)

### **48. Structure Repainting Recycled Abrasive Structure B-37-153, Item 517.1800.S.01; Structure Repainting Recycled Abrasive Structure B-37-154, Item 517.1800.S.02.**

#### **A Description**

This special provision describes surface preparation and painting of the metal surfaces in accordance to the manufacturer's recommendations and as hereinafter provided.

#### **A.1 Areas to be Cleaned and Painted**

All structural metal surfaces of:

- Structure B-37-153 35,000 SF.
- Structure B-37-154 35,000 SF.

Areas are approximate and given for informational purposes only.

#### **B Materials**

##### **B.1 Coating System**

Furnish a complete coating system from the department's approved list. The color for the finish coating material shall match the color number shown below in accordance to Federal Standard Number 595B, as printed in 1989. Supply the engineer with the product data sheets before any coating is applied. The product data sheets shall indicate the mixing and thinning directions, the recommended spray nozzles and pressures, and the minimum drying time between coats.

Finish Color: Medium Gray, 36424.

The color of the primer must be such that a definite contrast between it and the color of the blasted steel is readily apparent. There shall be a color contrast between all subsequent coats for the paint system selected. Submit color samples of the primer to the engineer for approval.

## **C Construction**

### **C.1 Surface Preparation**

Prior to blast cleaning, solvent clean all surfaces to be coated in accordance to SSPC-SP1. A No. 10 Near White Blast Cleaning according to Steel Structures Painting Council Specification Ten will be required on all metal surfaces to be painted. Prime the same day all metal surfaces receiving a No. 10 blast or re-blast before application.

The steel grit and any associated equipment brought to the site and used for blast cleaning shall be clean. Remove immediately dirty grit or equipment brought to the site at no expense to the department. Furnish an abrasive that has a gradation such that it will produce a uniform surface profile between 1 to 3 mils on the steel surface, as measured with extra profile course Testex Replica Tape. Use a minimum air pressure for abrasive blasting, measured at the nozzle, of 90 psi.

The abrasive blasting and recovery system shall be a completely integrated self-contained system for abrasive blasting and recovery. It shall be an open blast and recovery system that will allow no emissions from the recovery operation. The recovery equipment shall be such that the amount of contaminants in the clean recycled steel grit shall be less than 1 percent by weight.

Remove by grinding all fins, tears, slivers, and burred or sharp edges that are present on any steel member, or that appear during the blasting operation, and re-blast the area to give a 1 to 3 mils surface profile.

Remove all spent material and paint residue from steel surfaces with a good commercial grade vacuum cleaner equipped with a brush-type cleaning tool, and hand wipe the steel surfaces with a clean soft cloth. The airline used for surface preparation shall have an in-line water trap and the air shall be free of oil and water as it leaves the airline.

Take care to protect freshly coated surfaces from subsequent blast cleaning operations. Thoroughly wire brush damaged primed surfaces with a non-rusting tool, or if visible rust occurs, re-blast to a near white condition. Clean and re-prime the brushed or blast cleaned surfaces within the time recommended by the manufacturer.

### **C.2 Coating Application**

Apply paint in accordance to the manufacturer's recommendations in a neat workmanlike manner. Paint application shall normally be by airless spray.

The engineer may allow the use of conventional spray equipment after satisfactory demonstration by the contractor of the proper technique and handling of that equipment.

Mix the paint or coatings in accordance to the manufacturer's directions to a smooth lump-free consistency. After mixing and during application, continuously stir the paint or coating under constant slow speed agitation by use of a jiffy mixer.

Prior to applying the prime coat, stripe with primer all edges, rivet and bolt heads, nuts and washers by either brush or spray application.

Remove all dry spray by vacuuming, wiping, or sanding if necessary.

If the application of the coating at the required thickness in one coat produces runs, bubbles, or sags; apply a "mist-coating" in multiple passes of the spray gun; separate the passes by several minutes. Where excessive coating thickness produces "mud-cracking", remove such coating back to soundly bonded coating and re-coat the area to the required thickness.

The resultant paint film shall be smooth and uniform, without skips or areas of excessive paint.

The coating is supplied for normal use without thinning. If in cool weather it is necessary to thin the coating for proper application, thin in accordance to the manufacturer's recommendations.

During surface preparation and coating application the ambient and steel temperature shall be between 39 degrees F and 100 degrees F. The steel temperature shall be at least 5 degrees F above the dew point temperature. (This requires the steel to be dry and free of any condensation or ice regardless of the actual temperature of the steel.) The relative humidity shall not exceed 85%.

Paint thickness shall be as follows:

Dry Film Thickness	
Prime Coat	3 mils min.
Intermediate Coat	3 mils
Top Coat	3 mils

Time to recoat shall be according to the manufacturer's recommendations.

The dry film thickness will be determined by use of a magnetic film thickness gage. The gage shall be calibrated for dry film thickness measurement in accordance to SSPC-PA 2. Dry film thickness in each area measured will be based on an average of three gage readings, after calibration of the gage to account for surface profile of the bare steel as a result of surface preparation.

#### **D Measurement**

The department will measure Structure Repainting Recycled Abrasive (Structure) as a single complete 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
517.1800.S.01	Structure Repainting Recycled Abrasive Structure B-37-153	LS
517.1800.S.02	Structure Repainting Recycled Abrasive Structure B-37-154	LS

Payment is full compensation for preparing and cleaning the designated surfaces; furnishing and applying the paint; and for providing the listed equipment.  
517-050 (20050502)

### **49. Labeling and Disposal of Waste Material.**

The department will be obtaining the EPA permit for Structure B-37-153 and B-37-154, contact Dan Erva at 715-365-5776 for permit status and requirements.

Presently, the state has an exclusive mandatory use contract with a private waste management contractor to transport and dispose of hazardous waste.

The state's waste management contractor shall furnish and deliver appropriate hazardous waste containers and site-specific labels to each bridge site. The provided containers shall be placed at pre-selected drop-off and pick-up points at each bridge site, and these locations shall be determined at the preconstruction conference. The custody of the containers and labels shall be the responsibility of the painting contractor while they are at the job site.

Report all reportable spills and discharges in accordance to the contingency plan.

Labels are site-specific. Check the labels to ensure that the project ID, structure number, and EPA ID match the structure generating the waste. Apply a label to each drum when it is opened for the first time. Fill in the date on the label the first day material is accumulated in the drum. The following page is an example of a properly filled-in label.

During paint removal operations, continuously monitor and notify the project inspector of the status of waste generation and quantity stored so that timely disposal can be arranged.  
517-055 (20100709)

HAZARDOUS WASTE

WW-5257580999-001-01-0

# STORAGE LABEL

DOT SHIPPING DESCRIPTION

RQ, HAZARDOUS WASTE, SOLID, n.o.s.,  
(LEAD), 9, NA3077, III, (D008)

Enter the date that waste  
materials were first placed  
into the container

EPA CODE: E/D008 STATE: S

WIP#: 391498

WIP DESC: BRIDGE SAND WITH LEAD

DATE ACCUMULATED: 07/01/2005

HAZARDOUS WASTE – FEDERAL LAW PROHIBITS IMPROPER DISPOSAL IF FOUND,  
CONTACT THE NEAREST POLICE OR PUBLIC SAFETY AUTHORITY OR THE U.S.  
ENVIRONMENTAL PROTECTION AGENCY.

WISC DOT BRIDGE # B-29-53/54

I-94 OVER CTH H

PROJECT # 5882-03-70

CAMP DOUGLAS, WI 54618

(608) 963-0871

GENERATOR EPA ID  
WIR000121103

Project Number on  
label must match the  
Project Number  
assigned by the  
WIDOT

Bridge Number and  
Address on label  
must match specific  
bridge from which  
waste was generated.

EPA ID Number on  
label is specific to  
the bridge from  
which the waste is  
generated.

**50. Concrete Staining B-37-153, Item 517.1010.S.01; Concrete Staining B-37-154, Item 517.1010.S.02; Concrete Staining B-37-436, Item 517.1010.S.03.**

**A Description**

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

**B Materials**

**B.1 Mortar**

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

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

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

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

**B.2 Concrete Stain**

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

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

**C Construction**

**C.1 General**

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

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

**C.2 Preparation of Concrete Surfaces**

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

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

### **C.3 Staining Concrete Surfaces**

Apply the concrete stain in accordance to the manufacturer's recommendations.

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

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

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

### **C.4 Test Areas**

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

### **C.5 Surfaces to be Coated.**

Apply concrete stain to the surfaces in accordance to the plan.

## **D Measurement**

The department will measure Concrete Staining (Structure) in area by the square foot of surface, acceptably prepared and stained.

## **E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
517.1010.S.01	Concrete Staining B-37-153	SF

517.1010.S.02	Concrete Staining B-37-154	SF
517.1010.S.03	Concrete Staining B-37-436	SF

Payment is full compensation for furnishing and applying the two coat system; for preparing the concrete surface; and for preparing the sample panels.  
517-110 (20100709)

**51. Negative Pressure Containment and Collection of Waste Materials, Structure B-37-153, Item 517.4500.S.01; Negative Pressure Containment and Collection of Waste Materials, Structure B-37-154, Item 517.4500.S.02.**

**A Description**

This special provision describes providing a dust collector to maintain a negative air pressure in the enclosure; furnishing and erecting enclosures as required to contain, collect and store waste material resulting from the preparation of steel surfaces for painting, and repainting, including collection of such waste material, and the labeling and storage of waste material in approved hazardous waste containers, all as hereinafter provided.

**B (Vacant)**

**C Construction**

Erect an enclosure to completely enclose (surround) the blasting operations. The ground, slope paving, or roadway cannot be used as the bottom of the enclosure. So that there are no visible emissions to the air or ground or water, design, erect, operate, maintain and disassemble the enclosures in such a manner to effectively contain and collect dust and waste materials resulting from surface preparation and paint over spray. Where bulkheads are required, construct them of plywood and properly seal them. Suspend all enclosures over water from the structure or as approved by the engineer.

Construct the enclosure of flexible materials such as tarpaulins or of rigid materials such as covered plywood, or of a combination of flexible and rigid materials. Systems manufactured and provided by Eagle Industries, Detroit Tarps, or equal, are preferred. The tarpaulins shall be lined, either as part of the tarp system or have a separate plastic lining. Maintain all materials free of tears, cuts or holes. The vertical sides of the enclosure shall extend from the bottom of the deck down to the level of the work platform or barge where used for structures over water, and shall be fastened securely to those levels to prevent the wind from lifting them. Bulkheads are required between beams to enclose the blasting area as approved by the engineer. Where bulkheads are required, construct them of plywood and properly seal them. To prevent spent materials and paint over spray from escaping the enclosed area, overlap and fasten together all seams. Place groundcovers under all equipment prior to operations or as approved by the engineer.

To allow proper cleaning, inspection of structures or equipment, and painting, provide safe adequate artificial lighting in areas where natural light is inadequate.



Provide a dust collector so that there are no visible emissions outside of the enclosure and so that a negative air pressure inside the enclosure is maintained. The dust collector shall be sized to maintain the minimum air flow based on the cross-sectional area of the enclosure.

A combination of positive air input and negative air pressure may be needed to maintain the minimum airflow within the enclosure.

Filter all air exhausted from the enclosure to create a negative pressure within the enclosure so as to remove all hazardous and other particulate matter.

As a safety factor for structures over water, provide for scum control. Effectively contain the scum that forms on the water and does not sink in place from moving upstream or downstream by the use of floating boom devices.

If in the use of floating boom devices the scum tends to collect at the devices, contain, collect, store the scum, and do not allow it to travel upstream or downstream beyond the devices. Remove the scum at least once a day or more often if needed.

Collect and store at the bridge site for disposal all waste material or scum collected by this operation, or any that may have fallen onto the ground tarps. Collect and store all waste material and scum at the end of each workday or more often if needed. Storage shall be in provided hazardous waste containers. Label each container as it is filled, using the labels provided by the Hazardous Waste Disposal contractor. Check the label and ensure that the project ID, bridge number and EPA ID match the structure. Fill in the generation date when the first material is placed in the container. Secure all containers at the end of each workday. Keep the containers covered at all times except to add or remove waste material. Store the containers in an accessible and secured area, not located in a storm water runoff course, flood plain, or exposed to standing water.

In a separate operation, recover the recyclable abrasive for future application, and collect the paint and/or corrosion particles for disposal. Sand is not an acceptable abrasive.

#### **D Measurement**

The department will measure Negative Pressure Containment and Collection of Waste Materials (Structure), as a single complete unit of work for each structure designated in the contract, 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
517.4500.S.01	Negative Pressure Containment and Collection of Waste Materials Structure B-37-153	LS
517.4500.S.02	Negative Pressure Containment and Collection of Waste Materials Structure B-37-154	LS

Payment is full compensation for designing, erecting, operating, maintaining, and disassembling the containment devices; providing negative pressure exhaust ventilation; collecting, labeling, and for storing spent materials in provided hazardous waste containers. 517-065 (20101008)

## **52. Portable Decontamination Facility, Item 517.6001.S.**

### **A Description**

This special provision describes furnishing and maintaining weekly, or more often if needed, a single unit portable decontamination facility as hereinafter provided.

### **B Materials**

Supply adequate heating equipment with the necessary fuel to maintain a minimum temperature of 68° F in the facility.

The portable decontamination facility shall consist of a separate "Dirty Room", "Shower Room" and "Clean Room". The facility shall be constructed so as to permit use by either sex. The facility shall have adequate ventilation.

The "Dirty Room" shall have appropriately marked containers for disposable garments, clothing that requires laundering, worker shoes, and any other related equipment. Each container shall be lined with poly bags for transporting clothing, or for disposal. Benches shall be provided for personnel.

The "Shower Room" shall include self-contained individual showering stalls that are stable and well secured to the facility. Provide showers with a continuous supply of potable hot and cold water. The wastewater must be retained for filtration, treatment, and/or for proper disposal.

The "Clean Room" shall be equipped with secure storage facilities for street clothes and separate storage facilities for protective clothing. The lockers shall be sized to store clothing, valuables and other personal belongings for each worker. Benches shall be provided for personnel.

Supply a separate hand wash facility, either attached to the decontamination facility or outside the containment.

### **C Construction**

Properly contain, store, and dispose of the wastewater.

### **D Measurement**

The department will measure Portable Decontamination Facility by the 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
517.6001.S	Portable Decontamination Facility	Each

Payment is full compensation for furnishing and maintaining a portable decontamination facility.

517-060 (20050502)

## **53. Wall Modular Block Gravity, Item 532.0200.S.**

### **A Description**

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

### **B Materials**

#### **B.1 Proprietary Modular Block Gravity Wall Systems**

The department specifies approved modular block gravity wall products on the department's approved products list.

Proprietary wall systems may be used for this work, but must conform to the requirements of this specification and be pre-approved for use by the departments' Bureau of Structures, Structures Development Section. The name of the companies supplying pre-approved material shall be furnished within 25 days after the award of contract. The department maintains a list of pre-approved systems of retaining walls. To be eligible for use on this project, a system must have been pre-approved and added to that list prior to the bid opening date.

Applications for pre-approval may be submitted at any time. Applications must be prepared in accordance to the requirements of chapter 14 of the department's Bridge manual. Information and assistance with the pre-approval process can be obtained by contacting the Structures Development Section in Room 601 of the Hill Farms State Transportation Building in Madison or by calling (608) 266-8494.

#### **B.2 Design Requirements**

It is the responsibility of the contractor to supply a design and supporting documentation as required by this special provision for review by the department to show that the proposed wall design is in compliance with the design specifications. The following shall be submitted to the engineer for review and acceptance no later than 21 days before wall construction will begin.

The design/shop plans shall be prepared on reproducible sheets 11 inch x 17 inch, including borders. Each sheet shall have a title block in the lower right corner. The title block shall include the project identification number and structure number. Design

calculations and notes shall be on 8½ inch x 11 inch sheets, and shall contain the project identification number, name or designation of the wall, date of preparation, initials of designer and checker, and page number at the top of the page. All plans and calculations shall be signed, sealed, and dated by a professional engineer licensed in the State of Wisconsin. Four copies of the shop drawings and two copies of the design calculations and supporting materials shall be submitted.

The design of the Modular Block Gravity Wall shall be in conformance to the latest edition of the AASHTO Standard Specifications for Highway Bridges including interim specifications, the standard specifications, and standard engineering design procedures as determined by the department. The design must include analyses that clearly show the factors of safety for overturning, sliding, and soil bearing stress. The width of the modular block from front face to back face of the wall shall be given in the design computations and shown on the wall shop drawings.

The minimum embedment to the bottom of the modular block shall be 1 foot 6 inches, or as specified in the plan.

### **B.3 Wall System Components**

Materials furnished under this contract shall conform to the requirements hereinafter provided.

#### **B.3.1 Backfill**

Wall Backfill, Type A, shall comply with the requirements for coarse aggregate No. 1 as given in standard spec 501.2.5.4. All backfill placed within a zone from the base of the leveling pad to the top of the final layer of wall facing units and within 1 foot behind the back face of the wall shall be Wall Backfill, Type A. This includes all material used to fill openings in the wall facing units.

A layer of Geotextile Fabric Type “DF” (Schedule B) shall be placed vertically between the retained soil and the Type A backfill. The geotextile fabric shall extend from the top of the leveling pad to 6 inches below the surface of the retained soil. The geotextile shall then wrap across the top of the Type A backfill to the back of block wall facing.

#### **B.3.2 Wall Facing**

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

The top course of facing units shall be a solid precast concrete unit designed to be compatible with the remainder of the wall. The finishing course shall be bonded to the underlying facing units with a durable, high strength, flexible adhesive compound compatible with the block material. A formed cast-in-place concrete cap may also be

used to finish the wall. A cap of this type shall be designed to have texture, color, and an appearance that complements the remainder of the wall. The vertical dimension of the cap shall not be less than 3½ inches. Expansion joints shall be placed in the cap to correspond with each 24-inch change in vertical wall height or at a maximum spacing of 10 feet. Concrete for all cast-in-place caps shall be Grade A and shall conform to the requirements of standard spec 501.3.

Block dimensions may vary no more than ±1/8 inch from the standard values published by the manufacturer, in accordance to ASTM C1372. Blocks must have a minimum depth (front face to back face) of 8 inches. The minimum front face thickness of blocks shall be 4 inches measured perpendicular from the front face to inside voids greater than 4 square inches. Also the minimum allowed thickness of any other portion of the block is 2 inches. The front face of the blocks shall conform to plan requirements for color, texture, or patterns.

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

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

(1) Test shall be run using a 3% saline solution.

(2) Test results that meet either of the listed requirements for Freeze-Thaw Loss are acceptable

All blocks shall be certified as to strength, absorption, and freeze-thaw requirements unless, due to contract changes after letting, certified blocks are not available when required. At the time of delivery of the certified blocks, furnish the engineer a certified test report from a department-approved independent testing laboratory for each lot of modular blocks. The certified test report shall clearly identify the firm conducted the sampling and testing, the type of block, the date sampled, name of the person conducting the sampling, the represented lot, the number of blocks in the lot, and the specific test results for each of the stated requirements of this specification. A lot shall not exceed 5000 blocks. The certified test results will represent all blocks within the lot. Each pallet of blocks delivered shall bear lot identification information. Block lots that do not meet the requirements of this specification or blocks without supporting certified test reports will be rejected and shall be removed from the project at the contractor's expense.

A department-approved independent testing laboratory shall control and conduct all modular block sampling and testing for certification. Prior to sampling, the manufacturer's representative shall identify all pallets of modular blocks contained in each lot. All pallets of blocks within the lot shall be numbered and marked to facilitate

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

The department may conduct testing of certified or non-certified modular blocks lots delivered to the project. The department will not do freeze-thaw testing on blocks less than 45 days old. If a random sample of five blocks of any lot tested by the department fails to meet any of the requirements of this specification (nonconforming), the contractor shall remove from the project site all blocks from the failed lot that have not been installed in the finished work, at no cost to the department, unless the engineer allows otherwise. Nonconforming blocks installed in the finished work will be considered approved by the department as stated in standard spec 106.5(2) and any adjustment to the contract price will not exceed the price of the blocks charged by the supplier.

### **B.3.3 Leveling Pad**

For all walls over 5 feet tall measured from the top of the leveling pad to the top of the wall, the wall leveling pad shall consist of a poured concrete masonry pad made from Grade A concrete conforming to standard spec 501 as modified in standard spec 716. Provide QMP for class II concrete as specified in standard spec 716.. The depth of the leveling pad shall be as shown on the plans or 6-inches minimum. The leveling pad shall be as wide as the blocks plus 6-inches. Six inches of leveling pad shall extend beyond the front face of the blocks. The bottom of the blocks shall be horizontal and 100% of the block surface shall bear on the leveling pad. A concrete leveling pad shall be used for the entire length of the wall. All walls with a Structure Number assigned (such as R-XX-XXX) shall be built using the concrete leveling pad given above. The leveling pad shall step to follow the general slope of the ground line. The leveling pads steps shall keep the bottom of the wall within one block's thickness of the minimum embedment, i.e. minimum embedment plus up to the thickness of one block. Additional embedment may be detailed but will not be measured for payment.

On walls less than or equal to 5 feet in height without a wall number assigned, a compacted leveling pad made from base aggregate dense 1¼ inch as given in standard spec 305 may be used. The depth of the aggregate leveling pad shall be as shown on the plans or 12-inches minimum. The aggregate leveling pad shall be as wide as the blocks plus 12 inches with 12 inches of pad extending beyond the front face of the wall.

## **C Construction**

### **C.1 General**

Construct the modular block gravity wall in accordance to the manufacturer's instructions, at the locations and to the dimensions shown on the plan and as directed by the engineer. At the end of each working day, provide good temporary drainage such that the backfill shall not become contaminated with run-off soil or water if it should rain. Do not stockpile or store materials or large equipment within 10 feet of the front face of the wall.

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

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

Conduct backfilling operations in such a manner as to prevent damage or misalignment of the wall facing units. At no expense to the department, correct any such damage or misalignment as directed by the engineer.

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

After construction of the wall, restore the surrounding area located above and below all precast block retaining wall sites to its original condition and to the finished details on the plans.

### **C.2 Geotechnical Information**

Geotechnical data to be used in the design of the wall is given on the wall plan. The allowable soil bearing capacity is given on the plan. After completion of excavation, the department's Regional Soils Engineer will inspect the site and determine if the foundation is adequate for the intended loads. Allow the region's Soils Engineer two working days to perform the inspection.

## **D Measurement**

The department will measure Wall Modular Block Gravity in area by the square foot of face on a vertical plane between the top of the leveling pad and a line indicating the top of wall including wall cap or copings as required and shown on the plans. Unless directed by the engineer, wall area constructed above or below these limits will not be measured for payment.

## **E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
532.0200.S	Wall Modular Block Gravity	SF

Payment is full compensation for supplying a design and shop drawings; preparing the site, including all necessary excavation and disposal of surplus materials; supplying all necessary wall components to produce a functional system including cap and copings; constructing the retaining system; providing backfill, backfilling, and compacting the backfill; and furnishing and installing geotextile fabric. Parapets, railings, and other items above the wall cap or coping will be paid for separately.

Any required topsoil, fertilizer, seeding or sodding and mulch will be paid for at the contract unit price of topsoil, fertilizer, seeding or sodding and mulch, respectively.  
532-030 (20120615)

**54. Storm Sewer Rock Excavation, Item 607.5000.**

The work under this item includes rock excavation required for pipe culvert, water main, and sanitary sewer.

**55. Cover Plates Temporary, Item 611.8120.S.**

**A Description**

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

**B Materials**

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

**C (Vacant)**

**D Measurement**

The department will measure Cover Plates Temporary as each individual unit, acceptably completed.

**E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
611.8120.S	Cover Plates Temporary	Each

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

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



## **56. Pipe Grates, Item 611.9800.S.**

### **A Description**

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

### **B Materials**

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

Furnish pipe grates galvanized according to ASTM A123.

Furnish angles and brackets galvanized according to ASTM A123.

Furnish required hardware galvanized according to ASTM A153.

### **C Construction**

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

### **D Measurement**

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

### **E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
611.9800.S	Pipe Grates	Each

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

611-010 (20030820)

## **57. Crash Cushions Temporary.**

*Supplement standard spec 614.3.4(2) with the following:*

Provide and maintain temporary crash cushions, at the locations the plans show. Conform to the contract design criteria and to manufacturer's specifications. Certify that the installation was done accordingly to manufacturer's recommendations. Ensure that the upstream ends of crash cushions have reflective sheeting applied before opening to public traffic. Replace parts of crash cushions damaged during construction within 24 hours between December 1 and April 1 and within 4 hours all other times after the department gives notification that the site is cleared and safe to reinstall.

## **58. 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.

### **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)

## **59. Blue Specific Service Signs.**

*Supplement standard spec 638.3.4 with the following:*

Do not remove or move blue specific service signs or their associated posts. Specific service signs are signs with logos that identify commercial entities providing gas, food, lodging, camping, or attractions. A separate contractor, Derse, Inc., is responsible for these signs. Contact Mark Rognsvoog of the Derse Company at (800) 345-5772 a minimum of 14 calendar days in advance to coordinate removing, moving, or re-installation of these signs.

The contractor is responsible for damage done to these signs due to contractor operations.  
638-010 (20120615)

## **60. Removing Signs Type II.**

*Supplement standard spec 638.3.4 (2) with the following:*

Return aluminum Type II signs to either one of the department's North Central Region Office Sign Shops located at 2841 Industrial Street, Wisconsin Rapids or 501 North Hanson Lake Road, Rhinelander. Contact the Signing Lead Worker at (715) 421-8006.

## **61. Removing Signs, Type 1, Item 638.2601.**

The work under this item shall be in accordance to the pertinent requirements of standard spec 638 and as hereinafter provided.

*Revise standard spec 638.4, Method of Measurement, to read:*

Do not remove any Type 1 sign until its replacement has been delivered and erected. Locate the new sign to provide room to erect the new sign and to remove the old sign. Remove the existing sign after, but the same day that the new sign is erected.

## **62. Anchor Bolt Tightening, Sign Bridge.**

*Supplement standard spec 641.3.1.2 as follows:*

Verify by hydraulic methods that bolt tightening meets requirements of standard spec 641.3.1.2. Cost considered incidental to "Sign Bridge Structure S-37-91", "Remove and Reinstall Sign Bridge Cantilever S-37-64" and "Overhead Sign Support".

## **63. Field Facilities.**

*Supplement standard spec 642.2.1(3) as follows:*

Provide a water cooler to dispense the bottled drinking water.

*Supplement standard spec 642.3 as follows:*

Set up the field office within seven days after notice from the engineer.

Provide a parking area large enough to park a minimum of six cars directly adjacent to the field office. The parking area and approach to the field office shall be well drained and consist of a crushed base aggregate or an existing paved surface and shall be ready for use within seven days after the field office is set up.

## **64. Traffic Control.**

*Supplement standard spec 643.3.1 with the following.*

When traffic control devices are not in use, they shall be covered and/or removed from the traveled way and shoulders of the roadway. Lighting devices shall be covered or rendered inoperative when not in use.

Provide to the Marathon County Highway and Transportation Department, the Marathon County Sheriff's Department, the Wisconsin State Patrol, the City of Wausau Police, Fire and Rescue Departments and the engineer, the current telephone number(s) which the contractor or their representative can be contacted at all times in the event a safety hazard develops. Repair, replace or restore the damaged or disturbed traffic control devices within two hours from the time notified or made aware of the damaged or disturbed traffic control devices.

Keep local emergency officials informed of emergency access routes to provide timely services.

Inspect all traffic control devices at least once daily on both working and non-working days and keep a logbook of the inspections. Inspect traffic control devices at least once weekly during the hours of darkness. In the logbook document the date and time of the daily inspections, and any deficiencies and corrective actions taken. Review the logbook with the engineer a minimum of once a week.

Do not park or store equipment, vehicles, or construction materials within 30 feet of the edge of the traffic lane carrying IH 39/USH 51 during non-working hours in areas with no barrier wall. No equipment, vehicles, or construction materials shall be parked or stored within 20 feet of the edge of the traffic lanes carrying side road or ramp traffic during non working hours in areas with no barrier wall. Barrier wall required for the sole purpose of shielding construction materials, equipment, or vehicles shall be at the contractor's expense.

All contractor vehicles or equipment operating within the project limits shall be equipped with and have flashing yellow lights operating.

All department owned signs that are removed by the contractor because of interference with construction operations shall, unless otherwise authorized by the engineer, be promptly replaced as directed by the engineer. At no time may stop signs be removed or moved without flag persons present.

## **65. 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)

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

**A Description**

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

**B Materials**

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

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

**C Construction**

**C.1 General**

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

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

**C.2 Groove Depth**

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

**C.3 Groove Width – Longitudinal Markings**

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

**C.4 Groove Position**

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

## **C.5 Groove Cleaning**

### **C.5.1 Concrete**

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

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

### **C.5.2 New Asphalt**

Groove pavement five or more days after paving.

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

### **C.5.3 Existing Asphalt**

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

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

## **C.6 Tape Application**

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

### **Apply tape in the groove with additional surface preparation adhesive.**

The surface preparation adhesive must be set (feels tacky but is no longer in liquid form) and have a matte finish rather than a glossy wet appearance. Refer to the manufacturer's instructions for determining when the surface preparation adhesive is set.

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

## **D Measurement**

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



**E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
646.0841.S	Pavement Marking Grooved Wet Reflective Contrast Tape 4-Inch	LF
646.0843.S	Pavement Marking Grooved Wet Reflective Contrast Tape 8-Inch	LF

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

**67. Electrical Conduit.**

*Delete standard spec 652.3.1.1 (5) and replace with the following:*

A 12 AWG. XLP insulated, solid, copper, 600 volt AC, pull wire shall be installed in each run of conduit, as laid, which is to receive future conductors, unless the contract provides for the installation of wire or cable. The wire shall be approximately 4 feet longer than the run of conduit and shall be doubled back at least 2 feet at each raceway access point. The pull wire shall be anchored at each access point in a manner acceptable to the project manager.

**68. Notice to Contractor – Street Light Installation (Bus51/CTH K) (WDOT Maintains).****Lighting Control Cabinet**

The department will furnish and install the lighting control cabinet for the street light section install on Bus51/CTH K located northwest of the Campus Drive intersection. The contractor shall notify the department's NCR-Wisconsin Rapids Office electrician Doug Pilgrim (715) 459-4784 a minimum of ten working days prior to the desired lighting control cabinet installation date.

**Electrical Service Meter Breaker Pedestal (Bus51/CTH K)**

The department will furnish and install the electrical service meter breaker pedestal for the lighting system installed at (Bus51/CTH K).

**Electric Service Lateral Installation**

The department will arrange for the installation of the electric service lateral connection, by the local electric utility, to the meter breaker pedestal for the lighting system (Bus51/CTH K).

**Concrete Control Cabinet Bases Type (9 Special)**

The contractor will be responsible for the installation of the concrete control cabinet base under the pertinent bid item provided in the contract. The contractor shall finish grade the service trench, replace topsoil which may become lost or contaminated, seed, fertilize, and mulch all areas which are disturbed by the electric utility company after installing the electric service lateral.

**69. Install Conduit Into Existing Item, Item 652.0700.S.****A Description**

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

**B Materials**

Use type, size, and number of conduits as shown in the plan and as provided and paid for under other items in this contract. Furnish backfill material, topsoil, fertilizer, seed, and mulch conforming to the requirements of pertinent provisions of the standard specifications.

**C Construction**

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

**D Measurement**

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

**E Payment**

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

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

Payment is full compensation for excavating, drilling holes; furnishing and installing all materials, including bricks, coarse aggregate, sand, bedding, and backfill; for excavating and backfilling; and for furnishing and placing topsoil, fertilizer, seed, and mulch in disturbed areas; for properly disposing of surplus materials; and for making inspections.  
652-070 (20100709)

**70. Lighting Control Cabinet 3060, Item 661.0400.S.01.**

**A Description**

This special provision describes furnishing and installing lighting control cabinets as shown on the plans and as hereinafter provided.

**B Materials**

The cabinet type shall be Type 3060 as detailed in the plans.

**C (Vacant)**

**D Measurement**

The department will measure Lighting Control Cabinet 3060 as a 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
661.0400.S.01	Lighting Control Cabinet 3060	Each

Payment is full compensation for furnishing and installing all materials, including lighting control cabinets, hardware and fittings.

661-001 (20030820)

**71. 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 state-furnished equipment includes the following:

<b>State-Furnished Items</b>
50' Camera Pole w/ Lowering System
Dome Camera Assembly
Microwave Detector Assembly
Yagi Antenna
900 MHz Wireless Ethernet Bridge
Pole Mounted Cabinet
Ethernet Video Codec
Ethernet Switch
5.8 GHz Wireless Ethernet Bridge

Pick-up small state-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.

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

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

## **72. 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.4 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.5 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)

**73. 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 in accordance 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 section 656 of the standard specifications.

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 in accordance with 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 all testing.  
673-010 (20100630)

**74. 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 in accordance with 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)

**75. 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 in accordance 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 all programming.

677-030 (20100630)

**76. Crack and Damage Survey, Item 999.1500.S.****A Description**

This special provision describes conducting a crack and damage survey of the residences and business located at adjacent to the project limits.

This Crack and Damage Survey shall consist of two parts. The first part, performed prior to construction activities, shall include a visual inspection, photographs, and a written report describing the existing defects in the building(s) being inspected. The second part, performed after the construction activities, shall also include a visual inspection, photographs, and written report describing any change in the building's condition.

**B (Vacant)****C Construction**

Prior to any construction activities, thoroughly inspect the building structures for existing defects, including interior and exterior walls. Submit a written report of the inspector's name, date of inspection, descriptions and locations of defects, and photographs. The intent of the written report and photographs is to procure a record of the general physical condition of the building's interior and exterior walls and foundation. The report shall be typed on bond paper and be in text form.

The photographs shall be taken by a professional photographer capable of producing sharp, grain free, high-contrast colored pictures with good shadow details. The photographs shall be 3½ inch by 5 inch color prints, glossy, and mounted in protective storage pages with clear slip-in pockets and clear background. Each sheet shall hold four prints. The back of each photograph shall contain the following information:

ID \_\_\_\_\_  
Building Location \_\_\_\_\_  
View looking \_\_\_\_\_  
Date \_\_\_\_\_  
Photographer \_\_\_\_\_

Prior to the start of any construction activities pertinent to this survey, submit a copy of the written report and photographs to the engineer.

After the construction activities are complete, conduct another survey in the same manner, take photographs, and submit another written report to the engineer.

In lieu of photographs, a professional videographer may be hired to use a video camera capable of producing a VHS tape with the clarity required to perform this work.

#### **D Measurement**

The department will measure Crack and Damage Survey as single complete unit of work.

#### **E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
999.1500.S	Crack and Damage Survey	LS

Payment is full compensation for providing the before and after written reports, and for photographs or videotapes.  
999-010 (20030820)

### **77. Fertilizer for Lawn Type Turf, Item SPV.0030.01.**

#### **A Description**

This special provision describes furnishing and incorporating fertilizing material in the soil on areas of seeding or sodding.

#### **B Materials**

Use fertilizers that are standard, commercial, packaged or bulk products, in granular or liquid form conforming to Wisconsin Statutes and the Wisconsin Administrative Code Chapter ATPC 40. Ensure that each container of packaged fertilizer is plainly marked with the analysis of the contents showing minimum percentages of total nitrogen, available phosphoric acid, and soluble potash. If furnishing the fertilizer in bulk, include

an invoice with each shipment indicating the minimum percentages of total nitrogen, available phosphoric acid, and soluble potash in the contents.

The total of nitrogen, phosphoric acid, and potash shall equal at least 41 percent. At least 80% of the nitrogen shall be water insoluble.

If using fertilizer with a nitrogen, phosphoric acid, and potash total greater than 41 percent, maintain a ratio of 4-1-2 (N-P-K) and apply at a rate that provides the equivalent amount of nitrogen, phosphoric acid, and potash that is provided by a fertilizer with a 41 percent total.

Provide a slow release type fertilizer with a 14-week residual effect after activation into the soil conforming to the following minimum requirements:

Nitrogen,.....	not less than 22%
Phosphoric Acid,.....	not less than 5%
Potash,.....	not less than 10%

### **C Construction**

Uniformly apply the fertilizer to the seeding areas, and incorporate it into the soil by light discing or harrowing. If applying granular fertilizer, ensure it is well pulverized and free from lumps.

If incorporating fertilizer into topsoiled areas, apply it just before, and in conjunction with, final discing or harrowing, or if hand manipulating the topsoil, apply it just before final raking and leveling.

If fertilizing areas to receive sod, spread the fertilizer at the rate specified below uniformly over the soil before sodding, and then work the fertilizer into the soil while preparing the earth bed as specified in standard spec 631.3.1.

Apply fertilizer containing 41 percent total of nitrogen, phosphoric acid, and potash at 7 pounds per 1,000 square feet of area, unless the contract specifies otherwise. For Fertilizer for Lawn Type Turf that contains a different percentage of components, determine the application rate by multiplying the specified rate by a dimensionless factor determined as follows:

$$\text{Conversion Factor} = 41 / \text{New Percentage of Components}$$

### **D Measurement**

The department will measure Fertilizer for Lawn Type Turf by the hundred pounds (CWT) acceptably completed, and it will be measured based on an application rate of 7 pounds per 1,000 square feet. The department will not measure fertilizer used for the bid items under standard spec 632. The measured quantity equals the number of hundred-weight (CWT) of material determined by multiplying the actual number of CWT. of material incorporated by the ratio of the actual percentage of fertilizer components used to 41 percent for Fertilizer for Lawn Type Turf.

**E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0030.01	Fertilizer for Lawn Type Turf	CWT

Payment is full compensation for providing, hauling, placing, and incorporating the fertilizer into the soil.

**78. Miscellaneous Rock Excavation, Item SPV.0035.01.****A Description**

This work shall consist of Miscellaneous Rock Excavation for the installation of sign posts, concrete bases and sign structure footings as detailed in the plans.

**B Construction**

Construction methods used in performing the work shall conform to the pertinent requirements set forth in standard spec 607.3.

**C Measurement**

The department will measure Miscellaneous Rock Excavation by the cubic yard acceptably completed. The department will measure this work in its original position and compute the volume, excluding boulders, by the method of average end areas.

The department will measure boulders of 1/2 cubic yard or more as specified for boulders and surface stone greater than one cubic yard in standard spec 205.5.1.

The department will measure this work vertically from the top of rock to the bottom of rock, or to an elevation 6 inches below the bottom of the post/base/footing, whichever is higher, and horizontally the width of 6 inch on either side of the post/base/footing width. The department will not measure excavation below or beyond the specified limits.

**D Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0035.01	Miscellaneous Rock Excavation	CY

Payment for Miscellaneous Rock Excavation is full compensation for furnishing all rock excavation and disposal.

**79. Coarse Aggregate, Size No 2, Item SPV.0035.02.**

**A Description**

This work consists of furnishing and placing coarse aggregate at temporary bypass channels as shown on the plans and as hereinafter provided.

**B Materials**

Provide clean concrete aggregate graded in accordance with the requirements as specified under standard spec 501.2.5.4.4. The soundness and wear requirements are deleted from this material.

**C Construction**

Construct the coarse aggregates in accordance with standard spec 209.3.

**D Measurement**

The department will measure Coarse Aggregate Size No 2 by the cubic yard in the vehicle, 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.0035.02	Coarse Aggregate Size No. 2	CY

Payment is full compensation for furnishing and installing the aggregate and for all labor, tools, equipment and incidentals necessary to complete the work.

**80. PCMS Cellular Communications, Item SPV.0045.01.**

**A Description**

This special provision describes cellular communications requirements for use with PCMS. Cellular communication allows the department to control PCMS during incidents or other emergencies through Trans Suite software. The department will notify contractor of message changes.

**B Materials**

Provide a cellular modem and antenna that enables the department to communicate and control PCMS conforming to standard spec 643.2.7.

**B.1 Cellular Modem and Antenna**

Furnish an EV-DO Cellular modem registered to a 3G Cellular carrier. The cellular modem must include 1 or more external antennas, 1 or more 10/100 Ethernet ports, and 1 or more db9 Serial RS-232 interfaces. The device must be able to handle -30° C to +75° C and powered by a 12VDC power supply. The cellular modem must have a built-in secure router with NAT, port forwarding and IP pass-through capabilities.

Provide management IP and passwords for the cellular modem to the department.

Access includes IP address, serial port setting, and password(s). Antenna cable shall be continuous without splices. Mount the antenna at the highest practical location on the PCMS.

### **C Construction**

Conform to standard spec 643.3.7. Install cellular modem in a lockable, weatherproof compartment in the PCMS trailer.

A minimum of 14 days prior to deployment, demonstrate to the department that the cellular modem is capable of communications with Trans Suite software.

If remote communications are interrupted or temporarily unavailable, contractor will be notified by the department to change the message.

### **D Measurement**

The department will measure PCMS Cellular Communications by the day acceptably completed, measured as the number of calendar days each cellular modem for PCMS is available for exclusive use under the contract. The department will deduct one day for each calendar day the sign communications are required but out of service for more than 2 hours.

### **E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0045.01	PCMS Cellular Communications	DAY

Payment is full compensation for providing, operating and maintaining a cellular modem and antenna, and for making message changes if cellular communications are interrupted or temporarily unavailable.

## **81. Remove Microwave Detector, Item SPV.0060.49.**

### **A Description**

This special provision describes removing a microwave detector assembly from an existing type 5 pole.

### **B Materials**

Materials will be existing and will consist of:

- Type 5 pole with a pole-mounted cabinet
- EIS, Inc. RTMS microwave vehicle detector.



### **C Construction**

Disconnect microwave detector cable between the microwave detector assembly and the pole-mounted cabinet. Remove microwave detector assembly from the type 5 pole along with any brackets and banding. Dispose of the microwave detector assembly and related components.

### **D Measurement**

The department will measure Remove Microwave Detector as each individual unit, acceptably completed.

### **E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.49	Remove Microwave Detector	Each

Payment is full compensation for disconnecting of the microwave detector; for removal from the existing type 5 pole; and for disposing of equipment.

## **82. Salvage Solar Power System, Item SPV.0060.50.**

### **A Description**

This special provision describes removing and salvaging a solar power system, from a type 5 pole, that is used to power a microwave detector station.

### **B Materials**

Materials will be existing and will consist of:

- Solar power generation system, consisting of a pole-mount battery cabinet, batteries, two solar power arrays, solar power system controller, and associated cabling;
- Communications interface device which may be either a BlueTree wireless cellular modem, or a 900 MHz ethernet radio and Yagi antenna;

### **C Construction**

Prior to beginning work on this item the contractor may inspect the site with the engineer and verify the system is functioning properly. Once work has begun, the contractor will be responsible for any damage done to any of the components in the system and will be required to remedy the damage by replacing the damaged component(s) with new component(s) of the same make and model.

Disconnect wiring between solar panels and pole-mounted battery cabinet. Remove solar panel(s) and battery cabinet from the pole. Store in a safe place until the Department picks up the equipment. Contact Dean Beekman at (414) 227-2154 to coordinate pick up of this equipment.

**D Measurement**

The department will measure Salvage Solar Power System as each individual unit, acceptably completed.

**E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.50	Salvage Solar Power System	Each

Payment is full compensation for disassembly of the solar power system components, and for storing of equipment until pick up.

**83. Remove Pole Type 5, Item SPV.0060.51.****A Description**

This special provision describes removing a type 5 pole from a type 5 concrete base.

**B Materials**

Materials will be existing and will consist of:

- Type 5 pole and transformer base with other equipment removed under separate big items.
- Type 5 concrete base

**C Construction**

Remove type 5 pole and transformer base from type 5 concrete base following removal of microwave detector and solar power system. (paid for separately) Dispose of pole and transformer base unless plans call for salvaging the pole. Reinstallation of the salvaged poles and transformer bases will be paid under a separate bid item.

**D Measurement**

The department will measure Remove Pole Type 5 as each individual unit, acceptably completed.

**E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.51	Remove Pole Type 5	Each

Payment is full compensation for removing and disposing or salvaging of the pole.

## **84. Install Wireless Ethernet Bridge, Item SPV.0060.52.**

### **A Description**

This special provision describes installing a wireless Ethernet bridge access point or subscriber unit 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 wireless Ethernet bridge with integral antenna OR wireless Ethernet bridge with separate antenna.
- One wireless Ethernet bridge power converter.
- One wireless Ethernet bridge mounting bracket.

Contractor-furnished materials include the following:

- Mounting hardware.
- Outdoor rated Category 6 communications cable.
- Inline network cable surge suppressor.

### **C Construction**

Drill holes in camera pole or type 5 pole, adjacent to radio installation location. Install the Category 6 communications cable between the power injector to be installed in the cabinet and the radio / antenna inclusive Ethernet radio unit.

Bond the surge suppressor to the cabinet grounding system.

Install the wireless Ethernet bridge in a point-to-point or point-to-multipoint configuration as shown on the plans and as directed by the engineer.

Use the manufacturer's set-up software to configure the Ethernet bridge radio for its intended use. Use the signal strength indicator on the radio to find the optimum position. Also perform a frequency analysis to determine the optimal hop pattern of the radios and test the continuity of the link by polling the radios using the software provided. The position of the radio and the hop pattern shall be adjusted until the polls show at least 200 consecutive polling intervals have been successfully transmitted and received.

Demonstrate to the engineer that the hop pattern selected corresponds to the optimal noise free frequencies identified in the frequency analysis. Deliver 3 copies of the final test results for signal strength, frequency analysis, and test polling.

### **D Measurement**

The department will measure Install Wireless Ethernet Bridge as each individual unit, acceptably completed.

**E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.52	Install Wireless Ethernet Bridge	Each

Payment is full compensation for installing, setting up, configuring, and testing the wireless Ethernet bridge radio, surge suppressor, conduit, cables, and connections; and transportation.

**85. Install Antenna, Item SPV.0060.53.****A Description**

This special provision describes installing a state-furnished Yagi or omni-directional spread spectrum radio antenna and above ground metallic conduit. The antenna has a pigtail for connection to the antenna cable. Provide stainless steel bands for mounting to a steel pole or sign structure. Provide 2" metallic conduit to house antenna cable.

**B Materials**

Antenna as provided by the state. Metallic Conduit, 2-Inch as required in standard spec 652.

**C Construction**

Connect the antenna drop cable to the antenna. The connection shall be fully sealed using methods and materials recommended by the radio manufacturer. Install the antenna so that it does not block the view of any microwave detector on the same pole.

Aim the antenna at the matching antenna, as shown in the plans. Use the signal strength indicator on the radio to find the optimum position.

**D Measurement**

The department will measure Install Antenna as each individual unit, acceptably completed.

**E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.53	Install Antenna	Each

Payment is full compensation for testing and installing the antenna and connections; and for all metallic conduit, mounting hardware, equipment, and transportation.

## **86. Install Salvaged Type 5 Pole, Item SPV.0060.54.**

### **A Description**

This special provision describes reinstalling a salvaged type 5 pole and transformer base on a new or existing type 5 concrete base.

### **B Materials**

Materials are existing and will consist of:

- 11-1/2 inch transformer base;
- Type 5 pole;

### **C Construction**

Install type 5 pole and transformer base on new or existing type 5 concrete base in accordance with standard spec 657.3.

### **D Measurement**

The department will measure Install Salvaged Type 5 Pole as each individual unit, acceptably completed.

### **E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.54	Install Salvaged Type 5 Pole	Each

Payment is full compensation for installing pole and transformer base on type 5 concrete base.

## **87. Lane Rental Assessment, Item SPV.0055.01.**

### **A Description**

The contractor will be assessed a rental charge for each USH 51 lane closure, ramp closure, and each full closure of USH 51 from the time of notice to proceed until completion of all project work. If a lane is obstructed at any time due to contractor operations, it is considered a closure. The purpose of lane rental is to discourage unnecessary closures, especially during time periods outside of non peak hours.

Submit the dates of the proposed lane, shoulder, ramp, and roadway restrictions/closures to the engineer as part of the progress schedule. Coordinate lane, shoulder, ramp, and roadway restrictions/closures with any concurrent operations on USH 51 within 3 miles of the project.

The hours for Peak, Off Peak, and Night Time work are defined in the Prosecution and Progress article of these special provisions.

### A.1 Lane Rental Assessment Table

The hourly rental rate will be assessed for each USH 51 freeway lane closure, each service ramp closure, and each full closure of a freeway roadway (except as noted below), per direction of travel as follows:

Freeway Closure Type (Per Direction of travel)	Peak* Hours		Weekday Off Peak Hours		Weekend Off Peak Hours		Night Time Hours	
	Hourly Rental	Closure Hour Credits	Hourly Rental	Closure Hour Credits	Hourly Rental	Closure Hour Credits	Hourly Rental	Closure Hour Credits
Single Lane Closure (northbound and southbound USH 51)	\$10,000	0	\$1,000	200	\$500	0	\$ 0	n/a
Ramp Closure	\$2,500	0	\$500	0	\$250	0	\$100	0
Northbound USH 51 Closure	\$20,000	0	\$4,000	0	\$2,000	0	\$200	0
Southbound USH 51 Closure	\$20,000	0	\$4,000	0	\$2,000	0	\$200	0

\*Lane, ramp, shoulder, and roadway closures during the peak hour are not allowed. See article Prosecution and Progress. Non-compliant closures will be assessed at the Peak Hour Rate.

Lane rental will not be assessed for closures of the E ramp and F ramp noted in the plans under the title “Traffic Control – Stage 2” and as described in the “Traffic” article of these provisions.

Lane rental will not be assessed for closures of the A ramp noted in the plans under the titles “Traffic Control – Stage 3A, 3B, 4, 5A, 5B, 6A, 6B, and 6C” and as described in the “Traffic” article of these provisions.

Lane rental will not be assessed for ramp closures of the B ramp noted in the plans under the title “Traffic Control – Stage 6C” and as described in the “Traffic” article of these provisions.

Lane rental will not be assessed for the closures of the D ramp noted in the plans under the titles “Traffic Control – Stage 5A, 5B, 6A, 6B, and 6C” and as described in the “Traffic” article of these provisions.

Lane rental will not be assessed for the USH 51 closures for B-37-0069 removal noted in the plans under the title “Traffic Control – Stage 1”, as long as the closure does not occur for more than 2 nights as described in the “Traffic” article. Additional lane closures beyond those included in the plans under the title “Traffic Control - Stage 1” will be assessed if the closures exceed the credited hours.

Lane rental will not be assessed for the USH 51 closures for B-37-436 beam placement noted in the plans under the title “Traffic Control – Stage 2A/2B” and as described in the “Traffic” article of these provisions.

Closure times exceeding the allowed duration will be subject to Lane Rental Assessment as long as the closure does not occur for more than 15 minutes as described in the Traffic article. Additional lane closures beyond those included in the plans under the title “Traffic Control - Stage 1” will be assessed if the closures exceed the credited hours.

Lane rental will not be assessed for the USH 51 closures for rock blasting as described in the “General Requirements for Blasting Rock” article of these provisions.

Closure times exceeding the allowed duration will be subject to Lane Rental Assessment as long as the closure does not occur for more than 20 minutes as described in the “General Requirements for Blasting Rock” article. Additional lane closures beyond those included in the specials under the title ““General Requirements for Blasting Rock” will be assessed if the closures exceed the credited hours.

The hourly rental rate represents the average hourly cost of the interference and inconvenience to the road users for each closure. The contractor will be assessed a fee for lane rental in excess of the maximum credited hours specified. The assessment will be computed based on the total number of hours that each lane, ramp, or roadway closure exceeds the "closure hour credits", multiplied by the "hourly rental" rate as defined in the Lane Rental Assessment table.

For work performed under this contract, multiple lane closures in one direction of travel at a given time will be assessed as one lane closure.

Use lane rental credits in the above table towards closures for work performed under this contract only.

The Lane Rental Assessment will be measured in 15-minute increments. All lane or roadway closure event durations greater than 15 minutes in length will be rounded up to the nearest 15 minutes for the purposes of this computation.

In the event that the lane and/or roadway closures extend into the periods noted in the “Traffic,” “Other Work Restrictions,” or “Holiday Work Restrictions” sections of these special provisions, the closure will be considered non-compliant. Non-compliant closures may result in a project shut down until the closure is removed. Assessments for non-compliant closures will be based on the peak hour rate, and the duration of the non-compliant closure, which will be measured in 5-minute increments. Closure hour credits will not be accepted for non-compliant closures.

Lane rental assessment 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 Assessment.

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

Closure times exceeding the allowed duration for installing Crash Cushions Temporary will be subject to Lane Rental Assessment.

#### **A1.1 Lane Rental Assessment and Liquidated Damages**

When the contractor is to be charged liquidated damages, and a lane or roadway closure is in effect to facilitate construction operations which are exceeding credited hours, the contractor will be charged both the lane rental assessment and the liquidated damages.

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

#### **C (Vacant)**

#### **D Measurement**

The department will assess Lane Rental Assessment by the dollar. The charge will be the total dollar amount of each freeway closure type category where the total number of hours that each lane or roadway closure exceeds the project maximum number of “closure hour credits,” as defined in the Lane Rental Assessment table, multiplied by the “hourly rental” as defined in the Lane Rental Assessment table. The Lane Rental Assessment total will not be reduced or offset with freeway closure type categories where the total closure hours are less than “closure hour credits.”

Lane Rental Assessment will be in effect from the time of notice to proceed until the project is given final acceptance.

All Lane Rental Assessment for this contract shall be assessed to Project 1170-01-73.

#### **E Payment**

The department will assess Lane Rental Assessment, as described above, under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0055.01	Lane Rental Assessment	DOL



## **88. Cleaning and Painting Bearings, Item SPV.0060.02.**

### **A Description**

This special provision describes cleaning and painting the existing steel bearings on structures as shown on the plans, as directed by the engineer, and in accordance to standard spec 517.

### **B Materials**

Furnish a complete epoxy coating system from the department's approved product list. Use the same coating system for all repairs due to handling, shipping and erecting, and for all other uncoated areas. The color of epoxy shall be white and the urethane coating material shall match the color number shown on the plans in accordance to Federal Standard Number 595B, as printed in 1989. Supply the engineer with the product data sheets before any coating is applied. The product data sheets shall indicate the mixing and thinning directions, the minimum drying time for shop or field applied coats, and the recommended procedures for coating galvanized bolts, nuts, and washers.

### **C Construction**

#### **C.1 Surface Preparation**

Clean areas of loose paint and rust by wire brushing, grinding, or other mechanical means. Sound paint does not need to be removed.

After clean up and storage of waste material, blast cleaning is allowed for only those areas where paint has been removed. Shield adjacent painted areas during blast cleaning operations. The blasting sand does not have to be collected.

Furnish adequate containment methods as required to contain and collect waste material resulting from the preparation of painted steel surfaces for painting. All cleanup activities should minimize dust. Store waste materials in hazardous waste containers provided by the department.

#### **C.2 Coating Application**

Apply paint in a neat, workmanlike manner, and in accordance to the manufacturer's instructions and recommendations. Paint application shall be brushed on.

### **D Measurement**

The department will measure Cleaning and Painting Bearings as each individual bearing, acceptably completed.

### **E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.02	Cleaning and Painting Bearings	Each

Payment is full compensation for preparing and cleaning the designated bearings; furnishing and applying the paint; cleaning up, and containing and collecting all waste materials.

**89. Connection to Existing Inlets, Item SPV.0060.03.**

**A Description**

This special provision describes constructing the connection to existing inlets.

**B Materials**

Use materials conforming to the requirements for the class of material named and specified below:

Mortar standard spec 519.2.3

**C Construction**

Make a hole in the existing inlet large enough to make pipe connection. Make connections between new pipe and existing inlet as described in standard spec 611.3.2.

**D Measurement**

The department will measure Connection to Existing Inlet as each individual unit, acceptably completed.

**E Payment**

The department will assess Connection to Existing Inlet, as described above, under the following item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.03	Connection to Existing Inlets	Each

Payment for Connection to Existing Inlets bid items is full compensation for providing all material, inclusion all masonry; for furnishing all excavating, backfilling, disposing of surplus material, removing of portion of existing Inlet and restoring the work site; except the department will pay for the culvert pipe separately.

**90. Refocusing Vehicle Detector Assembly, Item SPV.0060.04.**

**A Description**

This special provision describes refocusing an existing microwave detector (located along northbound USH 51 at Station 717+00 NB right) for operation with temporary lane configurations during staged construction.

## **B Materials**

Materials include the following existing equipment:

- One (1) Electronic Integrated Systems, Inc. (EIS) Remote Traffic Microwave Sensor (RTMS) with integral 900 MHz serial radio.
- Mounting hardware for solar power system and RTMS detector.

## **C Construction**

Refocus the vehicle detector assembly (VDA) within 24 hours after northbound USH 51 traffic has been shifted onto temporary or permanent pavement as shown in the project plans. Coordinate all planned down-time to refocus the vehicle detector assembly with the State Traffic Operations Center (STOC) at (414) 227-2166. Notify the STOC a minimum of two business days prior to each scheduled refocus.

Verify to the satisfaction of the engineer that the existing VDA is working properly. Inspect the vehicle detector assembly for damage.

Reinstall the RTMS detector as required in section 675 of the standard specifications. Additionally, integrate the integral serial communications radio with the radio installed at the base-station field cabinet, and return the VDA to operation.

## **D Measurement**

The department will measure Refocusing Vehicle Detector Assembly by each individual unit, acceptably completed.

## **E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.04	Refocusing Vehicle Detector Assembly	Each

Payment is full compensation for making the detector fully operational with each temporary lane configuration required for construction staging as well as refocusing the VDA for the final lane configuration upon completion of construction operations.

## **91. Adjust Valve Box, Item SPV.0060.05.**

### **A Description**

This special provision describes making final adjustments to existing gate valve boxes located in new pavements all as shown on the plans and provided by these specifications.

### **B Materials**

Install or remove extensions as required to bring existing valve box to final grade. Valve boxes damaged by the contractor shall be replaced. Work associated with the replacement of components damaged by contractor shall be incidental.

### **C Construction**

Adjust existing gate valve boxes to be flush with the new pavement.

Notify the City of Wausau (Contact Allen M.Wesolowski, Project Manager, (715) 261-6740) to inspect the gate valve boxes after the initial removal of pavement. The City of Wausau will provide necessary replacement components for existing water valve box damage which is not a result of contractor's work. Clean out the water valve boxes as necessary to assure the valve wrench will fit completely over the valve bolt. Protect the water valve boxes during construction. Adjust the water valve boxes to the required final finished elevation.

Existing Gate Valve Boxes located in pavement areas will be adjusted in two separate phases. In the first phase, designated valve boxes will be lowered to finished base course elevation. The area will be filled with base course and/or asphaltic pavement mixture as directed by the engineer, which will remain in place until contract milling and paving operations permit setting the valve box to finished grade. The second phase will consist of removing the asphaltic pavement mixture covering the valve box, and setting the valve box to final grade.

### **D Measurement**

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

### **E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.05	Adjust Valve Box	Each

Payment is full compensation for making the final adjustments. Asphaltic pavement mixture, base course, milling, and paving will be measured and paid for separately.

## **92. Vertical Offset, Watermain, Item SPV.0060.06; Vertical Offset, Force Main, Item SPV.0060.07.**

### **A Description**

This special provision describes furnishing and installing fittings and pipes of various sizes and type, and joint restraint in the locations as shown on the plans and as directed by the engineer.

### **B Materials**

1a. Pipe Barrel. All pipe shall be ductile iron pipe and shall conform to the requirements of the latest revision of ANSI A21.50 (AWWA C150) and ANSI A21.51 (AWWA C151). Ductile iron pipe shall be cement-mortar lined and coated in accordance to the latest revision of ANSI A21.4 (AWWA C104). All ductile iron pipe shall be Class 50 unless otherwise specified.

1b. Joints. Joints on all ductile iron pipe shall conform to the latest revision of ANSI A21.11 (AWWA C111) with rubber gaskets unless otherwise specified.

Cast iron or ductile iron fittings or valves shall be mechanical joint conforming to the latest revision of ANSI A21.11 (AWWA C111) with rubber gaskets, unless otherwise specified.

Furnish and install on all joints, mechanical and push-on, an electrical conductor between socket and pipe end. Capacity shall be sufficient to carry a minimum of 400 amps current at each joint and meet the approval of the engineer. Straps are preferred. Lead tip gaskets and bronze wedges will not be accepted.

Where a transition is required from one type (cast iron, asbestos cement, or steel) of material to the other at a pipe joint, fitting or valve, provide the appropriate transition joint at no additional expense.

Submit a certification from the pipe manufacturer to the engineer certifying the joint materials to be incorporated in the work as specifically designed and manufactured for that type and class of pipe which is to be incorporated in the work.

1c. Fittings. Cast iron and ductile iron fittings shall conform to the latest revision of ANSI A 21.10 (AWWA C153). Joints shall conform to 5.9.B of these standard specifications. Fittings shall have a pressure rating of 250 pounds per square inch. Electrical conductors to carry a 400 ampere current across the joint shall be furnished. Unless otherwise specified, the inside coating for fittings shall be a bituminous material conforming to all appropriate requirements in ANSI A21.4 (AWWA C104) latest revision.

The usage of "compact ductile iron" mechanical joint watermain fittings shall be permitted providing they meet the following specifications:

Materials -	Ductile Iron ASTM A536, AWWA C110 (ANSI A21.10)
Pressure -	Class 350 AWWA C153 (ANSI A21.10) 350 PSI water working pressure
Testing -	AWWA C153 (ANSI A21.10)
Gasket -	AWWA C111 (ANSI A21.11)
Bolts -	AWWA C111 (ANSI A21.11)
Lining -	Inside coating shall be bituminous material conforming to AWWA C104 (ANSI A21.4)

### **C Construction**

Construct the vertical offsets in conformance to the specifications and details as provided in the plan. Verify with the engineer the required elevations of the offsets.

#### **D Measurement**

The department will measure Vertical Offsets (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.0060.06	Vertical Offset, Watermain	Each
SPV.0060.07	Vertical Offset, Force Main	Each

Payment is full compensation for excavation, shoring, materials, installation, and backfilling. Megalug joint restraint is an incidental cost to the installation.

### **93. Ramp Closure Gates Hardwired 28-FT, Item SPV.0060.08.**

#### **A Description**

This special provision describes providing freeway on-ramp closure gates on type 5 steel luminaire poles, and furnishing and delivering spare gate arms and flashers.

#### **B Materials**

##### **B.1 General**

Provide five user manuals and a listing of vendors and contact information for each manufactured component including flasher electrical components.

The engineer may allow alternate components equal to the manufactured components this special provision specifies. The engineer may require modification of the plan details to accommodate alternates. If the contractor provides an alternate arm and/or mounting adaptor, the engineer will reject that alternate if the contractor cannot demonstrate, to the engineer's satisfaction, that the department can easily remove and replace the arms.

##### **B.2 Components**

Furnish one Poles Type 5-Steel designed to carry twin 15-foot luminaire arms and conforming to standard spec 657 and with dimensions for acceptable installation of the ramp gate hardware as shown on the detail. Ensure a contiguous pole by eliminating the hand hole near base of pole, thus allowing uninhibited mounting of the gate pivot assembly.

Furnish galvanized steel nuts and galvanized bolts conforming to ASTM A307 except where designated as high strength (HS) conform to ASTM A325. For the ramp closure gate locking mechanism, furnish a handle nut to fit on a 3/4" bolt (B&B Roadway Part Number 0605P0539 or approved equal).

Furnish grade A36 steel for the gate supports, gate pivot assembly, and associated hardware that is all galvanized after fabrication by either a mechanical or hot-dip process. Grind welded connections, rough edges, and burrs smooth before galvanizing to ensure a finished appearance. Ensure that the galvanized coating conforms to ASTM A 153.

Provide aluminum/fiberglass gate arms of the nominal length the bid item indicates and conforming to plan dimensions. Cover gate arms on two sides with alternating red and white shop-applied type H reflective sheeting conforming to standard spec 637. Also provide a shear pin base that is the manufacturer's "permanent pivot" style. Obtain components from a WisDOT Approved Products List qualified vendor.

Furnish a worm gear winch with a single line vertical lift capacity of 2,000 lbs. Ensure that the winch has hardened steel gears, a handgrip, permanently lubricated bearings, a reinforced arc-welded reel assembly, and mounting plate. Ensure that the winch can be mounted to the winch mount plate shown on the construction details and the handgrip can be operated without conflict with the pole or ramp gate assembly. Furnish a 2 inch outdoor rated, rot resistant polyester strap for the connection between the worm gear winch and the gate arm pivot assembly.

Furnish hardwire power system and connections conforming to the following:

1. Cabinet

Furnish cabinet assemblies, power wire terminal strips, and power supplies for the on-ramp closure gate systems.

The cabinet shall be the following dimensions: 9-inches wide, 15-inches high, and 5-inches deep.

Minimum wall thickness of the aluminum castings shall be 3/16-inch.

Cabinet body shall have a cast rain hood over the top of the door opening.

Door shall be manufactured to accept a Corbin No. 2 lock.

Hinges shall consist of 3/6-inch diameter pins in cast hinge bosses that allow door to swing no less than 180° when open.

Cabinet shall be capable of being field prepared for top, bottom, or rear mounting and wire entrance holes.

Set screws shall be stainless steel.

Assembly shall be water resistant by the door flange in full contact with and compressing a neoprene gasket held by an adhesive to a groove cast into the cabinet body.

The cabinets shall consist of a cabinet body, door, and latch cast from aluminum alloy 319 or approved equivalent, and a Corbin No. 2 lock. The cast shall be free of voids, pits, dents, molding sand, and excessive foundry grinding marks. All radii shall be smooth and intact. Exterior and interior surfaces shall be smooth and cosmetically acceptable, free of molding fins, cracks, and other blemishes.

The aluminum shall meet the following minimum requirements:

- Yield Strength – 18 ksi
- Tensile Strength – 27 ksi
- Brinell Hardness – 70
- Elongation (% in 2 inches) – 2

The assembly shall have an alodine conversion coating to provide corrosion resistance and a proper base for paint adhesion.

Furnish a stainless steel or anodized steel mounting adapter plate to mount the cabinet to a pole with stainless steel banding straps.

2. Power Converter

Furnish the cabinet with a 120 VAC to 12 VDC power converter.

Furnish the cabinet with a 10 position terminal block for the 12 VDC power distribution. Power wire terminal strips 10 position feed-through terminal blocks UL-recognized for No. 22 AWG wire through No. 16 AWG wire and UL-rated for 15 amps. The terminals shall be tin-plated brass with brass clips and clamps.

Furnish gate flasher assemblies conforming to the following:

1. A 2-conductor connector, rated 12 volts at 5 amps minimum.
2. A 2-amp weather resistant in-line fuse and fuse holder.
3. Wiring harness made from 6-conductor 14 AWG stranded insulated control cable.
4. A 12-V flasher controller, capable of providing LED flashers with 5% to 100% duty cycle at a one-second pulse repetition rate.
5. A 4-conductor male/female electrical connector pair, 10 amp capacity for each connection, weather resistant, and mounted to allow rapid gate arm replacement.
6. A 5-amp mercury switch with less than 3 ohms “on” resistance and a 20- to 30-degree activation angle. Mount the switch on the gate arm to activate the flashers when the gate arm is lowered more than 45 degrees from vertical.
7. Furnish red LED flashers meeting the requirements of the MUTCD and/or AREMA standards for hue and brightness.



Power consumption	0.45 amp @ 10.5 V
Life expectancy	100,000 hrs
Directionality	0-degree cone orthogonal to face of flasher
Compliance temperature	-40° C to +70° C

Furnish electrical wires with jackets conforming to the following color scheme throughout the ramp closure gate system:

- Hot = Black or Red
- Neutral = White
- Ground = Green

Furnish a 4-digit combination padlock (Master Lock Model 175DLH or approved equal) for the purpose of preventing unauthorized use of the ramp closure gate system.

## **C Construction**

### **C.1 Ramp Closure Gates**

Under the Ramp Closure Gates bid items, provide ramp closure gate at the locations the plans show. Apply corrosion protection material from the department's approved products list to the interface between the aluminum base and steel pole. The engineer may direct adjustment of the gate arm assembly to ensure the correct vertical and angular orientation of the completed closure gate.

Install cabinet with power supply, flasher controller, and other components. Connect the 120 VAC to 12 VDC power supply to the circuit breaker in the breaker disconnect box. Connect the 120 VAC to 12 VDC power supply to the 10-position terminal block and connect the 12 VDC components to the terminal block.

Connect the 12 VDC terminal strip to the wiring harness through the female side of a 2-terminal polarized electrical connector. Connect male side of this connector to the flasher controller and the female side of a weatherproof polarized 4-conductor electrical connector.

Attach the male side of the 4 conductor electrical connector, mercury switch, wiring harness and the three LED flasher units to the portion of the flasher assembly mounted on the breakaway portion of the gate arm. Adjust mercury switch so that as the gate arm is lowered to a maximum of 45 degrees from the vertical, the gate flasher assembly is energized, and the LEDs begin to flash. Ensure that when the gate arm is raised to a minimum of 15 degrees from vertical, the mercury switches the gate flasher assembly off.

## **D Measurement**

The department will measure the Ramp Closure Gates Hardwired 28-FT as each individual installation, acceptably completed.

## **E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.08	Ramp Closure Gates Hardwired 28-FT	Each

Payment for the Ramp Closure Gate Hardwired is full compensation for providing and installing ramp closure gates including support poles, gate arm assemblies, guides and collars, gate arms, cabinets, wiring and power converters, and gate flashers.

## **94. Ramp Closure Gates Solar Powered 40-FT, Item SPV.0060.09.**

### **A Description**

This special provision describes providing freeway on-ramp closure gates on type 5 steel luminaire poles, and furnishing and delivering spare gate arms and flashers.

### **B Materials**

#### **B.1 General**

Provide five user manuals and a listing of vendors and contact information for each manufactured component including flasher electrical components.

The engineer may allow alternate components equal to the manufactured components this special provision specifies. The engineer may require modification of the plan details to accommodate alternates. If the contractor provides an alternate arm and/or mounting adaptor, the engineer will reject that alternate if the contractor cannot demonstrate, to the engineer's satisfaction, that the department can easily remove and replace the arms.

#### **B.2 Components**

Furnish one Poles Type 5-Steel designed to carry twin 15-foot luminaire arms and conforming to standard spec 657 and with dimensions for acceptable installation of the ramp gate hardware as shown on the detail. Ensure a contiguous pole by eliminating the hand hole near base of pole, thus allowing uninhibited mounting of the gate pivot assembly.

Furnish galvanized steel nuts and galvanized bolts conforming to ASTM A307 except where designated as high strength (HS) conform to ASTM A325. For the ramp closure gate locking mechanism, furnish a handle nut to fit on a ¾" bolt (B&B Part Number 0605P0539 or approved equal).

Furnish grade A36 steel for the gate supports, gate pivot assembly, and associated hardware that is all galvanized after fabrication by either a mechanical or hot-dip process. Grind welded connections, rough edges, and burrs smooth before galvanizing to ensure a finished appearance. Ensure that the galvanized coating conforms to ASTM A 153.

Provide aluminum/fiberglass gate arms of the nominal length the bid item indicates and conforming to plan dimensions. Cover gate arms on two sides with alternating red and white shop-applied type H reflective sheeting conforming to section 637 of the standard

specifications. Also provide a shear pin base that is the manufacturer's "permanent pivot" style. Obtain components from a WisDOT Approved Products List qualified vendor.

Furnish a worm gear winch with a single line vertical lift capacity of 2,000 lbs. Ensure that the winch has hardened steel gears, a handgrip, permanently lubricated bearings, a reinforced arc-welded reel assembly, and mounting plate. Ensure that the winch can be mounted to the winch mount plate shown on the construction details and the handgrip can be operated without conflict with the pole or ramp gate assembly. Furnish a 2 inch outdoor rated, rot resistant polyester strap for the connection between the worm gear winch and the gate arm pivot assembly.

Furnish solar power system and batteries conforming to the following:

1. Cabinet

The cabinet shall be manufactured of 0.125-inch sheet aluminum. Nominal cabinet dimensions shall be 26.25 inches high by 15.5 inches wide by 14.75 inches deep. The cabinet shall be a two-compartment type; the bottom compartment shall have a neoprene gasket seal so as to prevent battery gases from seeping into the top compartment. The cabinet shall have wire screened insect proof louvers on each side of both compartments for ventilation. The louvers shall be designed to not allow any rain to enter the cabinet. On the bottom of the cabinet there shall be two screened insect proof drain holes.

The door shall be a single unit with a continuous piano hinge riveted to the door and the cabinet. The door shall incorporate a neoprene gasket which, when closed, forms a snug weather tight seal. The door lock shall be a standard police lock, reinforced with a steel plate.

Each cabinet shall be equipped with the necessary rigid back wall for mounting to a traffic signal standard. The cabinet shall have a 1 inch diameter cable entry hole at each mounting location on the back.

2. Control Panel

The control panel containing the electronics shall be mounted in the top compartment of the cabinet using bolts with wing nuts for quick and easy removal. The solar panel and battery shall be connected directly to the solar charge controller terminals. All modular components shall be easily removed for replacement or maintenance.

The solar panels, load, and battery shall be fused for short circuit protection and ease of system maintenance.

Furnish the cabinet with a 10-position terminal block for the 12-VDC power distribution. Power wire terminal strips 10 position feed-through terminal blocks UL-recognized for No. 22 AWG wire through No. 16 AWG wire and UL-rated for 15 amps. The terminals shall be tin-plated brass with brass clips and clamps.

3. Solar Charge Controller

The solar charge controller shall control battery charging through pulse width, modulated, temperature compensating, constant charging algorithm. The solar charge controller will have both a low voltage disconnect (LVD) of 11.4 VDC and a high voltage disconnect (HVD) of 15.5 VDC. A liquid crystal display (LCD) of battery voltage, solar array current, and load current will be available with the solar charge controller. In addition, colored LEDs will display battery state. A green LED will indicate full charge, amber LED will indicate half charge, and a flashing red LED will indicate low charge. A solid glowing red LED will indicate the load has been disconnected. A separate green LED will indicate the battery is being charged.

The solar charge controller will have a load disconnect pushbutton. When the load is disconnected the button will glow red.

The solar charge controller will be capable of operating in a temperature range of -40° C and +85° degrees C.

Wire terminations to the solar charge controller shall be accomplished using Euro style terminations.

4. Solar Panel

The solar panel shall be a 50-watt high efficiency, single crystal silicon solar cells that are laminated to glass with layers of ethylene vinyl acetate (EVA). The panel will be self-cleaning, impact resistant, highly transmissive, tempered glass superstrate. The panel module frame will be made of extruded, polymer-coated aluminum alloy or similar approved construction. The panel module junction box will be a UV-resistant, weatherproof wire termination system that handles #14 AWG to #8 AWG wiring. The minimum wattage for the system shall be determined by the supplier, with design calculations submitted with the bid.

5. Solar Panel Mount

The solar panel mounting system shall consist entirely of non-corrosive materials, including aluminum brackets and zinc-plated hardware. The solar panel shall be mounted at angle of 60 degrees from horizontal, shall mount to a pole with a nominal diameter of 4-inches, and shall be designed for minimum of 30 pound per square foot.

6. Battery

The battery shall be a 99-amp-hour type 31 AGM maintenance-free, deep cycle, 12 volt DC battery. It shall contain valve regulation with a self-discharge rate of 1% per month or less (at 20° C). The battery will utilize T881 terminals. The positive terminal will be covered with a rubber boot to protect the battery from accidental shorting.

Furnish gate flasher assemblies conforming to the following:

1. A 2-conductor battery connector, rated 12 volts at 5 amps minimum.
2. A 2-amp weather resistant in-line fuse and fuse holder.
3. Wiring harness made from 6-conductor 14 AWG stranded insulated control cable.
4. 12-volt flasher controller, capable of providing LED flashers with 5% to 100% duty cycle at a one-second pulse repetition rate.
5. A 4-conductor male/female electrical connector pair, 10-amp capacity for each connection, weather resistant, and mounted to allow rapid gate arm replacement.
6. A 5-amp mercury switch with less than 3 ohms "on" resistance and a 20- to 30-degree activation angle. Mount the switch on the gate arm to activate the flashers when the gate arm is lowered more than 45 degrees from vertical.
7. Furnish red LED flashers meeting the requirements of the MUTCD and/or AREMA standards for hue and brightness.

Power consumption	0.45 amp @ 10.5 V
Life expectancy	100,000 hrs
Directionality	0-degree cone orthogonal to face of flasher
Compliance temperature	-40° C to +70° C

Furnish electrical wires with jackets conforming to the following color scheme throughout the ramp closure gate system:

- Hot = Black or Red
- Neutral = White
- Ground = Green

Furnish a 4-digit combination padlock (Master Lock Model 175DLH or approved equal) for the purpose of preventing unauthorized use of the ramp closure gate system.

## **C Construction**

### **C.1 Ramp Closure Gates**

Under the Ramp Closure Gates bid items, provide ramp closure gate at the locations the plans show. Apply corrosion protection material from the department's approved products list to the interface between the aluminum base and steel pole. The engineer may direct adjustment of the gate arm assembly to ensure the correct vertical and angular orientation of the completed closure gate.

Install solar power system and battery as the plans show. The engineer may direct adjustment of the solar power unit to ensure the correct orientation to the sun.

Connect the battery to the wiring harness through the female side of a 2-terminal polarized electrical connector. Connect male side of this connector to the flasher controller and the female side of a weatherproof polarized 4-conductor electrical connector.

Attach the male side of the 4 conductor electrical connector, mercury switch, wiring harness and the three LED flasher units to the portion of the flasher assembly mounted on the breakaway portion of the gate arm. Adjust mercury switch so that as the gate arm is lowered to a maximum of 45 degrees from the vertical, the gate flasher assembly is energized, and the LEDs begin to flash. Ensure that when the gate arm is raised to a minimum of 15 degrees from vertical, the mercury switches the gate flasher assembly off.

#### **D Measurement**

The department will measure the Ramp Closure Gates Solar Powered 40-FT as each individual installation, acceptably completed.

#### **E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.09	Ramp Closure Gates Solar Powered 40-FT	Each

Payment for the Ramp Closure Gate Solar Powered is full compensation for providing and installing ramp closure gates including support poles, gate arm assemblies, guides and collars, gate arms, solar power system, cabinets, wiring and batteries, and gate flashers.

### **95. Landscape Planting Surveillance and Care Cycle, Item SPV.0060.10.**

#### **A Description**

Perform this work in accordance to standard spec 632 and as hereinafter provided.

#### **B Materials**

Furnish materials in accordance to standard spec 632.3.19.1.

All plants shall be grown within the states of Wisconsin, Minnesota or Michigan located within Zone 4 of the "Plant Hardiness Zone Map" produced by the United States Department of Agriculture, Miscellaneous Publications No. 1475, issued January 2012, unless otherwise approved by the engineer.

#### **C Construction**

*Delete standard spec 632.3.18.1.1 and replace with the following:*

Performance of work in accordance to standard spec 632.3.18.1.1 is modified to an establishment period of one year extending to October 15, 2014.

*Delete standard spec 632.3.19.1.(2) and replace with the following:*

Proper care of plants consists of watering, weeding, cultivating, pruning, spraying, tightening braces and guys, retying wrapping, re-mulching, and other work necessary to keep the plants in a neat appearance and healthy growing condition. In addition to the watering required for planting under standard spec 632.3.7, perform complete watering at 7-day intervals for the first 6 weeks after final acceptance. After the initial establishment period, perform care cycle maintenance on an interval of 10 to 14 days until October 15, 2013. From the period of May 15 to July 1 of the following growing season, provide a care cycle of a 7-day interval and a 10 to 14 day interval after July 1 until October 15, 2014. The interval is referred to as a care cycle. This interval may lengthen if weather conditions and soil moisture allows. The engineer may order additional watering at any time during the plant establishment period if conditions require

#### **D Measurement**

The department will measure Landscape Planting Surveillance and Care Cycle as each individual care cycle the care specialist, 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.0060.10	Landscape Planting Surveillance and Care Cycle	Each

Payment for Landscape Planting Surveillance and Care Cycles is full compensation for furnishing all the work required under this bid item. The department will assess damages under the Failing to Perform Landscape Surveillance administrative item for failing to perform the required surveillance and care as specified in standard spec 632.3.19.2.

- 96. Avalanche Reed Grass #1 CG, Item SPV.0060.11; Northwind Switch Grass #1 CG, Item SPV.0060.12; Flame Grass #1 CG, Item SPV.0060.13 Ladys Mantle #1 CG, Item SPV.0060.14; Happy Returns Daylily #1 CG, Item SPV.0060.15; Xenox Stonecrop #1 CG, Item SPV.0060.16; Moonshine Yarrow #1 CG, Item SPV.0060.17.**

#### **A Description**

This special provision describes furnishing and planting perennials, groundcovers and grasses of the species, varieties and sizes specified, and includes furnishing all necessary, materials, excavation plant holes, salvaging topsoil, transplanting, backfilling, pruning, mulching, watering, heeling in, fertilizing, disposing of surplus and waste materials, and necessary care and requirements pending acceptance.

#### **B Materials**

Provide perennials, groundcovers and grasses according to standard spec 632.2.

### **C Construction**

Plant specified perennials, groundcovers and grasses according to standard spec 632.3.

### **D Measurement**

The department will measure Grasses, Stonecrop and Yarrow and Daylily 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.0060.11	Avalanche Reed Grass #1 CG	Each
SPV.0060.12	Northwind Switch Grass #1 CG	
SPV.0060.13	Flame Grass #1 CG	Each
SPV.0060.14	Ladys Mantle #1 CG	Each
SPV.0060.15	Happy Returns Daylily #1 CG	Each
SPV.0060.16	Xenox Stonecrop #1 CG	Each
SPV.0060.17	Moonshine Yarrow #1 CG	Each

Payment is full compensation for the excavation and subgrade preparations; for disposing of surplus material; and for furnishing and installing plant materials.

## **97. Gate Valve and Box, 8-Inch, Item SPV.0060.19; Salvage and Reinstall Gate Valve and Box, Item SPV.0060.41; Gate Valve and Box, 6-Inch, Item SPV.0060.48.**

### **A Description**

This special provision describes furnishing and installing gate valves and valve boxes and salvaging and reinstalling existing gate valves and valve boxes at the locations as shown on the plans and as directed by the engineer.

### **B Materials**

#### **B.1 Valves**

**B.1.1** Valves 3 to 12 inch diameter resilient seat, fully encapsulated single wedge full-port gate valves with non-rising bronze stems and double synthetic rubber O-ring seals.

**B.1.2** Valves open counter-clockwise. Valves designed for 200 psi working pressure with zero leakage, from both directions.

**B.1.3** Valves have push-on or mechanical joints compatible with the pipe selected for use.

**B.1.4** Valves AWWA C-509 specifications.

**B.1.5** Valves 14 inch diameter and larger: underground butterfly valves with heavy duty cast iron body, ASTM A126, Class B, integral mechanical joint ends.



**B.1.6** Valve seats, Buna-N material attached to the valve body.

**B.1.7** Mechanical devices to retain the seats are not to be permitted.

**B.1.8** Valve disc ASTM A436 Ni-Resist or ductile iron with a continuous sealing surface of Type 304 stainless steel.

**B.1.9** Valve shaft: Type 304 stainless steel.

**B.1.10** Valve AWWA Specification C-504 Class 150B.

**B.1.11** Underground valve operator permanently lubricated, leak-proof in a submerged condition equivalent to 10 psi water pressure.

**B.1.12** Valve operator standard two-inch square AWWA operating nut.

**B.1.13** Provide electrical continuity across the valve joints for ductile iron pipe an approved contractor rated for a minimum 400 amps.

**B.1.14** Where valve body is epoxy coated, provide electrical continuity from pipe end to pipe end by connection across the valve.

**B.1.15** Electrical continuity may be provided via the Cadwell Shot method.

## **B.2 Valve Boxes**

**B.2.1** Install valve boxes on all buried valves.

**B.2.2** Valve boxes: cast iron, five and one-quarter inch shaft screw type boxes.

**B.2.3** Valve box length: 84 inches, adjustable over a range of 78 to 90 inches as referenced from finished grade to top of pipe elevation.

**B.2.4** Mark watermain valve box covers "WATER".

**B.2.5** Where indicated on the Drawings install valve manholes instead of valve boxes.

**B.2.6** Valve box adapters to support the valve box (optional).

**B.2.6.1** Valve box adapters: install one-quarter inch steel members, coated with bitumastic paint, with a one-half inch neoprene gasket between the valve and valve box adapter.

**B.2.6.2** Gate valve and butterfly valve adapters: as manufactured by Adaptor, Inc., or equal.

## **C Construction**

**C.1** Provide a valve box for every valve 12 inches in size and under which has no gearing or operating mechanism or in which the gearing or operating mechanism is fully protected with a cast iron grease case.

**C.2** Isolate valve so that no stress or shock is transferred to the valve by the valve box.

**C.3** Center and plum the valve box over the operating nut.

**C.4** Adjust the box cover flush with the surface of the finished pavement or such other level as may be directed.

**C.5** Refer to the detail on the Drawings.

**C.6** Install valve box adapters per written instructions from the equipment manufacturer.

## **D Measurement**

The department will measure Gate Valve and Box (Size) and Remove and Reinstall Gate Valve and Box as each individual unit acceptably completed.

## **E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.19	Gate Valve and Box, 8-Inch	Each
SPV.0060.41	Remove and Reinstall Gate Valve and Box	Each
SPV.0060.48	Gate Valve and Box, 6-Inch	Each

Payment is full compensation for transporting and storing, cleaning, installing, adjusting valve box height; for furnishing bolts, nuts, gaskets, electrical continuity; and for all labor, tools, equipment and incidentals necessary to complete the contract work.

- 98. Ductile Iron Cross, 8-Inch x 8-Inch, Item SPV.0060.20; Ductile Iron Plug, 8-Inch, Item SPV.0060.21; Ductile Iron Tee, 8-Inch x 8-Inch, Item SPV.0060.42; Ductile Iron Tee, 8-Inch x 6-Inch, Item SPV.0060.43; Ductile Iron 45-Degree Bend, Item SPV.0060.44.**

## **A Description**

This special provision describes furnishing and installing watermain fittings of various sizes and type, and joint restraint in the locations as shown on the plans and as directed by the engineer.

## **B Materials**

### **B.1 Watermain and Forcemain**

**B.1.1** Utilize mechanical joint fittings with Megalug joint restraint system.

**B.1.2 Materials**

Ductile iron, ANSI A 21.10/AWWA C-110 or ANSI A21.53-84/AWWA C-153, and designed structurally to withstand 250 psi working pressure plus water hammer, coal-tar coated with internal standard cement lining per ANSI A 21.4/AWWA C-104.

**B.1.3** Bolts and associated hardware (nuts, washers) to be cold formed, high strength low alloy steel: 1.5-2.5% copper, nickel and chromium (Copper-0.5%, Nickel-0.5%, Chromium-1%).

**B.1.4 Joints**

ANSI A 21.11/AWWA C-111. Provide electrical continuity across joints with an approved conductor rated for a minimum 400 amps. Electrical continuity may be provided via the Cadwell Shot method.

**B.1.5** Use Megalug joint restraint at fittings.

**B.1.6** Where the watermain connects with valves or hydrants, support the weight of the valve or hydrant with a poured concrete cradle, or concrete block, constructed or placed beneath the valve or hydrant.

**C Construction**

Meet the construction specifications as provided in Section C of the specifications for Ductile Iron Watermain (size).

**D Measurement**

The department will measure Ductile Iron fittings (Type and Size) 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.0060.20	Ductile Iron Cross, 8-Inch x 8-Inch	Each
SPV.0060.21	Ductile Iron Plug, 8-Inch	Each
SPV.0060.42	Ductile Iron Tee, 8-Inch x 8-Inch	Each
SPV.0060.43	Ductile Iron Tee, 8-Inch x 6-Inch	Each
SPV.0060.44	Ductile Iron 45-Degree Bend	Each

Payment is full compensation for transporting and storage, cleaning, staking, installing, and continuity straps; for all labor, tools, equipment, and incidentals necessary to complete the contract work. Megalug joint restraint and ductile iron sleeves are an incidental cost to the fitting installation.

**99. Sanitary Manhole Casting, Item SPV.0060.22; Sanitary Manhole, Item SPV.0200.01.**

**A Description**

This work shall consist of furnishing and installing precast concrete sanitary manholes and castings (for new manholes) as shown on the plans and as hereinafter provided.

**B Materials**

**B.1 Manholes**

The cone, reinforced flat tops and flat slab reducing sections constructed in accordance to ASTM C-478, with adequate reinforcement to support the dead weight load and highway live loadings. For manholes in unpaved areas, provide two 3/4 inch threaded anchor bolts embedded in the top of the cone section. Cast the 3/4 inch bolts in the cone section during fabrication or install in the field utilizing expansion bolts. The bolts should be Type 303 or 304 stainless steel; McCullough Industries, Hilti or equal. Nuts and washers should be Type 18-8 stainless steel. The barrel section should be either 48 or 60 inch (as shown on the Drawings), Type A reinforced concrete, ASTM C-478. Construct the precast base section complete with integral, monolithic two foot eight inch (minimum) barrel section, manhole wall/pipe junction waterstops and grouted bench. Where a new manhole is constructed over an existing sewer, or where used as a valve manhole or storm sewer manhole, the precast base section may be separate from the precast barrel section (i.e. integral monolithic construction is waived). Provide an adequate opening in the grouted bench for pipe insertion into manhole base section. The opening thickness shall be 2 inches minimum, extending the full length of the manhole. The final grout is to provide a smooth transition across the manhole flow line. Grouted bench is not required for valve manholes. Waterstops should be a PSX Boot manufactured by Press Seal Gasket Corporation, or approved equal. Water stops are not required for storm sewer pipe.

If the base section is separate use reinforced concrete meeting ASTM C-478. In the event that the location of the invert of a sewer is changed in the field or a new manhole is constructed over an existing sewer, such that the integral waterstops cannot be utilized, other waterstops shall be furnished and installed at the junction of the sewer pipe and the manhole wall. These waterstops should be an Armco waterstop gasket and clamp, Fernco concrete manhole adaptor or equal.

Use rubber gaskets or a mastic sealant at the manhole wall section joints. Gaskets should meet AASHTO Designation M-198 and ASTM C-443. Mastic sealant shall be "Kent Seal", or equal. Adjusting rings, 2 and 4 inches high, shall be precast concrete with two strands reinforcement, set in a mastic sealant. Place mortar around the outside of the joints. Mortar used at manhole joints or rings should be one part Portland Cement, Type I, conforming to ASTM Specification C-91, to two parts of clean sand and water.

Adjustment rings for manholes in unpaved areas require two 3/4-inch diameter holes for the insertion of the 1/2 inch threaded anchor rods.

Manhole steps should be copolymer polypropylene, meeting the requirements of ASTM Designation 2146 Type II Grade 49108, reinforced with a deformed 3/8 inch steel reinforcing bar which conforms to ASTM A-615 Grade 60. Steps by M.A. Industries, Inc., Kelley and Dividend Drive, Peachtree City, Georgia 30269, Plastic Step No. PS-1, or equal.

Sealant and waterproofing should be Thoro-seal foundation coating, as manufactured by Standard Drywall Products, Inc., West Chemical Company or Xypex Crystalline Waterproofing Products as manufactured by Xypex Chemical Corporation, or equal.

## **B.2 Castings**

Manhole frames and covers to be 395 pound castings with machined bearing surfaces, self-sealing lids supplied by Neenah Foundry Company, Edition 12, R-1550 with Type C Lid, or approved equal. The lids to consist of two concealed pick holes. If the manhole location is off pavement, provide two 3/4-inch holes for bolting casting to cone/adjustment rings.

## **C Construction**

### **C.1 General**

Manholes are to be constructed as shown on the Drawings. Unless approved by the engineer, all manholes to have monolithic (i.e. base and first 2 feet 8 inches - minimum - of wall section shall be constructed simultaneously in one pour by the supplier so that it is one complete unit) base construction. Provide clearance for pipe positioning through the manhole wall and precast bench. Construct the manhole bench utilizing ballast concrete with final bench grout. Smooth and shape the manhole flowline as shown on the Drawings. Position an approved manhole waterstop with the wall of the manhole to be attached to the pipe, according to the manufacturer's instructions, prior to pouring a concrete base, and for pre-cast bases also. Keep concrete blocks or bricks used to support the pipe outside of these waterstops and not within the manhole perimeter. Properly work the concrete to ensure maximum contact with these waterstops. Where future connections are planned, install manhole stubs sealed with an approved plug. Build up manhole so that the cover, when placed, will be at the required grade. To the extent possible, the engineer has determined the final manhole elevation, as shown on the plans.

Provide a minimum of two inches and a maximum of twelve inches of concrete adjusting rings at the top of the manhole to permit future adjustment of the frame and cover. Contractors are cautioned to observe this requirement for adjusting rings when ordering the manholes. Where necessary, groove the concrete rings to receive a manhole step. Where the sewers are not within a paved roadway for which road grades have been established, the final ground elevation may vary from that shown on the Plans. Construct the complete length of the barrel of the manhole, including the cone section, within one day after the manhole base has been completed. Install the top of the manhole casting flush with the finish grade. In sloping grade areas, match the existing slope or modify the existing grade to provide a smooth transition to the manhole. The maximum ground slope is 3:1. Where the location of the invert of a sewer is changed in the field or a connection

is made to an existing manhole, core drill new opening into the manhole wall. Core the opening large enough to permit a water stop to be installed.

### **C.2 Preparation of Subgrade**

Maintain the bottom of the trench in a stable condition, and free of water, during the time required to install the manhole. Bed the manhole base section with 4 inches of crushed aggregate, in order to assure that adequate and uniform support is provided under the manhole and to avoid differential settlement. Limit the excavation to the size required for the manhole to be constructed. Over excavate the trench bottom to a depth of 4 inches below the manhole bottom, clear the loose soil and restore to grade with a cushion of bedding or initial backfill material, as specified in paragraph 1.3 D (3)(A).

### **C.3 Precast Concrete Manholes and Wetwells**

Place the base section in such a manner that (a) the invert of the sleeve or gasket is at the proper elevation, (b) the center of the manhole is in the proper location, and (c) the base section is plumb and level. Since the pipe will enter the manhole above the base, support the pipe with bedding material, extended from beneath the base section, as detailed in the Plans. If a precast base slab, without monolithic cast wall section is utilized, place it in such a manner that the top of the base section is below the invert of the pipe, to permit the proper installation of the pipe waterstop. Construct the manhole floor using ballast concrete to be placed up to the springline of the pipe and sloped up to the manhole walls at three inches/foot. Shape and smooth, the manhole flow line, and in accordance to the Plans. After the first manhole wall section is installed, paint and seal the outer joint between the base and the manhole walls with Thoroseal Foundation Coating, as manufactured by Standard Dry Wall Products, Inc., or Xypex Crystalline Waterproofing Products as manufactured by Xypex Chemical Corporation, or equal to provide a watertight joint. Make the manhole section joints watertight by using rubber gaskets or mastic sealant. Mortar may also be placed over the exterior joint to ensure its watertightness. Manholes must be watertight.

Concrete block, reinforced concrete, or poured-in-place manholes may be substituted for the above described manholes if the contractor submits a satisfactory design for such substitute manholes and written approval is obtained.

### **C.4 Adjusting Rings**

Place a minimum of one two-inch adjusting ring and a maximum of six two inch adjusting rings on the cone section of the manhole. Place a continuous bead of mastic sealant around the top of the cone section and between all adjusting rings, to ensure water tightness. Place mortar around the outside of the joints.

### **C.5 Manhole Frames and Covers**

Place a continuous bead of mastic sealant around the entire circumference of the top most adjusting ring. Center the manhole frame into place, and pressed firmly into the mastic to assure an even distribution of the sealant. Secure the manhole frame to the manhole via the two anchor bolts in the cone section.

#### **D Measurement**

The department will measure Sanitary Manhole Castings (for new manholes) as each individual sanitary manhole casting, acceptably completed. The department will measure Sanitary Manholes by the vertical foot, acceptably completed, from the invert of the deepest sewer pipe to the bottom of the manhole casting.

#### **E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.22	Sanitary Manhole Casting	Each
SPV.0200.01	Sanitary Manhole	VF

Payment is full compensation for excavating, backfilling, dewatering, sheeting, shoring, for furnishing and installing all materials for the complete manhole installation. Reinstallation of existing sanitary manholes castings on replacement manholes is an incidental cost to the manhole.

### **100. High-Tension Cable Guard TL-3 Terminal, Item SPV.0060.23; High-Tension Cable Guard TL-3 Socketed, Item SPV.0090.05.**

#### **A Description**

This special provision describes providing socketed high-tension TL-3 cable guard meeting the National Cooperative Highway Research Program (NCHRP) Report 350, Test Level 3. These items are being installed on USH 51 as part of Wisconsin Research Study #WI-C17-2007.

Materials are to be acquired from the manufacturer below:

Safence, Inc.  
Gegory Industries  
4100 13<sup>th</sup> Street SW  
Canton, OH 44710  
Contact: Tom Close  
Phone: (330) 477-4800 Ext. 165  
Email: [tclose@gregorycorp.com](mailto:tclose@gregorycorp.com)  
Web: [www.gregory.com](http://www.gregory.com)

Gibraltar  
320 Southland Road  
Burnet, TX 78611  
Contact: Jay Winn  
Phone: (800) 495-8957 ext 212  
(512) 756-1426 (main)  
(512) 756-1575 (fax)  
Email: [jwinn@gibraltartx.com](mailto:jwinn@gibraltartx.com)  
Web: [www.gibraltartx.com](http://www.gibraltartx.com)

Furnish Grade A concrete conforming to standard spec. 501 as modified in standard spec. 716. Provide QMP for Class II ancillary concrete as specified in standard spec. 716. Test concrete according to the QMP Concrete Ancillary special provision included in the contract. Specify the required 28-day concrete compressive strength values for socketed concrete line post and anchor footings. Provided concrete that conforms to the 28-day compressive strength values that the manufacturer recommendation.

Furnish steel reinforcement conforming to standard spec. 505.

Furnish cable and all cable connection components with a minimum breaking strength of 39,000 lbs per ASTM A741-98.

Furnish zinc-coated hardware as specified in AASHTO M232.

## **B.2 Design Requirements**

Thirty days before installation provide the engineer with two sets of manufacturer prepared design calculations, approval letters, documentation, notes, plan details, and construction specifications. Provide required information in a PDF format or other in electronic format that the department can review information.

Obtain prior approval from the Bureau of Project Development (Erik Emerson at (608) 266-2842) for all hardware substitutions before delivering the hardware on the project.

Provide a system that has been formally accepted by Federal Highway Administration as meeting the crash test requirements in NCHRP Report 350 or MASH, for a Test Level 3 system.

Provide a system to have a maximum deflection of 10.72 feet. Provide design documentation on how post spacing, radius of curve, direction of curve, and anchor spacing influences barrier deflection.

Provided design details for concrete socketed line post footing with a maximum line post spacing of 15 feet. Minimum depth of for concrete socketed line post is 48 inches for non-rock installations.

Provide concrete anchors with minimum of 60 inches for non-rock installations

Provide design details for non-rock installations of socketed line post and concrete anchors.

Ensure that concrete line post design has 6 inches of clear cover (distance from outside of concrete in the line post footing to steel sleeve) or manufacture provides documentation that the concrete line post footing will not become cracked or large pieces of concrete cannot fly into the air during a TL-3 truck impact.

Provide engineering analysis sealed by a Wisconsin licensed professional engineer that the line post footings and concrete anchorages are designed for the soils conditions presented in the contract. Analysis includes but is not limited to: design loads used for terminal and anchor posts, foundation design methodology used, factors of safety values, soil type, soil conditions, temperature ranges



Soils information can be obtained by contacting Dan Erva at (715) 365-5776.

Provide splice and connection details that have passed NCHRP 350 or MASH TL-3 crash testing requirements.

### **C Construction**

A representative of the manufacture is to be on site at all times during the installation of the terminals and the high-tension cable guard. Manufacturer's representative will provide engineer signed documentation that the contractor has installed the socketed high-tension TL-3 cable guard according to manufacturer's recommendations.

Construct concrete as specified in standard spec. 501.

Construct steel reinforcement as specified in standard spec. 505.

Construct terminal units at each end of a run of cable guard as shown in the plans. The contractor may determine the location of anchors subject to the engineer's approval.

Set steel posts in socketed concrete foundations according to the manufacturer's recommendations. Line post must be easily removed from sleeve, plumb, and hold cables at proper elevations.

Tension the cable according to the manufacturer's recommendations at the time of installation, and then check and adjust approximately 3 weeks after installation. If system is not maintaining proper tension, adjust tension and return 3 weeks later. Provide engineer documentation of date, time, location, tension value, and who checked the tension for each barrier run.

Use only one-half the available adjustment in each turnbuckle or tension adjustment connection to achieve manufacture's recommend tension values.

Field swage connections per manufacturer's recommendations and details.

The engineer will allow the contractor to open the roadway to traffic or remove traffic control devices if concrete attains manufacture's compressive strength. Without compressive strength information, the engineer may allow the contractor to remove traffic control devices 14 equivalent curing days. Equivalent curing days are defined in standard spec. 415.3

Install reflective delineators at even post spacing intervals close to 100 feet.

### **D Measurement**

The department will measure High-Tension Cable Guard TL-3 Terminal as each individual unit, acceptably completed.

The department will measure High-Tension Cable Guard TL-3 Socketed by the linear foot, acceptably completed, measured as the length from end of terminal to end of terminal and rounded to the nearest linear foot.

#### **E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.23	High-Tension Cable Guard TL-3 Terminal	Each
SPV.0090.05	High-Tension Cable Guard TL-3 Socketed	LF

Payment is full compensation for furnishing all materials, including posts, paint, concrete, steel reinforcement, sockets, cables, anchors, tension assemblies, fittings, and incidentals; for initial tensioning and subsequent adjustment of tension; for furnishing all excavating and backfilling; for removal of temporary anchors; for restoring of disturbed slope; delineation; engineering; and for properly disposing of excess material.

### **101. Removing and Salvaging Street Light, Item SPV.0060.25.**

#### **A Description**

This special provision describes removing a light pole, transformer base, arm(s) and luminaire(s).

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

#### **C Construction**

Contact city at least 3 days prior to removing any street lights.

Carefully remove and stockpile all street light equipment at a location approved by the engineer. Return all equipment to the city. Contact Allen Wesolowski at (715) 261-6740 to arrange time and location. Properly dispose of any equipment that the city does not elect to salvage.

Replace any equipment damaged in the removal process with equipment that is of greater or equal quality than the damaged piece.

#### **D Measurement**

The department will measure Removing and Salvaging Street Light as each individual street light, 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.0060.25	Removing and Salvaging Street Light	Each

Payment is full compensation for removals and disposals as required above.

- 102. Pavement Marking Grooved Preformed Thermoplastic Arrows Type 1, Item SPV.0060.26; Pavement Marking Grooved Preformed Thermoplastic Arrows Type 2, Item SPV.0060.27; Pavement Marking Grooved Preformed Thermoplastic Arrows Type 2R, Item SPV.0060.28; Pavement Marking Grooved Preformed Thermoplastic Arrows Type 3, Item SPV.0060.29; Pavement Marking Grooved Preformed Thermoplastic Arrows Type 3R, Item SPV.0060.30; Pavement Marking Grooved Preformed Thermoplastic Words, Item SPV.0060.31; Pavement Marking Grooved Preformed Thermoplastic Crosswalk 12-Inch, Item SPV.0090.11; Pavement Marking Grooved Preformed Thermoplastic 8-Inch, Item SPV.0090.12; Pavement Marking Grooved Preformed Thermoplastic 18-Inch, Item SPV.0090.13.**

**A Description**

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

**B Materials**

Furnish 125 mils preformed thermoplastic pavement marking and sealant material, if required, from the department's approved products list.

**C Construction**

**C.1 General**

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

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

**C.2 Groove Depth**

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

**C.3 Groove Width – Linear Markings**

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

**C.4 Groove Position**

Position the groove edge in accordance to the plan details.

#### **C.4.1 Linear Marking**

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

#### **C.4.2 Special Marking**

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

### **C.5 Groove Cleaning**

#### **C.5.1 Concrete**

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

If water is used in the grooving process, allow the groove to dry a minimum of 24 hours after groove cleaning, after removal of excess water, and prior to pavement marking application. Clean and dry the groove for proper application of the sealant, and placement of the pavement marking. Use a high-pressure air blower with at least 185 ft<sup>3</sup>/min air flow and 90 psi air pressure to clean the groove; use of the air blower does not decrease the amount of time required for the groove to dry.

#### **C.5.2 New Asphalt**

Groove pavement 5 or more days after paving. Use a high-pressure air blower with at least 185 ft<sup>3</sup>/min air flow and 90 psi air pressure to clean the groove.

#### **C.5.3 Existing Asphalt**

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

#### **C.5.2 Asphalt**

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

### **C.6 Preformed Thermoplastic Application**

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

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

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

Use any sealant in the remainder counties and for the remainder of the year.

The sealant must be wet.

#### **D Measurement**

The department will measure Pavement Marking Grooved Preformed Thermoplastic (Type) by each individual unit, acceptably completed, or in length by the linear foot of tape placed, acceptably completed.

#### **E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.26	Pavement Marking Grooved Preformed Thermoplastic Arrows Type 1	Each
SPV.0060.27	Pavement Marking Grooved Preformed Thermoplastic Arrows Type 2	Each
SPV.0060.28	Pavement Marking Grooved Preformed Thermoplastic Arrows Type 2R	Each
SPV.0060.29	Pavement Marking Grooved Preformed Thermoplastic Arrows Type 3	Each
SPV.0060.30	Pavement Marking Grooved Preformed Thermoplastic Arrows Type 3R	Each
SPV.0060.31	Pavement Marking Grooved Preformed Thermoplastic Words	Each
SPV.0090.11	Pavement Marking Grooved Preformed Thermoplastic Crosswalk 12-Inch	LF
SPV.0090.12	Pavement Marking Grooved Preformed Thermoplastic 8-Inch	LF
SPV.0090.13	Pavement Marking Grooved Preformed Thermoplastic 18-Inch	LF

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

#### **Salvage and Reinstall Lighting Unit, Item SPV.0060.32.**

##### **A Description**

Salvage and Reinstall street lighting units from the project as shown in the plans and as hereinafter provided.

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

##### **C Construction**

Disconnect and salvage the complete lighting unit (pole, arm(s), luminaire(s), lamp, internal wiring and fusing) from the locations shown in the plans and/or as designated by

the engineer. Reinstall the complete lighting unit on a new the new base at the locations shown in the plans and/or as designated by the engineer.

Maintain pole wiring and fusing within the salvaged lighting units. Disconnect from existing branch circuits prior to salvaging. If damaged during removal, provide conductors and fusing as specified in the plan details.

Store salvaged items and protect them from damage until ready for reinstallation. Any damage to the salvaged materials resulting from the salvage, storage, or reinstallation operation shall be repaired or replaced in-kind at contractor expense.

#### **D Measurement**

The department will measure Salvage and Reinstall Lighting Unit as each individual lighting unit acceptably salvaged and reinstalled.

#### **E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.32	Salvage and Reinstall Lighting Unit	Each

Payment is full compensation for salvaging, storage, and reinstallation, of all existing lighting unit components including poles, arms, luminaires, lamps, internal pole wiring and fusing, and all pole accessories, hardware and fittings; and for furnishing all labor, tools, equipment, and incidentals necessary to complete the work. New concrete bases are not part of this item and will be paid for separately.

### **103. High-Tension Cable Guard TL-3 Terminal Safence; Item SPV.0060.35.**

#### **A Description**

This special provision describes providing socketed high-tension TL-3 cable guard meeting the National Cooperative Highway Research Program (NCHRP) Report 350, Test Level 3. These items are being installed on USH 51 as part of Wisconsin Research Study #WI-C17-2007.

Materials are to be acquired from the manufacturer below:

Safence, Inc.  
Gegory Industries  
4100 13<sup>th</sup> Street SW  
Canton, OH 44710  
Contact: Tom Close  
Phone: (330) 477-4800 Ext. 165  
Email: [tclose@gregorycorp.com](mailto:tclose@gregorycorp.com)  
Web: [www.gregory.com](http://www.gregory.com)

Furnish Grade A concrete conforming to standard spec 501 as modified in standard spec. 716. Provide QMP for Class II ancillary concrete as specified in standard spec 716. Test concrete according to the QMP Concrete Ancillary special provision included in the contract. Specify the required 28-day concrete compressive strength values for socketed concrete line post and anchor footings. Provided concrete that conforms to the 28-day compressive strength values that the manufacturer recommendation.

Furnish steel reinforcement conforming to standard spec 505.

Furnish cable and all cable connection components with a minimum breaking strength of 39,000 lbs per ASTM A741-98.

Furnish zinc-coated hardware as specified in AASHTO M232.

## **B.2 Design Requirements**

Thirty days before installation provide the engineer with two sets of manufacturer prepared design calculations, approval letters, documentation, notes, plan details, and construction specifications. Provide required information in a PDF format or other in electronic format that the department can review information.

Obtain prior approval from the Bureau of Project Development (Erik Emerson at (608) 266-2842) for all hardware substitutions before delivering the hardware on the project.

Provide a system that has been formally accepted by Federal Highway Administration as meeting the crash test requirements in NCHRP Report 350 or MASH, for a Test Level 3 system.

Provide a system to have a maximum deflection of 10.72 feet. Provide design documentation on how post spacing, radius of curve, direction of curve, and anchor spacing influences barrier deflection.

Provided design details for concrete socketed line post footing with a maximum line post spacing of 15 feet. Minimum depth of for concrete socketed line post is 48 inches for non-rock installations.

Provide concrete anchors with minimum of 60 inches for non-rock installations

Provide design details for non-rock installations of socketed line post and concrete anchors.

Ensure that concrete line post design has 6 inches of clear cover (distance from outside of concrete in the line post footing to steel sleeve) or manufacture provides documentation that the concrete line post footing will not become cracked or large pieces of concrete cannot fly into the air during a TL-3 truck impact.

Provide engineering analysis sealed by a Wisconsin licensed professional engineer that the line post footings and concrete anchorages are designed for the soils conditions presented in the contract. Analysis includes but is not limited to: design loads used for terminal and anchor posts, foundation design methodology used, factors of safety values, soil type, soil conditions, temperature ranges

Soils information can be obtained by contacting Dan Erva at (715) 365-5776.

Provide splice and connection details that have passed NCHRP 350 or MASH TL-3 crash testing requirements.

### **C Construction**

A representative of the manufacture is to be on site at all times during the installation of the terminals and the high-tension cable guard. Manufacturer's representative will provide engineer signed documentation that the contractor has installed the socketed high-tension TL-3 cable guard according to manufacturer's recommendations.

Construct concrete as specified in standard spec. 501.

Construct steel reinforcement as specified in standard spec. 505.

Construct terminal units at each end of a run of cable guard as shown in the plans. The contractor may determine the location of anchors subject to the engineer's approval.

Set steel posts in socketed concrete foundations according to the manufacturer's recommendations. Line post must be easily removed from sleeve, plumb, and hold cables at proper elevations.

Tension the cable according to the manufacturer's recommendations at the time of installation, and then check and adjust approximately 3 weeks after installation. If system is not maintaining proper tension, adjust tension and return 3 weeks later. Provide engineer documentation of date, time, location, tension value, and who checked the tension for each barrier run.

Use only one-half the available adjustment in each turnbuckle or tension adjustment connection to achieve manufacture's recommend tension values.

Field swage connections per manufacturer's recommendations and details.

The engineer will allow the contractor to open the roadway to traffic or remove traffic control devices if concrete attains manufacture's compressive strength. Without compressive strength information, the engineer may allow the contractor to remove traffic control devices 14 equivalent curing days. Equivalent curing days are defined in standard spec. 415.3

Install reflective delineators at even post spacing intervals close to 100 feet.



**D Measurement**

The department will measure High-Tension Cable Guard TL-3 Terminal Safence 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.0060.35	High-Tension Cable Guard TL-3 Terminal Safence	Each

Payment is full compensation for furnishing all materials, including posts, paint, concrete, steel reinforcement, sockets, cables, anchors, tension assemblies, fittings, and incidentals; for initial tensioning and subsequent adjustment of tension; for furnishing all excavating and backfilling; for removal of temporary anchors; for restoring of disturbed slope; delineation; engineering; and for properly disposing of excess material.

**104. Traffic Signal Controller Fully Actuated 8-Phase and Cabinet, Item SPV.0060.40.****A Description**

- (1) This special provision describes furnishing and installing an Eagle Traffic Signal Controller as shown on the plans and as hereinafter provided.
- (2) Submit a Certification of Compliance from the signal vendor, the contractor or the company that wired the cabinet certifying that the cabinet and equipment as furnished, conform to the plan and specifications. Ensure that the certificate of compliance is on the letterhead stationery, signed by an authorized officer of the company, and notarized. Submit a copy to the engineer, the SPO Manager at the department's Regional Office, and to the Electrical Section at the department's Central Office in Madison.
- (3) It is the responsibility of the contractor or his designee that all functions within the controller, cabinet, switches, and other timing parameters, and that all electrical and electronics components are in proper working condition. In addition, it is the responsibility of the contractor or his designee to ensure it meets the plan and the specifications, and shall demonstrate this to the engineer or his designee at the field location.
- (4) After mounting the cabinet on the cabinet foundation, connect all the field wiring inside the controller cabinet and test the signal circuits for correct operation. Connect and test the signal circuits outside the controller cabinet as directed by the engineer. Connecting and testing signal circuits shall be considered part of this item of work.

- (5) The delivered cabinet at the intersection shall perform in accordance to the standard specifications, the plan details, and special provisions once the field wiring is connected. It shall also be the responsibility of the contractor to have the person responsible for wiring the cabinet present at the location when the field wiring is connected to the cabinet wiring. In addition, the contractor assumes liability for any damage or damage due to malfunctions or improper wiring.
- (6) The controller shall be a fully traffic actuated, solid state, digital microprocessor controller, capable of providing the number and sequence of phases, overlaps, and any special logic as described herein and shown on the accompanying plan.
- (7) The controller shall be fully programmed and shall be mounted in a control cabinet to operate as a complete and functioning intersection traffic signal control system. The equipment items included shall be, but not necessarily limited to, cabinet, microprocessor controller, monitor, detector amplifiers, power supply, power distribution panel, interior cabinet wiring, and other associated electrical and electronic equipment interior to the control cabinet that is necessary to provide the type of operation described in these specifications.
- (8) Dual ring, programmable for both single and dual entry concurrent timing, eight-phase frame or equivalent shall be provided. Volume density and pedestrian timing shall be provided for all phases. MUTCD flashing capability shall be provided. All controls shall be in accordance to the accompanying plans and with NEMA Standards Publication No. TSI-1976 including Revisions No. 1 and No. 2.
- (9) The intersection controller unit shall be capable of up to 8-phase operation plus four (4) programmable overlaps regardless of whether preemption, coordination or the special programming is used. Wire the intersection cabinet for a minimum of twelve and include six 3-circuit load switches.

## **B Electrical and Operational Aspects**

### **B.1 Buffering**

- (1) Internally buffer all logic circuit inputs to withstand transients and noise, such as might result from normal usage, without damage to any mechanism components.

### **B.2 Timing Features**

- (1) All controller timing parameters shall be fully programmable from the front panel using switches and/or keyboard inputs, and memory storage features shall be nonvolatile under power off conditions for at least 30 days. The locking, nonlocking detection mode and recall switches shall also be accessible on the front panel.

### **B.3 Minimum Green Timing**

- (1) The passage timer shall time concurrently with the minimum green timer, so that the duration of the minimum green time is directly adjustable and is independent of the passage time setting.

#### **B.4 Dual Ring Timing**

- (1) In the dual ring application, no more than two phases shall be permitted to time concurrently, and no more than one phase per ring. The controller shall provide barrier protection against concurrent timing of two conflicting phases; no phases assigned to one side of the barrier shall be permitted to time concurrently, if a conflict will occur. The controller shall service calls on a single entry basis, and both rings shall cross the barrier simultaneously in accordance to the following logic: (a) Phases timing concurrently shall terminate simultaneously if both have a gap out due to excessive time between actuations. (b) Phases timing concurrently shall terminate simultaneously if both have a maximum time out. (d) In the event that one phase has not achieved a gap out or maximum time out, the other gapped out phase shall be permitted to leave the gapped out condition and retime an extension when an actuation is received.

#### **B.5 Manual (Police) Control**

- (1) If manual control is used, actuation of the manual control shall permit manual advance of the Walk, Pedestrian Clearance, and Green interval terminations only. Manual termination of Yellow or All Red clearance intervals shall not be permitted.

#### **B.6 Red Revert**

- (1) Provide an adjustable red revert control to assure adequate red display when recycling a phase during call-away or red rest mode operation. A call for service to a different phase shall be preceded by an all-red clearance interval, as programmed.

#### **B.7 Coordination**

- (1) The controller shall be capable of operation in progressive coordination systems and mutual coordination and shall contain, but not be limited to, the following external inputs, with all functions brought out:

Vehicle/Pedestrian Detectors per phase	Pedestrian Omit per phase
Phase Omit per phase	Hold per phase
Omit Red Clearance per ring	Internal Maximum Inhibit per ring
Maximum II per ring	Red rest per ring
Stop Timing per ring	Force-Off per ring
Select Minimum Recall per controller	Manual Control per controller
Semi-Mode per controller	External Start per controller

#### **B.8 Minimum Safe Timings Control**

- (1) Controllers shall not accept any operator input or stored timing parameters that would result in intervals shorter than the following: yellow clearance - 3.0 seconds; minimum walk - 4.0 seconds; minimum pedestrian clearance - 6.0 seconds. At the beginning of each of the above intervals, the controller shall check the previously stored data against these minimums. If an operator attempts to load an incorrect timing parameter, the controller unit shall output a unique error code on the front panel display. As an alternate to minimum timing control, a coded keyboard entry security feature may be provided.

## **B.9 Indicator Lights and Switches**

- (1) Provide indicator lights to show the status of each signal phase on. Indicator lights shall also be used to show interval status, phase termination information, and presence of vehicular and pedestrian calls for each phase. Also provide an indicator light to show the status of the backup battery charging circuit.
- (2) The controller shall have an on off switch and fuse for AC power.

## **B.10 Data Display**

- (1) If keyboard entry is supplied, the front panel shall contain a display panel consisting of LED display characters. The face of the display shall be scratch, chemical, and solvent resistant. In the case of writing data or parameters into the controller, there shall be a visual indication that the data has been accepted. The number of characters shall be adequate to read or write all data and parameters in decimal format together with a data descriptor in either alpha numeric format, or thumbwheel switch display.

## **B.11 Diagnostic Program**

- (1) A diagnostic program shall be prepared by the manufacturer of the controller unit that will demonstrate the proper operation of all the inputs, outputs, controls and indicators in the controller, and shall have visual conformation on the front panel. The diagnostic program shall be either resident in the controller or furnished as a separate plug in module. A flow chart and listing of the diagnostic routine shall be furnished with the controller unit.

## **B.12 Maintenance of Controller**

- (1) For ease of service, the controller shall be divided to a minimum of the following separate circuit boards:
  1. CPU/Memory
  2. Input/Output
  3. Front Panel
  4. Power Supply
- (2) Each board must be easily removable without requirements for special tools.
- (3) The microprocessor supplied shall be the type that has a Fluke Pod that is compatible.
- (4) All electronic components must be removable by a PACE (model PPS-5) solder station and all integrated chips over 20 pins must be on sockets.

## **C Monitoring**

### **C.1 General**

A conflict monitor meeting the following requirements shall be provided:

1. Each cabinet assembly shall be wired to operate with one Malfunction Management Unit (MMU). The MMU shall be a Type 16.

2. This specification sets forth the minimum requirements for a shelf-mountable, sixteen channel, solid-state Malfunction Management Unit (MMU). The MMU shall meet, as a minimum, all applicable sections of the NEMA Standards Publication No. TS2-2003. Where differences occur, this specification shall govern.

## **C.2 Monitoring Functions**

The following monitoring functions shall be provided in addition to those required by the NEMA Standard Section 4.

### **C.2.1 Dual Indication Monitor**

Dual Indication monitoring shall detect simultaneous input combinations of active Green (Walk), Yellow, or Red (Don't Walk) field signal inputs on the same channel. In Type 12 mode this monitoring function detects simultaneous input combinations of active Green and Yellow, Green and Red, Yellow and Red, Walk and Yellow, or Walk and Red field signal inputs on the same channel.

When voltages on two inputs of a vehicle channel are sensed as active for more than 450 msec, the MMU shall enter the fault mode, transfer the OUTPUT relay contacts to the Fault position, and indicate the DUAL INDICATION fault. The MMU shall remain in the fault mode until the unit is reset by the RESET button or the EXTERNAL RESET input. When voltages on two inputs of a vehicle channel are sensed as active for less than 200 msec, the MMU shall not transfer the OUTPUT relay contacts to the Fault position.

When operating with Port 1 communications enabled, Bit #68 (Spare Bit #2) of the Type #129 response frame shall be set to indicate a Dual Indication fault has been detected.

Dual Indication Monitoring shall be disabled when the RED ENABLE input is not active.

- **Field Check Monitor:** In the Field Check Fault mode, when the field signal input states sensed by the MMU do not correspond with the data provided by the Controller Unit in the Type #0 message for 10 consecutive messages, the MMU shall enter the fault mode, transfer the OUTPUT relay contacts to the Fault position, and indicate the FIELD CHECK FAIL fault. Bit #67 (Spare Bit #1) of the Type #129 response frame shall be set to indicate a Field Check fault has been detected. The MMU shall remain in the fault mode until the unit is reset by the RESET button or the EXTERNAL RESET input.
- **Field Check Status:** The Field Check Status mode shall work in combination with the other fault monitoring functions of the MMU. When a Conflict, Red Fail, Clearance Fail, or Dual Indication Fail triggers the MMU, the Channel Status Display and Fault Status Display shall correspond to that detected fault. If Field Check errors were detected while the fault was being timed, the inputs on which the Field Check errors were detected shall be reported on the Channel Status display. Bit #67 (Spare Bit #1) of the Type #129 response frame shall also be set to indicate Field Check errors have been detected.

- **Field Check Programming:** Programming shall be provided to enable the Field Check monitoring function for each Green, Yellow, and Red input individually. Programming shall be provided to enable the Field Check monitoring function for channel 2, 4, 6, and 8 Walk input individually when operating in the Type 12 with SDLC mode.

### **C.2.2 Recurrent Pulse Monitoring**

The Signal Monitor shall detect Conflict, Red Fail, and Dual Indication faults that result from intermittent or flickering field signal inputs. These recurring pulses shall result in a latching fault with the RECURRENT PULSE STATUS indicated along with the resulting Conflict, Red Fail, or Dual Indication status. An option shall be provided to disable the RP detect function for testing purposes.

When operating with Port 1 communications enabled, Bit #69 (Spare Bit #3) of the Type #129 response frame shall be set to indicate a Recurrent Pulse status has been detected.

### **C.2.3 External Watchdog Monitoring**

The MMU shall provide the capability to monitor an optional external logic level output from a controller unit or other external cabinet circuitry. If the MMU does not receive a change in state on the EXTERNAL WATCHDOG input for 1500 msec ( $\pm 100$  msec), the MMU shall enter the fault mode, transfer the OUTPUT relay contacts to the Fault position, and indicate the WATCHDOG fault. The MMU shall remain in the fault mode until the unit is reset by the RESET button or the EXTERNAL RESET input. An MMU Power Failure shall reset the WATCHDOG fault state of the monitor. The EXTERNAL WATCHDOG input shall be wired to connector MSB-S.

When operating with Port 1 communications enabled, Bit #70 (Spare Bit #4) of the Type #129 response frame shall be set to indicate an External Watchdog fault has been detected.

### **C.2.4 Type Fault Monitoring**

The MMU shall verify at power-up that the Type 12 or Type 16 operating mode as determined by the TYPE SELECT input is consistent with the mode set by the last external reset.

Detection of a Type Fault shall place the MMU into the fault mode, transfer the OUTPUT relay contacts to the Fault position, and indicate the TYPE 12/16 fault. The MMU shall remain in the fault mode until the unit is reset by the RESET button or the EXTERNAL RESET input. An MMU Power Failure shall reset the Type Fault state of the monitor.

### **C.2.5 Flashing Yellow Arrow PPLT Support**

The MMU shall be designed to monitor an intersection with up to four approaches using the four section Flashing Yellow Arrow (FYA) movement outlined by the NCHRP Research Project 3-54 on Protected/Permissive signal displays with Flashing Yellow Arrows. Two cabinet configurations shall be supported for both the MMU Type 16 and Type 12 modes depending on the number of load switches provided and the capabilities of the controller unit. In both modes the MMU shall be designed to provide the same fault

coverage for the FYA approaches as it does for conventional protected left turn phases including Conflict, Red Fail, Dual Indication, and both Minimum Yellow and Minimum Yellow Plus Red Clearance monitoring.

### **C.3 Configuration Options**

#### **C.3.1 RYG ONLY Red Fail Option**

The MMU shall provide the capability to exclude the Walk inputs from the Red Fail fault detection algorithm when operating in the Type 12 mode. When the option is selected, the absence of signals on the Green, Yellow, and Red field outputs of a channel will place the MMU unit into the fault mode, transfer the OUTPUT relay contacts to the Fault position, and indicate the RED FAIL fault.

#### **C.3.2 LED Signal Threshold Adjust**

The MMU shall provide the capability to sense field inputs signals with the following thresholds:

Conflict, Dual Indication Low Threshold Signal Inputs (Green, Yellow, and Red)	
No Detect	less than 15 Vrms
Detect	greater than 25 Vrms

Red Fail High Threshold Signal Inputs (Green, Yellow, and Red)	
No Detect	less than 50 Vrms
Detect	greater than 70 Vrms

#### **C.3.3 CVM LOG Disable Option**

The MMU shall provide a means to disable the logging of CVM fault events.

### **C.4 Display Functions**

The following display functions shall be provided in addition to those required by the NEMA TS-2 Standard Section 4. A PC shall not be required to display the following parameters.

#### **C.4.1 Field Signal Voltages Display**

A mode shall be provided to display the RMS voltage of each field signal input. If the MMU is not in the fault mode, the displayed voltage will be the currently applied RMS voltage. If the MMU is in the fault mode, the displayed voltage will be the applied RMS voltage at the time of the fault.

#### **C.4.2 Cabinet Control Signal Voltages Display**

A mode shall be provided to display the RMS voltage of the AC Line and Red Enable, the frequency of the AC Line, and the ambient temperature measured at the MMU. If the MMU is not in the fault mode, the displayed values will be the currently applied values. If the MMU is in the fault mode, the displayed values will be the applied values at the time of the fault.

#### **C.4.3 Field Check Status Display**

When the MMU is in the fault mode, a display screen for the front panel display shall be provided to identify all field signal inputs with Field Check status.

#### **C.4.4 Recurrent Pulse Status Display**

When the MMU is in the fault mode, a display screen for the front panel display shall be provided to identify all field signal inputs with Recurrent Pulse status.

#### **C.4.5 Configuration Display**

A display mode for the front panel display shall be provided that allows the setting and viewing of all MMU configuration parameters. The configuration parameters provided on the program card shall be viewable only. A PC shall not be required to completely program or view the MMU configuration parameters.

#### **C.4.6 Event Logs Display**

A display mode for the front panel display shall be provided to review all details of the Previous Fail log, AC Line log, and the Monitor Reset log.

#### **C.4.7 Clock Set Display**

A display mode for the front panel display shall be provided to view and set the time and date of the MMU real time clock.

### **C.5 Operating Modes**

The MMU shall operate in both the Type 12 mode and Type 16 mode as required by the NEMA Standard.

#### **C.5.1 Help System**

A context sensitive Help System shall be provided that is activated by a separate help button. The main status display shall respond with text messages relevant to the position in the menu navigation level. When the MMU is in the fault mode the Help System shall respond with the diagnostic mode described in C.5.3.

#### **C.5.2 Setup Wizard**

A built-in setup mode shall be provided that automatically configures the Dual Indication enable, Field Check enable, Red Fail enable, and Minimum Yellow Plus Red Clearance enable parameters from user input consisting only of channel assignment and class (vehicle, ped, pp-turn, etc) responses.

#### **C.5.3 Diagnostic Wizard**

A built-in Diagnostic Wizard shall be provided that displays detailed diagnostic information regarding the fault being analyzed. This mode shall provide a concise view of the signal states involved in the fault, pinpoint faulty signal inputs, and provide guidance on how the technician should isolate the cause of the malfunction. The Diagnostic Wizard shall be automatically invoked when the MMU is in the fault mode and the HELP button is pressed. It shall also be automatically invoked when the MMU is in the Previous Fail (PF) event log display and the HELP button is pressed.



#### **C.5.4 TS-1 Type 12 With SDLC Mode**

The MMU shall be capable of operating in the Type 12 mode with SDLC communications enabled on Port 1. The Channel Status display shall operate in the Type 12 configuration and provide the field check function for up to four pedestrian Walk inputs.

#### **D Terminal Facilities**

- (1) Terminal facilities shall consist of all devices external to the controller unit that are necessary to complete the intersection control. Terminal facilities supplied shall be protected by dual 30-amp circuit breakers. The dual 30-amp breakers shall feed an evenly split signal bus supplied through bus relays and radio interference line filters. Bus relays, in all cases, shall be mercury type contractors and shall not be jack mounted. Terminal facilities shall also include applicable load switch panels of sufficient capacity to accommodate 8 vehicle phases, 4 pedestrian phases, and 4 overlap phases and shall include a minimum of 6 solid state 3 circuit load switches with visual indicators. Flash transfer relays and two double circuit flashers shall also be provided. The internal wiring in the load switch panels shall be insulated wiring of sufficient size or the individual outputs fused so that the wiring will not be damaged by shorted output light circuits. Printed circuits in the load switch panels will not be acceptable.
- (2) Use terminal strips to terminate controller cable, signal head cables and vehicle and pedestrian detector cables. Terminate all controller inputs and outputs on an interface panel. All interface and output terminal connections shall be the screw down type.
- (3) Fuse all interconnect terminal facilities to incoming lines.

#### **E Cabinet Switches**

- (1) Locate the following switches inside the cabinet on a maintenance panel:
  - a. Controller On/Off
  - b. Cabinet Light
  - c. Stop Time (Three Position)

POSITION	LABEL SWITCH	FUNCTION
Upper	Stop Time	Place stop time on the controller
Center	Run	Remove the stop time input to the controller
Lower	Normal	Connects the Monitor to the controller stop time input

- (2) Provide switches for all vehicle phases and all even pedestrian phases.
- (3) Locate the following switches behind the Police access door:
  - Signal/Off
  - Flash/Normal

- (4) The above switches shall function as follows:

Signal		Off
Flash	Signals Flash	Signals Dark
Normal	Signals Normal	Signals Dark

- (5) Manual Detector Operation. Provide three position switches external to the controller that will permit manual detector calls and manual detector disconnect for each phase independently. The switches shall be spring loaded and shall rest in the center (non-operative) position. The switches shall be appropriately labeled and shall operate as follows:

Upper Position:	Spring loaded:	Disconnect detector
Center Position:	Normal detector operation	
Lower Position:	Spring loaded:	Test call is placed to controller.

## **F Cabinet and Cabinet Equipment**

- (1) Furnish the controller completely housed in a door-in-door ground mounted (without anchor bolts) metal cabinet that meets the requirements for the TS1 traffic control cabinet assembly. At minimum the cabinet shall meet the size P cabinet - 52" H x 44" W x 24" D.
- (2) Provide a cabinet of clean-cut design and appearance. The size of the cabinet shall be such as to provide ample space for housing the controller, and all of the associated electrical devices which are to be furnished with the controller, together with any other auxiliary devices herein specified.
- (3) All cabinets shall have the following:
1. A 15-amp circuit breaker for auxiliary equipment.
  2. A 20-amp circuit breaker for street lighting.
  3. A valve type surge protector, as manufactured by Joslyn, catalog #L9200-10; General Electric, catalog #9L15DCB002; or approved equal, shall be mounted internally within the traffic signal cabinet and shall be connected across the load terminals of the circuit breakers. A General Electric Varistor, catalog #V130PA20A, shall be installed at the load terminals of each circuit breaker from the hot line to the grounded current carrying neutral conductor.
  4. Incandescent light socket.
  5. Solid state jack mounted NEMA flasher(s) with visual indicators and completely wired base, rated for at least 10 amps per circuit at 74 degrees C.
  6. Control switches, including controller power switch, stop time switch, cabinet light switch, and emergency flash switch.
  7. All switches specified in Section C-8 and F.
  8. Necessary fuses and circuit breakers.
  9. All wiring harnesses including detector harnesses. Loop detector harness connector shall be MS-3106B018-IS fully wired terminals I and J which shall go to separate isolated terminals. One loop harness shall be provided for each of the phases (i.e. 01 - 08).

10. **Duplex power receptacle.** A 120 VAC 20 amp, NEMA 5-20R GFI convenience outlet shall be mounted in each cabinet for energizing equipment or tools. The outlet shall be fuse protected.
  11. **Radio interference filter.** Each control cabinet shall be equipped with a single radio interference suppressor of sufficient ampere rating to handle the load requirements. The RIS shall be installed at the input power point. It shall minimize interference in both the broadcast and the aircraft frequencies, and shall provide a maximum attenuation of 50DB over a frequency range of from 200KHZ to 75MHZ, when used in connection with normal installations. The radio interference suppressor shall be hermetically sealed in a substantial metal case that shall be filled with a suitable insulating compound. The terminals shall be nickel-plated brass studs of sufficient external length to provide space to connect two No. 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 not be rated less than 35 amperes. The RIS shall be designed for operation on 115 VAC +/- 10%, 60HZ, single-phase circuits, and shall meet the standards of UL and Radio Manufacturer's Association.
  12. **Cabinet grounding.** In all controller cabinets and auxiliary cabinets, the AC common, the logic ground, and the chassis ground shall be isolated from each other the same as detailed by NEMA Standard.
  13. **Suppressors.** Each 120 VAC circuit that serves as inductive device, such as a pan 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.
- (4) All conductors in the cabinet shall be number 22 AWG or larger, with a minimum of 19 strands, and conforming to military specifications, Mil-W-16878D, Type B or D, vinyl nylon jacket, 600 volt, 105 degree C. All cabinets shall be factory wired.
  - (5) The cabinet shall provide weather protection and forced ventilation, air filters and heaters, with adjustable thermostat switches, and comply with the environmental and operating standards outlined in NEMA Specification TSI-1-1976. The cabinet shall provide reasonable vandalism protection. Provide access doors that have latches and a Corbin lock, dust cap, and key change IR6380. The small door shall be provided with standard police locks. The heater supplied shall have adjustable thermostat setting which varies from 0 degrees to 40 degrees Celsius.
  - (6) **Forced Ventilation.** Ventilate the controller cabinet containing solid-state equipment by means of a 120 VAC, 60HZ, tube axiac compact type fan. The fans free delivery airflow shall be greater than 2.83 cubic meter per minute. The magnetic field of 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 thermostat's turn on setting shall be adjustable from 32 to 49 degrees Celsius. The fan shall run until the cabinet temperature decrease to approximately 17 degrees C. below the turn on temperature setting. The fan shall be fused.

- (7) Provide metal shelves to support the controller and external equipment. The controller shall be located on the top shelf and not less than 965 mm above the bottom of the cabinet. There shall be a minimum of 250 mm vertical height for detector units.
- (8) Locate buss and flash transfer relays, flashers, load switches, circuit breakers, and interference filters on a standard panel consistent with the intersection plan. Design shall facilitate field inspection and maintenance accessibility without excessive disassembly or special tools.
- (9) Prime all inside and outside surfaces of the cabinet inside and outside surfaces with phosphate treatment and primer. After priming, give all exterior surfaces a minimum of 2 coats of rust resistant silver grey enamel; interior surfaces shall be furnished with rust resistant high gloss white enamel.
- (10) Neatly fold and cap any cables, wires or circuits that are not being used. These wires shall be neatly tied and stowed away in or on the terminal facilities.
- (11) Terminal facilities arrangement shall be in a fashion so that trouble shooting of load bay or behind the load bay can be accomplished with simple tools. This means that the load bay will be hinged so that it can be dropped down for ease of maintenance. There will be sufficient slack in the load bay wiring to allow for dropping the load bay.
- (12) Protect all control cables, i.e., detector harnesses, controller harnesses, harnesses which connect manual/vehicle detector switches, by a nylon jacket or provide equivalent protection to prevent any contact with cabinet metal shelves, doors and any other sharp corners.
- (13) If any branch circuit wiring or control wiring does not conform to the wire specifications, the supplier will be considered as not meeting the specifications and proper corrective action will be exercised against the supplier.
- (14) Provide a 4 input PED isolation circuit to isolate controller logic ground from the field wiring. Outputs from the PED isolator shall be connected to phases 2,4,6,8.

#### **G Solid State Load Switches**

- (1) Load switches shall meet the requirements of NEMA TSI-Part 5 for three circuit load switches.

- (2) Each load switch shall contain three individually replaceable, molded case, solid state relay modules. Each relay module shall utilize optical isolation between the control and the load circuits. The module shall have the functions and terminal assignments as specified in NEMA TSI-Part 5.
- (3) Each panel of load switches shall either be rack mounted or shall have a switch support bracket extending across the entire length of the switch panel.
- (4) The load bay arrangement from left to right in the cabinet shall be as described below:
  1. Vehicular Phasing shall be groups first - 01, 02, 03, 04, 05, 06, 07, 08.
  2. Pedestrian Phasing shall be followed second - 02, 04, 06, 08.
  3. Any other special phasing shall be grouped last.

## **H Equipment List and Drawings**

- (1) Submit detailed shop drawings of the control cabinet, equipment layout drawings and wiring diagrams of all equipment installed in the controller cabinet to the department for approval. Two sets of cabinet wiring diagrams shall be contained in a heavy duty clear plastic envelope mounted on the inside of the front door.
- (2) At the time of delivery, furnish one set of instruction manuals and an itemized price list for each type of equipment, their subassemblies, and their replacement parts. The instruction book shall include the following information: a) Table of Contents, b) operating procedure, c) step-by-step maintenance and troubleshooting information for the entire assembly, d) circuit wiring diagrams, e) pictorial diagrams of parts locations, f) parts numbers, and g) theory of operation. The instructional manuals shall include itemized parts lists. The itemized parts lists shall include the manufacturer's name and parts number for all components (such as IC's, diodes, switches, relays, etc.) used in each piece of equipment. The list shall include cross references to parts numbers of other manufacturers who make the same replacement parts.

## **I Warranty**

- (1) The contractor shall certify that the equipment meets the required specification and shall supply a complete catalog description. The following documents shall also be provided.
  1. A warranty statement that stipulates that equipment to be supplied shall be warranted for two years from the date of purchase.
  2. Operations manuals.
  3. Maintenance manuals.
  4. Schematic diagrams.
  5. Component and equipment locations within the cabinet.
- (2) If a malfunction in the controller unit, or its auxiliary equipment occurs during the warranty period, the supplier shall, within 24 hours after notification (excluding Saturday and Sunday), furnish a like controller unit module, or auxiliary equipment, for use while the warranted unit is being repaired. The isolation of any malfunction during the warranty period shall be the responsibility of the supplier. After the supplier has

repaired and returned the equipment, the department shall then return the spare component to the supplier.

## **J Preemption**

### **J.1 General**

- (1) These specifications detail a preemptor program for use with 2 through 8-phase-actuated controller.
- (2) The preemptor shall be capable of being adaptable to meet the various types of applications such as railroad, fire station, and bridge preempts.
- (3) The preemptor shall be internal to the controller and shall not alter controller capability or interchangeability under normal operation. The preemptor shall be completely programmable by the user.

### **J.2 Preempt Program**

- (1) Preempt Registration. The preempt call input shall initialize preempt registration and start preempt sequence unless a priority call input is activated which would treat the current controller preemptions state as normal operation and reinitiate call registration.
- (2) Preempt Delay. As soon as the preempt call is registered the preempt delay will begin timing unless preempt delay is set zero or preempt delay omit was active during preempt call registration. Delay shall be programmable from 0 to 255 seconds minimum.
- (3) As soon as preempt delay is timed out, current running phases not next to be common in preempt sequence are cleared. If the running phases are green and must be cleared, special programmable values of minimum green, walk and pedestrian intervals will time normal times. Concurrently a special preempt clearance is generated. This clearance is designed for advance track signals and any overlaps that may be green and require yellow clearance.
- (4) Entry Clearance Phase(s) Select. Two sequential phases or phase pairs shall be available to be run as programmable fixed time intervals as an entry sequence. Two entry options shall be available, each programmable. The entry sequence shall be capable of being omitted entirely.
- (5) Dwell Sequence. After the entry sequence, the preemptor shall enter the dwell sequence. During the dwell sequence the controller shall cycle between selected phases on a pre-timed or actuated basis. Pedestrian phasing may be normal or omitted entirely. When the dwell sequence is entered, a preempt dwell output shall be generated. The preemptor shall remain in dwell for the length of the dwell extension timer which shall be capable of being held in reset by the preempt call input. Dwell extension shall be omissible by setting the timer to zero.

- (6) Exit Sequence. After leaving dwell, the controller shall enter one or two programmed exit phases(s) or phase pairs sequences. The sequence will time programmed minimum green and place a vehicle call on all phases not omitted. After timing exit phase minimum green the controller shall time and sequence normally.

## **K Time Base Coordination**

- (1) These specifications detail a Time Base Coordinator program for use with 2 through 8-phase actuated controller.
- (2) The units shall allow traffic control equipment to be coordinated without requiring the use of interconnection cables. The units shall coordinate traffic control equipment based on signals from a precise time base which will allow output control signals to be changed at the proper pre-programmed time to achieve the coordinated operation of an intersection with other intersections or the desired operation of an isolated intersection. The coordinators may also used a programmer for a master intersection controller which in turn is interconnected with secondary intersection controllers. The units shall also be capable of providing a command for MUTCD flash, and shall allow a full year program to be initiated and carried out without the necessity of field adjustment for anticipated special events, etc.
- (3) The time base coordinator shall be internal to the controller and shall not alter controller capability or interchangeability under normal operation. The time base coordinator shall be completely programmable by the user.

## **L Loop Detector Amplifiers**

### **L.1 Materials and Construction Methods**

- (1) All loop detector amplifiers supplied shall be two channel shelf-mounted units with digital output timing, and sequential scanning. The amplifier shall operate in compliance with all the requirements specified herein, when connected to an inductance loop plus lead-in of from 0 to 1000 microhenries with a loop parameter as low as 5.0 at the amplifiers operating frequency.
- (2) Each channel shall be self-tuning and shall be fully operational within one minute after power up. After a power interruption, the channel shall automatically return to normal operation. Two conventional single channel front panel mounted MS3102a18-1P connectors for each amplifier shall be provided.
- (3) Each channel shall have a fail-safe design such that if the loop sensor circuit is broken, the channel shall output a continuous vehicle call.
- (4) Couple the loop sensor to the channel input circuitry through isolation transformers. This arrangement shall provide continued operation of the channel even if the loop sensor in the street develops resistive leakage or becomes grounded.

- (5) Provide lightning protection for each amplifier as an integral part of its own circuitry. The protection shall enable the detector to withstand the discharge of a 10 microfarad capacitor, charged to  $\pm 1000$  volts. The discharge shall be applied directly across the detector loop input pins with no loop load present. The protection shall also enable the detector to withstand the discharge from a 10 microfarad capacitor, charged to 1 to 2000 volts. The discharge shall be applied directly across either the detector loop input pins or across either side of the loop input pins to earth ground. For this test, the detector chassis shall be grounded and the detector loop input pins shall have a 5.0 ohm dummy resistive load connected across them.
- (6) The detector circuits shall be so designed that changes due to environmental drift and applied power shall not cause an actuation. The detectors shall be capable of compensating or tracking for an environmental change of up to but not exceeding  $1 \times 10$  minus 3% charge in inductance per second. This requirement must be met within two hours after initial application of operating power.
- (7) Each detector channel shall have a minimum of three sensitivity settings and these shall be front panel selectable. The most sensitive setting shall respond to an inductance change of 0.02%. The least sensitive setting may be chosen by the manufacturer such that accurate and repeatable occupancy measurements may be obtained. This setting must cause the detector channel to respond to a 0.14-0.4% charge in inductance.
- (8) Each detector channel shall have a front panel mounted indicator to provide a visual indication of each vehicle detection. A detector channel shall not cross talk with any other channel within the same module.
- (9) The unit shall operate over input voltage from 95VAC to 135VAC and shall neither originate nor be sensitive to electrical transients in excess of proposed NEMA standards. Provide varistors between power lines to limit transient voltages.
- (10) Provide extension and delay timing for each channel independently as described below:

## **L.2 Delay Timing**

- (1) Delay detector output for selected interval of 1 to 30 seconds in 1-second increments. Each new detection restarts the delay timer.

## **L.3 Extension Timing**

- (1) Extends vehicle calls up to 7.75 seconds in 0.50 second increments.

## **L.4 Green Gating**

- (1) Green signals from the controller shall be wired to the detector to modify timing functions. When green is true, delay timing is disabled. When green is false, extension timing is disabled. The green input signals may be DC or direct line voltage AC.



### **L.5 Smart Indicators**

- (1) Normal indicator operation is provided when neither timer is active. Delay and extensions are distinguished by 4 hertz and 16 hertz flashing respectively.
- (2) Provide the necessary Loop Detector Amplifiers as required on the plan.

### **M Controller Operation**

- (1) Consistent with customary trade practices, the manufacturer shall furnish a warranty for all electrical or mechanical equipment described herein. The contractor shall turn such warranty over to the owner for potential dealing with the guarantor.
- (2) If the contractor is the guarantor, he specifically waives the requirements of section 289.14(2), Wisconsin Statutes, and agrees as a condition of the contract that the owner may maintain an action against him at anytime during the warranty period for recovery of damages which the state may have sustained by reason of the failure of the contractor to comply with the provisions of the warranty provided to the owner.
- (3) During the installation and testing of the controller, the contractor shall provide, at his own expense, a competent representative to oversee, direct and manage the installation and testing of the controller. In the final stages of the installation and testing, the manufacturer's representative shall be available at the job site for consultation until such time as the controller operation is tested and accepted.
- (4) If a malfunction in the controller unit or its auxiliary equipment occurs during the warranty period, the supplier shall, within 24 hours after notification (excluding Saturday and Sunday), furnish a like controller unit, module, or auxiliary equipment, for use while the warranted unit is being repaired. The isolation of any malfunction and the repair and/or replacement of any device within the warranty period shall be the responsibility of the supplier. After the supplier has repaired and returned the equipment, the county shall return the spare component to the supplier.

### **N Measurement**

- (1) The department will measure Traffic Signal Controller Fully Actuated 8-Phase as a unit of work completed in accordance to the contract and accepted,.

### **O Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.40	Traffic Signal Controller Fully Actuated 8-Phase and Controller	Each

- (2) Payment is full compensation for furnishing and installing the signal controller and conflict monitor together with cabinet, switches for flashing operation, and fittings as are necessary to assure that the controller will perform the said functions.

**105. Install Hydrant, Item SPV.0060.45; Salvage and Reinstall Hydrant, Item SPV.0060.46.**

**A Description**

This special provision describes excavating, removing, relocating and/or installing hydrants, installing electrical continuity connections, furnishing and installing drainage stone for hydrants, furnishing and installing thrust blocking; and backfilling excavations in the locations as shown on the plans and as directed the engineer.

**B Materials**

The City of Wausau Water Works (WWW) will supply new hydrants to the contractor and will deliver them to the project where no existing hydrants are present. Coordinate with the WWW contact listed in the plan for delivery of the hydrants.

**C Construction**

Excavate and relocate or install new hydrants in accordance with the details on the plans. Maintain a minimum of 6 inches of clearance from sidewalks or curbs. Install Mega-lug joint restraints on all joints from watermain tee to hydrant.

**D Measurement**

The department will measure Install Hydrant and Salvage and Reinstall Hydrant 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.0060.45	Install Hydrant	Each
SPV.0060.46	Salvage and Reinstall Hydrant	Each

Payment is full compensation for excavating, relocating or installing; for drainage stone; for thrust blocking; and for furnishing all labor, tools, equipment and incidentals necessary to complete the contract work.

**106. Tracer Wire Access Box, Item SPV.0060.47; PVC Sanitary Sewer Main, 8-Inch, Item SPV.0090.09; PVC Sanitary Lateral, 6-Inch, Item SPV.0090.14.**

**A Description**

This special provision describes excavating required trenches, furnishing and laying 8-inch PVC sanitary sewer main, and 6-inch PVC sanitary lateral and backfilling trenches all in accordance with the requirements of the plans, specifications and contract.

## **B Materials**

### **B.1 Polyvinyl Chloride (PVC)**

**B.1.1** PVC pipe: ASTM D-3034, PSM SDR 35 for main line, Schedule 40 for laterals

**B.1.2** PVC pipe materials: Class 12454-B, 12454-C or 13364-B as defined in ASTM D-1784.

**B.1.3** Produced by a continuous extrusion process, employing a prime grade of unplasticized polyvinyl chloride.

**B.1.4** Use a grade highly resistant to hydrogen sulfide, sulfuric acid, gasoline, oil, detergents and other chemicals commonly found in sewage and industrial wastes.

**B.1.5** Self-extinguishing flammability.

**B.1.6** The minimum wall thickness in accordance with the respective ASTM governing the specific pipe manufacturer.

**B.1.7** Maximum deflection of the installed PVC pipe, five percent.

**B.1.8** Furnish mandrel for testing.

### **B.2 Connection to Sewer**

**B.2.1 Service laterals:** Connect by PVC or CISP wye fittings.

**B.2.2** Use of the same material as the mainline sewer for wye and the fittings.

**B.2.3** Where approved by the engineer, saddle tap-in assemblies may be utilized.

**B.2.3.1** Saddle tap-in assemblies: All materials (i.e. gaskets, solvents, adhesives, stainless steel bands, conversion fitting for ASTM D-3034, PSM SDR-35 pipe, assembly instructions, etc.) necessary for a tap-in connection.

**B.2.3.2** Saddle tap-in assemblies must have a constriction to prevent the slipping of the service lateral into the sewer.

### **B.3 Connection to Existing Laterals**

**B.3.1** Where connection to an existing lateral is not to be made as part of the Project, end the service lateral with a cap or plug in a joint or fitting compatible for connection (by others) with ASTM D-3034 Schedule 40 pipe.

**B.4** Connection to Existing Sewers. Where connection to an existing sewer is part of the project, utilize a Fernco or equal “donut” transition fitting or “flexible” coupling.

## **B.5 Tracer Wire and Access Box**

**B.5.1** Tracer Wire shall be No. 12 AWG solid single copper wire with green plastic coating.

**B.5.2** Grounding rod shall be 3/8-inch diameter, 12-inch long copper clad steel.

**B.5.3** Access box shall be non-traffic rated ABS plastic access box with cast iron rim and lid, flared base, 2-1/2 inch shaft diameter, and minimum 18 inch shaft length. Lid shall be locked and opened with standard pentagon head key wrench and shall be marked "SEWER". Two stainless steel terminal screws for attachment of tracer wire shall be mounted on underside of lid.

## **C Construction**

### **C.1.1 Excavation**

#### **C.1.1.1 General**

**C.1.1.1.1** Unless otherwise specified, install ductile iron pipe, in accordance with AWWA C-600 and "A Guide for the Installation of Ductile Iron Pipe" as published by the Ductile Iron Pipe Research Association.

**C.1.1.1.2** Unless otherwise specified, install polyvinyl chloride pipe in accordance with the "Recommended Construction Practices for PVC Pipe", Handbook of PVC Pipe as published by UNI-Bell PVC Pipe Association.

#### **C.1.1.2 Open Trench**

**C.1.1.2.1** Maximum of 100 feet of trench opened in advance of pipe laying.

**C.1.1.2.2** Maximum of 200 feet of trench left open behind pipe laying.

#### **C.1.1.3 Trench Width**

**C.1.1.3.1** Trench width not to exceed 24 inches more than the outside pipe diameter at the top of the pipe.

**C.1.1.3.2** Trench slope above the pipe as required for safety.

**C.1.1.3.3** Pipe class must be sufficient for the conditions of the trench width and depth required.

#### **C.1.1.4 Trench Shoring**

##### **C.1.1.4.1 General**

**C.1.1.4.1.1** Trench shoring or bracing in order to protect personnel, structures and utilities as well as to maintain the construction limits is encouraged.

### **C.1.2 Trench Shoring or Bracing**

**C.1.2.1** If trench shoring or bracing is required, furnish and install in accordance with the regulations of the Wisconsin Department of Industry, Labor and Human Relations.

**C.1.2.1.1** Prior to placing the sheeting or shoring, submit complete plans, and description of, proposed shoring system.

**C.1.2.1.2** Review of proposed the shoring system only with respect to the basic principles and methods.

**C.1.2.1.3** The engineer assumes no liability for the performance nor safety of the sheeting or shoring system.

### **C.1.3 Trench Box or Shield**

**C.1.3.1** A portable trench box or sliding trench shield may be used.

**C.1.3.2** Used of either device as approved by the Wisconsin Department of Industry, Labor and Human Relations.

**C.1.3.3** Use of the box or shield does not relieve the contractor of liability for damage to persons or property occurring from or on the work of constructing the pipelines or appurtenances occasioned by negligence or otherwise, growing out of a failure on the part of the contractor to leave in place in the trench sufficient sheeting or bracing to prevent the caving or moving of the ground, or disturbance of the completed work or any of the nearby surface or subsurface structures.

**C.1.3.4** The bottom of the box or shield to be 12 to 24 inches above the bottom of the pipeline.

**C.1.3.5.** Take care when the trench box or shield is moved ahead so as not to pull the already jointed pipe apart or to leave voids around the pipe wall.

**C.1.3.6** An acceptable method of rechecking line, depth of pipe and horizontal location of the pipe after the box or shield has been moved ahead is required.

**C.1.3.7** Reset disturbed pipe at the proper line and depth.

**C.1.3.8** The width of the trench shield or box, equal to pipe O.D. plus, 12 inches.

**C.1.3.9** Backfill voids between the trench box or shield and the undisturbed trench wall within the pipe zone (i.e. bottom of trench to top of cover material) with suitable material, immediately after the box or shield is positioned.

### **C.1.3.10 Dewatering**

#### **C.1.3.10.1 Site Conditions**

**C.1.3.10.1.1** Become familiar with site conditions, the subsurface ground conditions and the groundwater conditions.

**C.1.3.10.1.2** The city anticipates that the contractor will perform an independent investigation of the soil and groundwater conditions, prior to bidding, and that the contractor's bid will reflect the cost of dewatering as well as the decrease in the rate of progress of pipe laying associated with such dewatering.

**C.1.3.10.2** Complete all dewatering activities in accordance with Environmental Protection – Dewatering.

#### **C.2.1 Line and Grade**

##### **C.2.1.1 Sewers**

##### **C.2.1.1.1 Laser Beam**

**C.2.1.1.1.1** A Laser Beam-Aligner System, or equal, to maintain grade and alignment is recommended.

**C.2.1.1.1.2** A qualified operator is required handle the equipment during the course of construction.

**C.2.1.1.1.3** When "in the pipe" method is used, check the line and grade of the first 50 feet of pipe out of the manhole and additional points at which offset stakes have been placed.

**C.2.1.1.1.4** If bending of the beams due to air temperature variations becomes apparent with "in the pipe" units, provide a fan to circulate the air.

**C.2.1.1.1.5** Pulsating or vibrating of the beam by the air viscosity is not allowed.

**C.2.1.1.1.6** Verify the beam alignment at least once for every 100 feet of installed pipeline.

**C.2.1.1.1.7** More frequent checks of the beam may be ordered when warranted by job conditions.

#### **C.3.1 Laying of Pipelines**

##### **C.3.1.1 Sewer**

**C.3.1.1.1** Sewers are to be laid true to line and grade with bells upgraded.

**C.3.1.1.2** Lay pipe sections so the sewer will have a smooth and uniform invert.

**C.3.1.1.3** Changes in line or grade will be made only at manholes.

**C.3.1.1.4** Keep pipe so that jointing connectors and compounds will properly fit and adhered.

**C.3.1.1.5** Inspect each pipe for defects before lowering it into the trench. Keep the interior of the pipe sewer free from dirt, cement or superfluous material of every description as the work progresses.

**C.3.1.1.6** Protect the exposed end of the pipe to prevent earth or other substances from entering the pipe when installation is in progress.

**C.3.1.1.7** When pipe installation is not in progress, a watertight plug on the open pipe end is required.

**C.3.1.1.8** Provide watertight plug during the noon hour as well as overnight.

**C.3.1.1.9** The trench is to be dry prior to removal of the plug.

**C.3.1.1.10** Insure the interior of the sewer is free of dirt, cement, etc., when pipe installation is completed.

**C.3.1.1.11** No extra payment will be made for flushing or balling of the sewer if required.

**C.3.1.1.12** Flushing and balling water and debris, removed from the sewer will not cause erosion or flooding and will not endanger public health, property, nor any portion of the work under construction or completed, and dispose of water and debris in a manner that will cause no inconvenience to the City, Engineer or others engaged on work about the sited.

#### **C.4.1 Bedding and Initial Backfilling**

##### **C.4.1.1 General**

**C.4.1.1.1** Add moisture on dry material as necessary, to achieve proper compaction of bedding and/or initial backfill material.

**C.4.1.1.2** Frozen materials will not be used, as bedding or initial backfill. Bedding material will not be placed upon frozen ground.

**C.4.1.1.3** Walking or working on the completed pipeline, except as necessary for tamping of backfilling, is prohibited until the trench has been backfilled to a height of one foot above the top of the pipe.

**C.4.1.1.4** Back filling of the trench is to be carried on simultaneously on both sides of the pipe to eliminate injurious side pressures.

**C.4.1.2 Stable Trench Bottom**

**C.4.1.2.1** Where the bottom of the trench can be maintained in a stable condition, and free of water, during the time required to install the pipe, the pipeline and/or service lateral may be bedded and be initially backfilled as specified in the following sections.

**C.4.1.1.2.1** Grade is defined as the elevation of the invert of the pipe.

**C.4.1.1.2.2** PVC and PE pipe installations: Class "B" Bedding and initial backfilling.

**C.4.1.1.2.3** Class "C" bedding and initial backfilling procedures are required for ductile iron, RCP, CISP, copper and steel pipe installations.

**C.4.2.1 Bedding and Initial Backfill**

**C.4.2.1.1 Class "B" Bedding and Initial Backfill**

**C.4.2.1.1.1 Bedding**

**C.4.2.1.1.2** Over excavate the trench bottom, throughout its length to a depth of at least six (6) inches below the bottom of the pipe, clear of loose soil, and bring back to grade with a cushion of sand, gravel, crushed stone or other approved material.

**C.4.1.2.2** The bedding material as follows:

<b>Sieve Size or Number</b>	<b>Percentage Passing by Weight</b>
¾ Inch	100
No. 40	15 - 35
No. 200	2 - 10

**C.4.1.2.3** Where the existing soil at the pipe invert elevation is of the specified size for bedding material, over-excavation is not required.

**C.4.1.2.4** Excavate the trench so the pipe invert is at grade and a uniform and continuous bearing and support for the pipe is provided on solid undisturbed ground.



**C.4.1.2.5** Compact and shape bedding material to the lower quadrant of the pipe (i.e. haunches), to provide a continuous and uniform bearing and support for the pipe at every point between bell holes.

**C.4.1.2.6** Shape bedding to accommodate pipe bells or couplings.

**C.4.1.2.7** Do not use planking or blocks to support the pipe.

**C.4.1.2.8** Compaction of the bedding material to 90% of the maximum dry density ASTM D 1557 (Modified Proctor).

**C.4.1.2.9** Placed bedding material to the spring line of the pipe and compacted. Percent compaction and density of the material to be determined as previously specified.

**C.4.1.2.10** During the initial stage of placing this material, assure that sufficient bedding material has been worked under the haunch of the pipe to provide adequate side support.

**C.4.1.2.11** Prevent movement of the pipe during the placement and compaction of the material beneath the pipe haunch.

#### **C.4.2 Initial Backfill**

**C.4.2.1.1** After the bedding material has been placed and compacted, place the initial backfill material around and over the pipe. Initial backfill material may be sand, gravel, crushed stone, or other material approved by the engineer.

**C.4.2.2.2** Initial backfill material as follows.

Sieve Size Or Number	Percentage Passing by Weight
1 Inch	100
3/4 Inch	85 - 100
No. 40	15 - 35
No. 200	2 - 10

**C.4.2.1.3** Place the initial backfill material in uniform layers not exceeding six inches in depth after compaction.

**C.4.2.1.4** Place initial backfill material in the trench for its full width on each side of the pipe, fittings and appurtenances simultaneously.

**C.4.2.1.5** Compact each layer prior to placing the next layer.

**C.4.2.1.6** Meet the requirements for compaction and density determination of the compacted material as specified in the Bedding section.

**C.4.2.1.7** It is neither necessary nor desirable to compact the initial backfill directly over the pipe.

**C.4.2.1.8** Compacted the side fill out to the undisturbed trench walls.

**C.4.2.1.9** Place the initial backfill material to a height of 12 inches, after compaction, above the top of the pipe.

**C.4.2.1.10** Compaction up to, but not directly over the pipe.

**C.4.2.1.11** After the initial backfill material has been placed and compacted, backfilling operations may be begun.

#### **C.4.2.2 Materials**

**C.4.2.2.1** When approved by the engineer existing in-place soils, suitable material taken from the excavation, on other excavations and/or clean granular on-site material, may be utilized as bedding and/or initial backfill material.

**C.4.2.2.2** Submit samples of proposed material(s) to be use as bedding and/or initial backfill to the engineer.

#### **C.4.3 Class "C" Bedding and Initial Backfilling**

##### **C.4.3.1 Bedding**

**C.4.3.1.1** The same as Class “B”.

**C.4.3.1.2** Over excavate the trench bottom, to a depth of at least four inches below the bottom of the pipe, clear of loose soil, and brought back to grade with a cushion of sand, gravels, crushed stone or other material approved by the Engineer.

**C.4.3.1.3** Use same Bedding material gradation as Class “B”.

**C.4.3.1.4** Where the existing soil at the pipe invert elevation is of the specified size for bedding material, over-excavation is not required.

**C.4.3.1.5** Excavate the trench such that the pipe invert is at grade and a uniform and continuous bearing and support surface for the pipe is provided on solid undisturbed ground.

**C.4.3.1.6** Compact the bedding material and shaped to the lower quadrant of the pipe (i.e. haunches), so as to provide a continuous and uniform bearing and support surface for the pipe at every point.

**C.4.3.1.7** Take precautions to prevent movement of the pipe during the placement and compaction of material beneath the pipe haunches.

**C.4.3.1.8** Shape the bedding to accommodate pipe bells or couplings.

**C.4.3.1.9** Do not use planking or blocks to support the pipe.

**C.4.3.1.10** Compact the bedding material as specified for Class "B".

#### **C.4.3.2 Initial Backfill**

**C.4.3.2.1** After the bedding material is placed and compacted, place the initial backfill material around and over the pipe. The initial backfill for Class C is the same as Class B except the size of the initial backfill material is less than one inch. The requirements for compaction of "non-plastic soils" (sands and silts with a plastic index less than 4) and the determination of the density of the compacted material are as specified in the Bedding section. The requirement for compaction of "plastic soils", (clays, clayey silts and sands with a plastic index equal to or greater than 4) is a minimum of 95% of the maximum dry density as determined by ASTM D 698 (Standard Proctor)

**C.4.3.2.2** The determination of the density of the compacted material in-place is as specified in the Bedding Section.

**C.4.3.2.3** It is neither necessary nor desirable to compact directly over the pipe and take care to avoid this.

**C.4.3.2.4** Compact the side fills out to the undisturbed trench walls.

**C.4.3.2.5** Place the initial backfill material to a height of 12 inches, after compaction, above the top of the pipe.

**C.4.3.2.6** Compact up to, but not directly over, the pipe.

**C.4.3.2.7** After the initial backfill material has been placed and compacted, backfilling operations may be begun.

#### **C.4.4 Backfilling**

**C.4.4.1** After the pipe has been bedded and initially backfilled, perform mechanical backfilling operations.

**C.4.4.2** Use material taken from the trench excavation as backfill, unless the engineer deems such material unsuitable and orders its disposal.

**C.4.4.3** Carefully deposited, spread and leveled the materials in layers, layers not to exceed 18 inches in loose thickness.

**C.4.4.4** A vibratory compactor will be on the job site, in operating condition, before starting the backfilling operations.

**C.4.4.5** Compact each layer, prior to placing the next layer, utilizing suitable mechanical compacting equipment.

**C.4.4.6** Meet percent compaction of the material in place as follows:

**C.4.4.6.1** Non-plastic soils – 90% of the maximum dry density ASTM 1557 Modified Proctor.

**C.4.4.6.2** Plastic soils – 95% of the maximum dry density – ASTM D698, Standard Proctor.

**C.4.4.6.3** Compact the upper three feet of trenches beneath road pavements or within County Trunk Highway, State Trunk Highway or Federal Highway rights-of-way to 95% of maximum dry density (ASTM D 1557) for non-plastic soils (sands and silts with a plastic index less than 4) and to 100% maximum dry density (ASTM D 698 - Standard Proctor) for plastic soils (clays, clayey silts and sands with a plastic index equal to or greater than 4).

**C.4.4.6.4** Provide density of the compacted material, in-place, in accordance with the latest revision of the Method of Test for Density of Soil-in-Place, ASTM D1556 (sand cone), D2167 (balloon) or D2922 (nuclear density meter).

**C.4.4.6.5** Field density tests shall be conducted in-place contractor shall arrange and pay for soil sampling and testing by a qualified testing agency, acceptable to the department and independent of contractor. Test soil materials for suitability for intended purpose using standard, recognized procedures. Determine mechanical analysis, liquid and plastic limit, and moisture-density curve (ASTM D698) for each type of soil encountered.

**C.4.4.6.6** Perform at least two field density tests in random compacted backfill layers for every 400 linear feet of trench, or fraction thereof, under roadways and walks. Density tests shall be at randomly selected locations and in accordance with ASTM D1556 (sand cone method) or ASTM D2922 (nuclear method). Where field testing indicates that soils are below specified density, provide additional compaction and testing at no additional cost to Department. Attain the required compaction density for each layer before any material for a succeeding layer is placed thereon.

**C.4.4.7** Exclude stones, rocks or cobbles greater than 3 inches in diameter, boulders, bituminous pavement, timber, organic materials, excavated material which is frozen, or any other unsuitable material, from the backfill.

**C.4.4.8** Materials disposal is an incidental cost to the pipeline construction.

**C.4.4.9** In the event excavations have been sheeted or shored, conform the backfill to the requirements hereinbefore set forth. Carefully draw and remove the sheeting and braces in a manner which will not disturb the completed work.

**C.4.4.10** Refill all openings left by pulling sheeting with approved backfill material and properly compacted.

**C.4.4.11** Refill settlement of all backfilled areas until final acceptance of the work and the expiration of the warranty period.

**C.4.4.12** Refill settlement of backfill material under gravel, granite, bituminous, or other surface material, with like surface material.

#### **C.4.5 Installation of Carrier Pipes in Casings**

**C.4.5.1** Carrier pipes installed in casings must be supported in such a way that the beam strength of the pipe will not be exceeded as a result of either loads from the combined weight of pipe and contents completely full or buoyant forces with pipe completely empty.

**C.4.5.2** Provided pipe supports at the crown and bottom.

**C.4.5.3** If two pipelines are installed in a single casing, submit for the engineer's review details of the proposed method of supporting the pipelines.

**C.4.5.4** Where watermains and other pipelines are installed in one casing, install the watermain above the other pipeline.

**C.4.5.5** Fill the casing pipe with sand or pea gravel where indicated on the drawings.

#### **C.4.6 Sewer Laterals and Water Services**

##### **C.4.6.1 General**

**C.4.6.1.1** Install sewer laterals and water services in accordance with Chapter COMM 82 of the Wisconsin Administrative Code (Plumbing Code) and all local plumbing codes and regulations.

**C.4.6.1.2** For water services 2 inches or less in diameter, place sewer lateral and water service in a common trench and install concurrently. Install water service 30 inches horizontally (center to center) from the sewer lateral or closer if the bottom of the water service is 12 inches above the top of the sewer lateral. For water services 2 ½ inches or larger in diameter, maintain a minimum 8 foot horizontal separation between the sewer lateral and water service.

##### **C.4.7. Performance Test**

#### **C.4.7.1 General**

**C.4.7.1.1** No performance testing will be done until the sanitary sewer, storm sewer and service laterals have been installed, backfilled and cleaned.

**C.4.7.1.2** Remove and replace any cracked or defective pipes, fittings or joints discovered as a consequence of the performance testing with sound material, until the results of the performance tests are satisfactory.

**C.4.7.1.3** Performance tests will be made on all sections of the system.

**C.4.7.1.4** Supply all labor and materials necessary to install devices or otherwise prepare for the performance of the tests.

**C.4.7.1.5** Provide leakage tests consisting of an air test and/or an infiltration test as follows:

**C.4.7.1.5.1** Perform air test on all sanitary sewers and service laterals.

**C.4.7.1.5.2** An infiltration test will be performed, in addition to the air test, on all sanitary sewers where groundwater level is above sewer pipe invert.

**C.4.7.1.6** Perform an alignment test on all sewers. Perform a deflection test on all PVC sewers.

**C.4.7.1.7** A section of sanitary sewer acceptable if it satisfactorily passes:

**C.4.7.1.7.1** The deflection test.

**C.4.7.1.7.2** The low pressure air test and infiltration test.

**C.4.7.1.7.3** The alignment test.

#### **C.4.7.2 Deflection Test for PVC Pipe**

**C.4.7.2.1** PVC sewers will be tested for deflection.

**C.4.7.2.2** Devices used consist of rigid ball or mandrel.

**C.4.7.2.3** Any length of pipe which indicates a deflection of more than five percent will be and replaced.

**C.4.7.2.4** Attempts to reshape in place will not be allowed.

**C.4.7.2.5** Perform deflection tests after backfilling is completed but prior to conducting other performance tests.

**C.4.7.2.6** For acceptance, the device must pass through the entire section between manholes in one pass when pulled BY HAND, without the use of excessive force.

**C.4.7.2.7** Maximum deflection of the installed pipe: Five percent of the "base i.d.".

**C.4.7.2.8** "Base I.D." is the minimum pipe I.D. calculated by subtracting the square root of the sum of the squared standard manufacturing tolerances (tolerance package) from the average I.D.

**C.4.7.2.9** Calculate the "Base I.D." by the following formula:

$$\text{Base I.D.} = \text{Avg. I.D.} - (A^2 + 2B^2 + C^2)^{1/2}$$

Where: Avg. I.D. = Avg. O.D. -  $2t - 2(0.06)t$

With: Avg. O.D. = Average outside diameter as per ASTM D3034

t = minimum wall thickness as per ASTM D3034

0.06 = customary wall thickness tolerance of 6%

A = O.D. tolerance average as per ASTM D3034

B = Customary excess wall thickness tolerance of 6% of the minimum wall thickness =  $0.06t$

C = out of roundness tolerance as per ASTM D3034, Table XI.I or other values supplied by the manufacturer and approved by the engineer.

### **C.4.7.3 Low Pressure Air Test**

#### **C.4.7.3.1 General**

**C.4.7.3.1.1** Test all sewers tested using the low pressure air test.

**C.4.7.3.1.2** Furnish the equipment for the low pressure air test, and perform the test under the observation of the engineer.

**C.4.7.3.1.3** Test sewer between adjacent manholes in accordance with Uni-Bell Plastic Pipe Association UNI-B-6-82, "Recommended Practice for Low Pressure Air Testing of Installed Sewer Pipe".

**C.4.7.3.1.4** In all cases, ignore the length of laterals.

#### **C.4.7.3.2 Low Pressure Air Test Procedure**

**C.4.7.3.2.1** Isolate the section of sewer line to be tested by means of inflatable stoppers or other suitable test plugs.

**C.4.7.3.2.2** One of the plugs will have an inlet tap, or other provision for connecting a hose to a portable air control source.

**C.4.7.3.2.3** If the test section is below the groundwater level, determine the height of the groundwater above the spring line of the pipe at each end of the test section and compute the average.

**C.4.7.3.2.4** For every foot of ground water above the pipe spring line, increase the gage test pressures by 0.43 pounds per square inch.

**C.4.7.3.2.5** Connect the air hose to the inlet tap and a portable air control source.

**C.4.7.3.2.6** Provide the air equipment consisting of necessary valves and pressure gages to control the rate at which air flows into the test section and to enable monitoring of the air pressure within the test section.

**C.4.7.3.2.7** Equip the testing apparatus with a pressure relief device to prevent the possibility of loading the test section with the full capacity of the compressor.

**C.4.7.3.2.8** Add air slowly to the test section until the pressure inside the pipe is raised to 4.0 psig greater than the average back pressure of any groundwater that may be over the pipe.

**C.4.7.3.2.9** After a pressure of 4.0 psig is obtained, regulate the air supply so that the pressure is maintained between 3.5 and 4.0 psig (above the average groundwater back pressure) for a period of two minutes. This allows the air temperature to stabilize in equilibrium with the temperature of the pipe walls.

**C.4.7.3.2.10** The pressure will normally drop slightly until temperature equilibrium is obtained.

**C.4.7.3.2.11** Check all plugs during this period with a soap solution to detect any plug leakage.

**C.4.7.3.2.12** Determine the rate of air loss by the time-pressure drop method.

**C.4.7.3.2.13** After the two minute air stabilization period, disconnect the air supply and allow the test pressure to decrease to 3.5 psig (greater than the average groundwater back pressure).



**C.4.7.3.2.14** The time required for the test pressure to drop from 3.5 to 2.5 psig is determined by means of a stopwatch and this time interval is then compared to the required time in the Air Test Time table (see Plan Detail Sheets) to determine if the rate of air loss is within the allowable time limit. If the time is equal to or greater than the times indicated in the table, the pipe line is acceptable.

**C.4.7.3.2.15** The test may be discontinued once the prescribed time has elapsed, even though the 1.0 psig drop has not occurred.

**C.4.7.3.2.16** If the time is less than the times indicated in the table, the sewer as required and retest.

**C.4.7.3.2.17** Upon completion of the test, the bleeder valve is opened and all air is allowed to escape.

**C.4.7.3.2.18** Do not remove plugs until all air pressure in the test section has been released.

**C.4.7.3.2.19** During this time allow no one in the trench or manhole while the pipe is being decompressed.

### **C.4.7.3.3 Infiltration**

**C.4.7.3.3.1.** In areas with existing ground water, conduct an infiltration test. Conduct the infiltration tests using a 60 degree V-notch weir.

**C.4.7.3.3.2** The flow rate of water measured from the sewer section being tested may not exceed a rate of 50 gallons per inch of pipe diameter per mile per day, for the sewer section being tested, ignoring the length of service laterals and manholes.

**C.4.7.3.3.3** Have the manufacturer or independent testing laboratory calibrate the V-notch weir.

### **C.4.7.3.4 Alignment**

**C.4.7.3.4.1** Tests for pipe alignment.

**C.4.7.3.4.2** Look through the pipe, from one manhole, at the light of a large flashlight or spotlight positioned in the next manhole.

**C.4.7.3.4.3** Repair or remove any sewer segment wherein a "3/4 moon" or more is not visible.

### **C.4.7.3.5 Presentation of Test Results**

**C.4.7.3.5.1** At the conclusion of the Performance Tests, furnish the city with a written report of the results of the tests.

**C.4.7.3.5.2** Provide a report identifying the specific type and length of pipe tested, the pressures, the duration of the test, the amount of leakage, etc.

**C.4.7.3.5.3** The report will be signed by the contractor and the engineer or their authorized representatives.

#### **C.4.8 Tracer Wire and Access Box Installation**

**C.4.8.1** Install continuous, unspliced tracer wire over each PVC sewer lateral from wye or tee at sewer main to property line. Ground wire adjacent to wye or tee by securely clamping or welding it to a grounding rod. Then loop wire around collar of wye or tee fitting and attach wire to top of pipe at approximately 10-foot intervals.

**C.4.8.2** Bring each tracer wire to grade at property line in a flush mount tracer wire access box. Attach wire to terminal screw on lid with sufficient slack left in wire length so that lid can be lifted approximately 18 inches from access box with wire intact.

**C.4.8.3** Energize installed tracer wire and verify that lateral can be located with tracing equipment.

#### **E Measurement.**

The department will measure PVC Sanitary Sewer and PVC Sanitary Lateral by the linear foot. Measurement will be made along distances between centerlines of sewer to the terminus of the pipe. The department will measure Tracer Wire Access Box as each individual unit acceptably completed.

#### **F Payment.**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.47	Tracer Wire Access Box	Each
SPV.0090.09	PVC Sanitary Sewer Main, 8-Inch	LF
SPV.0090.14	PVC Sanitary Lateral, 6-Inch	LF

Payment is full compensation for all excavation; dewatering; sheeting and shoring; bedding materials; backfill and supplemental backfill, if required; all test procedures; all pipe and fittings not otherwise specified, including associated tracer wire, grounding rod, testing; and for furnishing all labor, tools, equipment and incidentals necessary to complete the contract work.

## **107. Excavate and Backfill Utility Trench, Item SPV.0090.04.**

### **A Description**

This special provision describes excavating and backfilling trenches for water services all in accordance with the requirements of the plans and specifications. Upon excavation, Wausau Water Works will either discontinue an existing water service at the watermain or extend the water service and install a new water shut off valve as indicated on the plans.

Wausau Water Works will furnish materials required for the water service and perform the work on the water services in the trench excavated by the contractor. Manage operations to permit Wausau Water Works to perform the work in one complete operation. Backfill all trenches immediately after the work on the water service has been completed by Wausau Water Works.

### **B Materials**

Provide granular material in accordance with standard spec 209 unless Wausau Water Works deems the existing material taken from the excavation is suitable.

### **C Construction**

Excavate the water utility trench at locations as shown on the plans and as directed by Wausau Water Works.

Carefully lower all materials into the trench in such a manner as to prevent damage to the materials or their protective coatings.

### **D Measurement**

The department will measure Excavate and Backfill Utility Trench by the linear foot in place measured along the centerline of the pipe.

### **E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.04	Excavate and Backfill Utility Trench	LF

Payment is full compensation for excavation, backfilling, dewatering, sheeting and shoring, bedding material, backfill and supplemental backfill, if required; and for furnishing all labor and equipment necessary to complete the installation in accordance with the plans and specifications.

## **108. Ductile Iron Watermain, 8-Inch; Item SPV.0090.08.**

### **A Description**

This special provision describes excavating required trenches, furnishing, and laying water mains and backfilling trenches, testing, and removing existing watermain where specified in the plans.

## **B Material**

### **B.1 General**

Furnish watermains and forcemains in trenches made of ductile iron with push on and restrained joints. Restrain joints at fittings. Furnish water services made of copper with compression fitting joints.

### **B.2 Ductile Iron (DI) Pipe**

**B.2.1** Provide ductile iron pipe conforming to ANSI A 21.51/AWWA C-151 having a coal tar coat and an internal standard thickness cement lining in accordance to ANSI A 21.4/AWWA C-104.

**B.2.2** Furnish ductile iron pipe with thickness Class 50.

### **B.3 Pipe Joints**

**B.3.1** Provide joints for ductile iron pipe meeting ANSI A 21.11/AWWA C-111, and furnish joints that are push on type with rubber gaskets.

**B.3.2** At fittings, restrain pipeline joints for the following length from fittings:

<b>Restrained Length (feet)</b>			
<b>Pipe Size (In)</b>	<b>45° Bend</b>	<b>90° Bend</b>	<b>Tee Hydrant or Dead End</b>
6	11	20	14
8	19	34	24
10	28	51	36
12	39	73	51

**B.3.3** Provide joints for watermain pipe with a conductivity connector to provide electrical continuity across the joint. Provide a conductivity connector with a rating for 600 amps. Provide a conductivity connector that is a cable connector.

**B.3.4** Provide the assembly of ductile iron rubber gasket joints meeting AWWA C600.

## **C Construction**

Meet the construction specifications as provided in Section C of the specifications for PVC Sanitary Sewer Lateral and as follows.

### **C.1 Performance Tests**

#### **C.1.1 Hydrostatic Pressure Test**

**C.1.1.1** After pipe hydrostatic pressure test will be done.

**C.1.1.2** Necessary equipment include: test plugs, reaction blocking, hoses, pressure gauges, measuring devices, and hand pumps, to perform the work required in connection with the tests.

**C.2** Slowly fill each test section with water, care being taken to expel all air from the pipes.

**C.3** Tap the pipe, if necessary, at high points to vent the air.

**C.4** Maintained at 150 P.S.I. for at least one hour.

**C.5** Tighten leaks found at mechanical joints, until the leaking stops.

**C.5.1** Remove and replace any cracked or defective pipes, fittings, valves or joints discovered as a consequence of the pressure test with sound material, and repeat the test until satisfactory.

#### **C.5.2 Leakage Test**

**C.5.2.1** After the pipe has been subjected to the above pressure test, perform a leakage test as described herein.

**C.5.2.2** If water does not have to be added to the pipeline during the pressure test, to maintain 150 psi, the requirement for the leakage test may be waived.

**C.5.2.2.1** Necessary equipment include: test plugs, reaction blocking, hoses, pressure gauges, measuring devices and hand pumps, to perform the work required in connection with the tests.

**C.5.2.3** The duration of each leakage test is two hours.

**C.5.2.4** The main pressure during the test is 150 P.S.I.

**C.5.2.5** Leakage is defined as the quantity of water to be supplied into the newly laid pipe, or any valved section thereof necessary to maintain the specified test pressure after the pipe has been filled with water and the air expelled.

**C.5.2.6** The engineer will approve. The system of measuring this volume of water prior to commencement of the test.

**C.5.2.7** The maximum leakage in gallons per hour is determined by the following equation:

$$L = \frac{SD \times (P)^{1/2}}{133,200}$$

L = allowable leakage in gallons per hour

S = length of pipeline tested in feet

D = nominal diameter of the pipe in inches

P = test pressure in psig

\*Based on 11.65 gpd per mile of pipe per inch of nominal diameter, at 150 psi.

**C.5.2.7.1** The allowable leakage per 1,000 feet of pipeline is as follows:

Pipe Size (in.)	Allowable Leakage (gph)
4	0.37
6	0.55
8	0.74
10	0.92
12	1.10
14	1.29
18	1.66

**C.5.2.7.2** In case the section under test contains joints of various diameters, the allowable leakage will be the sum of the computed leakage for each size of joint.

**C.5.2.8** Should the test disclose leakage greater than that permitted, locate and repair the defective pipe until the leakage is within the specified allowance.

### **C.5.3** Conductivity Test

**C.5.3.1** Joints on ductile iron pipe are expected to provide electrical continuity between joining sections of pipe and house services connected to those adjoining sections.

**C.5.3.2** Electrical continuity along the length of PVC or P.E. watermain will be provided by the service thawing connections.

**C.5.3.3** A conductivity test will be conducted to verify that continuity exists.

**C.5.3.4** Where continuity is not found to exist steps as may be required to repair any instances.

### **C.5.4** Presentation of Test Results

**C.5.4.1** At the conclusion of the Performance Tests, the city or city's furnish a written report or the results of the tests.

**C.5.4.2** The report will identify the specific type and length of pipe tested, the pressures, the duration of the test, the amount of leakage, etc.

**C.5.4.3** The report will be signed by the contractor.

## **C.6 Disinfection of Complete Watermains**

**C.6.1** AWWA C-651 Standard for Disinfecting Watermains.

**C.6.2** Clean the main prior to disinfection, except when using the tablet method.

**C.6.2** Chlorinate main using one of the following forms of chlorine.

**C.6.2.1** Liquid Chlorine in combination with a solution feed, vacuum operated chlorinator and a booster pump.

**C.6.2.2** Calcium or Sodium Hypochlorite solution injected into the main with a chemical feed pump.

**C.6.2.3** Calcium Hypochlorite tablets, 5 grams each containing approximately 65 percent available chlorine by weight.

**C.6.2.4** Calcium Hypochlorite tablets may not be used on solvent-welded plastic or on screw-joint steel pipe.

## **C.6.3 Methods of Chlorine Application**

### **C.6.3.1 Continuous Feed Method**

**C.6.3.1.1** Flow water from the existing distribution system at a constant, measured rate into the newly-laid pipeline.

**C.6.3.1.2** Feed the chlorine dose at a constant, measured rate.

**C.6.3.1.3** Proportion the two rates to deliver chlorine concentration at a minimum of 25 mg/l available chlorine. Fill the entire main is with chlorine solution.

**C.6.3.1.4** Retain the chlorinated water in the main for at least 24 hours, Operate all valves and hydrants in the section treated to disinfect the appurtenances.

**C.6.3.1.5** At the end of the 24 hour period, a 10 mg/l free chlorine residual throughout the length of the main is required.

**C.6.3.1.6** If the initial disinfection fails to produce a free chlorine residual of 10 mg/l, rechlorinated the main with 25 mg/l available chlorine until a residual of 10 mg/l is obtained.

### **C.6.3.2 Slug Method**

**C.6.3.2.1** Flow water from the existing distribution system at a constant, measured rate into the newly laid pipeline.

**C.6.3.2.2** Feed the chlorine dose at a constant, measured rate.

**C.6.3.2.3** Proportion the two rates so that the chlorine concentration in the water entering the pipeline is maintained at no less than 100 mg/l.

**C.6.3.2.4** Apply the chlorine continuously and for a sufficient period to develop a solid column or "slug" of chlorinated water that will, as it passes along the line, expose all interior surfaces to a chlorine concentration of at least 100 mg/l for at least 3 hours.

**C.6.3.2.5** As the chlorinated water flows past tees and crosses, operate related valves and hydrants to disinfect appurtenances.

### **C.6.3.3 Tablet Method**

**C.6.3.3.1** During construction place, 5 gram calcium hypochlorite tablets in each section of pipe.

**C.6.3.3.2** Place one such tablet in each hydrant, hydrant branch and other appurtenance.

**C.6.3.3.3** The number of 5 gram tablets required for each pipe section to provide a dose of 25 mg/l is  $0.0012 d^2 L$  rounded to the next higher integer, where  $d$  is the inside pipe diameter, in inches, and  $L$  is the length of the pipe section, in feet.

**C.6.3.3.4** The number of tablets required for various pipe diameters is as follows:

Pipe Diameter (in.)	Number of Tablets	
	13 Ft. Pipe Length	20 Ft. Pipe Length
4	1	1
6	1	1
8	1	2
10	2	3
12	3	4
16	4	7

**C.6.3.3.5** Attach the tablets with a food-grade adhesive.

**C.6.3.3.6** Tablet adhesive only on the broadside attached to the surface of the pipe.



**C.6.3.3.7** Attach all the tablets inside and at the top of the main, with approximately equal numbers of tablets at each end of a given pipe length.

**C.6.3.3.8** If the tablets are attached before the pipe section is placed in the trench, their position mark their position on the section so it can be readily determined that the pipe is installed with the tablets at the top.

**C.6.3.3.9** When installation has been completed, fill the main at a velocity no greater than 1 foot per second.

**C.6.3.3.10** Take precautions to eliminate air pockets.

**C.6.3.3.11** Chlorinate pipe for at least 24 hours.

**C.6.3.3.12** If the water temperature is less than 41°F, chlorinate the pipe for at least 48 hours.

**C.6.3.3.13** After the applicable retention period, flush the heavily chlorinated water from the main until chlorine concentration in the water leaving the main is no higher than 1 mg/l.

**C.6.3.3.14** Direct discharge from the watermain to the ground or surface waters may not be allowable. A WPDES (Wisconsin Pollutant Discharge Eliminate System) general permit is required for discharges of chlorinated water out of hydrants or watermains.

**C.6.3.3.15** WPDES general permits are available from the DNR area district wastewater engineer.

**C.6.4** Following a satisfactorily observed chlorine residual and flushing, two successive sets of samples taken at 24 hour intervals, will be tested for bacteriological analysis.

**C.6.4.1** Furnish a sampling tap consisting of a standard corporation cock installed in the main with a copper tube gooseneck assembly.

**C.6.4.2** After sampling remove the gooseneck assembly and retained for future use.

**C.6.4.3** Two bacteriologically safe water samples are to be obtained from each location prior to the main being placed into services.

**C.6.4** After disinfection has been completed open all valves and the facilities be placed in operation.

## **D Measurement**

The department will measure Ductile Iron Watermain (Size) by the linear foot in place measured along the centerline of the pipe, acceptably completed.

**E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.08	Ductile Iron Watermain, 8-Inch	LF

Payment is full compensation for excavation, dewatering, sheeting and shoring, bedding material, backfill and supplemental backfill, if required, all test procedures, all pipe and fittings not otherwise specified, for removal of existing watermain and appurtenances at locations specified in the plan, and staking of new watermain.

**109. Ductile Iron Watermain, 8-Inch, Item SPV.0090.08; Ductile Iron Watermain, 6-Inch, Item SPV.0090.15.****A Description**

This special provision describes excavating required trenches, furnishing, and laying water mains and backfilling trenches, testing, and removing existing watermain where specified in the plans.

**B Material****B.1 General**

Furnish watermains and forcemains in trenches made of ductile iron with push on and restrained joints. Restrain joints at fittings. Furnish water services made of copper with compression fitting joints.

**B.2 Ductile Iron (DI) Pipe**

**B.2.1** Provide ductile iron pipe conforming to ANSI A 21.51/AWWA C-151 having a coal tar coat and an internal standard thickness cement lining in accordance with ANSI A 21.4/AWWA C-104.

**B.2.2** Furnish ductile iron pipe with thickness Class 50.

**B.3 Pipe Joints**

**B.3.1** Provide joints for ductile iron pipe meeting ANSI A 21.11/AWWA C-111, and furnish joints that are push on type with rubber gaskets.

**B.3.2** At fittings, restrain pipeline joints for the following length from fittings:

<b>Restrained Length (feet)</b>			
<b>Pipe Size (In)</b>	<b>45° Bend</b>	<b>90° Bend</b>	<b>Tee Hydrant or Dead End</b>
6	11	20	14
8	19	34	24
10	28	51	36
12	39	73	51

**B.3.3** Provide joints for watermain pipe with a conductivity connector to provide electrical continuity across the joint. Provide a conductivity connector with a rating for 600 amps. Provide a conductivity connector that is a cable connector.

**B.3.4** Provide the assembly of ductile iron rubber gasket joints meeting AWWA C600.

## **C Construction**

Meet the construction specifications as provided in Section C of the specifications for PVC Sanitary Sewer Lateral and as follows.

### **C.1 Performance Tests**

#### **C.1.1 Hydrostatic Pressure Test**

**C.1.1.1** After pipe hydrostatic pressure test will be done.

**C.1.1.2** Necessary equipment include: Test plugs, reaction blocking, hoses, pressure gauges, measuring devices, and hand pumps, to perform the work required in connection with the tests.

**C.2** Slowly fill each test section with water, care being taken to expel all air from the pipes.

**C.3** Tap the pipe, if necessary, at high points to vent the air.

**C.4** Maintained at 150 P.S.I. for at least one hour.

**C.5** Tighten leaks found at mechanical joints, until the leaking stops.

**C.5.1** Remove and replace any cracked or defective pipes, fittings, valves or joints discovered as a consequence of the pressure test with sound material, and repeat the test until satisfactory.

## **C.5.2 Leakage Test**

**C.5.2.1** After the pipe has been subjected to the above pressure test, perform a leakage test as described herein.

**C.5.2.2** If water does not have to be added to the pipeline during the pressure test, to maintain 150 psi, the requirement for the leakage test may be waived.

**C.5.2.2.1** Necessary equipment include: Test plugs, reaction blocking, hoses, pressure gauges, measuring devices and hand pumps, to perform the work required in connection with the tests.

**C.5.2.3** The duration of each leakage test is two hours.

**C.5.2.4** The main pressure during the test is 150 P.S.I.

**C.5.2.5** Leakage is defined as the quantity of water to be supplied into the newly laid pipe, or any valved section thereof necessary to maintain the specified test pressure after the pipe has been filled with water and the air expelled.

**C.5.2.6** The engineer will approve. The system of measuring this volume of water prior to commencement of the test.

**C.5.2.7** The maximum leakage in gallons per hour is determined by the following equation:

$$L = \frac{SD \times (P)^{1/2}}{133,200}$$

L = allowable leakage in gallons per hour

S = length of pipeline tested in feet

D = nominal diameter of the pipe in inches

P = test pressure in psig

\*Based on 11.65 gpd per mile of pipe per inch of nominal diameter, at 150 psi.

**C.5.2.7.1** The allowable leakage per 1,000 feet of pipeline is as follows:

<b>Pipe Size (in.)</b>	<b>Allowable Leakage (gph)</b>
4	0.37
6	0.55
8	0.74
10	0.92
12	1.10
14	1.29
18	1.66

**C.5.2.7.2** In case the section under test contains joints of various diameters, the allowable leakage will be the sum of the computed leakage for each size of joint.

**C.5.2.8** Should the test disclose leakage greater than that permitted, locate and repair the defective pipe until the leakage is within the specified allowance.

### **C.5.3 Conductivity Test**

**C.5.3.1** Joints on ductile iron pipe are expected to provide electrical continuity between joining sections of pipe and house services connected to those adjoining sections.

**C.5.3.2** Electrical continuity along the length of PVC or P.E. watermain will be provided by the service thawing connections.

**C.5.3.3** A conductivity test will be conducted to verify that continuity exists.

**C.5.3.4** Where continuity is not found to exist steps as may be required to repair any instances.

### **C.5.4 Presentation of Test Results**

**C.5.4.1** At the conclusion of the Performance Tests, the City or City's furnish a written report or the results of the tests.

**C.5.4.2** The report will identify the specific type and length of pipe tested, the pressures, the duration of the test, the amount of leakage, etc.

**C.5.4.3** The report will be signed by the contractor.

## **C.6 Disinfection of Complete Watermains**

**C.6.1** AWWA C-651 Standard for Disinfecting Watermains.

**C.6.2** Clean the main prior to disinfection, except when using the tablet method.

**C.6.2** Chlorinate main using one of the following forms of chlorine.

**C.6.2.1** Liquid Chlorine in combination with a solution feed, vacuum operated chlorinator and a booster pump.

**C.6.2.2** Calcium or Sodium Hypochlorite solution injected into the main with a chemical feed pump.

**C.6.2.3** Calcium Hypochlorite tablets, 5 grams each containing approximately 65 percent available chlorine by weight.

**C.6.2.4** Calcium Hypochlorite tablets may not be used on solvent-welded plastic or on screw-joint steel pipe.

### **C.6.3 Methods of Chlorine Application**

#### **C.6.3.1 Continuous Feed Method**

**C.6.3.1.1** Flow water from the existing distribution system at a constant, measured rate into the newly-laid pipeline.

**C.6.3.1.2** Feed the chlorine dose at a constant, measured rate.

**C.6.3.1.3** Proportion the two rates to deliver chlorine concentration at a minimum of 25 mg/l available chlorine. Fill the entire main is with chlorine solution.

**C.6.3.1.4** Retain the chlorinated water in the main for at least 24 hours, Operate all valves and hydrants in the section treated to disinfect the appurtenances.

**C.6.3.1.5** At the end of the 24 hour period, a 10 mg/l free chlorine residual throughout the length of the main is required.

**C.6.3.1.6** If the initial disinfection fails to produce a free chlorine residual of 10 mg/l, rechlorinated the main with 25 mg/l available chlorine until a residual of 10 mg/l is obtained.

#### **C.6.3.2 Slug Method**

**C.6.3.2.1** Flow water from the existing distribution system at a constant, measured rate into the newly laid pipeline.

**C.6.3.2.2** Feed the chlorine dose at a constant, measured rate.

**C.6.3.2.3** Proportion the two rates so that the chlorine concentration in the water entering the pipeline is maintained at no less than 100 mg/l.

**C.6.3.2.4** Apply the chlorine continuously and for a sufficient period to develop a solid column or "slug" or chlorinated water that will, as it passes along the line, expose all interior surfaces to a chlorine concentration of at least 100 mg/l for at least 3 hours.

**C.6.3.2.5** As the chlorinated water flows past tees and crosses, operate related valves and hydrants to disinfect appurtenances.

### **C.6.3.3 Tablet Method**

**C.6.3.3.1** During construction place, 5 gram calcium hypochlorite tablets in each section of pipe.

**C.6.3.3.2** Place one such tablet in each hydrant, hydrant branch and other appurtenance.

**C.6.3.3.3** The number of 5 gram tablets required for each pipe section to provide a dose of 25 mg/l is  $0.0012 d^2 L$  rounded to the next higher integer, where  $d$  is the inside pipe diameter, in inches, and  $L$  is the length of the pipe section, in feet.

**C.6.3.3.4** The number of tablets required for various pipe diameters is as follows:

Pipe Diameter (in.)	Number of Tablets	
	13 Ft. Pipe Length	20 Ft. Pipe Length
4	1	1
6	1	1
8	1	2
10	2	3
12	3	4
16	4	7

**C.6.3.3.5** Attach the tablets with a food-grade adhesive.

**C.6.3.3.6** Tablet adhesive only on the broadside attached to the surface of the pipe.

**C.6.3.3.7** Attach all the tablets inside and at the top of the main, with approximately equal numbers of tablets at each end of a given pipe length.

**C.6.3.3.8** If the tablets are attached before the pipe section is placed in the trench, their position mark their position on the section so it can be readily determined that the pipe is installed with the tablets at the top.

**C.6.3.3.9** When installation has been completed, fill the main at a velocity no greater than 1 foot per second.

**C.6.3.3.10** Take precautions to eliminate air pockets.

**C.6.3.3.11** Chlorinate pipe for at least 24 hours.

**C.6.3.3.12** If the water temperature is less than 41°F, chlorinate the pipe for at least 48 hours.

**C.6.3.3.13** After the applicable retention period, flush the heavily chlorinated water from the main until chlorine concentration in the water leaving the main is no higher than 1 mg/l.

**C.6.3.3.14** Direct discharge from the watermain to the ground or surface waters may not be allowable. A WPDES (Wisconsin Pollutant Discharge Eliminate System) general permit is required for discharges of chlorinated water out of hydrants or watermains.

**C.6.3.3.15** WPDES general permits are available from the DNR area district wastewater engineer.

**C.6.4** Following a satisfactorily observed chlorine residual and flushing, two successive sets of samples taken at 24 hour intervals, will be tested for bacteriological analysis.

**C.6.4.1** Furnish a sampling tap consisting of a standard corporation cock installed in the main with a copper tube gooseneck assembly.

**C.6.4.2** After sampling remove the gooseneck assembly and retained for future use.

**C.6.4.3** Two bacteriologically safe water samples are to be obtained from each location prior to the main being placed into services.

**C.6.4** After disinfection has been completed open all valves and the facilities be placed in operation.

#### **D Measurement**

The department will measure Ductile Iron Watermain (Size) by the linear foot in place measured along the centerline of the pipe.

#### **E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.08	Ductile Iron Watermain, 8-Inch	LF
SPV.0090.15	Ductile Iron Watermain, 6-Inch	LF

Payment is full compensation for excavation, dewatering, sheeting and shoring, bedding material, backfill and supplemental backfill, if required, all test procedures, all pipe and fittings not otherwise specified, for removal of existing watermain and appurtenances at locations specified in the plan, staking of new watermain, and for furnishing all labor, tools, equipment and incidentals necessary to complete the contract work.



**110. Salvage Fence, Item SPV.0090.10.**

**A Description**

This special provision describes salvaging fence and delivering to the County Shop.

**B (Vacant)**

**C Construction**

Remove and salvage the fence in a manner that does not damage the fence. Posts are not required for salvage.

Deliver the salvaged fence to the County Shop located at:

1430 West Street  
Wausau, WI 54401

Contact Kris Baguhn or Dan Raczkowski at (715) 261-1800 one week prior to coordinate delivery.

**D Measurement**

The department will measure Salvage Fence by the linear foot, acceptably completed.

**E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.10	Salvage Fence	LF

Payment is full compensation for salvaging the fence, storing the fence away from construction activities, and delivering the fence to the County shop, and for any required excavation and backfilling.

**111. Research and Locate Existing Property Monuments Project 1170-01-70, Item SPV.0105.01; Research and Locate Existing Property Monuments Project 6999-18-70, Item SPV.0105.02.**

**A Description**

This special provision describes researching and locating existing property monuments located within permanent easement, temporary easement or construction permit areas, within the construction limits, that may be lost or disturbed by construction operations, as directed by the engineer, and as hereinafter provided.

This provision does not relinquish the contractor of his responsibility under standard spec 107.11.

**B (Vacant)**

### **C Construction**

Prior to construction, research, locate and document the adjacent property monuments located within permanent easement, temporary easement and construction permit areas. Tie the located property monuments in with coordinates accurate to 1:3000 and tied to at least two adjacent section corners that will not be disturbed by any project.

Prepare a property monument location map showing the type of monuments originally found with their coordinates. A legible tax map or right-of-way plat is acceptable as a base map for the property monument location map. Provide a copy of the property monument location map to the engineer.

All work under this item is to be performed by, or under the direction of, a land surveyor registered in the State of Wisconsin.

After construction is completed property monument locations will be verified and reset, if necessary, under the item titled "Verify and Replace Existing Property Monuments".

### **D Measurement**

The department will measure Research and Locate Existing Property Monuments 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.0105.01	Research and Locate Existing Property Monuments Project 1170-01-70	LS
SPV.0105.02	Research and Locate Existing Property Monuments Project 6999-18-70	LS

Payment is full compensation for furnishing all research, field survey, locating, and recording of field data necessary to locate and determine coordinates for existing property monuments within the construction limits prior to construction; furnishing a registered land surveyor; and for preparing, annotating and delivering the property monument location map to the engineer.

## **112. Verify and Replace Existing Property Monuments Project 1170-01-70, Item SPV.0105.03; Verify and Replace Existing Property Monuments Project 6999-18-70, Item SPV.0105.04.**

### **A Description**

This special provision describes verifying the location of, and replacing existing property monuments, which were previously located under the item "Research and Locate Existing Property Monuments", that are determined to be lost or disturbed, as directed by the engineer, and as hereinafter provided.

This provision does not relinquish the contractor of his responsibility under standard spec 107.11.

### **B Materials**

Provide replacement property monuments that are one-inch inside diameter by 24-inch long iron pipe or ¾-inch diameter iron rod or rebar that are 24 inches long in locations outside of pavement areas, a Berntsen Steel Nail Marker for placement in asphalt pavement, or a Berntsen BP1 Brass Marker with anchoring plug for placement in concrete pavement.

### **C Construction**

After construction is completed, verify the location of all property monuments previously located under the item “Research and Locate Existing Property Monuments”. Replace or reset as necessary, any property monuments that are lost or disturbed.

Prepare a property monument location map showing the type of monuments originally found, and the type of replacement monument used to replace or reset the lost or disturbed monuments, with their coordinates. A legible tax map or right-of-way plat is acceptable as a base map for the property monument location map. The property monument location map shall explicitly state that the replaced or reset monuments are not being certified as an actual property monument, only that evidence of a property monument was found and reset. Provide a copy of the property monument location map to the engineer and the county surveyor.

All work under this item is to be performed by, or under the direction of, a land surveyor registered in the State of Wisconsin.

### **D Measurement**

The department will measure Verify and Replace Existing Property Monuments 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.0105.03	Verify and Replace Existing Property Monuments Project 1170-01-70	LS
SPV.0105.04	Verify and Replace Existing Property Monuments Project 6999-18-70	LS

Payment is full compensation for furnishing all survey work necessary to verify the location of all property monuments previously located under the item “Research and Locate Existing Property Monuments”; replacing or resetting, as necessary, property monuments that are lost or disturbed from their original location; furnishing property

monuments; furnishing a registered land surveyor; and for preparing, annotating and delivering the property monument location map.

### **113. Railing Tubular Screening Galvanized B-37-436, Item SPV.0105.05.**

#### **A Description**

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

#### **B Materials**

All materials for railing shall be new stock, free from defects impairing strength, durability and appearance. Railing assemblies shall be galvanized and receive a two-coat paint system. Bubbles, blisters and flaking in the coating will be a basis for rejection.

#### **B.1 Coating System**

##### **B.1.1 Galvanizing**

After fabrication, blast clean steel railing assemblies per SSPC-SP6 and galvanize according to ASTM A123. Vent holes shall be drilled in members as required to facilitate galvanizing and drainage. Location and size of vent holes are to be shown on the shop drawings. All burrs at component edges, corners and at holes shall be removed and sharp edges chamfered before galvanizing. Condition any thermal cut edges before blast cleaning by shallow grinding or other cleaning to remove any hardened surface layer. Remove all evident steel defects exposed in accordance to AASHTO M 160 prior to blast cleaning. Lumps, projections, globules, or heavy deposits of galvanizing, which will provide surface conditions that when painted, will produce unacceptable aesthetic and/or visual qualities, will not be permitted.

##### **B.1.2 Two-Coat Paint System**

After galvanizing, paint all exterior surfaces of steel railing assemblies and inside of rail elements at field erection and expansion joints as hereinafter provided. All galvanized surfaces to be painted shall be cleaned per SSPC-SP1 to remove chlorides, sulfates, zinc salts, oil, dirt, organic matter and other contaminants. The cleaned surface shall then be brush blast cleaned per SSPC-SP16 to create a slight angular surface profile per manufacturer's recommendation for adhesion of the tie coat. Blasting shall not fracture the galvanized finish or remove any dry film thickness. After cleaning, apply a tie coat from an approved coating system that is specifically intended to be used on a galvanized surface, per manufacturer's recommendations. The tie coat shall etch the galvanized rail and prepare the surface for the top coat. Apply a top coat per manufacturer's recommendations, matching the specified color shown on the plans. Use a preapproved top coat that is resistant to the effects of the sun and is suitable for a marine environment. The tie and top coats should be of contrasting colors, and come from the same manufacturer.

Ensure that the paint manufacturer reviews the process to be used for surface preparation and application of the paint coating system with the paint applicator. The review shall include a visit to the facility performing the work if requested by the paint manufacturer.

Provide written confirmation, from the paint manufacturer to the engineer, that the review has taken place and that issues raised have been addressed before beginning coating work under the contract.

Use one of the qualified paint manufacturers and products given below. An equivalent system may be used with the written approval of the engineer.

<b>Manufacturer</b>	<b>Coat</b>	<b>Products</b>	<b>Dry Film Minimum Thickness (mils)</b>	<b>Min. Time<sup>1</sup> Between Coats (hours)</b>
<b>Sherwin Williams</b> 1051 Perimeter Drive Suite 710 Schaumburg, IL 60173 (847) 330-1562	Tie	Recoatable Epoxy Primer B67-5 Series / B67V5	2.0 to 4.0	6
	Top	<b>Acrolon 218 HS</b> Polyurethane, B65-650	2.0 to 4.0	NA
<b>Carboline</b> 350 Hanley Industrial St. Louis, MO 63144 (314) 644-1000	Tie	Rustbond Penetrating Sealer FC	1	36
	Tie	Carboguard 60	4.0 to 6.0	10
	Tie	Carboguard 635	4.0 to 6.0	1
	Top	Carbothane 133 LH(satin)	4	NA
<b>Wasser Corporation</b> 4118 B Place NW Suite B Auburn, WA 98001 (253) 850-2967	Tie	MC-Ferrox B 100	3.0 to 5.0	8
	Top	MC-Luster 100	2.0 to 4.0	NA

<sup>1</sup> Time is dependent on temperature and humidity. Contact manufacturer for more specific information.

## **B.2 Shop Drawings**

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

## **C Construction**

### **C.1 Delivery, Storage and Handling**

Deliver material to the site in an undamaged condition. Upon receipt at the job site, all materials shall be thoroughly inspected to ensure that no damage occurred during shipping or handling and conditions of materials is in conformance with these specifications. If coating is damaged, repair or replace railing assemblies to the approval

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

### **C.2 Touch-up and Repair**

For minor damage caused by shipping, handling or installation to coated surfaces, touch-up the surface in conformance with the manufacturer's recommendations. If damage is excessive, the railing assembly shall be replaced at no additional cost to the department. The contractor shall provide the engineer with a copy of the manufacturer's recommended repair procedure and materials before repairing damaged coatings.

### **D Measurement**

The department will measure Railing Tubular Screening Galvanized B-37-436 as a single lump sum unit for each structure where railing is satisfactorily furnished and installed.

### **E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.05	Railing Tubular Screening Galvanized B-37-436	LS

Payment is full compensation for fabricating, galvanizing, painting, transporting, and installing the railing, including any touch-up and repairs.

## **114. Concrete Pavement Joint Layout 1170-01-70, Item SPV.0105.07; Concrete Pavement Joint Layout 6999-18-70, Item SPV.0105.30.**

### **A Description**

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

### **B (Vacant)**

### **C Construction**

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

### **D Measurement**

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

**E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.07	Concrete Pavement Joint Layout 1170-01-70	LS
SPV.0105.30	Concrete Pavement Joint Layout 6999-18-70	LS

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

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

**115. Remove And Reinstall Sign Bridge Cantilevered S-37-64, Item SPV.0105.08.****A Description**

Remove and reinstall an existing cantilevered sign bridge. The removal, cleaning, storage and reinstallation of existing sign bridge shall conform to the requirements of standard spec 638 and 203.3.4. The requirements of erecting sign truss shall conform to standard spec 635.

**B (Vacant)****C Construction**

Take care to not damage the existing structural steel framing that is to be reincorporated into the new structure. Monitor existing sign truss removal and reinstallation closely so that existing structure is not damaged. Repair any damage caused to the existing steel framing during removal and reinstallation of the existing sign truss to the satisfaction of the engineer at no additional cost.

**D Measurement**

The department will measure Remove and Reinstall Sign Bridge Cantilevered S-37-64 as a single lump sum unit of work for removing and reinstalling the sign truss, 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.0105.08	Remove and Reinstall Sign Bridge Cantilevered S-37-64	LS

Payment is full compensation for removing and reinstalling the existing sign truss; storing and protecting all materials from damage; and for repairing damaged units as necessary.

**116. Remove and Salvage Traffic Signals USH 51 NB Ramp and CTH U, Item SPV.0105.09.**

**A Description**

This special provision describes removing and salvaging traffic signals in accordance to the pertinent provisions of standard spec 204 and as hereinafter provided.

**B (Vacant)**

**C Construction**

Inventory the quantity and condition of the traffic signals, lighting equipment, and pull box frames and covers prior to removal. Provide the engineer and the department's North Central Region electrician with a copy of the inventory.

Notify the department's electrician at least three working days prior to the desired starting date for the removal of the traffic signals. The department's electrical unit will arrange for de-energizing the signals with the local electrical utility. The department's electrical unit will verify that the traffic signals have been de-energized and will then notify the engineer.

Remove and salvage the traffic signals and pull box frames and covers, following notification by the engineer to do so, in such a manner that they are not damaged.

If the traffic signal cabinet requires removal, contact the department's electrician at least three working days prior to the desired starting date for the cabinet removal. The department's electrical unit will be responsible for all work to remove the traffic signal cabinet and its internal modules.

Remove the traffic signal standards and poles from their concrete bases. Remove the attached transformer bases, trombone arms, and luminaire arms from the standards or poles. Access hand hole doors and hardware shall remain intact. Remove the pull box frames and covers from the corrugated pipe.

Notify the department's electrician at least three working days prior, to make arrangements for delivering the salvaged traffic signals to the region's electrical shop. No deliveries shall be made on Fridays.

Load, transport and unload the salvaged materials from the construction site to the designated location. Dispose of the underground cable, wires, and conduits properly.



Department's electrical contact information:

Department's electrician: Doug Pilgram, (715) 459-4784

Region's electrical shop: North Central Region Wisconsin Rapids Shop  
2841 Industrial Street  
Wisconsin Rapids, WI 54495

#### **D Measurement**

The department will measure Remove and Salvage Traffic Signals USH 51 NB and CTH U, 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.0105.09	Remove and Salvage Traffic Signals USH 51 NB and CTH U	LS

Payment is full compensation for inventorying; disconnecting the wiring of the traffic signals; removing and disassembling the traffic signals; removing the pull box frames and covers; and for loading, transporting and unloading the salvaged traffic signal materials from the construction site to the designated location.

- 117. Temporary Traffic Signals for Intersection USH 51 NB at CTH U, Item SPV.0105.10; Temporary Traffic Signals for Intersection USH 51 NB at BUS 51, Item SPV.0105.11; Temporary Traffic Signals for Intersection CTH U at Overlook Drive/Westwood Drive, Item SPV.0105.12; Temporary Traffic Signals for Intersection CTH K at Overlook Drive, Item SPV.0105.13; Temporary Traffic Signals for Intersection USH 51 SB at BUS 51, Item SPV.0105.20.**

#### **A Description**

Perform this work in accordance to the requirements of section 661 of the standard specifications, and as shown on the plans or as approved by the engineer, except as hereinafter modified.

#### **B Materials**

Furnish and install the Video Detection System that detects vehicles on a roadway using only video images of vehicle traffic.

#### **C (Vacant)**

#### **D Measurement**

The department will measure Temporary Traffic Signals for Intersections 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.0105.10	Temporary Traffic Signals for Intersection USH 51 NB at CTH U	LS
SPV.0105.11	Temporary Traffic Signals for Intersection USH 51 NB at BUS 51	LS
SPV.0105.12	Temporary Traffic Signals for Intersection CTH U at Overlook Drive/Westwood Drive	LS
SPV.0105.13	Temporary Traffic Signals for Intersection CTH K at Overlook Drive	LS
SPV.0105.20	Temporary Traffic Signals for Intersection USH 51 SB at BUS 51	LS

Payment is full compensation for furnishing all labor, tools, equipment, materials, and incidentals necessary to complete the contract work; and for furnishing, installing, maintaining, and for removal of video detection system.

**118. Removing and Razing Parcel 17, Item SPV.0105.14; Parcel 18, Item SPV.0105.15.****A Description**

This special provision describes removing and razing all buildings located on the parcel, disposing of all material and debris, removing all miscellaneous land improvements, if any, and placing compacted backfill in the exposed basements and openings resulting from the removal of the buildings. Abandon the present sanitary sewer or septic and water systems in accordance to current statutes, ordinances, and regulations.

**B (Vacant)****C Construction**

Remove all buildings, pavement, asphaltic surface, curb, gutter, curb and gutter, lights, utility poles, concrete bases, storm sewer, catch basins, inlets, manholes, concrete sidewalks, and large advertising signs in accordance to the requirements of standard spec 204.

Remove all existing signs Type II and small sign supports in accordance to the requirements of standard spec 638.

Clear and Grub all existing trees and shrubs as directed by the engineer in accordance to the requirements of standard spec 201.

The buildings to be razed and removed and the backfilling of the resulting exposed openings are situated as follows. All parcels listed are referring to right-of-way project number 1170-01-21:

**PARCEL 17**  
**2005 W. Cassidy Drive, Wausau, 54401**

**BUILDINGS TO BE REMOVED:**

<b>Warehouse</b>		<b>Exterior</b>	
# of Stories	1	Foundation	Poured
Age / years	10+/-	Exterior Walls	Metal
Effective Age / years	15+/-	Roof Surface	Metal
Condition	Good	Exterior extra's	
Size (Gross sq ft)	8700	Window Type	Combination
<b>Interior</b>			
Total Rooms	3	Floors	Concrete
Lower Level	N/A	Walls/Ceiling	I-beam const.
Bathrooms	N/A	Trim/Finish	N/A
Plumbing	Yes	Doors	6 overhead
Water Heater	Yes	Electrical Service	Yes
Heating / Cooling	Partially heated	Other	Loading dock
<b>Septic System</b>	N/A	<b>Water</b>	well
<b>Asbestos Report</b>	Can be obtained if needed	<b>Fuel Storage Tanks</b>	None known
Garage			

**ASBESTOS:** Contractor will be responsible for the proper disposal of asbestos material as outlined in the Special Provisions.

**MISCELLANEOUS:**

Item(s) to be removed	Yes/No	Additional Notes
Asphalt and concrete driveway	No	•
Building, Foundations and Concrete sidewalks	Yes	• Concrete Slab
Detached garage/workshop	No	•
Trees/Shrubs	No	•
OTHER	Yes	• Various office and shop items.

**PARCEL 18**  
**2005 W. Cassidy Drive, Wausau, 54401**

**BUILDINGS TO BE REMOVED:**

<b>Office Building</b>		<b>Exterior</b>	
# of Stories	2	Foundation	Poured
Age / years	40+/-	Exterior Walls	Wood
Effective Age / years	25+/-	Roof Surface	Flat
Condition	Good	Exterior extra's	Stone/Stucco
Size (Gross sq ft)	5000+/-	Window Type	combination
<b>Interior</b>			
Total Rooms	20	Floors	mixed
Lower Level	N/A	Walls/Ceiling	Mixed
Bathrooms	4	Trim/Finish	Wood/paneling
Plumbing	Yes	Doors	Yes
Water Heater	Yes	Electrical Service	CB
Heating / Cooling	NGFA/HAVOC	Other	
<b>Septic System</b>	Private	<b>Water</b>	Well
<b>Asbestos Report</b>	Can be obtained if needed	<b>Fuel Storage Tanks</b>	None known
Garage	See below		

**ASBESTOS:** Contractor will be responsible for the proper disposal of asbestos material as outlined in the Special Provisions.

**MISCELLANEOUS:**

Item(s) to be removed	Yes/No	Additional Notes
Asphalt and concrete driveway	Yes	<ul style="list-style-type: none"> <li>Asphalt</li> </ul>
Building, Foundations and Concrete sidewalks	Yes	<ul style="list-style-type: none"> <li>Concrete slab</li> </ul>
Attached garage/workshop	Yes	<ul style="list-style-type: none"> <li>7800 sf. metal walls and roof, I-beam construction, loading dock, concrete slab/floor 4 overhead doors</li> </ul>
Trees/Shrubs	No	<ul style="list-style-type: none"> <li></li> </ul>
OTHER	Yes	<ul style="list-style-type: none"> <li>Various office and shop items.</li> </ul>

Parcel 17 and 18 sites and buildings will be available to walk-through on December 4, 2012 from noon – 3:30 PM. This is not a mandatory meeting. Contact the Wisconsin Department of Transportation, North Central Region, Jessie Prien, 510 N. Hanson Lake Road, Rhinelander, WI 54501, (715) 365-5757 for additional information regarding these parcels, list of other miscellaneous items to be removed, and a list of parties interested in some of the existing structures.

Upon written order by the department representative to commence work, the buildings and surrounding state-owned property shall be under the custody of the contractor. Nothing in this proposal shall be interpreted as setting forth the condition of any building or the 06-76 111 of 119 appurtenances thereto. Except as otherwise provided herein, it is to be understood that the department accepts no responsibility for the protection of buildings and appurtenances against damages sustained either prior to or subsequent to the time of the letting of the work under this contract. Contractor shall take such measures as are necessary to safeguard the public from damages or injury.

While the buildings are in the contractor's custody, keep the buildings in a closed condition. Do not remove doors or windows from the buildings until the actual day of razing, unless all openings are sealed as approved by the engineer. Only the contractor and his subcontractor shall salvage building components. At all times, do not allow the general public in the buildings or on the grounds.

The contractor is allowed to remove the buildings, by relocation, intact to a new site beyond the right-of-way limits.

If the contractor elects to move structure(s) from the parcels, but fails to remove the structure(s) from the premises by the completion date, contractor shall forfeit any and all rights, title and interest in the structure(s), and the structure(s) and any salvageable materials remaining on the premises shall revert to the ownership and control of the Wisconsin Department of Transportation to dispose of as it sees fit; but nothing shall in any way release the contractor from any of the contractor's duties, obligations or liability under the terms and provisions of this contract. Contractor shall not sell, nor in any manner transfer title of the structure(s) to a third party until the structure(s) is removed from the right-of-way limits.

The department has no knowledge regarding the condition of the structure(s) or their related components. The department cannot and does not warrant the condition of the structure(s) or their components, nor does the department warrant, guarantee, or imply the suitability of the structure(s) for moving.

### **C.1 Removing and Razing Operations**

Arrange for public and/or private utility companies to disconnect their services and remove meters. Make arrangements with the local plumbing inspectors to inspect the abandonment of wells and septic systems and/or sewer and water laterals. In accordance to state laws and administrative rules, licensed well driller and pump installer contractor must accomplish all water well abandonment.

In compliance with the ordinances and permit requirements of the municipality in which the buildings are situated and in the presence of the local governing unit, a certified well driller and pump installer shall seal or abandon all sewer and water lines and/or wells.

Until standing walls have been razed, the walls shall be reasonably and safely braced at all times to ensure complete safety during the wrecking operations.

Break, roll, and remove all basement walls, floors, and footings in their entirety from the site.

Dispose of all non-hazardous demolition waste in a landfill licensed or approved in writing by the department of Natural Resources and in accordance to NR500, Wisconsin Administrative Code. Failure to properly dispose of solid waste is a violation of State Solid Waste Statutes and Administrative code and is subject to issuance of a citation under Wisconsin Statute 159.81(3).

Remove all hazardous materials from the site, only after proper notification and compliance with the department requirements of the Wisconsin Department of Natural Resources and local government regulations.

Remove all material from the premises in a safe manner and in compliance with all applicable laws and ordinances. Do not disturb adjacent property.

## **C.2 Backfill**

Prior to any backfill operations, notify the North Central Region office of the Department of Transportation to inspect all exposed areas resulting from the razing and removal operations. Contact the Wisconsin Department of Transportation, North Central Region, Jessie Prien, 510 N. Hanson Lake Road, Rhinelander, WI 54501, (715) 365-5757, for this inspection. Ensure that all exposed basements and openings are free of all refuse and debris.

Backfill exposed basements and openings in accordance to standard spec 204.3.1.2 to the present surrounding ground elevation. Compact backfill in accordance to standard spec 207.3.6.2. Furnish granular backfill meeting the requirements of standard spec 209 o for use as backfill material.

Fill the septic systems with granular material and abandon all wells and/or sanitary sewers, if any, in compliance with all ordinances and permit requirements of the municipality in which the buildings are situated and those of the State of Wisconsin.

## **C.3 Fencing**

After removing the buildings, furnish and erect suitable fencing around the basement, porch openings, and other large open excavations to protect and safeguard the public from all hazardous conditions created by the operations. Install the fencing in such a manner to ensure that the general public is prevented from falling into any openings. The fence shall be a height of 52 inches, and the posts shall be at least 58-inches high and spaced at a distance no greater than ten feet apart. After all open excavations have been backfilled satisfactorily, remove the fencing.

#### **C.4 Environmental Site Assessment**

The successful bidder will be supplied with a copy of the Environmental Site Assessment for each parcel for which an assessment was deemed necessary or for sites on which underground storage tanks were removed. A private consultant will remove any tanks discovered during the Environmental Site Assessment before razing activities begin.

If tanks are discovered on the site during razing that were not removed as part of or in the absence of an Environmental Site Assessment, immediately cease razing operations on the site and contact the department. The department will hire a private consultant to remove the discovered tanks.

#### **C.5 Other Agency Requirements**

Comply with the requirements of the Environmental Protection Agency (EPA) regulations, National Emission Standards for Asbestos, the Occupational, Safety and Health Administration (OSHA) regulations on asbestos removal, all applicable Wisconsin Department of Natural Resources (DNR) regulations, and local government regulations. The most recent editions of all applicable standards, codes, or regulations shall be in effect. Where conflict among the requirements of these specifications occurs, follow the most stringent. In addition, the following requirements apply to this work:

Any person performing asbestos abatement must comply with all training and certification requirements, rules, regulations, and laws of the State of Wisconsin regarding asbestos removal.

Properly notify the Department of Natural Resources and the Department of Health and Social Services at least ten working days prior to starting the project.

Asbestos removal is considered incidental to razing and removing buildings and will not be measured for payment separately.

If required, notify the Eau Claire Regional Office of the Department of Natural Resources (DNR) located at 1300 West Clairemont Avenue, P.O. Box 4001, Eau Claire, WI 54702, Telephone (715) 839-3700, Fax (715) 839-6076 at least ten working days in advance of the contractor's intent to raze or otherwise remove each parcel. In the notice to DNR, include the address and type of building(s) to be razed or removed, the proposed date that each will be razed or removed, and the name of the licensed or approved landfill where the demolition waste will be disposed. Mail a copy of this notification within ten days of DNR notification, to the Wisconsin Department of Transportation, North Central Region, Jessie Prien, 510 N. Hanson Lake Road, Rhinelander, WI 54501, (715) 365-5757.

The contractor's failure to comply with the requirements of this article shall subject the contractor to a penalty of liquidated damages pursuant to standard spec 108.11. The liquidated damages formula will apply for each day in which the provisions of this article are not met.

The well abandonment subcontractor shall prepare and submit to DNR well abandonment reports that are required by law in the manner prescribed herein. Supply a copy of the well abandonment report within 30 days of well abandonment to the Wisconsin Department of Transportation, North Central Region, Jessie Prien, 510 N. Hanson Lake Road, Rhinelander, WI 54501, (715) 365-5757.

#### **D Measurement**

The department will measure Removing and Razing (Parcel) as a single lump sum unit for each individual parcel 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.0105.14	Removing and Razing Parcel 17	LS
SPV.0105.15	Removing and Razing Parcel 18	LS

Payment is full compensation for furnishing all removals; clearing and grubbing; furnishing and placing granular backfill, base aggregate dense, and HMA pavement; furnishing and installing seeding, and fencing; and for properly disposing of materials as required;.

### **119. Crash Cushion Temporary Onsite, Item SPV.0105.16.**

#### **A Description**

This special provision describes supplying a Crash Cushion Temporary Onsite at all time during construction.

#### **B Materials**

Furnish a Crash Cushion Temporary as specified in standard spec 614.2 on the project site at all times that any Crash Cushion Temporary are installed as part of the contract.

#### **C Construction**

The Crash Cushion Temporary Onsite is payment for keeping a Crash Cushion Temporary available on the project site. The location for the storage of the Crash Cushion Temporary Onsite must be approved by the department. If during the construction of the project an installed Crash Cushion Temporary is damaged due to crashes or accidents, the Crash Cushion Temporary Onsite will be used to replace the damaged Crash Cushion Temporary. A new Crash Cushion Temporary Onsite will be required to be on the project site within 24 hours of the completed replacement. At the end of the project the Crash Cushion Temporary Onsite remains the property of the contractor.

#### **D Measurement**

The department will measure Crash Cushion Temporary Onsite as a single complete lump sum unit of work, acceptably completed.



## **E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.16	Crash Cushion Temporary Onsite	LS

Payment is full compensation for furnishing a crash cushion temporary. If the Crash Cushion Temporary Onsite is used due to crashes or accidents not initiated by the contractor, the contractor will be paid for installation under Crash Cushion Temporary item.

## **120. GPS Based Traffic Signal Preemption BUS 51 and College Drive, Item SPV.0105.17; GPS Based Traffic Signal Preemption BUS 51 and Campus Drive, Item SPV.0105.18; GPS Based Traffic Signal Preemption BUS 51 and Randolph Street, Item SPV.0105.19.**

### **A Description**

This special provision describes the furnishing and installing of EVP equipment including GPS radio unit, intersection multimode phase selector, Card Rack, radio receiver antenna, mounting bracket, and radio cable back to the intersection controller cabinet.

All EVP system materials shall be manufactured by Global Traffic Technologies.

### **B Materials**

#### **B.1 System Description**

The required priority control system will employ data-encoded radio communication to identify the presence of designated priority vehicles. A record of system users by agency identification number, vehicle classification and vehicle identification number will be created. In priority vehicle mode, the data-encoded communication will request the traffic signal controller to advance to and/or hold a desired traffic signal display selected from phases normally available.

The priority control system will consist of a matched system of vehicle equipment and intersection equipment. The vehicle equipment includes a radio, processor board, and GPS receiver contained in one unit, a GPS antenna and a radio antenna contained in one module, cable, system software, and a vehicle control unit in a separate module. The intersection equipment includes a radio, radio antenna, GPS receiver, and GPS antenna contained in one module, cable, phase selectors and system software.

This contract requires no vehicle equipment.

The GPS receiver on the vehicle will obtain vehicle location, heading and speed from the U.S. Department of Defense (DoD) operated satellites. The vehicle equipment will also monitor the vehicle's turn signal status. A 2.4 GHz spread spectrum/frequency hopping radio in the vehicle equipment will transmit this data to nearby intersections, only when it

is within radio communication range of an intersection, which is received by a similar radio located at the intersection. The vehicle radio will communicate to intersection radios at distances up to at least 2,500 feet (762 m) with no obstructions. The intersection radios will communicate to vehicles and other intersection radios at distances of up to at least 2,500 feet (762 m) with no obstructions. The phase selector will process the vehicle information to ensure that the vehicle is (1) in a predefined approach corridor, (2) heading toward the intersection, (3) requesting priority, and (4) within user-settable range. If these conditions are met, the phase selector will generate a priority control request to the traffic controller for the approaching priority vehicle. If the approaching vehicle has an active turn signal, the approach intersection will relay the priority request to the next nearest in-range intersection in the direction of the approaching vehicle's turn signal. The output of the phase selector may also be varied depending on the state of the approaching vehicle's turn signal.

The system will require no action from the vehicle operator other than to turn on the vehicle equipment. A remote activation line will be provided so that activation may happen at the same time as the driver activates other equipment such as a lightbar. The system will operate on a first-come, first-served basis. High priority requests will override Low priority requests. The system will interface with most traffic signal controllers and will not compromise normal operation or existing safety provisions.

## **B.2 Matched System Components**

The required priority control system will be comprised of seven basic matched components: vehicle/intersection radio/GPS module, vehicle control module, vehicle/intersection radio/GPS antenna, intersection only radio/GPS module, radio/GPS cable, phase selector and system software. In addition, a card rack, an interface panel with additional outputs and an auxiliary harness will be available if required. To ensure system integrity, operation and compatibility, all components will be from the same manufacturer. The system will offer compatibility with most signal controllers, e.g. NEMA (National Electrical Manufacturers Association), 170 including IR system currently used by WisDOT. The system can be interfaced with most globally available controllers using the controller's preemption inputs. An RS-232 interface shall also be available.

Manufacturer's Warranty for all equipment shall be for three years.

### **Vehicle/Intersection radio/GPS Module.**

Radio/GPS Antenna with factory terminated SMA connectors, and vehicle control unit. The radio/GPS module will obtain the vehicle position, speed and heading information and transmit this information only when within range of a GPS intersection. The vehicle control unit will communicate with the radio/GPS module and provide the interface to the vehicle in order to monitor the vehicle's turn signal status, provide activation and disable inputs as well as regulate the vehicle power provided to the radio/GPS module.

**Intersection Radio/GPS Module.**

The intersection radio/GPS module will transmit a beacon every second and receive the data transmitted by the vehicle equipment and relay this information to the phase selector as well as other system-equipped intersections. It will also obtain position information from the GPS satellites.

**Radio/GPS Cable.**

The radio/GPS cable will carry the data received from the intersection radio/GPS unit to the phase selector. It will also carry the power for the radio and GPS components provided by the phase selector. The same cable will be used to carry the data between the vehicle radio/GPS unit and the vehicle control unit. The cable used to connect the radio/GPS unit to the phase selector shall be a shielded 10 conductor data cable; the use of coax cable is not permitted.

**Phase Selector.**

The phase selector will process the data in order to validate that all parameters required for granting a priority request are met. It will be located within the controller cabinet at the intersection. It will request the controller to provide priority to a valid priority vehicle by connecting its outputs to the traffic controller's preemption inputs.

**System Software.**

The system software will operate Windows™ 7 or XP and Internet Explorer V5.5 or later compliant program. It supports system configuration and gathering of operational information. Use Opticom on-site software.

**Card Rack.**

The card rack will provide simplified installation of a phase selector into controller cabinets that do not already have a suitable card rack. The card rack will provide the +24 VDC required operating the phase selector.

**Auxiliary Interface Panel/Harness.**

The auxiliary panel will provide additional preemption outputs if needed. It will also provide a connection point for the phase selector to monitor the status of the intersection's green lights (green sense). Additional communication ports may also be accessed via this panel.

### **C Construction**

Install the GPS radio antenna and cable back to the signal controller cabinet with no splices. A field site survey will be required to establish which traffic signal pole provides the optimum signal for best system performance. Certified GTT vendor shall perform site survey.

Signal Controller cabinet equipment shall be installed per manufacturers' instructions.

### **D Measurement**

The department will measure GPS Based Traffic Signal Preemption (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.0105.17	GPS Based Traffic Signal Preemption BUS 51 and College Drive	LS
SPV.0105.18	GPS Based Traffic Signal Preemption BUS 51 and Campus Drive	LS
SPV.0105.19	GPS Based Traffic Signal Preemption BUS 51 and Randolph Street	LS

Payment is full compensation for furnishing and installing GPS based traffic signal preemption and priority control system.

## **121. Temporary Sand Bag Dike, Item SPV.0105.21.**

### **A Description**

This work shall consist of the construction of dikes or barriers with sand filled bags and polyethylene sheeting at temporary bypass channels as shown on the plans and as hereinafter provided.

Remove and dispose of the sand bags, sheeting, and all surplus material upon completion of its use under this contract.

### **B Materials**

The bags shall be canvas, burlap, nylon or other approved material. The bags shall contain a minimum of one half cubic foot of sand, be of one size and shape, and be securely closed.

The sand shall conform to the requirements standard spec 501.2.5.3 except that standard spec 501.2.5.3.4 shall be deleted. The maximum size of particle shall pass a No. 4 sieve.

Polyethylene sheeting shall conform to the requirements of standard spec 501.2.9.2.

### **C (Vacant)**

**D Measurement**

The department will measure Temporary Sand Bag Dike by 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.0 105.21	Temporary Sand Bag Dike	LS

Payment is full compensation for furnishing and installing sand filled bags and polyethylene sheeting; for all excavation; for removal and disposal of the sand bags, polyethylene sheeting, and all waste or surplus materials, including eroded materials; for shaping and restoring the area; and for furnishing all labor, tools, equipment and incidentals necessary to complete the work.

Any required topsoiling, fertilizing, seeding or mulching will be paid for under the applicable item.

**122. Water for Seeded Areas, Item SPV.0120.01.****A Description**

This special provision describes furnishing, hauling and applying water to seeded areas as directed by the engineer, and as hereinafter provided.

**B Materials**

Furnish water that is in accordance to the pertinent requirements of standard spec 624.

Use clean water, free of impurities or substances that might injure the seed.

**C Construction**

Water the seeded area in accordance to standard spec 624 except as hereinafter modified.

If rainfall is not sufficient, keep all seeded areas thoroughly moist by watering or sprinkling to maintain a moist soil condition for the first 30 days after seeding. Apply water in a manner to preclude washing or erosion. Do not leave topsoil un-watered for more than 3 days during this 30-day period unless the engineer determines that it is excessively wet and does not require watering. The equivalent of one inch of rainfall per week shall be considered the minimum.

**D Measurement**

The department will measure Water for Seeded Areas by volume in thousand gallon units (MGAL), acceptably completed. The department will determine volume by engineer-approved meters or from tanks of known capacity.

**E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0120.01	Water for Seeded Areas	MGAL

Payment is full compensation for furnishing, hauling, and applying the water.

**123. Weed Barrier, Item SPV.0165.01.****A Description**

This special provision describes furnishing and installing a vegetation barrier over the prepared planting bed at each of the roundabout landscape areas.

**B Materials**

Polyester woven weed control fabric, 3 oz per sq yd minimum.

**C Construction**

Place weed control fabric over smooth planting bed, overlapping edges a minimum of 3" inches Stake fabric, as necessary, to maintain alignment.

**D Measurement**

The department will measure Weed Barrier on each area 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.0165.01	Weed Barrier	SF

Payment is full compensation for the excavation and subgrade preparations; for disposing of surplus material; and for furnishing and installing plant materials.

**124. Rock Mulch 1-Inch Size 3-Inch Deep, Item SPV.0165.02.****A Description**

This special provision describes furnishing and installing rock mulch over a weed control fabric within the roundabout center planting beds

**B Materials**

Rock mulch, fracture Red Granite washed stone 1-inch ( $\frac{3}{4}$ " to 1-1/2" inch)

**C Construction**

Place no less than 3 inches of rock mulch over planting bed within the specified area after performing all necessary backfilling and leveling, unless specified otherwise. Place rock mulch material within 5 days of second watering required under standard spec 632.3.7. Ensure areas receiving rock mulch are free of living weeds before applying rock mulch.

**D Measurement**

The department will measure Rock Mulch 1-Inch Size 3-Inch Deep in each area by the square foot of rock mulch, 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.0165.02	Rock Mulch 1-Inch Size, 3-Inch Deep	SF

Payment is full compensation for the excavation and subgrade preparations; for disposing of surplus material; and for furnishing and installing plant materials.

**125. Rock Mulch 1-Inch Size, 6-Inch Deep, Item SPV.0165.03.****A Description**

This special provision describes furnishing and installing rock mulch over a weed control fabric within the roundabout center planting beds

**B Materials**

Rock mulch, fracture Red Granite washed stone 1-inch ( $\frac{3}{4}$ " to 1-1/2" inch)

**C Construction**

Place no less than 6 inches of rock mulch over planting bed within the specified area after performing all necessary backfilling and leveling, unless specified otherwise. Ensure areas receiving rock mulch are free of living weeds before applying rock mulch.

**D Measurement**

The department will measure Rock Mulch 1-Inch Size, 6-Inch Deep in each area by the square foot of rock mulch, 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.0165.03	Rock Mulch 1-Inch Size, 6-Inch Deep	SF

Payment is full compensation for the excavation and subgrade preparations; for disposing of surplus material; and for furnishing and installing plant materials.

## **126. Preparing Topsoil for Lawn Type Turf, Item SPV.0180.01.**

### **A Description**

This special provision describes preparing the bed of topsoil or salvaged topsoil, for seeding or sodding, in areas designated by the engineer where a lawn type turf is desired.

### **B (Vacant)**

### **C Construction**

Prepare and finish the subgrade so that rocks, concrete debris, or wood larger than three inches in diameter are not present within 1 foot of the finished surface of the topsoil.

Remove or break down all clods and lumps in the topsoil by using harrows or discs, screening, or other appropriate methods to provide a uniformly textured soil, in which 100 percent of the topsoil passes a one-inch sieve and at least 90 percent passes a No. 10 sieve.

Remove rocks, twigs, clods, and other foreign material that will not break down, and dress the entire surface to present a uniform appearance.

Shape the topsoil so that the horizontal or sloped surface between any two points ten feet apart does not vary by more than one inch. Roll with a turf type roller to a uniform minimum compacted depth of 4 inches or as the plans show.

Shape and compact the topsoil adjacent to pavements, sidewalks and curbs to 1 inch below the top of the abutting surface. Before seeding, correct locations that vary by more than 1/4-inch.

### **D Measurement**

The department will measure Preparing Topsoil for Lawn Type Turf 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
SPV.0180.01	Preparing Topsoil for Lawn Type Turf	SY

Payment is full compensation for preparing the subgrade and topsoil bed for sod or seed as described above.



## **127. Insulation 2-Inch, Item SPV.0180.02.**

### **A Description**

This special provision describes furnishing and placing polystyrene insulation board as shown on the plans and as hereinafter provided.

### **B Materials**

Provide polystyrene insulation board that conforms to the requirements for Extruded Insulation Board, AASHTO Designation M230, except as hereinafter revised.

Delete flammability requirement.

### **B.1 Certification**

Before installation, obtain from the manufacturer a certification indicating compliance and furnish it to the engineer.

### **C Construction**

Place the insulation board on leveled and compacted cover material with the long side parallel to the centerline of the pipe to be insulated. Place the insulation board 6 inches above the top of the pipe. Place and spread backfill over the insulation board in such a manner that construction equipment does not operate directly on the insulation.

### **D Measurement**

The department will measure Insulation (size) by area in square yards of work, acceptably completed.

### **E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0180.02	Insulation 2-Inch	SY

Payment is full compensation for furnishing all excavation; and for furnishing and placing the insulation board.

## **128. Wet Detention Pond Liner, Item SPV.0180.04.**

### **A Description**

This special provision describes providing wet detention pond liner as shown on the plans and as hereinafter provided.

Work includes lining wet detention pond base, side slopes, and safety shelf with geosynthetic clay liner (GCL) and cover soil as shown in the plan.

## **B Materials**

### **B.1 Submittals**

- (1) **Product Data:** Submit product data, installation instructions, and general recommendations from GCL manufacturer prior to delivery.
  - Product data shall include information on the geotextile components, type of bentonite, thickness, and physical and mechanical properties.
  - Installation instructions shall include information on constraints due to weather conditions and traffic travel over installed GCL.
  - General recommendations shall include storage, handling, and layout.
- (2) **Manufacturer Certification:** Submit written certification that manufacturer has continuously inspected GCL for presence of foreign objects and found GCL to be free of foreign objects. Submit written certification that bentonite will not shift during transportation or installation.
- (3) **Shipping List:** Submit list of specific rolls to be shipped to project site.
- (4) **Installer Certification:** Submit written certification that clay liner is suitable for placement of GCL.

### **B.2 Quality Assurance**

- (1) Obtain GCL material from a single manufacturer.

### **B.3 Storage and Handling**

- (1) Store and handle products in accordance to manufacturer's recommendations.
- (2) Materials shall be suitably prepared and packaged to prevent moisture damage or deterioration during shipping and storage.
- (3) Store GCL material in location where it is protected from vandalism, vehicular traffic, and construction activities.

### **B.4 Geosynthetic Clay Liner (GCL)**

- (1) GCL shall consist of a layer of sodium bentonite clay encapsulated between two polypropylene geotextile layers, one woven and one non woven. GCL shall be manufactured by mechanically bonding geotextile using a needle punch process.

- (2) GCL material shall have the following properties:

<b>Property</b>	<b>Test Method</b>	<b>Value</b>
Bentonite Unit Area	ASTM D5993	0.75 lb/ft <sup>2</sup>
Thickness	ASTM D1777	0.20 in.
Grab Tensile	ASTM D4632	90 lb
Puncture	ASTM D4833	130 lb
Friction Angle	ASTM D5321	25 deg
Peel Strength	ASTM D4632	15 lb
Water Permeability	ASTM D5084	5 x 10 <sup>-9</sup>
Carrier Geotextile	ASTM D3776	3.1 oz/yd <sup>2</sup>
Cover Geotextile	ASTM D3776	6.0 oz/yd <sup>2</sup>

- (3) Bentonite sealing compound or bentonite granules used to make repairs shall be made of the same natural sodium bentonite as GCL and shall be as recommended by GCL manufacturer.
- (4) GCL shall be manufactured in minimum 12 foot widths without factory seams or joints.
- (5) Each roll delivered to site shall be individually wrapped in a relatively impermeable cover and shall be marked or tagged with the following information: manufacturer's name, product identification, roll number, roll length, and manufacturer's style number.
- (6) GCL shall be Colloid Environmental Technologies/Bentomat ST, National Seal/Bentodix NS, or approved equal.

## **B.5 Cover Soil**

- (1) On-site soil with 100% passing a 1 in. sieve and free of angular stones and foreign matter that would damage GCL.

## **C Construction**

### **C.1 Subgrade Preparation**

- (1) Installer shall certify that subgrade is suitable and acceptable before proceeding with installation of GCL. Subgrade shall be maintained in a smooth, uniform, and compacted condition and free from debris during installation.

### **C.2 GCL Installation**

- (1) Handle and deploy GCL in a manner to ensure it is not damaged during installation. At a minimum, comply with the following:
- Weight GCL with sandbags or equivalent when wind is present.
  - On slopes, anchor GCL securely and deploy it down slope in a controlled manner.
  - Cut GCL with a geotextile cutter or other approved device.
  - Check surface before deployment. Do not entrap stones or trash under GCL.
  - Do not place GCL during periods of heavy rain or in areas of ponded water.

- Replace GCL that is significantly hydrated before placement of overlaying cover soil. GCL shall be considered significantly hydrated when liner is more than 3/4 in. thick or moisture content of bentonite is greater than 40%.
  - Only deploy amount of GCL that can be covered during that day by cover soil.
  - On side slopes, run GCL to bottom of slope as indicated.
- (2) Overlap GCL in accordance to manufacturer's instructions. In general, no horizontal seams shall be allowed on side slopes. For needle-punched GCLs, apply granular bentonite to overlapped area at rate recommended by manufacturer.
  - (3) Excavate GCL liner anchor trenches as shown on Drawings.
  - (4) Repair flaws or damaged areas by placing a patch of the same material extending a minimum of 1-ft beyond flaw or damaged area. Apply bentonite to seam as described in "GCL Installation" article, above.

### **C.3 Cover Soil Installation**

- (1) Place cover soil as shown. No compaction is required beyond that resulting from placing and spreading operation.
- (2) Use placement methods that prevent damage to GCL.

### **C.4 Topsoiling and Seeding**

- (1) Topsoiling and seeding of wet detention pond below normal water elevation is not required.

### **D Measurement**

The department will measure Wet Detention Pond Liner, in area by square yards of work, acceptably completed.

### **E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0180.04	Wet Detention Pond Liner	SY

Payment is full compensation for furnishing all excavation, furnishing, delivering, placing and installing pond liner.

## **129. Topsoil Special, Item SPV.0180.05.**

### **A Description**

Perform this work in accordance to standard spec 625 and as hereinafter provided.

### **B Materials**

Furnish materials in accordance to standard spec 625.2(2).

**C Construction**

Perform work in accordance to standard spec 625.3, except that standard spec 625.3.3 (1) is modified to require a minimum depth of 8-inches, instead of 4-inches.

**D Measurement**

The department will measure Topsoil Special by the square yard, acceptably completed. Measurement of Topsoil Special shall be according to standard spec 625.4.2.

**E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0180.05	Topsoil Special	SY

Payment of Topsoil Special is full compensation according to standard spec 652.5.2.

**130. Clean Roadstone 3-Inch, Item SPV.0195.01.****A Description**

This special provision describes furnishing and placing Clean Roadstone Stone 3-inch for subbase stabilization prior to constructing the roadway foundation.

**B Materials**

Provide clean aggregate without fines graded in accordance to the following gradation requirements:

SIEVE	PERCENT PASSING BY WEIGHT
3-inch	100
1-inch	0-15
3/4-inch	0-5

Soundness and wear requirements do not apply to the material. Washing of the material is not required. Do not place material without the engineer's approval of the stone quality, size, and shape.

**C Construction**

Upon completion of marsh excavation water bearing sandy soils are expected to be observed. Prepare the foundation as specified in standard spec 211. Stabilization of the water bearing sandy soils is to be completed by "walking in" the 3-inch clean roadstone statically (without vibration). Continue this process until the grade has been raised approximately one foot.

**D Measurement**

The department will measure Clean Roadstone 3-Inch by the ton acceptably completed. Provide the department a ticket for each load of the material placed on the project at the location and dimensions specified in the plan or as directed by the engineer.

**E Payment**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0195.01	Clean Roadstone 3-Inch	Ton

Payment is full compensation for preparing the foundation, and providing, placing, and compacting the stone.

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**ADDITIONAL SPECIAL PROVISION 1 (ASP 1)  
FOR TRANSPORTATION ALLIANCE FOR NEW SOLUTIONS (TrANS)  
PROGRAM EMPLOYMENT PLACEMENTS AND APPRENTICESHIPS**

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The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), Section 5204(e) – Surface Transportation Workforce Development Training and Education, provides for 100 percent Federal funding if the core program funds are used for training, education, or workforce development purposes, including “pipeline” activities. The core programs includes: Congestion Mitigation and Air Quality Improvement (CMAQ) Program, Highway Bridge Program (HBP), Interstate Maintenance (IM), National Highway System (NHS), and Surface Transportation Program (STP). These workforce development activities cover surface transportation workers, including OJT/SS programs for women and minorities as authorized in 23 U.S.C. §140(b).

*TrANS* is an employment program originally established in 1995 in Southeastern Wisconsin. Currently TrANS has expanded to include TrANS program locations to serve contractors in Southeast (Milwaukee and surrounding counties), Southcentral (Dane County and surrounding counties including Rock County), and most Northeastern Wisconsin counties from locations in Keshena, Rhinelander and surrounding far Northern areas. TrANS attempts to meet contractor’s needs in other geographic locations as possible. It is an industry driven plan of services to address the outreach, preparation, placement and retention of women, minorities and non-minorities as laborers and apprentices in the highway skilled trades. These candidate preparation and contractor coordination services are provided by community based organizations. For a list of the TrANS Coordinators contact the Disadvantaged Business Enterprise Office at (414) 438-4583 in Milwaukee or (608) 266-6961 in Madison. These services are provided to you at no cost.

### ***I. BASIC CONCEPTS***

Training reimbursements to employing contractors for new placements, rehires or promotions to apprentice of TrANS Program graduates will be made as follows:

- 1) **On-the-Job Training, Item ASP.1T0G, ASP 1 Graduate.** At the rate of \$5.00 per hour on federal aid projects when TrANS graduates are initially hired, or seasonally rehired, as unskilled laborers or the equivalent.

Eligibility and Duration: To the employing contractor, for up to 2000 hours from the point of initial hire as a TrANS program placement.

Contract Goal: To maintain the intent of the Equal Employment Opportunity program, it is a goal that 12 (number) TrANS Graduate(s) be utilized on this contract.

- 2) **On-the-Job Training, Item ASP.1T0A, ASP 1 Apprentice.** At the rate of \$5.00 per hour on federal aid projects at the point when an employee who came out of the TrANS Program is subsequently entered into an apprenticeship contract in an underutilized skilled trade (this will include the Skilled Laborer Apprenticeship when that standard is implemented).

Eligibility and Duration: To the employing contractor, for the length of time the TrANS graduate is in apprentice status.

Contract Goal: To maintain the intent of the Equal Employment Opportunity program, it is a goal that 7 (number) TrANS Apprentice(s) be utilized on this contract.

- 3) The maximum duration of reimbursement is two years as a TrANS graduate plus time in apprentice status.
- 4) If a TrANS program is not available in the contractor's area and another training program is utilized, payment of On-the-Job Training hours may be approved by the Wisconsin Department of Transportation (WisDOT) if the training program meets the established acceptance criteria. Only On-the-Job Training Hours accumulated after WisDOT approval will be reimbursed as specified under Items ASP.1T0G and ASP.1T0A. For more information, contact the Disadvantaged Business Enterprise Office at the phone numbers listed above.
- 5) WisDOT reserves the right to deny payments under items ASP.1T0G and ASP.1T0A if the contractor either fails to provide training or there is evidence of a lack of good faith in meeting the requirements of this training special provision.

## ***I. RATIONALE AND SPECIAL NOTE***

The \$5.00 per hour now being paid for TrANS placements is intended to cover the duration of two years to allow for reaching entry-level laborer status. An additional incentive, the \$5.00 rate, would promote movement into the underutilized skilled trades' apprenticeships and applies until the individual completes their apprenticeship. These incentives benefit TrANS candidates by giving them a better opportunity to enter a skilled trade; benefits contractors who will be assisted in meeting their EEO profiles and goals; and benefits the public who will see the program reinforce larger public-private employment reform in Wisconsin. The pool of TrANS graduates was created for the purpose of addressing underutilization in the skilled trades, an objective that is further reinforced by a parallel retention pilot program, known as the Companywide Reporting. *Whether or not reimbursement is involved, the WisDOT reassures contractors who are in the Companywide Program that TrANS placements still contribute toward fulfilling the new hire goal of 50% women and minorities.* Based on data administered by United States Department of Labor (US DOL), the highway skilled trades remain underutilized for women statewide (less than 6.9%); and for minorities in all counties (% varies by county).

***NOTE:*** *Unless using other advancement strategies, contractors are encouraged to use some or all of this monetary incentive to offset the cut in hourly wages an individual may incur when entering an apprenticeship if the full general laborer hourly rate has been previously paid. No special accounting measures are required.*

## ***II. IMPLEMENTATION***

The implementation of ASP 1 is intended to cover only the amount of time it takes for underutilization to be resolved across the trades. This will be measured annually at the county and/or state levels using data administered by WisDWD in relation to goals set by the USDOL-



OFCCP. With appropriate state and federal approvals, we may also do some measurement at the company level.

It is the contractor's responsibility to note on their Certified Payrolls if their employee is a TrANS graduate or a TrANS apprentice. The District EEO Coordinators utilize the information on the Certified Payrolls to track the hours accumulated by TrANS Graduates and TrANS apprentices on WisDOT contracts. Payment under this ASP 1 is made based on the hours recorded off of the Certified Payrolls. Tracking may eventually include improved linkages with the WisDWD apprentice database, information from company and committee level sources.

TrANS is nondiscriminatory by regulation, and is a tool for optional use by contractors to address the underutilization of women and minorities as laborers and apprentices in our industry's skilled trades.

#### **IV. TRANS TRAINING**

As part of the contractor's equal employment opportunity affirmative action program, training shall be provided to employees enrolled in apprenticeship and on-the-job training programs as follows:

The contractor shall provide on-the-job training aimed at developing full journey workers in the type of trade or job classifications involved. In the event the contractor subcontracts a portion of the contract work, the contractor shall determine how many, if any, of the trainees are to be trained by the subcontractor provided, however, that the contractor shall retain the primary responsibility for meeting the training requirements imposed by this special provision. The contractor shall also insure that this training special provision is made applicable to such subcontract.

Training and upgrading of minorities and women toward journey workers status is a primary objective of this training special provision. Accordingly, the contractor shall make every effort to enroll minority trainees and women (e.g., by conducting systematic and direct recruitment through public and private sources likely to yield minority trainees and women trainees); to the extent such persons are available within a reasonable area of recruitment. The contractor will be given an opportunity and will be responsible for demonstrating the steps that they have taken in pursuance thereof, prior to determination as to whether the contractor is in compliance with this training special provision. This training commitment is not intended, and shall not be used, to discriminate against any applicant for training, whether a member of a minority group or not.

No employee shall be employed as a trainee in any classification in which they have successfully completed a training course leading to journey workers status or in which they have been employed as a journey worker. The contractor should satisfy this requirement by including appropriate questions in the employee application or by other suitable means. Regardless of the method used, the contractor's records should document the findings in each case.

#### **V. APPRENTICESHIP TRAINING**

The Federal Highway Administration's (FHWA) policy is to require full use of all available training and skill improvement opportunities to assure increased participation of minority groups, disadvantaged persons and women in all phases of the highway construction industry. The FHWA On-the-Job Training (OJT) Program requires the State transportation agencies (STAs) to establish apprenticeships and training programs targeted to move women, minorities, and disadvantaged individuals into journey-level positions to ensure that a competent workforce is available to meet highway construction hiring needs, and to address the historical underrepresentation of members of these groups in highway construction skilled crafts.

The OJT Supportive Services (OJT/SS) Program was established in Title 23 Code of Federal Regulations (CFR), Part 230) to supplement the OJT program and support STA training programs by providing services to highway construction contractors and assistance to highway construction apprentices and trainees. The primary objectives of OJT/SS are:

- (1) To increase the overall effectiveness of the State highway agencies' approved training programs.
- (2) To seek other ways to increase the training opportunities for women, minorities, and disadvantaged individuals.

The STAs are responsible for establishing procedures, subject to the availability of Surface Transportation and Bridge Funds under 23 U.S.C. §140(b) (Nondiscrimination), for the provision of supportive services with respect to training programs approved under 23 CFR, Part 230(a) (Equal Employment Opportunity on Federal and Federal-aid Construction Contracts – including Supportive Services).

The contractor and subcontractor shall maintain records to demonstrate compliance with these apprenticeship requirements. Reasonable exemptions and modifications to and from any or all of these requirements will be determined by the Wisconsin Department of Transportation-Civil Rights Office. A request for an exemption or modification, with justification, shall be made in writing, addressed to WisDOT Civil Rights Office, 4802 Sheboygan Avenue, P.O. Box 7965, Rm. 451, Madison, WI 53707.

### ADDITIONAL SPECIAL PROVISION 3

Disadvantaged Business Enterprise Development. This item shall consist of concerted efforts by the contractor as part of its affirmative action responsibilities to train and develop minority business enterprises to become fully qualified contractors in the transportation construction field. Hereafter, minority business enterprise refers to businesses owned or controlled by socially and economically disadvantaged person(s) as certified by the Wisconsin Department of Transportation. It is the intention of this provision that firms owned and controlled by women be included as a presumptive group within the definition of Disadvantaged Business Enterprise (DBE).

The contractor will aggressively solicit DBE subcontractor and/or supplier quotes and incorporate them in its bid for work on this project by making systematic written and verbal contact with DBEs likely to have an interest in transportation construction work.

In this contract, the contractor shall procure services, materials, or subcontract the minimum percentage as shown on the cover of the Highway Work Proposal of the total amount bid to one or more certified DBEs. The Department maintains and furnishes the list of DBEs considered certified. If the proposed DBE is uncertified, the contractor must appeal to the Department to establish the eligibility of the DBE to become certified. This goal may be accomplished through the use of any combination of ethnic or women owned businesses certified as DBEs by the Department.

It is the intent of this specification that the percentage goal specified be fulfilled as indicated. However, if the contractor considers such fulfillment to be impossible of attainment, and if the contractor can demonstrate to the satisfaction of the Department that such utilization is not feasible, the Department may accept a varying percentage in lieu of the designated percentage for the DBE classification.

The contractor is encouraged to develop DBEs in areas of construction where these firms have traditionally been non-competitive. Therefore, the DBE goal on this contract may be reduced by the Department up to 50 percent for DBE work in the non-traditional construction categories of: concrete paving, asphalt paving, excavating and heavy grading, aggregate production, structures and major culvert installation. Any goal reduction is discretionary by the Department and will only be granted where it is clear the intended work will benefit the development and experience of the DBE.

Credit toward the required DBE goal is allowed for supplies and materials furnished by DBEs. However, the DBEs must assume the actual contractual responsibilities for furnishing the supplies and materials and also manufacture them. For these purposes, a manufacturer is a supplier that either produces goods from raw materials or substantially alters them before resale. When the supplier is not the manufacturer, only 60 percent of the expenditure to the supplier may be credited toward the DBE goal, provided the supplier performs a commercially useful function in the transaction.

Nevertheless, in order for the Department to execute a contract with a bidder that has failed to meet the specified DBE contract goal, the Department must determine that the bidder's good faith efforts were those that, given all relevant circumstances, a bidder activity and aggressively seeking to meet the goal would make.

Good faith efforts are to include contacts with the Department's Office of Disadvantaged Business Programs. In determining whether a contractor has made good faith efforts, the Department will usually look not only at the different kinds of efforts that the bidder has made, but also the quantity and intensity of those efforts. Efforts that are merely pro forma are not good faith efforts to meet the goal. Even if the efforts are sincerely motivated, they are not considered to be good faith efforts if, given all relevant circumstances, they could not

reasonably be expected to produce a level of DBE participation sufficient to meet the goal.

Within ten working 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 subcontract or supply agreement and the dollar amount of such items of work. Failure by the contractor to furnish the necessary information within the specified time frame does not negate the Department's right to award and execute the contract; however, good faith efforts after the submittal requirement will be discounted. Delay in fulfilling this requirement shall not constitute a cause for extension of the contract time. All other aspects of this minority business enterprise requirement shall be in accordance with appropriate provisions of Part 26 of Volume 49 of the Code of Federal Regulations entitled "Participation by Minority Business Enterprises in Department of Transportation Programs."

The contractor shall also provide or arrange for direct assistance to the DBEs in such areas as providing information to prepare intelligent quotations, insuring that the DBE can read and understand highway plans, assisting in reaching a full understanding of the Standard Specifications and contract requirements applicable to the DBE portion of the work, appropriate cost accounting and other business practices, and other actions aimed at continued development of the DBE into a viable highway contracting business.

The contractor shall maintain records and may be required to furnish periodic reports documenting its performance under this item.

The work herein prescribed will not be paid for separately, but will be considered incidental to other items of work included in the contract.

Failure on the part of the bidder to meet the DBE goal and to meet an adequate level of good faith efforts will, at the discretion of the Department, be deemed failure to execute the contract, be just cause of the cancellation of the award, and such other actions as deemed appropriate.

The entire provisions of this item do not apply if the bidder, excluding joint ventures, is a certified DBE.

**ADDITIONAL SPECIAL PROVISION 4**

Payment to all Subcontractors. Within 10 calendar days of receipt by a contractor of a progress payment for work performed, materials furnished, or materials stockpiled by a subcontractor, the contractor shall pay that subcontractor for all work satisfactorily performed and for all materials furnished or stockpiled.

The contractor agrees further to release retainage amounts to each subcontractor within 10 calendar days after the subcontractor's work is satisfactorily completed. In addition, whenever the Department reduces the contract retainage amount, within 10 calendar days of receipt by a contractor of a retainage payment, the contractor must reduce the total amount retained from subcontractors to no more than remains retained by the Department.

The contractor shall pay the subcontractor within the time frames described above unless the contractor complies with both of the following within 10 calendar days of receiving the Department's progress payment:

- 1) The contractor notifies the subcontractor in writing that the work is not satisfactorily completed.
- 2) The contractor requests approval from the Department to delay payment because the subcontractor has not satisfactorily completed the work.

The contractor's request for approval should include the written notification to the subcontractor and shall provide sufficient documentation of good cause to assist the engineer in making a timely decision. If the engineer does not grant approval, the contractor shall pay the subcontractor within 10 calendar days of the Department's decision.

All subcontracting agreements made by a contractor shall include the above provisions and shall be binding on all contractors and subcontractors.

The contractor certifies compliance with the requirements of this Additional Special Provision by signing the contract. This clause applies to both DBE and non-DBE subcontractors.



**ADDITIONAL SPECIAL PROVISIONS 5****Fuel Cost Adjustment****A Description**

Fuel Cost Adjustments will be applied to partial and final payments for work items categorized in Section B as a payment to the contractor or a credit to the department. ASP-5 shall not apply to any force account work.

**B Categories of Work Items**

The following items and Fuel Usage Factors shall be used to determine Fuel Cost Adjustments:

(1) Earthwork.		Unit	Gal. Fuel Per Unit
205.0100	Excavation Common	CY	0.23
205.0200	Excavation Rock	CY	0.39
205.0400	Excavation Marsh	CY	0.29
208.0100	Borrow	CY	0.23
208.1100	Select Borrow	CY	0.23
209.0100	Backfill Granular	CY	0.23
350.0102	Subbase	CY	0.28
350.0104	Subbase	Ton	0.14
350.0115	Subbase 6-Inch	SY	0.05
350.0120	Subbase 7-Inch	SY	0.05
350.0125	Subbase 8-Inch	SY	0.06
350.0130	Subbase 9-Inch	SY	0.07
350.0135	Subbase 10-Inch	SY	0.08
350.0140	Subbase 11-Inch	SY	0.09
350.0145	Subbase 12-Inch	SY	0.09

**C Fuel Index**

A Current Fuel Index (CFI) in dollars per gallon will be established by the Department of Transportation for each month. The CFI will be the price of No. 2 fuel oil, as reported in U.S. Oil Week, using the first issue dated that month. The CFI will be the average of prices quoted for Green Bay, Madison, Milwaukee and Minneapolis.

The base Fuel Index (BFI) for this contract is \$2.90 per gallon.

#### **D Computing the Fuel Cost Adjustment**

The engineer will compute the ratio CFI/BFI each month. If the ratio falls between 0.85 and 1.15, inclusive, no fuel adjustment will be made for that month. If the ratio is less than 0.85 a credit to the department will be computed. If the ratio is greater than 1.15 additional payment to the contractor will be computed. Credit or additional payment will be computed as follows:

- (1) The engineer will estimate the quantity of work done in that month under each of the contract items categorized in Section B.
- (2) The engineer will compute the gallons of fuel used in that month for each of the contract items categorized in Section B by applying the unit fuel usage factors shown in Section B.
- (3) The engineer will summarize the total gallons (Q) of fuel used in that month for the items categorized in Section B.
- (4) The engineer will determine the Fuel Cost Adjustment credit or payment from the following formula:

$$FA = \left( \frac{CFI}{BFI} - 1 \right) \times Q \times BFI$$

(plus is payment to contractor; minus is credit to the department)

Where	FA	=	Fuel Cost Adjustment (plus or minus)
	CFI	=	Current Fuel Index
	BFI	=	Base Fuel Index
	Q	=	Monthly total gallons of fuel

#### **E Payment**

A Fuel Cost Adjustment credit to the department will be deducted as a dollar amount each month from any sums due to the contractor. A Fuel Cost Adjustment payment to the contractor will be made as a dollar amount each month.

Upon completion of the work under the contract, any difference between the estimated quantities and the final quantities will be determined. An average CFI, calculated by averaging the CFI for all months that fuel cost adjustment was applied, will be applied to the quantity differences. The average CFI shall be applied in accordance with the procedure set forth in Section D.



## ADDITIONAL SPECIAL PROVISION 6 MODIFICATIONS TO THE STANDARD SPECIFICATIONS

*Make the following revisions to the 2013 edition of the standard specifications:*

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### 106.3.4.3.1 General

*Replace paragraph two with the following effective with the November 2012 letting:*

- (2) Required sampling and testing methodologies and documentation are specified in CMM chapter 8.
  - (3) If disputed, approval of materials and components, as well as acceptance of the work incorporating those materials or components, is subject to review under the QMP dispute resolution process.
- 

### 107.17.3 Railroad Insurance Requirements

*Replace the entire text with the following effective with the August 2012 letting:*

- (1) If required by the special provisions, provide or arrange for a subcontractor to provide railroad protective liability insurance in addition to the types and limits of insurance required in 107.26. Keep railroad protective liability insurance coverage in force until completing all work, under or incidental to the contract, on the railroad right of way or premises of the railroad and until the department has accepted the work as specified in 105.11.2.4.
- (2) Provide railroad protective liability insurance coverage written as specified in 23 CFR part 646 subpart A. Provide a separate policy for each railroad owning tracks on the project. Ensure that the railroad protective liability insurance policies provide the following minimum limits of coverage:
  - 1. Coverage A, bodily injury liability and property damage liability; \$2 million per occurrence.
  - 2. Coverage B, physical damage to property liability; \$2 million per occurrence.
  - 3. An annual aggregate amount of \$6 million that shall apply separately to each policy renewal or extension.
- (3) Obtain coverage from insurance companies licensed to do business in Wisconsin that have an A.M. Best rating of A- or better. The cost of providing the required insurance coverage and limits is incidental to the contract. The department will make no additional or special payment for providing insurance.
- (4) Submit the following to each railroad owning tracks on the project as evidence of that railroad's respective coverage:
  - 1. A certificate of insurance for the types and limits of insurance specified in 107.26.
  - 2. The railroad protective liability insurance policy or other acceptable documentation to the railroad company.
- (5) Submit the following to the region as evidence of the required coverage:
  - 1. A copy of the letter to the railroad company transmitting the submittal documents specified in 107.17.3(4).
  - 2. A certificate of insurance for the required railroad protective liability coverages.
- (6) Do not begin work on the right of way or premises of the railroad company until the region receives the submittals specified in 107.17.3(5) and notification from the railroad company that the contractor has provided sufficient insurance information to begin work.
- (7) Notify the railroad and the region immediately upon cancellation or initiating cancellation, whichever is earlier, or any material change in coverage. Cease operations within 50 feet of the railroad right of way immediately if insurance is cancelled or reduced. Do not resume operations until the required coverage is in force.



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**460.2.8.3.1.4 Department Verification Testing Requirements**

*Replace paragraph four with the following effective with the December 2012 letting:*

- (4) The department will randomly test each design mixture at the following minimum frequency:
- FOR TONNAGES TOTALING:
- Less than 501 tons ..... no tests required
- From 501 to 5,000 tons..... one test
- More than 5,000 tons..... add one test for each additional 5,000-ton increment
- 

**506.3.22 Shop Inspection**

*Replace paragraph one with the following effective with the July 2010 letting:*

- (1) The engineer or an independent inspection agency under department contract may inspect all structural steel and miscellaneous metals furnished. The department will provide the contractor with monthly consultant inspection invoices and identify any quality deficiencies at the fabrication facility.
- 

**506.5 Payment**

*Add paragraph nine as follows effective with the June 2010 letting:*

- (9) The department will limit costs for inspections conducted under 506.3.2 to \$0.05 per pound of material and deduct costs in excess of that amount from payment due the contractor. The department will determine costs for in-house inspections based on hourly rates for department staff plus overhead and use invoiced costs for contracted-out inspections. The department will administer deductions for the contractor's share of the total inspection cost under the Excess Costs For Fabrication Shop Inspection administrative item.
- 

**507.2.2.1 General**

*Replace paragraph four with the following effective with the December 2012 letting:*

- (4) Ensure that there are no unsound knots or knot holes. Also ensure that there are no tight knots of a diameter exceeding one-quarter of the greater dimension at the point where they occur. Measure a knot by taking its diameter at right angles to the length of the timber. Ensure that the sum of sizes of all knots in any one-foot length does not exceed 2 times the size of the largest allowed single knot. The engineer will treat cluster knots as if they were a single knot. A cluster knot is 2 or more knots grouped together, with the fibers of the wood deflected around the entire unit.
- 

**512.3.1 Driving and Cutting Off**

*Replace the entire text with the following effective with the December 2012 letting:*

**512.3.1.1 General**

- (1) Coordinate driving operations to prevent damage or displacement of concrete in substructure units or damage to adjacent facilities due to vibrations.
- (2) Drive sheeting with a variation of 1/4 inch or less per foot from the vertical or from the batter the plans show. Ensure that the sheetpiles are within 6 inches of the plan position after driving. Do not damage sheetpiles attempting to correct for misalignment.
- (3) Remove and replace, or otherwise correct, sheetpiles the engineer deems unacceptable under 105.3. Submit details of planned corrections to the engineer for review and approval before initiating any corrective actions.
- (4) Drive sheetpiles to or beyond the required tip elevation the plans show.

**512.3.1.2 Driving System**

- (1) Furnish a sheetpile driving system capable of driving the sheetpiles to the required minimum tip elevation the plans show.

- (2) The engineer may order the contractor to remove a pile driving system component from service if it causes insufficient energy transfer or damages the sheetpiles. Do not return a component to service until the engineer determines that it has been satisfactorily repaired or adjusted.
- (3) Drive sheetpiles with diesel, air, steam, gravity, hydraulic, or vibratory hammers.

### 512.3.1.3 Cut-Offs

- (1) Cut off sheetpiles at the elevations the plans show or as the engineer directs. Pile cut-offs become the property of the contractor. Dispose of cut-offs not incorporated into the work.

## 614.2.5 Wood Posts and Offset Blocks

*Retitle and replace the entire text with the following effective with the July 2012 letting:*

### 614.2.5 Posts and Offset Blocks

#### 614.2.5.1 Wood Posts and Offset Blocks

- (1) Furnish sawed posts and offset blocks of one of the following species:
- |             |                 |                |           |            |
|-------------|-----------------|----------------|-----------|------------|
| Douglas fir | Southern pine   | Ponderosa pine | Jack pine | White pine |
| Red pine    | Western hemlock | Western larch  | Hem-fir   | Oak        |
- (2) Ensure that posts are the size the plans show and conform to the nominal and minimum dimensions tabulated in 507.2.2.3. The contractor does not have to surface the posts. Provide posts of the net length the plans show after setting and cut off.
- (3) Use stress graded posts rated at 1200 psi  $f_b$  or higher. Determine the stress grade rating for douglas fir, western larch, and southern pine as specified in 507.2.2.4.
- (4) For hem-fir, hemlock, red pine, white pine, jack pine, ponderosa pine, and oak conform to the following:

**TABLE 614-1 PROPERTIES FOR WOOD POSTS AND BLOCKS**

SPECIES			WESTERN HEMLOCK, HEM-FIR, RED PINE, WHITE PINE, JACK PINE, PONDEROSA PINE		OAK	
MAXIMUM SLOPE OF GRAIN			1 in 15		1 in 12	
NOMINAL WIDTH OF FACE			6"	8"	6"	8"
SHAKES, CHECKS, AND SPLITS	GREEN		1"	1 3/8"	2 3/8"	3 1/8"
	SEASONED		1 1/2"	2"	2 5/8"	3 1/2"
MAXIMUM WANE			1"	1 3/8"	1 1/8"	1 5/8"
MAXIMUM ALLOWABLE KNOTS	NARROW FACE	MIDDLE 1/3 OF LENGTH	1 3/8"	1 5/8"	2 1/8"	2 3/8"
		END <sup>[1]</sup>	2 3/4"	3 1/4"	4 1/4"	4 3/4"
		SUM IN MIDDLE 1/2 OF LENGTH <sup>[2]</sup>	11"	13"	17"	19
	WIDE FACE	EDGE KNOT N MIDDLE 1/3 OF LENGTH	1 3/8"	1 5/8"		
		EDGE KNOT AT END <sup>[1]</sup>	2 3/4" 7	3 1/4"		
		CENTERLINE	1 3/8"	1 7/8"	2 1/4"	2 7/8"
		SUM IN MIDDLE 1/2 OF LENGTH	5 1/2"	7 1/2"	9"	11 1/2"

<sup>[1]</sup> But do not exceed the maximum allowable knot on the centerline of the wide face of the same piece.

<sup>[2]</sup> But do not exceed 4 times the maximum allowable knot on the centerline of the wide face of the same piece.

- (5) Pressure treat posts and offset blocks as specified in 507.2.2.6. Use one of the oil-soluble preservatives or chromated copper arsenate conforming to 507.2.3. Use the same material for offset blocks and posts and treat material used in each continuous installation with the same type of preservative.

#### **614.2.5.2 Steel Posts**

- (1) Furnish steel posts conforming to AASHTO M270 Grade 36 and galvanized according to AASTHO M111.

#### **614.2.5.3 Plastic Offset Blocks**

- (1) Furnish plastic offset blocks from the department's approved products list.

### **614.3.1 General**

Replace the entire text with the following effective with the July 2012 letting:

- (1) Paint the ends of cut-off galvanized posts, rail, bolts, cut or drilled surfaces of galvanized components, and areas of damaged zinc coating with 2 coats of zinc dust/zinc oxide paint. Clean the damaged and adjacent areas thoroughly before applying paint.
- (2) Apply 2 coats of wood preservative to cut surfaces of wood components. Use the same preservative originally used to treat that component or use a 2-percent solution of copper naphthenate conforming to AWWA Standard P8 or P36.

### **614.3.2.1 Installing Posts**

Replace paragraph four with the following effective with the July 2012 letting:

- (4) Cut post tops to the finished elevation the plans show.

### **628.2.13 Rock Bags**

Replace paragraph one with the following effective with the November 2012 letting:

- (1) Furnish rock bags made of a porous, ultraviolet resistant, high-density polyethylene or geotextile fabric that will retain 70% of its original strength after 500 hours of exposure according to ASTM D4355 and a minimum in-place filled size of 18-inches long by 12-inches wide by 6-inches high. Ensure that the fabric conforms to the following:

TEST REQUIREMENT	METHOD	VALUE
Minimum Tensile	ASTM D4632	
Machine direction		70 lb minimum
Cross direction		40 lb minimum
Elongation	ASTM D4632	
Machine direction		20% minimum
Cross direction		10 % min
Puncture	ASTM 4833	65 lbs minimum
Minimum Apparent Opening		0.0234 inches (No. 30 sieve)
Maximum Apparent Opening		0.0787 inches (No. 10 sieve)

### **701.4.2 Verification Testing**

Replace paragraph two with the following effective with the December 2012 letting:

- (2) The department will sample randomly at locations independent of the contractor's QC tests and use separate equipment and laboratories. The department will conduct a minimum of one verification test for each 5 contractor QC tests unless specific QMP provisions specify otherwise.

**715.3.1.3 Department Verification Testing**

Replace paragraph one with the following effective with the December 2012 letting:

- (1) The department will perform verification testing as specified in 701.4.2 except as follows:
  - Air content, slump, and temperature: a minimum of 1 verification test per lot.
  - Compressive strength: a minimum of 1 verification test per lot.

**Errata**

Make the following corrections to the 2012 edition of the standard specifications:

**107.22 Contractor's Responsibility for Utility Facilities, Property, and Services**

Correct errata by eliminating references to the department. Costs are determined by statute.

- (3) If the contractor damages or interrupts service, the contractor shall notify the utility promptly. Coordinate and cooperate with the utility in the repair of the facility. Determine who is responsible for repair costs according to Wisconsin statutes 66.0831 and 182.0175(2).

**506.2.6.5.2 Pad Construction**

Correct errata by changing ASTM A570 to ASTM A1011.

- (4) For the internal steel plates use rolled mild steel conforming to ASTM A36, or ASTM A1011 grade

**512.3.3 Painting**

Correct errata by changing 511.3.5 to 550.3.11.3.

- (1) Paint permanent steel sheet piling as specified for painting steel piling in 550.3.11.3.

**513.2.2.8 Toggle Bolts**

Correct errata by changing r ASTM A570 to ASTM A1011.

- (1) Use toggle bolts made of steel, conforming to the plans. Make the assembly from the material specified below:
 

Toggle bolt and pin .....	Cold finished steel heat-treated Brinell 311-363 ASTM A354.
Toggle washer .....	Hot rolled steel ASTM A1011. Manufacturer's standard washer.
Spacer nut .....	Grade 1213, ASTM A108. Cold finished steel heat-treated ASTM A325.

**660.2.1 General**

Correct errata by changing section 511 to 550.

- (1) Furnish materials conforming to the following:
 

Concrete .....	section 501
Concrete bridges .....	section 502
Luminaires .....	section 659
Steel piling .....	section 550
Steel reinforcement.....	section 505

**660.3.2.3 Pile Type Foundations**

Correct errata by changing section 511 to 550.

- (1) Drive piles as specified in for steel piling in section 550.

**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://roadwaystandards.dot.wi.gov/hcci/labor-wages-eeo/index.shtm>

(2) Ensure that all tiers of subcontractors, as well as all trucking firms, submit their weekly certified payrolls electronically through CRCS. These payrolls are due within seven calendar days following the close of the payroll period. Every firm providing physical labor towards completing the project is a subcontractor under this special provision.

(3) Upon receipt of contract execution, promptly make all affected firms aware of the requirements under this special provision and arrange for them to receive CRCS training as they are about to begin payrolls. The department will provide training either in a classroom setting at one of our regional offices or by telephone. Contact Tess Mulrooney at 608-267-4489 to schedule the training.

(4) The department will reject all paper submittals of forms DT-1816 and DT-1929 for information required under this special provision. All costs for conforming to this special provision are incidental to the contract.

(5) Firms wishing to export payroll data from their computer system into CRCS should have their payroll coordinator send several sample electronic files to Tess two months before a payroll needs to be submitted. Not every contractor's payroll system is capable of producing export files. For details, see section 3.2 of the CRCS System Background Information manual available online on the Labor, Wages, and EEO Information page at:

<http://roadwaystandards.dot.wi.gov/hcci/labor-wages-eeo/docs/crc-basic-info.pdf>

## REQUIRED CONTRACT PROVISIONS FEDERAL-AID CONSTRUCTION CONTRACTS

- I. General
- II. Nondiscrimination
- III. Nonsegregated Facilities
- IV. Davis-Bacon and Related Act Provisions
- V. Contract Work Hours and Safety Standards Act Provisions
- VI. Subletting or Assigning the Contract
- VII. Safety: Accident Prevention
- VIII. False Statements Concerning Highway Projects
- IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
- X. Compliance with Governmentwide Suspension and Debarment Requirements
- XI. Certification Regarding Use of Contract Funds for Lobbying

### ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

### I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

### II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding \$10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

**1. Equal Employment Opportunity:** Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under

this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

**2. EEO Officer:** The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

**3. Dissemination of Policy:** All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

**4. Recruitment:** When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

**5. Personnel Actions:** Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

**6. Training and Promotion:**

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are

applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

**7. Unions:** If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

**8. Reasonable Accommodation for Applicants / Employees with Disabilities:** The contractor must be familiar

with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

**9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment:** The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

#### **10. Assurance Required by 49 CFR 26.13(b):**

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.

**11. Records and Reports:** The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on [Form FHWA-1391](#). The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor

will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

### III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of \$10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

### IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding \$2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 "Contract provisions and related matters" with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

#### 1. Minimum wages

a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions

of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b. (1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or



will notify the contracting officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program. Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

## **2. Withholding**

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

## **3. Payrolls and basic records**

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-

Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b. (1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at <http://www.dol.gov/esa/whd/forms/wh347instr.htm> or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency..

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

#### **4. Apprentices and trainees**

##### **a. Apprentices (programs of the USDOL).**

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly

rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

##### **b. Trainees (programs of the USDOL).**

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

**5. Compliance with Copeland Act requirements.** The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

**6. Subcontracts.** The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

**7. Contract termination: debarment.** A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

**8. Compliance with Davis-Bacon and Related Act requirements.** All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

**9. Disputes concerning labor standards.** Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

**10. Certification of eligibility.**

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

**V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT**

The following clauses apply to any Federal-aid construction contract in an amount in excess of \$100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

**1. Overtime requirements.** No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

**2. Violation; liability for unpaid wages; liquidated damages.** In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.

**3. Withholding for unpaid wages and liquidated damages.** The FHWA or the 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 2012**

**ADDITIONAL FEDERAL-AID PROVISIONS**

**BUY AMERICA**

All steel and iron materials permanently incorporated in this project shall be domestic products and all manufacturing and coating processes for these materials 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.

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/hidden/ws4567.doc>

**NOTICE TO ALL BIDDERS**

To report bid rigging activities call:

**1-800-424-9071**

The U.S. Department of Transportation (DOT) operates the above toll-free "hotline" Monday through Friday, 8:00 a.m. to 5:00 p.m., Eastern Time. Anyone with knowledge of possible bid rigging, bidding collusion, or other fraudulent activities should use the "hotline" to report such activities.

The "hotline" is part of the DOT's continuing effort to identify and investigate highway construction contract fraud and abuse and is operated under the direction of the DOT Inspector General. All information will be treated confidentially and caller anonymity will be respected.



**Effective 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  
MARATHON COUNTY**

Compiled by the State of Wisconsin - Department of Workforce Development  
for the Department of Transportation  
Pursuant to s. 103.50, Stats.  
Issued on April 1, 2012

**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	32.66	15.92	48.58
Carpenter	29.06	15.16	44.22
Cement Finisher	29.35	15.05	44.40
Electrician	27.40	16.54	43.94
Future Increase(s): Add \$.50/hr. on 06/04/2012			
Premium Pay: DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.			
Fence Erector	35.62	0.00	35.62
Ironworker	30.90	19.11	50.01
Line Constructor (Electrical)	35.97	18.08	54.05
Painter	24.10	9.54	33.64
Pavement Marking Operator	26.52	16.78	43.30
Piledriver	28.11	23.37	51.48
Roofer or Waterproofing	21.50	4.02	25.52
Teledata Technician or Installer	21.26	11.75	33.01
Tuckpointer, Caulker or Cleaner	23.96	18.07	42.03
Underwater Diver (Except on Great Lakes)	36.20	18.81	55.01
Heavy Equipment Operator - ELECTRICAL LINE CONSTRUCTION ONLY	33.87	16.10	49.97
Light Equipment Operator -ELECTRICAL LINE CONSTRUCTION ONLY	28.78	16.21	44.99
Heavy Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	25.18	13.07	38.25
Light Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	23.38	12.48	35.86
Groundman - ELECTRICAL LINE CONSTRUCTION ONLY	21.30	10.97	32.27

<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	22.35	16.19	38.54
Future Increase(s): Add \$1.75/hr on 6/1/2012; Add \$1.85/hr on 6/1/2013.			
Premium Pay: DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.			
Three or More Axle	23.60	15.86	39.46
Articulated, Euclid, Dumptor, Off Road Material Hauler	26.77	18.90	45.67
Future Increase(s): Add \$2/hr on 6/1/12; Add \$2/hr on 6/1/13; Add \$1.75/hr on 6/1/14.			
Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.25/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).			
Pavement Marking Vehicle	23.99	14.70	38.69
Shadow or Pilot Vehicle	24.76	15.35	40.11
Truck Mechanic	23.60	15.86	39.46
<b>LABORERS</b>			
General Laborer	26.92	13.45	40.37
Future Increase(s): Add \$1.60/hr on 6/1/2012; Add \$1.70/hr on 6/1/2013; 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	28.46	10.65	39.11
Landscaper	26.92	13.45	40.37
Future Increase(s): Add \$1.60/hr on 6/1/12; Add \$1.70/hr on 6/1/13; Add \$1.60/hr on 6/1/14.			
Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.25/hr for work on projects involving temporary traffic control setup, for lane and shoulder closures, when work under artificial illumination conditions is necessary as required by the project provisions (including prep time prior to and/or cleanup after such time period).			
Flagperson or Traffic Control Person	23.55	13.45	37.00
Future Increase(s): Add \$1.60/hr on 6/1/2012; Add \$1.70/hr on 6/1/2013; Add \$1.60/hr on 6/1/2014.			
Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.25/hr when the Wisconsin Department of Transportation or responsible governing agency requires that work be performed at night under artificial illumination with traffic control and the work is completed after sunset and before sunrise.			
Fiber Optic Laborer (Outside, Other Than Concrete Encased)	15.00	0.61	15.61
Railroad Track Laborer	12.50	2.91	15.41

<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 \$2/hr on 6/1/12; Add \$2/hr on 6/1/13; Add \$1.75/hr on 6/1/14. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.25/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).	34.22	18.90	53.12
Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of 130,000 Lbs. or Over; Caisson Rig; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 175 Ft or Under; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With or Without Attachments, With a Lifting Capacity of 100 Tons or Under, Self-Erecting Tower Crane With A Lifting Capacity Of 4,000 Lbs., & Under; Dredge (NOT Performing Work on the Great Lakes); Licensed Boat Pilot (NOT Performing Work on the Great Lakes); Pile Driver. Future Increase(s): Add \$2/hr on 6/1/12; Add \$2/hr on 6/1/13; Add \$1.75/hr on 6/1/14. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.25/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).	33.72	18.90	52.62
Air Track, Rotary or Percussion Drilling Machine &/or Hammers, Blaster; Asphalt Heater, Planer & Scarifier; Asphalt Milling Machine; Asphalt Screed; Automatic Subgrader (Concrete); Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of Under 130,000 Lbs., Backhoe (Mini, 15,000 Lbs. & Under); Bituminous (Asphalt) Plant & Paver, Screed; Boatmen (NOT Performing Work on the Great Lakes); Boring Machine (Directional, Horizontal or Vertical); Bridge (Bidwell) Paver; Bulldozer or Endloader; Concrete Batch Plant, Batch Hopper; Concrete Breaker (Large, Auto, Vibratory/Sonic, Manual or Remote); Concrete Bump Cutter, Grinder, Planing or Grooving Machine; Concrete Conveyor System; Concrete Laser/Screed; Concrete Paver (Slipform); Concrete Pump, Concrete Conveyor (Rotec or Bidwell Type); Concrete Slipform Placer Curb & Gutter Machine; Concrete Spreader & Distributor; Crane (Carry Deck, Mini) or Truck Mounted Hydraulic Crane (10 Tons or Under); Crane With a Lifting Capacity of 25 Tons or Under; Forestry Equipment, Timbco, Tree Shear, Tub Grinder, Processor; Gradall (Cruz-Aire Type); Grader or Motor Patrol; Grout Pump; Hydro-Blaster (10,000 PSI or Over); Loading Machine (Conveyor); Material or Stack Hoist; Mechanic or Welder; Milling Machine; Post Hole Digger or Driver; Roller (Over 5 Ton); Scraper (Self Propelled or Tractor Drawn) 5 cu yds or More Capacity; Shoulder Widener; Sideboom; Skid Rig; Stabilizing or Concrete Mixer (Self-Propelled or 14S or Over); Straddle Carrier or Travel Lift; Tractor (Scraper, Dozer, Pusher, Loader); Tractor or Truck Mounted Hydraulic Backhoe; Trencher (Wheel Type or Chain Type); Tube Finisher; Tugger (NOT Performing Work on the Great Lakes); Winches	33.22	18.90	52.12

<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 \$2/hr on 6/1/12; Add \$2/hr on 6/1/13; Add \$1.75/hr on 6/1/14.			
Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.25/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).			
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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.	32.96	18.90	51.86
Future Increase(s): Add \$2/hr on 6/1/12; Add \$2/hr on 6/1/13; Add \$1.75/hr on 6/1/14.			
Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.25/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).			
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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.	33.22	18.90	52.12
Future Increase(s): Add \$2/hr on 6/1/12; Add \$2/hr on 6/1/13; Add \$1.75/hr on 6/1/14.			
Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.25/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).			
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Fiber Optic Cable Equipment.	16.00	4.79	20.79
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SUPERSEDES DECISION WI20070010  
U. S. DEPARTMENT OF LABOR  
(DAVIS-BACON ACT, MINIMUM WAGE RATES)

STATE: Wisconsin

DECISION NUMBER: W1080010

DESCRIPTION OF WORK: Highways and Airport Runway and Taxiway Construction

DATE: September 28, 2012

LABORERS CLASSIFICATION:	Basic Hourly Rates	Fringe Benefits	Truck Drivers:	Basic Hourly Rates	Fringe Benefits
Group 1: General Laborer; Tree Trimmer; Conduit Layer; Demolition and Wrecking Laborer; Guard Rail, Fence and Bridge Builder; Landscaper, Multiplate Culvert Assembler; Stone Handler; Bituminous Worker (Shoveler, Loader, Utility Man); Batch Truck Dumper; or Cement Handler; Bituminous Worker; (Dumper, Ironer, Smoother, Tamper); Concrete Handler .....	\$26.92	13.45	1 & 2 Axles .....	23.16	17.13
Group 2: Air Tool Operator; Joint Sawyer and Filler (Pavement); Vibrator or Tamper Operator (Mechanical Hand Operated); .....	27.02	13.45	Three or More Axles; Euclids, Dumptor & Articulated, Truck Mechanic.....	23.31	17.13
Group 3: Bituminous Worker (Raker and Luteman); Formsetter (Curb, Sidewalk, and Pavement); Strike Off man.....	27.07	13.45			
Group 4: Line and Grade Specialist .....	27.27	13.45			
Group 5: Blaster and Powderman .....	27.12	13.45			
Group 6: Flagperson; Traffic Control.....	23.55	13.45			

CLASSES OF LABORER AND MECHANICS

Bricklayer .....	31.34	16.05
Carpenter .....	30.56	14.81
Millwright .....	32.16	14.81
Piledriverman .....	31.06	14.81
Ironworker .....	31.25	19.48
Cement Mason/Concrete Finisher .....	31.52	16.30
Electrician .....	See Page 3	
Line Construction		
Lineman.....	38.25	18.00
Heavy Equipment Operator .....	34.43	16.71
Equipment Operator.....	30.60	15.41
Heavy Groundman Driver.....	26.78	14.11
Light Groundman Driver .....	24.86	13.45
Groundsman.....	21.04	12.16
Painters .....	23.37	11.52
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 March 12, 2010; Modification 1, dated March 19, 2010; Modification 2, dated June 4, 2010; Modification 3, dated July 2, 2010; Modification 4, dated August 6, 2010; Modification 5, dated September 3, 2010; Modification 6, dated October 1, 2010; Modification 7, dated November 5, 2010; Modification 8; dated November 15, 2010; Modification 9, dated January 7, 2011; Modification #10 dated February 11, 2011; Modification #11 dated May 6, 2011; Modification #12 dated May 13, 2011; Modification #13 dated June 3, 2011; Modification #14 dated July 29, 2011; Modification #15 dated August 12, 2011; Modification #16 dated August 26, 2011; Modification #17 dated September 16, 2011; Modification #18 dated October 14, 2011; Modification #19 dated November 11, 2011; Modification #0, dated January 6, 2012; Modification #1 dated January 13, 2012; Modification #2 dated February 3, 2012; Modification #3 dated February 10, 2012; Modification #4 dated March 2, 2012; Modification #5 dated May 4, 2012; Modification #6 dated May 11, 2012; Modification #7 dated June 1, 2012; Modification #8 dated June 15, 2012; Modification #9 dated July 6, 2012; Modification #10 dated August 3, 2012; Modification #11 dated August 31, 2012; Modification #12 dated September 28, 2012.

SUPERSEDES DECISION WI20070010  
U. S. DEPARTMENT OF LABOR  
(DAVIS-BACON ACT, MINIMUM WAGE RATES)

STATE: Wisconsin

DECISION NUMBER: W1080010

DESCRIPTION OF WORK: Highways and Airport Runway and Taxiway Construction

DATE: September 28, 2012

<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 .....	\$35.22	\$19.65	(scraper, dozer, pusher, loader); scraper - rubber tired (single or twin engine); end loader 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. ....	\$34.22	\$19.65
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.....	\$34.72	\$19.65	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, end loader (rubber tired) - light; jeep digger; fork lift; mulcher; launch operator; fireman; environmental burner. ....	\$33.96	\$19.65
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.....	\$33.67	\$19.65
			Group 6: Off - road material hauler with or without ejector .....	\$27.77	\$19.65
			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 WI20070010  
U. S. DEPARTMENT OF LABOR  
(DAVIS-BACON ACT, MINIMUM WAGE RATES)

STATE: Wisconsin

DECISION NUMBER: W1080010

DESCRIPTION OF WORK: Highways and Airport Runway and Taxiway Construction

DATE: September 28, 2012

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	\$27.80	16.52		
Area 2:				
Electricians.....	29.13	17.92	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:	28.10	17.24		
Area 5	28.61	16.60		
Area 6	35.25	19.30	Area 6 -	KENOSHA COUNTY
Area 8				
Electricians.....	30.00	17.76	Area 8 -	DODGE, (Emmet Township only), GREEN, JEFFERSON, LAFAYETTE, RACINE (Burlington township), ROCK and WALWORTH COUNTIES
Area 9:				
Electricians.....	32.94	18.71	Area 9 -	COLUMBIA, DANE, DODGE, (area west of Hwy. 26, except Chester & Emmet Townships), GREEN LAKE (except townships of Berlin, Seneca and St. Marie), IOWA, MARQUETTE (except townships of Neshkoka, Crystal Lake, Newton and Springfield), and SAUK COUNTIES
Area 10	28.97	19.55		
Area 11	31.27	23.12		
Area 12	32.87	19.22	Area 10 -	CALUMET (Township of New Holstein), DODGE (East of Hwy. 26 including Chester Township), FOND DU LAC, MANITOWOC (Schleswig), and SHEBOYGAN COUNTIES
Area 13	32.20	21.64		
Teledata System Installer			Area 11 -	DOUGLAS COUNTY
Area 14				
Installer/Technician .....	21.89	11.83	Area 12 -	RACINE (except Burlington township) COUNTY
Sound & Communications				
Area 15			Area 13 -	MILWAUKEE, OZAUKEE, WASHINGTON and WAUKESHA COUNTIES
Installer .....	16.47	14.84		
Technician.....	24.75	16.04	Area 14 -	Statewide.
Area 1 -			Area 15 -	DODGE (East of Hwy 26 including Chester Twp, excluding Emmet Twp), FOND DU LAC (Except Waupun), MILWAUKEE, OZAUKEE, MANITOWOC (Schleswig), WASHINGTON, AND WAUKESHA COUNTIES.
CALUMET (except township of New Holstein), GREEN LAKE (N. part, including Townships of Berlin, St. Marie and Seneca), MARQUETTE (N. part, including Townships of Crystal Lake, Neshkoro, Newton & Springfield), OUTAGAMIE, WAUPACA, WAUSHARA and WINNEBAGO COUNTIES.				
Area 2 -				
ASHLAND, BARRON, BAYFIELD, BUFFALO, BURNETT, CHIPPEWA, CLARK (except Mayville, Colby, Unity, Sherman, Fremont, Lynn and Sherwood), CRAWFORD, DUNN, EAU CLAIRE, GRANT, IRON, JACKSON, LA CROSSE, MONROE, PEPIN, PIERCE, POLK, PRICE, RICHLAND, RUSK, ST. CROIX, SAWYER, TAYLOR, TREMPLEAU, VERNON and WASHBURN COUNTIES				
Area 3 -				
FLORENCE (townships of Aurora, Commonwealth, Fern, Florence and Homestead), MARINETTE (Niagara township)				

General Decision Number: WI120002 09/28/2012 WI2

Superseded General Decision Number: WI20100002

State: Wisconsin

Construction Type: Building

County: Marathon County in Wisconsin.

BUILDING CONSTRUCTION PROJECTS (does not include residential construction consisting of single family homes and apartments up to and including 4 stories)

Modification Number	Publication Date
0	01/06/2012
1	01/13/2012
2	02/03/2012
3	03/02/2012
4	05/04/2012
5	05/11/2012
6	06/15/2012
7	07/06/2012
8	08/03/2012
9	09/28/2012

ASBE0205-010 06/01/1998

	Rates	Fringes
Asbestos Removal worker/hazardous material handler (I) ncludes preparation, wetting, stripping, removal, scrapping vacuuming, bagging and disposing of all insulation materials from mechanical systems whether they contain asbestos or not.....	\$ 16.56	3.10

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BOIL0107-001 01/01/2012

	Rates	Fringes
BOILERMAKER Boilermaker.....	\$ 31.09	25.71
Small Boiler Repair (under 25,000 lbs/hr).....	\$ 26.91	16.00

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BRWI0006-003 06/01/2012

	Rates	Fringes
BRICKLAYER Bricklayer, Cement Mason, Tile Layer.....	\$ 31.34	16.05

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 CARP0252-001 06/01/2010

	Rates	Fringes
CARPENTER (Including Drywall Hanging, Acoustical work, Excluding Batt Insulation)		
CARPENTER & SOFT FLOOR		
LAYER.....	\$ 30.56	14.81
MILLWRIGHT.....	\$ 32.16	14.81
PILEDRIVERMAN.....	\$ 31.06	14.81

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\* ELEC0388-001 06/01/2012

	Rates	Fringes
ELECTRICIAN.....	\$ 28.61	16.60

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ELEV0132-001 01/01/2012

	Rates	Fringes
ELEVATOR MECHANIC.....	\$ 44.94	23.535

FOOTNOTE:

PAID VACATION: Employer contributes 8% of basic hourly rate as vacation pay for employees with more than 5 years or more of service, and 6% for less than 5 years of service.

PAID HOLIDAYS: New Years Day, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving Day, Friday after Thanksgiving, and Christmas Day.

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ENGI0139-002 06/03/2012

	Rates	Fringes
OPERATOR: Power Equipment		
Group 1.....	\$ 35.12	18.20
Group 2.....	\$ 34.12	18.20
Group 3.....	\$ 32.92	18.20
Group 4.....	\$ 32.39	18.20
Group 5.....	\$ 30.32	18.20
Group 6.....	\$ 29.69	18.20

HAZARDOUS WASTE PREMIUMS:

EPA Level "A" Protection: \$3.00 per hour

EPA Level "B" Protection: \$2.00 per hour

EPA Level "C" Protection: \$1.00 per hour

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Cranes, Tower Cranes and Derricks with or without attachments with a lifting capacity of over 100 tons;  
Cranes, Tower Cranes, and Derricks with boom, leads and/or jib lengths 176 ft or longer.

GROUP 2: Backhoes (Excavators) weighing 130,000 lbs & over;  
Cranes, Tower Cranes and Derricks with or without attachments with a lifting capacity of 100 tons or less;

Cranes, Tower Cranes, and Derricks with boom, leads, and/or jib lengths 175 ft or less; Caisson Rigs; Pile Driver

GROUP 3: Backhoes (Excavators) weighing under 130,000 lbs; Travelling Crane (bridge type); Milling Machine; Concrete Paver over 27 E; Concrete Spreader and Distributor; Concrete Laser Screed; Concrete Grinder and Planing Machine; Slipform Curb and Gutter Machine; Boring Machine (Directional); Dredge Operator; Skid Rigs; Over 46 meter Concrete Pump.

GROUP 4: Hydraulic Backhoe (tractor or truck mounted); Hydraulic Crane, 10 tons or less; Tractor, Bulldozer, or End Loader (over 40 hp); Motor Patrol; Scraper Operator; Bituminous Plant and Paver Operator; Screed-Milling Machine; Roller over 5 tons; Concrete Pumps 46 meter & under; Grout Pumps; Rotec Type Machine; Hydro Blaster, 10,000 psi and over; Rotary Drill Operator; Percussion Drilling Machine; Air Track Drill with or without integral hammer; Blaster; Boring Machine (vertical or horizontal); Side Boom; Trencher, wheel type or chain type having 8 inch or larger bucket; Rail Leveling Machine (Railroad); Tie Placer; Tie Extractor; Tie Tamper; Stone Leveler; Straddle Carrier; Material Hoists; Stack Hoist; Man Hoists; Mechanic and Welder; Off Road Material Haulers

GROUP 5: Tractor, Bulldozer, or Endloader (under 40 hp); Tampers -Compactors, riding type; Stump Chipper, large; Roller, Rubber Tire; Backfiller; Trencher, chain type (bucket under 8 inch); Concrete Auto Breaker, large; Concrete Finishing Machine (road type); Concrete Batch Hopper; Concrete Conveyor Systems; Concrete Mixers, 14S or over; Pumps, Screw Type and Gypsum); Hydrohammers, small; Brooms and Sweepers; Lift Slab Machine; Roller under 5 tons; Industrial Locomotives; Fireman (Pile Drivers and Derricks); Pumps (well points); Hoists, automatic; A-Frames and Winch Trucks; Hoists (tuggers); Boats (Tug, Safety, Work Barges and Launches); Assistant Engineer

GROUP 6: Shouldering Machine Operator; Farm or Industrial Tractor mounted equipment; Post Hole Digger; Auger (vertical and horizontal); Skid Steer Loader with or without attachments; Robotic Tool Carrier with or without attachments; Power Pack Vibratory/Ultra Sound Driver and Extractor; Fireman (Asphalt Plants); Screed Operator; Stone Crushers and Screening Plants; Air, Electric, Hydraulic Jacks (Slip Form); Prestress Machines; Air Compressor, 400 CFM or over; Refrigeration Plant/Freeze Machine; Boiler Operators (temporary heat); Forklifts; Welding Machines; Generators; Pumps over 3"; Compressors, under 400 CFM; Heaters, Mechanical; Combination small equipment operator; Winches, small electric; Oiler; Greaser; Rotary Drill Tender; Conveyor; Elevator Operator

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IRON0383-002 06/01/2012

	Rates	Fringes
IRONWORKER.....	\$ 31.25	19.48

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LABO0330-004 10/31/2011

	Rates	Fringes
Asbestos Abatement/Hazardous Waste (Preparation, removal, and Encapsulation of hazardous materials from non-mechanical systems).....	\$ 23.41	13.43
Laborer, General.....	\$ 23.41	13.43

NOTE: Mason Tender \$.25 over general laborer.

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PAIN0802-005 06/01/2012

	Rates	Fringes
Painters:		
Brush, Roller, Spray, and Drywall Finishing.....	\$ 23.37	11.52

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PAIN1204-001 06/01/2009

	Rates	Fringes
GLAZIER.....	\$ 27.14	13.46

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PLUM0434-001 01/01/2012

	Rates	Fringes
PLUMBER/PIPEFITTER (Including HVAC work).....	\$ 33.00	15.77

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SFWI0669-002 04/01/2012

	Rates	Fringes
SPRINKLER FITTER.....	\$ 36.07	18.31

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SHEE0018-005 05/29/2011

	Rates	Fringes
SHEET METAL WORKER (Including HVAC work)		
Contracts \$120,000 or less..	\$ 20.57	11.60
Contracts over \$120,000.....	\$ 27.54	19.51

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SUWI2002-003 01/23/2002

	Rates	Fringes
Asbestos Worker/Heat and Frost Insulator.....	\$ 25.36	8.37
Laborers:		
Concrete Worker.....	\$ 16.34	3.59
Landscape.....	\$ 8.73	4.90

ROOFER.....	\$ 18.01	3.28
Tile & Marble Finisher.....	\$ 13.89	8.20

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TEAM0662-001 06/03/2012

	Rates	Fringes
TRUCK DRIVER		
1 & 2 Axles.....	\$ 26.86	13.718
3 or more Axles.....	\$ 26.86	13.718

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WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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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 (29CFR 5.5 (a) (1) (ii)).

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The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of "identifiers" that indicate whether the particular rate is union or non-union.

#### Union Identifiers

An identifier enclosed in dotted lines beginning with characters other than "SU" denotes that the union classification and rate have found to be prevailing for that classification. Example: PLUM0198-005 07/01/2011. The first four letters, PLUM, indicate the international union and the four-digit number, 0198, that follows indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2011, following these characters is the effective date of the most current negotiated rate/collective bargaining agreement which would be July 1, 2011 in the above example.

Union prevailing wage rates will be updated to reflect any changes in the collective bargaining agreements governing the rate.

0000/9999: weighted union wage rates will be published annually each January.



## Non-Union Identifiers

Classifications listed under an "SU" identifier were derived from survey data by computing average rates and are not union rates; however, the data used in computing these rates may include both union and non-union data. Example: SULA2004-007 5/13/2010. SU indicates the rates are not union rates, LA indicates the State of Louisiana; 2004 is the year of the survey; and 007 is an internal number used in producing the wage determination. A 1993 or later date, 5/13/2010, indicates the classifications and rates under that identifier were issued as a General Wage Determination on that date.

Survey wage rates will remain in effect and will not change until a new survey is conducted.

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## WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

- \* an existing published wage determination
- \* a survey underlying a wage determination
- \* a Wage and Hour Division letter setting forth a position on a wage determination matter
- \* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Regional Office for the area in which the survey was conducted because those Regional Offices have responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations  
Wage and Hour Division  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

The request should be accompanied by a full statement of the

interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board  
U.S. Department of Labor  
200 Constitution Avenue, N.W.  
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION

State of Wisconsin Department of Workforce Development Equal Rights Division	DEPARTMENTAL ORDER
ISSUE DATE: 10/25/2012	
PROJECT:	
USH 51, WAUSAU-MERRILL, CTH K / B51 INTERCHANGE WAUSAU CITY, MARATHON COUNTY, WI Determination No. 201202447 [Owner Project No. 1170-01-70]	
PROJECT OWNER:	REQUESTER:
DANIEL ERVA, PROJECT MANAGER WI DEPT OF TRANSPORTATION 510 N. HANSON LAKE ROAD RHINELANDER, WI 54501	ROBIN M DROUT, DOCUMENTS SPECIALIST AYRES ASSOCIATES 3433 OAKWOOD HILLS PKWY EAU CLAIRE, WI 54701
ADDITIONAL CONTACT:	NOTE: The Requester must provide a copy of this Project Determination and enclosures to the Project Owner and Additional Contact.
<p>The department received an application for prevailing wage rate determination for the above-captioned project. The department conducted a survey to determine the prevailing wage rate for the trade(s) or occupation(s) needed to complete the project. The survey's findings appear in the attached project determination.</p> <p>If you believe that the wage rate for any trade or occupation does not accurately reflect the prevailing wage rate in the city, village or town where the project is located, you may ask the department to conduct an administrative review of such wage rate. You must submit this request in writing within 30 days from the date indicated above. Additionally, your request must include wage rate information from at least three similar projects in the city, village or town where the proposed project is located and on which some work has been performed by the contested trade(s) during the current survey period and was previously considered by the department in issuing the attached determination. See DWD 290.10 of the Wisconsin Administrative Code and either s. 66.0903(3)(br), s. 66.0904(4)(e), or s. 103.49(3)(c), Stats., for a complete explanation of the administrative review process.</p> <p>Enclosures</p>	
<p>It is hereby ordered that the prevailing wage rates set forth in the attached project determination shall only be applicable to the above referenced project. This order is a <b>FINAL ORDER</b> of the department unless a timely request for an administrative review is filed with the department.</p> <p>À QÙWÒÖÖYKÀ ~~~~~Equal Rights Division Labor Standards Bureau Construction Wage Standards Section PO Box 8928 Madison, WI 53708-8928 (608)266-6861</p> <p>Web Site: <a href="http://dwd.wisconsin.gov/er/">http://dwd.wisconsin.gov/er/</a></p>	

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**PREVAILING WAGE RATE DETERMINATION**

Issued by the State of Wisconsin  
Department of Workforce Development  
Pursuant to s. 103.49, Wis. Stats.  
Issued On: 10/25/2012

**DETERMINATION NUMBER:** 201202447

**EXPIRATION DATE:** Prime Contracts MUST Be Awarded or Negotiated On Or Before 4/23/2013. If NOT, You MUST Reapply.

**PROJECT NAME:** USH 51, WAUSAU-MERRILL, CTH K / B51 INTERCHANGE  
PROJECT NO: 1170-01-70

**PROJECT LOCATION:** WAUSAU CITY, MARATHON COUNTY, WI

**CONTRACTING AGENCY:** WI DEPT OF TRANSPORTATION

<b>CLASSIFICATION:</b>	Contractors are responsible for correctly classifying their workers. Either call the Department of Workforce Development (DWD) with trade or classification questions or consult DWD's Dictionary of Occupational Classifications & Work Descriptions on the DWD website at: <a href="http://dwd.wisconsin.gov/er/prevailing_wage_rate/Dictionary/dictionary_main.htm">dwd.wisconsin.gov/er/prevailing_wage_rate/Dictionary/dictionary_main.htm</a> .
<b>OVERTIME:</b>	<p>Time and one-half must be paid for all hours worked:</p> <ul style="list-style-type: none"><li>- over 10 hours per day on prevailing wage projects</li><li>- over 40 hours per calendar week</li><li>- Saturday and Sunday</li><li>- on all of the following holidays: January 1; the last Monday in May; July 4; the 1st Monday in September; the 4th Thursday in November; December 25;</li><li>- The day before if January 1, July 4 or December 25 falls on a Saturday;</li><li>- The day following if January 1, July 4 or December 25 falls on a Sunday.</li></ul> <p>Apply the time and one-half overtime calculation to whichever is higher between the Hourly Basic Rate listed on this project determination or the employee's regular hourly rate of pay. Add any applicable Premium or DOT Premium to the Hourly Basic Rate before calculating overtime.</p> <p>A DOT Premium (discussed below) may supersede this time and one-half requirement.</p>
<b>FUTURE INCREASE:</b>	When a specific trade or occupation requires a future increase, you MUST add the full hourly increase to the "TOTAL" on the effective date(s) indicated for the specific trade or occupation.
<b>PREMIUM PAY:</b>	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.
<b>DOT PREMIUM:</b>	This premium only applies to highway and bridge projects owned by the Wisconsin Department of Transportation and to the project type heading "Airport Pavement or State Highway Construction." DO NOT apply the premium calculation under any other project type on this determination.
<b>APPRENTICES:</b>	Pay apprentices a percentage of the applicable journey person's hourly basic rate of pay and hourly fringe benefit contributions specified in this determination. Obtain the appropriate percentage from each apprentice's contract or indenture.
<b>SUBJOURNEY:</b>	Subjourney wage rates may be available for some of the trades or occupations indicated below with the exception of laborers, truck drivers and heavy equipment operators. Any employer interested in using a subjourney classification on this project MUST complete Form ERD-10880 and request the applicable wage rate from the Department of Workforce Development PRIOR to using the subjourney worker on this project.

This document **MUST BE POSTED** by the **CONTRACTING AGENCY** in at least one conspicuous and easily accessible place **on the site of the project**. A local governmental unit may post this document at the place normally used to post public notices if there is no common site on the project. This document **MUST** remain posted during the entire time any worker is employed on the project and **MUST** be physically incorporated into the specifications and all contracts and subcontracts. If you have any questions, please write to the Equal Rights Division, Labor Standards Bureau, P.O. Box 8928, Madison, Wisconsin 53708 or call (608) 266-6861.

**The following statutory provisions apply to state agency projects of public works and are set forth below pursuant to the requirements of s. 103.49(3)(a), Stats.**

**s. 103.49 (1) (c) "PREVAILING HOURS OF LABOR"** for any trade or occupation in any area means 10 hours per day and 40 hours per week and may not include any hours worked on a Saturday or Sunday or on any of the following holidays:

1. January 1.
2. The last Monday in May.
3. July 4.
4. The first Monday in September.
5. The 4th Thursday in November.
6. December 25.
7. The day before if January 1, July 4 or December 25 falls on a Saturday.
8. The day following if January 1, July 4 or December 25 falls on a Sunday.

**s. 103.49 (2) PREVAILING WAGE RATES AND HOURS OF LABOR.**

Any contract made for the erection, construction, remodeling, repairing, or demolition of any project of public works to which the state or any state agency is a party shall contain a stipulation that no person performing the work described in sub. (2m) may be permitted to work a greater number of hours per day or per week than the prevailing hours of labor, except that any such person may be permitted or required to work more than such prevailing hours of labor per day and per week if he or she is paid for all hours worked in excess of the prevailing hours of labor at a rate of at least 1.5 times his or her hourly basic rate of pay; nor may he or she be paid less than the prevailing wage rate determined under sub. (3) in the same or most similar trade or occupation in the area in which the project of public works is situated. A reference to the prevailing wage rates determined under sub. (3) and the prevailing hours of labor shall be published in the notice issued for the purpose of securing bids for the project. If any contract or subcontract for a project of public works that is subject to this section is entered into, the prevailing wage rates determined under sub. (3) and the prevailing hours of labor shall be physically incorporated into and made a part of the contract or subcontract, except that for a minor subcontract, as determined by the department, the department shall prescribe by rule the method of notifying the minor subcontractor of the prevailing wage rates and prevailing hours of labor applicable to the minor subcontract. The prevailing wage rates and prevailing hours of labor applicable to a contract or subcontract may not be changed during the time that the contract or subcontract is in force.

**s. 103.49 (6M) LIABILITY AND PENALTIES.**

- (ag) 1. Any contractor, subcontractor, or contractor's or subcontractor's agent who fails to pay the prevailing wage rate determined by the department under sub. (3) or who pays less than 1.5 times the hourly basic rate of pay for all hours worked in excess of the prevailing hours of labor is liable to any affected employee in the amount of his or her unpaid wages or his or her unpaid overtime compensation and in an additional amount as liquidated damages as provided in subd. 2., 3., whichever is applicable.
2. If the department determines upon inspection under sub. (5) (b) or (c) that a contractor, subcontractor, or contractor's or subcontractor's agent has failed to pay the prevailing wage rate determined by the department under sub. (3) or has paid less than 1.5 times the hourly basic rate of pay for all hours worked in excess of the prevailing hours of labor, the department shall order the contractor to pay to any affected employee the amount of his or her unpaid wages or his or her unpaid overtime compensation and an additional amount equal to 100 percent of the amount of those unpaid wages or that unpaid overtime compensation as liquidated damages within a period specified by the department in the order.
3. In addition to or in lieu of recovering the liability specified in subd. 1. as provided in subd. 2., any employee for and in behalf of that employee and other employees similarly situated may commence an action to recover that liability in any court of competent jurisdiction. If the court finds that a contractor, subcontractor, or contractor's or subcontractor's agent has failed to pay the prevailing wage rate determined by the department under sub. (3) or has paid less than 1.5 times the hourly basic rate of pay for all hours worked in excess of the prevailing hours of labor, the court shall order the contractor, subcontractor, or agent to pay to any affected employee the amount of his or her unpaid wages or his or her unpaid overtime compensation and an additional amount equal to 100 percent of the amount of those unpaid wages or that unpaid overtime compensation as liquidated damages.

5. No employee may be a party plaintiff to an action under subd. 3. unless the employee consents in writing to become a party and the consent is filed in the court in which the action is brought. Notwithstanding s. 814.04 (1), the court shall, in addition to any judgment awarded to the plaintiff, allow reasonable attorney fees and costs to be paid by the defendant.

(am) Except as provided in pars. (b), (d) and (f), any contractor, subcontractor or contractor's or subcontractor's agent who violates this section may be fined not more than \$200 or imprisoned for not more than 6 months or both. Each day that a violation continues is a separate offense.

(b) Whoever induces any person who seeks to be or is employed on any project of public works that is subject to this section to give up, waive, or return any part of the wages to which the person is entitled under the contract governing the project, or who reduces the hourly basic rate of pay normally paid to a person for work on a project that is not subject to this section during a week in which the person works both on a project of public works that is subject to this section and on a project that is not subject to this section, by threat not to employ, by threat of dismissal from employment, or by any other means is guilty of an offense under s. 946.15 (1).

(c) Any person employed on a project of public works that is subject to this section who knowingly permits a contractor, subcontractor, or contractor's or subcontractor's agent to pay him or her less than the prevailing wage rate set forth in the contract governing the project, who gives up, waives, or returns any part of the compensation to which he or she is entitled under the contract, or who gives up, waives, or returns any part of the compensation to which he or she is normally entitled for work on a project that is not subject to this section during a week in which the person works both on a project of public works that is subject to this section and on a project that is not subject to this section, is guilty of an offense under s. 946.15 (2).

(d) Whoever induces any person who seeks to be or is employed on any project of public works that is subject to this section to permit any part of the wages to which the person is entitled under the contract governing the project to be deducted from the person's pay is guilty of an offense under s. 946.15 (3), unless the deduction would be permitted under 29 CFR 3.5 or 3.6 from a person who is working on a project that is subject to 40 USC 3142.

(e) Any person employed on a project of public works that is subject to this section who knowingly permits any part of the wages to which he or she is entitled under the contract governing the project to be deducted from his or her pay is guilty of an offense under s. 946.15 (4), unless the deduction would be permitted under 29 CFR 3.5 or 3.6 from a person who is working on a project that is subject to 40 USC 3142.

<b>BUILDING OR HEAVY CONSTRUCTION</b>
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Includes sheltered enclosures with walk-in access for the purpose of housing persons, employees, machinery, equipment or supplies and non-sheltered work such as canals, dams, dikes, reservoirs, storage tanks, etc. A sheltered enclosure need not be "habitable" in order to be considered a building. The installation of machinery and/or equipment, both above and below grade level, does not change a project's character as a building. On-site grading, utility work and landscaping are included within this definition. Residential buildings of four (4) stories or less, agricultural buildings, parking lots and driveways are NOT included within this definition.

<b>SKILLED TRADES</b>
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Fringe Benefits Must Be Paid On <u>All</u> Hours Worked		HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
<u>CODE</u>	<u>TRADE OR OCCUPATION</u>	\$	\$	\$
101	Acoustic Ceiling Tile Installer	29.06	15.16	44.22
102	Boilermaker	31.09	22.03	53.12
103	Bricklayer, Blocklayer or Stonemason Future Increase(s): Add \$.50/hr on 6/1/2012; Add \$ .80 on 6/1/2013 Premium Increase(s): 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.	31.34	15.85	47.19
104	Cabinet Installer	29.06	15.16	44.22
105	Carpenter	29.06	15.16	44.22
106	Carpet Layer or Soft Floor Coverer	29.06	15.16	44.22
107	Cement Finisher	31.74	15.45	47.19
108	Drywall Taper or Finisher	13.00	4.80	17.80
109	Electrician Premium Increase(s): 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.	28.29	16.47	44.76
110	Elevator Constructor	43.79	25.48	69.27
111	Fence Erector	25.50	0.00	25.50
112	Fire Sprinkler Fitter	36.39	16.97	53.36
113	Glazier	28.19	9.84	38.03
114	Heat or Frost Insulator	28.14	19.73	47.87
115	Insulator (Batt or Blown)	23.62	11.55	35.17
116	Ironworker	30.90	19.11	50.01
117	Lather	29.06	15.16	44.22
118	Line Constructor (Electrical)	35.97	18.08	54.05

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
119	Marble Finisher	31.16	16.27	47.43
120	Marble Mason	31.74	15.45	47.19
121	Metal Building Erector	13.60	4.18	17.78
122	Millwright	30.66	15.21	45.87
123	Overhead Door Installer	17.50	1.30	18.80
124	Painter	16.83	2.65	19.48
125	Pavement Marking Operator	26.00	0.00	26.00
126	Piledriver	29.56	15.16	44.72
127	Pipeline Fuser or Welder (Gas or Utility)	30.52	18.84	49.36
129	Plasterer Future Increase(s): Add \$.50/hr on 6/1/2012; Add \$ .80 on 6/1/2013	31.34	15.85	47.19
130	Plumber	33.00	15.77	48.77
132	Refrigeration Mechanic	33.00	15.77	48.77
133	Roofer or Waterproofer	21.50	4.02	25.52
134	Sheet Metal Worker	27.42	20.02	47.44
135	Steamfitter	33.00	15.77	48.77
137	Teledata Technician or Installer Premium Increase(s): 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.	21.26	11.75	33.01
138	Temperature Control Installer	32.59	13.79	46.38
139	Terrazzo Finisher	18.00	5.35	23.35
140	Terrazzo Mechanic	31.16	16.27	47.43
141	Tile Finisher	20.50	5.10	25.60
142	Tile Setter	30.76	16.42	47.18
143	Tuckpointer, Caulker or Cleaner	23.96	18.07	42.03
144	Underwater Diver (Except on Great Lakes)	36.20	18.81	55.01
146	Well Driller or Pump Installer	25.32	15.30	40.62
147	Siding Installer	18.50	1.92	20.42
150	Heavy Equipment Operator - ELECTRICAL LINE CONSTRUCTION ONLY	27.42	14.20	41.62



<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b><u>CODE</u></b>	<b><u>TRADE OR OCCUPATION</u></b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
151	Light Equipment Operator -ELECTRICAL LINE CONSTRUCTION ONLY	28.78	15.16	43.94
152	Heavy Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	17.80	9.00	26.80
153	Light Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	23.38	12.48	35.86
154	Groundman - ELECTRICAL LINE CONSTRUCTION ONLY	21.30	10.97	32.27

**TRUCK DRIVERS**

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b><u>CODE</u></b>	<b><u>TRADE OR OCCUPATION</u></b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
201	Single Axle or Two Axle	32.32	10.76	43.08
203	Three or More Axle	14.00	5.97	19.97
204	Articulated, Euclid, Dumptor, Off Road Material Hauler Future Increase(s): Add \$1/hr on 6/3/2012; Add \$1/hr on 6/2/2013.	31.89	17.98	49.87
205	Pavement Marking Vehicle	19.25	10.84	30.09
207	Truck Mechanic	14.00	5.97	19.97

**LABORERS**

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b><u>CODE</u></b>	<b><u>TRADE OR OCCUPATION</u></b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
301	General Laborer Future Increase(s): Add \$.50/hr. on 06/04/2012; Add \$.75/hr. on 06/03/2013 Premium Increase(s): Add \$1.00/hr for certified welder and pipelayer; Add \$.25/hr for mason tender	23.41	13.43	36.84
302	Asbestos Abatement Worker	28.46	10.65	39.11
303	Landscaper	21.00	0.96	21.96
310	Gas or Utility Pipeline Laborer (Other Than Sewer and Water)	19.29	12.20	31.49
311	Fiber Optic Laborer (Outside, Other Than Concrete Encased)	15.00	0.61	15.61
314	Railroad Track Laborer	12.50	2.91	15.41

**HEAVY EQUIPMENT OPERATORS  
SITE PREPARATION, UTILITY OR LANDSCAPING WORK ONLY**

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
501	Air Track, Rotary or Percussion Drilling Machine &/or Hammers, Blaster; Asphalt Milling Machine; Boring Machine (Directional, Horizontal or Vertical); Backhoe (Track Type) Having a Mfg'r's Rated Capacity of 130,000 Lbs. or Over; Backhoe (Track Type) Having a Mfg'r's Rated Capacity of Under 130,000 Lbs., Backhoe (Mini, 15,000 Lbs. & Under); Bulldozer or Endloader (Over 40 hp); Compactor (Self-Propelled 85 Ft Total Drum Width & Over, or Tractor Mounted, Towed & Light Equipment); Concrete Batch Plant, Batch Hopper; Concrete Breaker (Large, Auto, Vibratory/Sonic, Manual or Remote); Crane, Shovel, Dragline, Clamshells; Forklift (Machinery Moving or Steel Erection, 25 Ft & Over); Gradall (Cruz-Aire Type); Grader or Motor Patrol; Master Mechanic; Mechanic or Welder; Robotic Tool Carrier (With or Without Attachments); Scraper (Self Propelled or Tractor Drawn) 5 cu yds or More Capacity; Tractor or Truck Mounted Hydraulic Backhoe; Tractor or Truck Mounted Hydraulic Crane (10 Tons or Under); Tractor (Scraper, Dozer, Pusher, Loader); Trencher (Wheel Type or Chain Type Having Over 8 Inch Bucket).	33.62	17.18	50.80
502	Backfiller; Broom or Sweeper; Bulldozer or Endloader (Under 40 hp); Environmental Burner; Forestry Equipment, Timbco, Tree Shear, Tub Grinder, Processor; Jeep Digger; Screed (Milling Machine); Skid Rig; Straddle Carrier or Travel Lift; Stump Chipper; Trencher (Wheel Type or Chain Type Having 8 Inch Bucket & Under). Future Increase(s): Add \$1/hr on 6/3/2012; Add \$1/hr on 6/2/2013.	31.89	17.98	49.87
503	Air Compressor (&/or 400 CFM or Over); Augers (Vertical & Horizontal); Compactor (Self-Propelled 84 Ft Total Drum Width & Under, or Tractor Mounted, Towed & Light Equipment); Crusher, Screening or Wash Plant; Farm or Industrial Type Tractor; Forklift; Generator (&/or 150 KW or Over); Greaser; High Pressure Utility Locating Machine (Daylighting Machine); Mulcher; Oiler; Post Hole Digger or Driver; Pump (3 Inch or Over) or Well Points; Refrigeration Plant or Freeze Machine; Rock, Stone Breaker; Skid Steer Loader (With or Without Attachments); Vibratory Hammer or Extractor, Power Pack.	29.19	18.94	48.13
504	Work Performed on the Great Lakes Including Diver; Wet Tender or Hydraulic Dredge Engineer.	36.20	18.81	55.01
505	Work Performed on the Great Lakes Including Crane or Backhoe Operator; Assistant Hydraulic Dredge Engineer; Hydraulic Dredge Leverman or Diver's Tender; Mechanic or Welder; 70 Ton & Over Tug Operator. Premium Increase(s): Add \$.50/hr for friction crane, lattice boom or crane certification (CCO).	37.45	19.45	56.90
506	Work Performed on the Great Lakes Including Deck Equipment Operator or Machineryman (Maintains Cranes Over 50 Tons or Backhoes 115,000 Lbs. or More); Tug, Launch or Loader, Dozer or Like Equipment When Operated on a Barge, Breakwater Wall, Slip, Dock or Scow, Deck Machinery.	26.80	18.52	45.32

507	Work Performed on the Great Lakes Including Deck Equipment Operator, Machineryman or Fireman (Operates 4 Units or More or Maintains Cranes 50 Tons or Under or Backhoes 115,000 Lbs. or Under); Deck Hand, Deck Engineer or Assistant Tug Operator; Off Road Trucks - Great Lakes ONLY.	27.75	19.15	46.90
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**HEAVY EQUIPMENT OPERATORS  
EXCLUDING SITE PREPARATION, UTILITY, PAVING LANDSCAPING WORK**

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
508	Boring Machine (Directional); 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; Crane, Tower Crane, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 176 Ft or Over; Master Mechanic. Future Increase(s): Add \$1/hr on 6/3/2012; Add \$1/hr on 6/2/2013. Premium Increase(s): Add \$.50/hr at 200 ton; Add \$1.00/hr. at 300 ton; Add \$1.50/hr at 400 ton; Add \$2.00/hr at 500 ton.	34.62	17.98	52.60
509	Backhoe (Track Type) Having a Mfgr's Rated Capacity of 130,000 Lbs. or Over; Boring Machine (Horizontal or Vertical); Caisson Rig; 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; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 175 Ft or Under; Pile Driver; Versi Lifts, Tri-Lifts & Gantrys (20,000 Lbs. & Over). Future Increase(s): Add \$1/hr on 6/3/2012; Add \$1/hr on 6/2/2013. Premium Increase(s): Add \$.25/hr for cranes with lifting capacity of 45 ton or over.	33.62	17.98	51.60
510	Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of Under 130,000 Lbs., Backhoe (Mini, 15,000 Lbs. & Under); Concrete Bump Cutter, Grinder, Planing or Grooving Machine; Concrete Laser/Screed; Concrete Paver (Slipform); Concrete Pump (Over 46 Meter), Concrete Conveyor (Rotec or Bidwell Type); Concrete Slipform Placer Curb & Gutter Machine; Concrete Spreader & Distributor; Dredge (NOT Performing Work on the Great Lakes); Forklift (Machinery Moving or Steel Erection, 25 Ft & Over); Gradall (Cruz-Aire Type); Hydro-Blaster (10,000 PSI or Over); Milling Machine; Skid Rig; Traveling Crane (Bridge Type). Future Increase(s): Add \$1/hr on 6/3/2012; Add \$1/hr on 6/2/2013.	32.42	17.98	50.40

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
511	Air, Track, Rotary or Percussion Drilling Machine &/or Hammers, Blaster; Bulldozer or Endloader (Over 40 hp); Compactor (Self-Propelled 85 Ft Total Drum Width & Over, or Tractor Mounted, Towed & Light Equipment); Concrete Pump (46 Meter & Under), Concrete Conveyor (Rotec or Bidwell Type); Crane (Carry Deck, Mini) or Truck Mounted Hydraulic Crane (10 Tons or Under); Environmental Burner; Gantrys (Under 20,000 Lbs.); Grader or Motor Patrol; High Pressure Utility Locating Machine (Daylighting Machine); Manhoist; Material or Stack Hoist; Mechanic or Welder; Railroad Track Rail Leveling Machine, Tie Placer, Extractor, Tamper, Stone Leveler or Rehabilitation Equipment; Roller (Over 5 Ton); Scraper (Self Propelled or Tractor Drawn) 5 cu yd or More Capacity; Screed (Milling Machine); Sideboom; Straddle Carrier or Travel Lift; Tining or Curing Machine; Tractor (Scraper, Dozer, Pusher, Loader); Tractor or Truck Mounted Hydraulic Backhoe; Tractor or Truck Mounted Hydraulic Crane (10 Tons or Under); Trencher (Wheel Type or Chain Type Having Over 8-Inch Bucket). Future Increase(s): Add \$1/hr on 6/3/2012; Add \$1/hr on 6/2/2013.	31.89	17.98	49.87
512	Backfiller; Broom or Sweeper; Bulldozer or Endloader (Under 40 hp); Compactor (Self-Propelled 84 Ft Total Drum Width & Under, or Tractor Mounted, Towed & Light Equipment); Concrete Batch Plant, Batch Hopper; Concrete Breaker (Large, Auto, Vibratory/Sonic, Manual or Remote); Concrete Conveyor System; Concrete Finishing Machine (Road Type); Fireman (Pile Driver & Derrick NOT Performing Work on the Great Lakes); Grout Pump; Hoist (Tugger, Automatic); Industrial Locomotives; Jeep Digger; Lift Slab Machine; Mulcher; Roller (Rubber Tire, 5 Ton or Under); Screw or Gypsum Pumps; Stabilizing or Concrete Mixer (Self-Propelled or 14S or Over); Stump Chipper; Trencher (Wheel Type or Chain Type Having 8-Inch Bucket & Under); Winches & A-Frames.	37.47	19.10	56.57
513	Air Compressor (&/or 400 CFM or Over); Air, Electric or Hydraulic Jacking System; Augers (Vertical & Horizontal); Boatmen (NOT Performing Work on the Great Lakes); Boiler (Temporary Heat); Crusher, Screening or Wash Plant; Elevator; Farm or Industrial Type Tractor; Fireman (Asphalt Plant NOT Performing Work on the Great Lakes); Forklift; Generator (&/or 150 KW or Over); Greaser; Heaters (Mechanical); Loading Machine (Conveyor); Oiler; Post Hole Digger or Driver; Prestress Machine; Pump (3 Inch or Over) or Well Points; Refrigeration Plant or Freeze Machine; Robotic Tool Carrier (With or Without Attachments); Rock, Stone Breaker; Skid Steer Loader (With or Without Attachments); Vibratory Hammer or Extractor, Power Pack. Future Increase(s): Add \$1/hr on 6/3/2012; Add \$1/hr on 6/2/2013.	29.19	17.98	47.17
514	Gas or Utility Pipeline, Except Sewer & Water (Primary Equipment). Future Increase(s): Add \$2/hr. on 1/1/2013.	34.89	19.68	54.57
515	Gas or Utility Pipeline, Except Sewer & Water (Secondary Equipment).	30.32	17.40	47.72
516	Fiber Optic Cable Equipment	16.00	4.79	20.79

<b>SEWER, WATER OR TUNNEL CONSTRUCTION</b>
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**Includes those projects that primarily involve public sewer or water distribution, transmission or collection systems and related tunnel work (excluding buildings).**

<b>SKILLED TRADES</b>
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Fringe Benefits Must Be Paid On <u>All</u> Hours Worked				
<u>CODE</u>	<u>TRADE OR OCCUPATION</u>	<u>HOURLY BASIC RATE OF PAY</u>	<u>HOURLY FRINGE BENEFITS</u>	<u>TOTAL</u>
		\$	\$	\$
103	Bricklayer, Blocklayer or Stonemason	31.74	15.45	47.19
105	Carpenter Premium Increase(s): 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.	33.43	19.31	52.74
107	Cement Finisher	29.35	15.05	44.40
109	Electrician	26.00	6.06	32.06
111	Fence Erector	25.50	0.00	25.50
116	Ironworker	30.90	19.11	50.01
118	Line Constructor (Electrical)	35.97	18.08	54.05
125	Pavement Marking Operator	26.00	0.00	26.00
126	Piledriver	29.56	15.16	44.72
130	Plumber	32.59	14.93	47.52
135	Steamfitter	32.59	14.93	47.52
137	Teledata Technician or Installer	21.26	11.75	33.01
143	Tuckpointer, Caulker or Cleaner	23.96	18.07	42.03
144	Underwater Diver (Except on Great Lakes)	36.20	18.81	55.01
146	Well Driller or Pump Installer	24.22	14.80	39.02
150	Heavy Equipment Operator - ELECTRICAL LINE CONSTRUCTION ONLY	27.42	14.20	41.62
151	Light Equipment Operator -ELECTRICAL LINE CONSTRUCTION ONLY	28.78	15.16	43.94
152	Heavy Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	17.80	9.00	26.80
153	Light Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	23.38	12.48	35.86
154	Groundman - ELECTRICAL LINE CONSTRUCTION ONLY	21.30	10.97	32.27

**TRUCK DRIVERS**

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b><u>CODE</u></b>	<b><u>TRADE OR OCCUPATION</u></b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
201	Single Axle or Two Axle	23.00	8.64	31.64
203	Three or More Axle	23.50	0.00	23.50
204	Articulated, Euclid, Dumptor, Off Road Material Hauler Future Increase(s): Add \$1.75/hr on 6/1/2012; Add \$1.85/hr on 6/1/2013. Premium Increase(s): 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.	22.50	16.19	38.69
205	Pavement Marking Vehicle	19.25	10.84	30.09
207	Truck Mechanic	23.50	0.00	23.50

**LABORERS**

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b><u>CODE</u></b>	<b><u>TRADE OR OCCUPATION</u></b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
301	General Laborer Future Increase(s): Add \$.70/hr. on 06/04/2012; Add \$.80/hr. on 06/03/2013 Premium Increase(s): Add \$.20 for blaster, bracer, manhole builder, caulker, bottomman and power tool; Add \$.55 for pipelayer; Add \$1.00 for 0-15 lbs. compressed air; Add \$2.00 for 15-30 lbs. compressed air; Add \$3.00 for over 30 lbs. compressed air.	25.03	13.44	38.47
303	Landscaper	21.00	0.96	21.96
304	Flagperson or Traffic Control Person	22.50	12.90	35.40
311	Fiber Optic Laborer (Outside, Other Than Concrete Encased)	15.00	0.61	15.61
314	Railroad Track Laborer	12.50	2.91	15.41

**HEAVY EQUIPMENT OPERATORS  
SEWER, WATER OR TUNNEL WORK**

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
521	Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of 130,000 Lbs. or Over; Caisson Rig; 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; Master Mechanic; Pile Driver.	33.59	19.67	53.26
522	Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of Under 130,000 Lbs., Backhoe (Mini, 15,000 Lbs. & Under); Boring Machine (Directional); Concrete Bump Cutter, Grinder, Planing or Grooving Machine; Concrete Laser/Screed; Concrete Paver (Slipform); Concrete Pump (Over 46 Meter), Concrete Conveyor (Rotec or Bidwell Type); Concrete Spreader & Distributor; 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); Milling Machine; Skid Rig; Telehandler; Traveling Crane (Bridge Type). Future Increase(s): Add \$1/hr on 6/3/2012; Add \$1/hr on 6/2/2013.	32.42	17.98	50.40
523	Air Track, Rotary or Percussion Drilling Machine &/or Hammers, Blaster; Boring Machine (Horizontal or Vertical); Bulldozer or Endloader (Over 40 hp); Crane (Carry Deck, Mini) or Truck Mounted Hydraulic Crane (10 Tons or Under); Concrete Pump (46 Meter & Under), Concrete Conveyor (Rotec or Bidwell Type); Concrete Slipform Placer Curb & Gutter Machine; Gradall (Cruz-Aire Type); Grader or Motor Patrol; Hydro-Blaster (10,000 PSI or Over); Manhoist; Material or Stack Hoist; Mechanic or Welder; Roller (Over 5 Ton); Scraper (Self Propelled or Tractor Drawn) 5 cu yd or More Capacity; Screed (Milling Machine); Sideboom; Straddle Carrier or Travel Lift; Tractor (Scraper, Dozer, Pusher, Loader); Tractor or Truck Mounted Hydraulic Backhoe; Tractor or Truck Mounted Hydraulic Crane (10 Tons or Under); Trencher (Wheel Type or Chain Type Having Over 8-Inch Bucket). Future Increase(s): Add \$1/hr on 6/3/2012; Add \$1/hr on 6/2/2013.	32.42	17.98	50.40

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
524	Backfiller; Broom or Sweeper; Bulldozer or Endloader (Under 40 hp); Compactor (Self-Propelled 85 Ft Total Drum Width & Over, or Tractor Mounted, Towed & Light Equipment); Concrete Batch Plant, Batch Hopper; Concrete Breaker (Large, Auto, Vibratory/Sonic, Manual or Remote); Concrete Conveyor System; Concrete Finishing Machine (Road Type); Environmental Burner; Fireman (Pile Driver & Derrick NOT Performing Work on the Great Lakes); Forestry Equipment, Timbco, Tree Shear, Tub Grinder, Processor; Hoist (Tugger, Automatic); Grout Pump; Jeep Digger; Lift Slab Machine; Mulcher; Power Subgrader; Pump (3 Inch or Over) or Well Points; Robotic Tool Carrier (With or Without Attachments); Roller (Rubber Tire, 5 Ton or Under); Screw or Gypsum Pumps; Stabilizing or Concrete Mixer (Self-Propelled or 14S or Over); Stump Chipper; Tining or Curing Machine; Trencher (Wheel Type or Chain Type Having 8-Inch Bucket & Under); Winches & A-Frames.	30.89	18.12	49.01
525	Air Compressor (&/or 400 CFM or Over); Air, Electric or Hydraulic Jacking System; Augers (Vertical & Horizontal); Compactor (Self-Propelled 84 Ft Total Drum Width & Under, or Tractor Mounted, Towed & Light Equipment); Crusher, Screening or Wash Plant; Farm or Industrial Type Tractor; Fireman (Asphalt Plant NOT Performing Work on the Great Lakes); Generator (&/or 150 KW or Over); Heaters (Mechanical); High Pressure Utility Locating Machine (Daylighting Machine); Loading Machine (Conveyor); Post Hole Digger or Driver; Refrigeration Plant or Freeze Machine; Rock, Stone Breaker; Skid Steer Loader (With or Without Attachments); Vibratory Hammer or Extractor, Power Pack.	29.19	19.20	48.39
526	Boiler (Temporary Heat); Forklift; Greaser; Oiler.	29.19	17.96	47.15
527	Work Performed on the Great Lakes Including Diver; Wet Tender or Hydraulic Dredge Engineer.	36.20	18.81	55.01
528	Work Performed on the Great Lakes Including 70 Ton & Over Tug Operator; Assistant Hydraulic Dredge Engineer; Crane or Backhoe Operator; Hydraulic Dredge Leverman or Diver's Tender; Mechanic or Welder.	36.20	18.81	55.01
529	Work Performed on the Great Lakes Including Deck Equipment Operator or Machineryman (Maintains Cranes Over 50 Tons or Backhoes 115,000 Lbs. or More); Tug, Launch or Loader, Dozer or Like Equipment When Operated on a Barge, Breakwater Wall, Slip, Dock or Scow, Deck Machinery.	26.80	18.52	45.32
530	Work Performed on the Great Lakes Including Deck Equipment Operator; Machineryman or Fireman (Operates 4 Units or More or Maintains Cranes 50 Tons or Under or Backhoes 115,000 Lbs. or Under), Deck Hand, Deck Engineer or Assistant Tug Operator; Off Road Trucks - Great Lakes ONLY.	26.80	18.52	45.32



<b>LOCAL STREET OR MISCELLANEOUS PAVING CONSTRUCTION</b>
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Includes roads, streets, alleys, trails, bridges, paths, racetracks, parking lots and driveways (except residential or agricultural), public sidewalks or other similar projects (excluding projects awarded by the Wisconsin Department of Transportation).

<b>SKILLED TRADES</b>
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Fringe Benefits Must Be Paid On <u>All</u> Hours Worked				
<u>CODE</u>	<u>TRADE OR OCCUPATION</u>	<u>HOURLY BASIC RATE OF PAY</u>	<u>HOURLY FRINGE BENEFITS</u>	<u>TOTAL</u>
		\$	\$	\$
103	Bricklayer, Blocklayer or Stonemason	31.74	15.45	47.19
105	Carpenter	29.06	15.16	44.22
107	Cement Finisher	29.35	15.05	44.40
109	Electrician Future Increase(s): Add \$.50/hr. effective 06/04/2012. Premium Increase(s): 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.	28.74	17.86	46.60
111	Fence Erector	25.50	0.00	25.50
116	Ironworker	30.90	19.11	50.01
118	Line Constructor (Electrical)	35.97	18.08	54.05
124	Painter	16.83	2.65	19.48
125	Pavement Marking Operator	26.00	0.00	26.00
126	Piledriver	29.56	15.16	44.72
133	Roofer or Waterproofer	21.50	4.02	25.52
137	Teledata Technician or Installer	21.26	11.75	33.01
143	Tuckpointer, Caulker or Cleaner	23.96	18.07	42.03
144	Underwater Diver (Except on Great Lakes)	36.20	18.81	55.01
150	Heavy Equipment Operator - ELECTRICAL LINE CONSTRUCTION ONLY	35.42	12.90	48.32
151	Light Equipment Operator -ELECTRICAL LINE CONSTRUCTION ONLY Premium Increase(s): 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.	29.64	14.64	44.28
152	Heavy Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	25.18	13.07	38.25
153	Light Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	23.38	12.48	35.86
154	Groundman - ELECTRICAL LINE CONSTRUCTION ONLY	21.30	10.97	32.27

**TRUCK DRIVERS**

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b><u>CODE</u></b>	<b><u>TRADE OR OCCUPATION</u></b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
201	Single Axle or Two Axle	15.00	0.00	15.00
203	Three or More Axle	14.00	3.42	17.42
204	Articulated, Euclid, Dumptor, Off Road Material Hauler Future Increase(s): Add \$1/hr on 6/3/2012; Add \$1/hr on 6/2/2013.	31.89	17.98	49.87
205	Pavement Marking Vehicle	19.25	10.84	30.09
206	Shadow or Pilot Vehicle	15.00	0.00	15.00
207	Truck Mechanic	14.00	3.42	17.42

**LABORERS**

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b><u>CODE</u></b>	<b><u>TRADE OR OCCUPATION</u></b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
301	General Laborer Future Increase(s): Add \$1.60/hr on 6/1/2012; Add \$1.70/hr on 6/1/2013; Add \$1.60/hr on 6/1/2014. Premium Increase(s): 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).	26.92	13.45	40.37

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b><u>CODE</u></b>	<b><u>TRADE OR OCCUPATION</u></b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
303	Landscaper Future Increase(s): Add \$1.60/hr on 6/1/12; Add \$1.70/hr on 6/1/13; Add \$1.60/hr on 6/1/14. Premium Increase(s): 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).	26.92	13.45	40.37
304	Flagperson or Traffic Control Person Future Increase(s): Add \$1.60/hr on 6/1/2012; Add \$1.70/hr on 6/1/2013; Add \$1.60/hr on 6/1/2014. Premium Increase(s): 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.	23.55	13.45	37.00
311	Fiber Optic Laborer (Outside, Other Than Concrete Encased)	15.00	0.61	15.61
314	Railroad Track Laborer	12.50	2.91	15.41

**HEAVY EQUIPMENT OPERATORS  
CONCRETE PAVEMENT OR BRIDGE WORK**

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b><u>CODE</u></b>	<b><u>TRADE OR OCCUPATION</u></b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
541	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; Crane, Tower Crane, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 176 Ft or Over; Master Mechanic. Future Increase(s): Add \$2/hr on 6/1/12; Add \$2/hr on 6/1/13; Add \$1.75/hr on 6/1/14. Premium Increase(s): 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).	34.22	18.90	53.12
542	Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of 130,000 Lbs. or Over; Caisson Rig; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With 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; Crane, Tower Crane Portable Tower, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 175 Ft or Under; Dredge (NOT Performing Work on the Great Lakes); Licensed Boat Pilot (NOT Performing Work on the Great Lakes); Pile Driver. Future Increase(s): Add \$2/hr on 6/1/12; Add \$2/hr on 6/1/13; Add \$1.75/hr on 6/1/14. Premium Increase(s): 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).	33.72	18.90	52.62

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b><u>CODE</u></b>	<b><u>TRADE OR OCCUPATION</u></b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
543	<p>Air Track, Rotary or Percussion Drilling Machine &amp;/or Hammers, Blaster; Automatic Subgrader (Concrete); Backhoe (Track Type) Having a Mfr.'s Rated Capacity of Under 130,000 Lbs., Backhoe (Mini, 15,000 Lbs. &amp; Under); 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 &amp; Gutter Machine; Concrete Spreader &amp; 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); Manhoist; Material or Stack Hoist; Mechanic or Welder; Milling Machine; Post Hole Digger or Driver; 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 &amp; A-Frames.</p> <p>Future Increase(s): Add \$2/hr on 6/1/12; Add \$2/hr on 6/1/13; Add \$1.75/hr on 6/1/14.</p> <p>Premium Increase(s): DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day &amp; 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).</p>	33.22	18.90	52.12

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b>CODE</b>	<b>TRADE OR OCCUPATION</b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
544	Backfiller; 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 (Pile Driver & Derrick NOT Performing Work on the Great Lakes); Forklift; Greaser; 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); Self Propelled Chip Spreader; Shouldering Machine; Skid Steer Loader (With or Without Attachments); Telehandler; Tining or Curing Machine. Future Increase(s): Add \$2/hr on 6/1/12; Add \$2/hr on 6/1/13; Add \$1.75/hr on 6/1/14. Premium Increase(s): 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).	33.22	18.90	52.12
545	Air Compressor (&/or 400 CFM or Over); Air, Electric or Hydraulic Jacking System; 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.	30.42	17.58	48.00
546	Fiber Optic Cable Equipment.	16.00	4.79	20.79
547	Work Performed on the Great Lakes Including Diver; Wet Tender or Hydraulic Dredge Engineer.	36.20	18.81	55.01
548	Work Performed on the Great Lakes Including 70 Ton & Over Tug Operator; Assistant Hydraulic Dredge Engineer; Crane or Backhoe Operator; Hydraulic Dredge Leverman or Diver's Tender; Mechanic or Welder.	36.20	18.81	55.01
549	Work Performed on the Great Lakes Including Deck Equipment Operator or Machineryman (Maintains Cranes Over 50 Tons or Backhoes 115,000 Lbs. or more); Tug, Launch or Loader, Dozer or Like Equipment When Operated on a Barge, Breakwater Wall, Slip, Dock or Scow, Deck Machinery.	26.80	18.52	45.32
550	Work Performed on the Great Lakes Including Deck Equipment Operator; Machineryman or Fireman (Operates 4 Units or More or Maintains Cranes 50 Tons or Under or Backhoes 115,000 Lbs. or Under); Deck Hand, Deck Engineer or Assistant Tug Operator; Off Road Trucks - Great Lakes ONLY.	26.80	18.52	45.32

**HEAVY EQUIPMENT OPERATORS  
ASPHALT PAVEMENT OR OTHER WORK**

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b><u>CODE</u></b>	<b><u>TRADE OR OCCUPATION</u></b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
551	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; Crane, Tower Crane, Pedestal Tower or Derrick, With Boom, Leads and/or Jib Lengths Measuring 176 Ft or Over; Master Mechanic.	34.62	17.96	52.58
552	Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of 130,000 Lbs. or Over; Caisson Rig; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With 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; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 175 Ft or Under; Dredge (NOT Performing Work on the Great Lakes); Licensed Boat Pilot (NOT Performing Work on the Great Lakes); Pile Driver. Future Increase(s): Add \$2/hr on 6/1/12; Add \$2/hr on 6/1/13; Add \$1.75/hr on 6/1/14. Premium Increase(s): 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).	33.72	18.90	52.62

<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b><u>CODE</u></b>	<b><u>TRADE OR OCCUPATION</u></b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
553	<p>Air, Track, Rotary or Percussion Drilling Machine &amp;/or Hammers, Blaster; Asphalt Heater, Planer &amp; Scarifier; Asphalt Milling Machine; Asphalt Screed; Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of Under 130,000 Lbs., Backhoe (Mini, 15,000 Lbs. &amp; Under); Bituminous (Asphalt) Plant &amp; Paver, Screed; Boring Machine (Directional, Horizontal or Vertical); Bulldozer or Endloader; Concrete Breaker (Large, Auto, Vibratory/Sonic, Manual or Remote); Concrete Conveyor System; Concrete Laser/Screed; Concrete Slipform Placer Curb &amp; Gutter Machine; 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; Hydro-Blaster (10,000 PSI or Over); Loading Machine (Conveyor); Manhoist; Material or Stack Hoist; Mechanic or Welder; Milling Machine; Post Hole Digger or Driver; Railroad Track Rail Leveling Machine, Tie Placer, Extractor, Tamper, Stone Leveler or Rehabilitation Equipment; 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); 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 &amp; A-Frames.</p> <p>Future Increase(s): Add \$2/hr on 6/1/12; Add \$2/hr on 6/1/13; Add \$1.75/hr on 6/1/14.</p>	26.15	17.70	43.85
554	<p>Backfiller; Broom or Sweeper; Compactor (Self-Propelled or Tractor Mounted, Towed &amp; Light Equipment); Concrete Finishing Machine (Road Type); Environmental Burner; Farm or Industrial Type Tractor; Fireman (Asphalt Plant, Pile Driver &amp; 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.</p> <p>Future Increase(s): Add \$2/hr on 6/1/12; Add \$2/hr on 6/1/13; Add \$1.75/hr on 6/1/14.</p>	26.15	17.70	43.85



<b>Fringe Benefits Must Be Paid On <u>All</u> Hours Worked</b>		<b>HOURLY BASIC RATE OF PAY</b>	<b>HOURLY FRINGE BENEFITS</b>	<b>TOTAL</b>
<b><u>CODE</u></b>	<b><u>TRADE OR OCCUPATION</u></b>	<b>\$</b>	<b>\$</b>	<b>\$</b>
555	Air Compressor (&/or 400 CFM or Over); Air, Electric or Hydraulic Jacking System; Augers (Vertical & Horizontal); Automatic Belt Conveyor & Surge Bin; Boiler (Temporary Heat); Crusher, Screening or Wash Plant; Generator (&/or 150 KW or Over); Heaters (Mechanical); High Pressure Utility Locating Machine (Daylighting Machine); Mudjack; Oiler; Prestress Machine; Pug Mill; Pump (3 Inch or Over) or Well Points; Rock, Stone Breaker; Screed (Milling Machine); Stump Chipper; Tank Car Heaters; Vibratory Hammer or Extractor, Power Pack. Future Increase(s): Add \$2/hr on 6/1/12; Add \$2/hr on 6/1/13; Add \$1.75/hr on 6/1/14. Premium Increase(s): 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).	32.67	18.90	51.57
556	Fiber Optic Cable Equipment.	16.00	4.79	20.79

\*\*\*\*\* END OF RATES \*\*\*\*\*

Department of Workforce Development  
 Equal Rights Division  
 P.O. Box 8928  
 Madison, WI 53708-8928  
 Telephone: (608) 266-6860  
 Fax: (608) 267-4592  
 TTY: (608) 264-8752



Scott Walker, Governor  
 Reginald J. Newson, Secretary  
 Joe Handrick, Division Administrator

The documents following the Prevailing Wage Rate Determination consist of 18 pages of various forms/documents that will be used throughout the completion of the project. The chart below lists the form number, form/document name, the party who uses the document, and the document's number of pages. If you have any questions regarding these forms please call the Prevailing Wage Office at (608)266-6861.

ERD Form Number	Form Name	Party Who Uses the Form	Pages
16056	Post the White Sheet	Contracting agency	1
16770	Substance Abuse Prevention on Public Works and Publicly Funded Projects, §103.503, Wis. Stats.	All contractors working on public works and publicly funded private construction projects	1
10908	Consolidated List of Debarred Contractors	Any party contracting someone to complete work on a prevailing wage project	2
7777	Disclosure of Ownership	Contractors that meet the criteria set out in (3)(A)&(B) of the form	1
5724	Prime Contractor Affidavit of Compliance	Prime contractor files with contracting agency upon completion of the work before receiving final payment	2
10584	Agent or Subcontractor Affidavit of Compliance	Subcontractors file with their awarding contractor upon completion of their work on the project before receiving final payment	2
10880	Request to Employ Subjourneyperson	Contractors wishing to employ a subjourneyperson(s)	1
	Prevailing Wage - Public Entity Project Owners	Explanation of project owner responsibilities	2
	Prevailing Wage – Contractors	Explanation of contractor responsibilities	2
	Summary of Prevailing Wage Law Changes Effective July 1, 2011	Information for public entity or any other interested party	4

09/01/12

## **POST THE WHITE SHEET**

As the public entity receiving this prevailing wage rate determination, YOU ARE REQUIRED by law to post the prevailing wage rate determination (i.e., white sheet) in at least one conspicuous and easily accessible place on the project site that is available to all construction workers. The white sheet must remain posted from the onset of the project until all construction labor on the project has been completed.

[See, Wis. Admin. Code §DWD 290.12(1)]

Posting the white sheet inside the general contractor's trailer does not meet this requirement. That placement is not available/accessible to all workers and is not a location over which you have control.

If you have questions about posting, please call (608)266-6861 and ask for prevailing wage intake.

## **Disclaimer**

**Employers performing work on public works and publicly funded private construction projects in Wisconsin are required to have a written substance abuse testing program in place. The provisions of this requirement are contained in Sec. 103.503, Wis. Stats. The Department of Workforce Development is neither responsible for enforcement of this law nor authorized to answer questions concerning its provisions. For legal advice on complying with Sec. 103.503, Wis. Stats., you may wish to consult with a private attorney.**

### **103.503 Substance abuse prevention on public works and publicly funded projects. (1) DEFINITIONS.** In this section:

(a) "Accident" means an incident caused, contributed to, or otherwise involving an employee that resulted or could have resulted in death, personal injury, or property damage and that occurred while the employee was performing the work described in s. 66.0903 (4), 66.0904 (3), or 103.49 (2m) on a project.

(b) "Alcohol" has the meaning given in s. 340.01 (1q).

(c) "Contracting agency" means a local governmental unit, as defined in s. 66.0903 (1) (d), a state agency, as defined in s. 103.49 (1) (f), or an owner or developer under s. 66.0904 that has contracted for the performance of work on a project.

(d) "Drug" means any controlled substance, as defined in s. 961.01 (4), or controlled substance analog, as defined in s. 961.01 (4m), for which testing is required by an employer under its substance abuse prevention program under this section.

(e) "Employee" means a laborer, worker, mechanic, or truck driver who performs the work described in s. 66.0903 (4), 66.0904 (3), or 103.49 (2m) on a project.

(f) "Employer" means a contractor, subcontractor, or agent of a contractor or subcontractor that performs work on a project.

(g) "Project" means a project of public works that is subject to s. 66.0903 or 103.49 or a publicly funded private construction project that is subject to s. 66.0904.

(2) **SUBSTANCE ABUSE PROHIBITED.** No employee may use, possess, attempt to possess, distribute, deliver, or be under the influence of a drug, or use or be under the influence of alcohol, while performing the work described in s. 66.0903 (4), 66.0904 (3), or 103.49 (2m) on a project. An employee is considered to be under the influence of alcohol for purposes of this subsection if he or she has an alcohol concentration that is equal to or greater than the amount specified in s. 885.235 (1g) (d).

(3) **SUBSTANCE ABUSE PREVENTION PROGRAMS REQUIRED.** (a) Before an employer may commence work on a project, the employer shall have in place a written program for the prevention of substance abuse among its employees. At a minimum, the program shall include all of the following:

1. A prohibition against the actions or conditions specified in sub. (2).

2. A requirement that employees performing the work described in s. 66.0903 (4), 66.0904 (3), or 103.49 (2m) on a project submit to random, reasonable suspicion, and post-accident drug and alcohol testing and to drug and alcohol testing before commencing work on a project, except that testing of an employee before commencing work on a project is not required if the employee has been participating in a random testing program during the 90 days preceding the date on which the employee commenced work on the project.

3. A procedure for notifying an employee who violates sub. (2), who tests positive for the presence of a drug in his or her system, or who refuses to submit to drug or alcohol testing as required under the program that the employee may not perform work on a project until he or she meets the conditions specified in sub. (4) (b) 1. and 2.

(b) Each employer shall be responsible for the cost of developing, implementing, and enforcing its substance abuse prevention program, including the cost of drug and alcohol testing of its employees under the program. The contracting agency is not responsible for that cost, for the cost of any medical review of a test result, or for any rehabilitation provided to an employee.

(4) **EMPLOYEE ACCESS TO PROJECT.** (a) No employer may permit an employee who violates sub. (2), who tests positive for the presence of a drug in his or her system, or who refuses to submit to drug or alcohol testing as required under the employer's substance abuse prevention program under sub. (3) to perform work on a project until he or she meets the conditions specified in par. (b) 1. and 2. An employer shall immediately remove an employee from work on a project if any of the following occurs:

1. The employee violates sub. (2), tests positive for the presence of a drug in his or her system, or refuses to submit to drug or alcohol testing as required under the employer's substance abuse prevention program.

2. An officer or employee of the contracting agency has a reasonable suspicion that the employee is in violation of sub. (2) and requests the employer to immediately remove the employee from work on the project.

(b) An employee who is barred or removed from work on a project under par. (a) may commence or return to work on the project upon his or her employer providing to the contracting agency documentation showing all of the following:

1. That the employee has tested negative for the presence of drugs in his or her system and is not under the influence of alcohol as described in sub. (2).

2. That the employee has been approved to commence or return to work on the project in accordance with the employer's substance abuse prevention program.

(c) Testing for the presence of drugs or alcohol in an employee's system and the handling of test specimens shall be conducted in accordance with guidelines for laboratory testing procedures and chain-of-custody procedures established by the substance abuse and mental health services administration of the federal department of health and human services.

(5) **LOCAL ORDINANCES; STRICT CONFORMITY REQUIRED.** A local governmental unit, as defined in s. 66.0903 (1) (d), may enact an ordinance regulating the conduct regulated under this section only if the ordinance strictly conforms to this section.

History: 2005 a. 181; 2009 a. 28.

**Consolidated List of Debarred Contractors  
Prepared and Issued By  
State of Wisconsin  
Department of Workforce Development**

September 1, 2012

This list has been prepared in accordance with the provisions of s. 66.0903(12), s. 66.0904(10) and s. 103.49(7), Stats. and Chapter DWD 294 of the Wisconsin Administrative Code. All contractors on this list were found to have committed a "debarable offense" related to certain labor standard provisions determined or established for a state or local public works project or publicly funded private construction project. No state agency, local governmental unit or owner or developer may knowingly solicit bids from, negotiate with or award any contracts to or approve or allow any subcontracts with a debarred contractor, including all divisions, affiliates or other organizational elements of such contractor that are engaged in construction business activities, until the debarment is terminated. The name of each debarred contractor must remain on this list for a period of three (3) years from the termination date indicated below. The contractor is, however, only "debarred" from the "effective date" through the "termination date" indicated for that contractor. Questions regarding this list should be addressed to Julie Eckenwalder, Equal Rights Division, P. O. Box 8928, Madison, WI 53708 or call (608) 266-3148. Deaf, hearing or speech-impaired callers may contact the department by calling its TDD number (608) 264-8752.

<u>Name of Contractor</u>	<u>Address</u>	<u>Effective Date</u>	<u>Termination Date</u>	<u>Cause Code</u>	<u>Date of Violation(s)</u>	<u>Limitations/Deviations</u>
Abel, Mike	See, Abel Electric, Inc					
Abel Electric, Inc	3385 Belmar Rd Green Bay, WI 54313	9/1/12	8/31/2015	1	2011	None
Atkins, Scott	See, Freedom Insulation, Inc					
Boecker, Roger	See, R-Way Pumping, Inc					
Castlerock Commercial Construction, Inc	PO Box 11699 Milwaukee, WI 53211-0699	2/1/12	1/31/15	1, 2 and 4	2009 & 2010	None
Custom Heating & Air LLC	283 Tony Lane Green Bay, WI 54304	12/1/06	11/30/09	1, 2 and 4	2003 & 2004	None
Dem/Ex Group, Inc	805 S Adams St Manito, IL 61546	12/1/11	11/30/14	1 and 2	2010	None
Fisher, Ed &/or Fisher, Rhonda	See, Dem/Ex Group, Inc					
Freedom Insulation, Inc	117925 219 <sup>th</sup> Ave Chippewa Falls, WI 54729	9/1/11	8/31/14	1	2008- 2010	None

<u>Name of Contractor</u>	<u>Address</u>	<u>Effective Date</u>	<u>Termination Date</u>	<u>Cause Code</u>	<u>Date of Violation(s)</u>	<u>Limitations/Deviations</u>
JT Roofing, Inc	350 Tower Dr Saukville, WI 53080	6/1/11	5/31/15	1, 2 and 4	2007 & 2008	None
Jinkins, Richard	See, Castlerock Commercial Construction, Inc.					
Joseph Stoller Company	N8426 Hwy 42 Algoma, WI 54201	2/1/07	1/31/10	1 and 2	2004 & 2005	None
Keiver, David	See, Custom Heating & Air LLC					
Ofstie, Darin	See, Precision Excavating and Grading, LLC					
Precision Excavating and Grading, LLC or Precision Excavating Enterprises, LLC	2104 Pierce Saint Croix Rd Baldwin, WI 54002	5/1/11	4/30/14	1, 2 and 4	2006- 2008	None
R-Way Pumping, Inc	3023 Lake Maria Rd Freeport, MN 56331	3/1/12	2/28/15	1, 2 and 4	2008	None
Stoller Enterprises LLC	N8426 Hwy 42 Algoma, WI 54201-9552	2/1/2007	1/31/10	1 and 2	2005 to 2006	None
Stoller, Joseph	See, Joseph Stoller Company					
Stoller, Patrick J	See, Stoller Enterprises LLC					
Thull, Gerald T	See, JT Roofing, Inc.					

Cause Code: 1 = Failure to Pay Straight Time    2 = Failure to Pay Overtime    3 = Kickback    4 = Payroll Records.

## Disclosure of Ownership

The statutory authority for the use of this form is prescribed in Sections 66.0903(12)(d), 66.0904(10)(d) and 103.49(7)(d), Wisconsin Statutes.

The use of this form is mandatory. The penalty for failing to complete this form is prescribed in Section 103.005(12), Wisconsin Statutes.

Personal information you provide may be used for secondary purposes [Privacy Law, s. 15.04(1) (m), Wisconsin Statutes]

- (1) On the date a contractor submits a bid to or completes negotiations with a state agency, local governmental unit, or developer, investor or owner on a project subject to Section 66.0903, 66.0904 or 103.49, Wisconsin Statutes, the contractor shall disclose to such state agency, local governmental unit, or developer, investor or owner, the name of any "other construction business", which the contractor, or a shareholder, officer or partner of the contractor, owns or has owned within the preceding three (3) years.
- (2) The term "other construction business" means any business engaged in the erection, construction, remodeling, repairing, demolition, altering or painting and decorating of buildings, structures or facilities. It also means any business engaged in supplying mineral aggregate, or hauling excavated material or spoil as provided by Sections 66.0903(3), 66.0904(2), 103.49(2) and 103.50(2), Wisconsin Statutes.
- (3) This form must ONLY be filed, with the state agency project owner, local governmental unit project owner, or developer, investor or owner of a publicly funded private construction project that will be awarding the contract, if **both (A) and (B) are met**.
- (A) The contractor, or a shareholder, officer or partner of the contractor:
- (1) Owns at least a 25% interest in the "other construction business", indicated below, on the date the contractor submits a bid or completes negotiations.
  - (2) Or has owned at least a 25% interest in the "other construction business" at any time within the preceding three (3) years.
- (B) The Wisconsin Department of Workforce Development (DWD) has determined that the "other construction business" has failed to pay the prevailing wage rate or time and one-half the required hourly basic rate of pay, for

### Other Construction Business

Name of Business			
Street Address or P O Box	City	State	Zip Code
Name of Business			
Street Address or P O Box	City	State	Zip Code
Name of Business			
Street Address or P O Box	City	State	Zip Code
Name of Business			
Street Address or P O Box	City	State	Zip Code

**I hereby state under penalty of perjury that the information, contained in this document, is true and accurate according to my knowledge and belief.**

Print the Name of Authorized Officer			
Signature of Authorized Officer		Date Signed	
Name of Corporation, Partnership or Sole Proprietorship			
Street Address or P O Box	City	State	Zip Code

**If you have any questions call (608) 266-6861**

## Prime Contractor Affidavit of Compliance With Prevailing Wage Rate Determination

Authorization for this form is provided under Sections 66.0903(9)(c), 66.0904(7)(c) and 103.49(4r)(c) Wisconsin Statutes.

The use of this form is mandatory. The penalty for failing to complete this form is prescribed in Section 103.005(12), Wisconsin Statutes.

Personal information you provide may be used for secondary purposes [Privacy Law, s. 15.04(1)(m), Wisconsin Statutes].

This form must **ONLY** be filed with the **Awarding Agency** indicated below.

State Of )  )SS  County Of )	Project Name	
	DWD Determination Number	Project Number (if applicable)
	Date Determination Issued	Date of Contract
	Awarding Agency	
		Date Work Completed

After being duly sworn, the person whose name and signature appears below hereby states under penalty of perjury that

- **I am** the duly authorized officer of the corporation, partnership, sole proprietorship or business indicated below and have recently completed all of the work required under the terms and conditions of a contract with the above-named awarding agency and make this affidavit in accordance with the requirements set forth in Section 66.0903(9)(c), 66.0904(7)(c) or 103.49(4r)(c), Wisconsin Statutes and Chapter DWD 290 of the Wisconsin Administrative Code in order to obtain FINAL PAYMENT from such awarding agency.
- **I have** fully complied with all the wage and hour requirements applicable to this project, including all of the requirements set forth in the prevailing wage rate determination indicated above which was issued for such project by the Department of Workforce Development on the date indicated above.
- **I have** received the required affidavit of compliance from each of my agents and subcontractors that performed work on this project and have listed each of their names and addresses on page 2 of this affidavit.
- **I have** full and accurate records that clearly indicate the name and trade or occupation of every worker(s) that I employed on this project, including an accurate record of the hours worked and actual wages paid to such worker(s).
- **I will** retain the records and affidavit(s) described above and make them available for inspection for a period of at least three (3) years from the completion date indicated above at the address indicated below and shall not remove such records or affidavit(s) without prior notification to the awarding agency indicated above.

Name of Corporation, Partnership, Sole Proprietorship, Business, State Agency or Local Governmental Unit				
Street Address	City	State	Zip Code	Telephone Number
Print Name of Authorized Officer			Date Signed	
Signature of Authorized Officer				



## List of Agents and Subcontractors

Name			Name		
Street Address			Street Address		
City	State	Zip Code	City	State	Zip Code
Telephone Number			Telephone Number		

Name			Name		
Street Address			Street Address		
City	State	Zip Code	City	State	Zip Code
Telephone Number			Telephone Number		

Name			Name		
Street Address			Street Address		
City	State	Zip Code	City	State	Zip Code
Telephone Number			Telephone Number		

Name			Name		
Street Address			Street Address		
City	State	Zip Code	City	State	Zip Code
Telephone Number			Telephone Number		

Name			Name		
Street Address			Street Address		
City	State	Zip Code	City	State	Zip Code
Telephone Number			Telephone Number		

Name			Name		
Street Address			Street Address		
City	State	Zip Code	City	State	Zip Code
Telephone Number			Telephone Number		

## Agent or Subcontractor Affidavit of Compliance With Prevailing Wage Rate Determination

Authorization for this form is provided under Sections 66.0903(9)(b), 66.0904(7)(b) and 103.49(4r)(9b), Wisconsin Statutes. The use of this form is mandatory. The penalty for failing to complete this form is prescribed in Section 103.005(12), Wisconsin Statutes.

Personal information you provide may be used for secondary purposes [Privacy Law, Section 15.04(1)(m), Wisconsin Statutes].

This form must **ONLY** be filed with the **Awarding Contractor** indicated below.

State Of _____ )  )SS  County Of _____ )	Project Name	
	DWD Determination Number	Project Number (if applicable)
	Date Determination Issued	Date of Subcontract
	Awarding Contractor	
	Date Work Completed	

After being duly sworn, the person whose name and signature appears below hereby states under penalty of perjury that

- **I am** the duly authorized officer of the corporation, partnership, sole proprietorship or business indicated below. We have recently completed all of the work required under the terms and conditions of a subcontract with the above-named awarding contractor. We make this affidavit in accordance with the requirements set forth in Section 66.0903(9)(b), 66.0904(7)(b) or 103.49(4r)(b), Wisconsin Statutes and Chapter DWD 290 of the Wisconsin Administrative Code in order to obtain FINAL PAYMENT from such awarding contractor.
- **I have** fully complied with the entire wage and hour requirements applicable to this project, including all of the requirements set forth in the prevailing wage rate determination indicated above which was issued for such project by the Department of Workforce Development on the date indicated above.
- **I have** received the required affidavit of compliance from each of my agents and subcontractors that performed work on this project and have listed each of their names and addresses on page 2 of this affidavit.
- **I have** full and accurate records that clearly indicate the name and trade or occupation of every worker(s) that I employed on this project, including an accurate record of the hours worked and actual wages paid to such worker(s).
- **I will** retain the records and affidavit(s) described above and make them available for inspection for a period of at least three (3) years from the completion date indicated above at the address indicated below and shall not remove such records or affidavit(s) without prior notification to the awarding contractor.

Name of Corporation, Partnership, Sole Proprietorship, Business, State Agency or Local Governmental Unit				
Street Address or PO Box	City	State	Zip Code	Telephone Number (     )
Print Name of Authorized Officer			Date Signed	
Authorized Officer Signature				

## List of Agents and Subcontractors

Name			Name		
Street Address			Street Address		
City	State	Zip Code	City	State	Zip Code
Telephone Number (     )			Telephone Number (     )		

Name			Name		
Street Address			Street Address		
City	State	Zip Code	City	State	Zip Code
Telephone Number (     )			Telephone Number (     )		

Name			Name		
Street Address			Street Address		
City	State	Zip Code	City	State	Zip Code
Telephone Number (     )			Telephone Number (     )		

Name			Name		
Street Address			Street Address		
City	State	Zip Code	City	State	Zip Code
Telephone Number (     )			Telephone Number (     )		

Name			Name		
Street Address			Street Address		
City	State	Zip Code	City	State	Zip Code
Telephone Number (     )			Telephone Number (     )		

Name			Name		
Street Address			Street Address		
City	State	Zip Code	City	State	Zip Code
Telephone Number (     )			Telephone Number (     )		

**If you have any questions call (608) 266-6861**

## Request to Employ Subjourneyperson

The use of this form is mandatory. The penalty for failing to complete this form is prescribed in Section 103.005(12), Wisconsin Statutes. Personal information you provide may be used for secondary purposes (Privacy Law, s. 15.04(1)(m), Wisconsin Statutes).

The employer indicated below requests that the Department of Workforce Development (DWD) determine the prevailing wage rate(s) and related qualifications to enable such employer to use a subjourneyperson(s) on the following prevailing wage project, in accordance with the provisions of Section DWD 290.025, Wisconsin Administrative Code.

1. Name of Project Appearing on the Project Determination			
County	City, Village or Town		
DWD Project Determination Number	Project Number (if applicable)		
2. Job Classification(s) for which you request a subjourney rate (i.e., carpenter, electrician, plumber, etc.)			
a.	b.		
c.	d.		
3. Employer Name (Print)			
Address	City	State	Zip Code
Telephone Number (       )			
Email address (if you prefer to receive your response via email)	Fax Number (if you prefer to receive your response via fax) (       )		

**READ CAREFULLY:** I understand that this request is ONLY applicable to the project and job classification(s) listed above and that subjourney employees primarily work under the direction of and assist a skilled trade employee by frequently using the tools of a skilled trade and will NOT regularly perform the duties of a general laborer, heavy equipment operator or truck driver. If the subjourney employee regularly performs the work of a different trade or occupation, he/she will be compensated for such work at the applicable journeyperson prevailing wage rate. I agree to compensate subjourney employees in strict accordance with the directions received from the DWD.

Requester Signature	Date Signed
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MAIL the completed request to:  
EQUAL RIGHTS DIVISION, LABOR STANDARDS BUREAU  
PO BOX 8928, MADISON WI 53708  
OR  
FAX the completed request to: (608) 267-0310 / **DO NOT e-mail your request.**  
Call (608) 266-6861 for assistance in completing this form.

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## PREVAILING WAGE – Public Entity Project Owners

Any public works project that has a total estimated project cost that equals or exceeds single-trade or multiple-trade project thresholds requires a prevailing wage rate determination issued by the Department of Workforce Development (DWD). Public works include erecting, constructing, remodeling, repairing, demolishing, alterations, painting and decorating projects for a local governmental unit or state agency. State law excludes minor service or maintenance work, warranty work, or work under a supply-and-installation contract. There is a statutory definition for each of these exclusions. The prevailing wage law that applies to local governmental units is §66.0903, Wis. Stats. The prevailing wage law that applies to state agencies is §103.49, Wis. Stats. The applicable administrative rules for all public entities are DWD 290 and DWD 294, Wis. Adm. Code.

### Thresholds

A "single-trade project of public works" means a project in which a single trade accounts for 85% or more of the total labor cost of the project. The single trade threshold is \$48,000.

A "multiple-trade project of public works" means a project in which no single trade accounts for 85% or more of the total labor cost of the project.

(a) The multiple-trade threshold is \$100,000, unless a municipality falls under the description in (b).

(b) The multiple-trade threshold of \$234,000 applies to public works projects erected, constructed, repaired, remodeled, or demolished by a private contractor for •a city or village with a population less than 2500 or •a town.

Effective July 1, 2011, a local governmental unit or state agency that has a public works project that equals or exceeds the prevailing wage thresholds must do all of the following:

- Request a prevailing wage rate determination for the project from DWD at least 30 days before soliciting bids or negotiating contracts. An Application for Prevailing Wage Rate Determination is available on the DWD website: [http://dwd.wisconsin.gov/er/prevailing\\_wage\\_rate/default.htm](http://dwd.wisconsin.gov/er/prevailing_wage_rate/default.htm)

To avoid waiting for a project determination use the on-line application system that permits the user to generate a determination immediately and save all documents in PDF form to the user's computer. Use this project determination on line application at the following address:

- Tell potential contractors the project is subject to state prevailing wage law when soliciting bids.
- Include the prevailing wage rate determination in the construction contract, or if there is no written contract, provide a copy of the project determination to each prime contractor.
- Award contracts to contractors who do *not* appear on the “Consolidated List of Debarred Contractors.”
- Post the prevailing wage rate determination on the project site. (This document is often referred to as “the white sheet.”)
- Notify project contractors that if DWD finds that a contractor violated the prevailing wage law, DWD will assess liquidated damages of 100% of the wages owed to employees.
- Obtain an Affidavit of Compliance from each prime contractor before making final payment for the project.

If the total estimated cost of the project exceeds the prevailing wage thresholds, a local governmental unit or state agency also must obtain a prevailing wage rate determination under the following circumstances:

- when a completed facility is leased, purchased, lease-purchased or otherwise acquired by or dedicated to a public entity in lieu of the public entity contracting for the project,
- when one public entity does work for another public entity,
- when a *private* entity will construct a road, street, bridge, sanitary sewer or water main project and dedicate it to a local governmental unit or the state for its ownership or maintenance (except for some residential subdivisions).

For more information, visit the prevailing wage website: [http://dwd.wisconsin.gov/er/prevaling\\_wage\\_rate/default.htm](http://dwd.wisconsin.gov/er/prevaling_wage_rate/default.htm). For further assistance, call the Equal Rights Division at 608-266-6861 and ask for prevailing wage.

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## PREVAILING WAGE – Contractors

Any public works project that has a total estimated project cost that equals or exceeds prevailing wage project thresholds requires a prevailing wage rate determination issued by the Department of Workforce Development (DWD). Public works include erecting, constructing, remodeling, repairing, demolishing, alterations, painting and decorating projects for a local governmental unit or state agency. State law excludes minor service or maintenance work, warranty work, or work under a supply-and-installation contract. There is a statutory definition for each of these exclusions. The prevailing wage law that applies to local governmental units and their contractors is §66.0903, Wis. Stats. The prevailing wage law that applies to state agencies and their contractors is §103.49, Wis. Stats. The applicable administrative rules for all prevailing wage projects are DWD 290 and DWD 294, Wis. Adm. Code. These laws include provisions that apply to all contractors and subcontractors working on prevailing wage projects.

Effective July 1, 2011, any contractor or subcontractor working on a local governmental unit or state agency's public works project that equals or exceeds current prevailing wage project thresholds must do all of the following:

- Receive and review the project's prevailing wage rate determination (i.e., white sheet).
- Tell subcontractors the project is subject to state prevailing wage law and include the prevailing wage rate determination in the construction contract, or if there is no written contract, provide a copy of the project determination to each subcontractor.
- Hire subcontractors who do *not* appear on the "Consolidated List of Debarred Contractors."
- Notify subcontractors that if DWD finds that a contractor or subcontractor violated the prevailing wage law, DWD will assess liquidated damages of 100% of the wages owed to employees.

- Apply to DWD for subjourney wage rates prior to employing these individuals on the project.
- Receive and retain a completed Affidavit of Compliance from each subcontractor brought on to the project before providing final payment to those subcontractors.
- Submit a completed Affidavit of Compliance to the contractor who brought the subcontractor on to the project before receiving final payment for the project.
- Maintain payroll records for 3 years that comply with §§66.0903(10)(a) or 103.49(5)(a), Stats. and DWD 274.06.
- Respond to requests from DWD or the project owner to provide payroll records and/or respond to prevailing wage complaints filed by employees or third parties.

For more information, visit the prevailing wage website: [http://dwd.wisconsin.gov/er/prevailing\\_wage\\_rate/default.htm](http://dwd.wisconsin.gov/er/prevailing_wage_rate/default.htm). For further assistance, call the Equal Rights Division at 608-266-6861 and ask for prevailing wage.



## **SUMMARY OF PREVAILING WAGE LAW CHANGES EFFECTIVE JULY 1, 2011**

(This document updated 07/27/11)

For further updates on this topic, refer to the prevailing wage website at:  
[http://dwd.wisconsin.gov/er/prevailing\\_wage\\_rate/default.htm](http://dwd.wisconsin.gov/er/prevailing_wage_rate/default.htm)

The recently approved State budget bill (2011 Wisconsin Act 40) includes major changes to prevailing wage laws (§§66.0903, 66.0904, 103.49 & 103.50, Wis. Stats.) effective JULY 1, 2011. Significant changes are described below.

Topic	Who's affected?	Brief description of requirement under §66.0903 or §103.49
Thresholds	All public entities & Contractors	The \$25,000 threshold for public works projects has been changed to single-trade and multiple-trade project thresholds as noted below. The new thresholds apply to prevailing wage projects whose prime contract is awarded after June 30, 2011.
Non-applicability: Threshold for Single-Trade Projects	All public entities & Contractors	Any single-trade project of public works with an estimated cost of completion of less than \$48,000 does not require a prevailing wage rate determination. "Single-trade project of public works" means a project of public works in which a single trade accounts for 85 percent or more of the total labor cost of the project.
Non-applicability: Threshold for Multiple-Trade Projects	All public entities except cities, towns & villages as noted below & Contractors	Any multiple-trade project of public works with an estimated cost of completion of less than \$100,000 does not require a prevailing wage rate determination. "Multiple-trade project of public works" means a project of public works in which no single trade accounts for 85 percent or more of the total labor cost of the project.
Non-applicability: Threshold for Multiple-Trade Projects	Cities or villages with a population less than 2500 & Towns & Contractors	A multiple trade project of public works erected, constructed, repaired, remodeled, or demolished by a private contractor for a city or village with a population less than 2500, or a town with an estimated cost of completion of less than \$234,000 does not require a prevailing wage rate determination. "Multiple-trade project of public works" means a project of public works in which no single trade accounts for 85 percent or more of the total labor cost of the project.
Non-applicability: Minor service & maintenance work	Towns & Contractors	The following TOWN projects only do not require a prevailing wage rate determination: <ul style="list-style-type: none"> <li>• A project not funded under §86.31, Stats. (TRIP projects) that is limited to minor crack filling, chip or slurry sealing or other minor pavement patching, not including overlays.</li> <li>• The depositing of gravel on an existing gravel road applied solely to maintain the road;</li> <li>• Road shoulder maintenance;</li> <li>• Cleaning drainage or sewer ditches or structures;</li> <li>• Any other limited, minor work on public facilities or equipment that is routinely performed to prevent breakdown or deterioration.</li> </ul>
Non-applicability: Work which a contractor or individual donates to a public entity	All public entities	Prevailing wage laws §§66.0903 & 103.49, Stats., do not apply to work performed on a project of public works for which the local governmental unit or the state or the state agency contracting for the project is not required to compensate any contractor, subcontractor, contractor's or subcontractor's agent, or individual for performing the work.

<b>Topic</b>	<b>Who's affected?</b>	<b>Brief description of requirement under §66.0903 or §103.49</b>
<b>Non-applicability: Residential</b>	<b>All public entities</b>	A prevailing wage rate determination is not required for the erection, construction, repair, remodeling, or demolition of a residential property containing 2 dwelling units or less.
<b>Non-applicability: Residential subdivision infrastructure</b>	<b>All public entities</b>	A prevailing wage rate determination is not required for a road, street, bridge, sanitary sewer, or water main project that is a part of a development in which at least 90 percent of the lots contain or will contain 2 dwelling units or less, as determined by the local governmental unit at the time of approval of the development, and that, on completion, is acquired by, or dedicated to, a local governmental unit (including under §236.13(2), Stats.), or the state, for ownership or maintenance by the local governmental unit or the state.
<b>Non-applicability: Certain nursing homes</b>	<b>All public entities</b>	Prevailing wage law §66.0903, Stats., does not apply to a project of public works involving the erection, construction, repair, remodeling, or demolition of a nursing home in a county having a population of less than 50,000 when the project commences no later than July 1, 2012.
<b>Electronic certified payroll record</b>	<b>Contractors</b>	The requirement that every contractor on a prevailing wage project submit to DWD monthly a certified record of employees who worked on the project and that DWD post these certified records on its Internet website is discontinued effective July 1, 2011. However, contractors who worked on prevailing wage projects during the period January 1, 2010 through June 30, 2011, must comply with the repealed law for work completed on projects during that period of time.
<b>Payroll record inspection request by any person</b>	<b>Contractors &amp; Complainants</b>	Any person may request DWD to inspect the payroll records of any contractor working on a prevailing wage project. On receipt of such a request, the contractor must submit to DWD a certified record of its payroll records, other than personally identifiable information relating to an employee of the contractor, for no longer than a 4-week period. DWD may request records from a contractor under this provision no more than once per calendar quarter for each project of public works on which the contractor is performing work. The department may not charge a requester a fee for obtaining that information. DWD must make these certified records available for public inspection.
<b>Complaints</b>	<b>Complainants</b>	There are no longer investigation fees.
<b>Statewide uniformity</b>	<b>Local governmental units</b>	A local governmental unit may not enact & administer a prevailing wage ordinance/provision for public works or publicly funded private construction projects. Any extant laws to that effect are void.

Topic	Who's affected?	Brief description of requirement under §66.0903, §103.49 or §103.50
Covered employees	Truck drivers & Other workers & Contractors	<p>A laborer, worker, mechanic, or truck driver who is employed to process, manufacture, pick up, or deliver materials or products from a commercial establishment that has a fixed place of business from which the establishment supplies processed or manufactured materials or products or from a facility that is not dedicated exclusively, or nearly so, to a project of public works is NOT entitled to receive the prevailing wage rate UNLESS any of the following applies:</p> <p>1) the laborer, worker, mechanic, or truck driver is employed to go to the source of mineral aggregate such as sand, gravel, or stone and deliver that mineral aggregate to the site of a project of public works by depositing the material directly in final place, from the transporting vehicle or through spreaders from the transporting vehicle.</p> <p>2) the laborer, worker, mechanic, or truck driver is employed to go to the site of a project of public works, pick up excavated material or spoil from the site of the project, and transport that excavated material or spoil away from the site of the project.</p>
Annual Prevailing Wage Survey	All public entities	When establishing yearly prevailing wage rates, DWD may not use data from any construction work that is performed by a local governmental unit or a state agency.
Prevailing Wage Rates	DOT & Contractors & Employees	For state highway prevailing wage rates, DWD is required to include wage rates for work performed on Sundays, holidays and shift differentials based on the time of day or night when work is performed.
<p>The 2009-2011 State budget bill (2009 Wisconsin Act 28) created a new prevailing wage law (§66.0904, Wis. Stats.) for PUBLICLY FUNDED PRIVATE CONSTRUCTION PROJECTS effective January 1, 2010. The current 2011-2013 State budget bill (2011 Wisconsin Act 32) REPEALS this law. So the publicly funded private construction projects law only applies to projects that awarded the prime contract during the period January 1, 2010 through June 30, 2011.</p>		

## **SINGLE & MULTIPLE TRADE PROJECT THRESHOLDS FOR §§66.0903 & 103.49, Wis. Stats. Effective July 1, 2011**

The \$25,000 threshold for public works projects has been changed to single-trade and multiple-trade project thresholds as described below. Projects of public works with total estimated costs of completion that equal or exceed these thresholds require a prevailing wage rate determination.

### **SINGLE-TRADE THRESHOLD**

A “single-trade project of public works” means a project in which a single trade accounts for 85 percent or more of the total labor cost of the project.

The single trade threshold is \$48,000.

### **MULTIPLE-TRADE THRESHOLDS**

A “multiple-trade project of public works” means a project in which no single trade accounts for 85 percent or more of the total labor cost of the project.

(a) The multiple-trade threshold is \$100,000, unless a municipality falls under the description in (b).

(b) The multiple-trade threshold of \$234,000 applies to public works projects erected, constructed, repaired, remodeled, or demolished by a private contractor for:

- a city or village with a population less than 2500, or
- a town

### **APPLYING THE NEW THRESHOLDS**

The department will apply the new single-trade & multiple-trade prevailing wage thresholds to projects of public works for which the prime contract is awarded on or after July 1, 2011.

**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):
20121211027	1170-01-70	WISC 2012708
	1170-01-71	N/A
	1170-01-73	WISC 2012709
	6999-18-70	WISC 2012714

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	137.000				
	STA		.		.	
0020	201.0205 GRUBBING	137.000				
	STA		.		.	
0030	203.0100 REMOVING SMALL PIPE CULVERTS	44.000				
	EACH		.		.	
0040	203.0200 REMOVING OLD STRUCTURE (STATION) 01. 765+14.11 NB	LUMP	LUMP			.
0050	203.0200 REMOVING OLD STRUCTURE (STATION) 02. 766+38.72 SB	LUMP	LUMP			.
0060	203.0200 REMOVING OLD STRUCTURE (STATION) 03. 49+90 U	LUMP	LUMP			.
0070	203.0200 REMOVING OLD STRUCTURE (STATION) 04. 812+08.84 SB	LUMP	LUMP			.
0080	203.0200 REMOVING OLD STRUCTURE (STATION) 20. 61+07 KN	LUMP	LUMP			.
0090	203.0500.S REMOVING OLD STRUCTURE OVER WATERWAY (STATION) 01. 755+02.50 SB	LUMP	LUMP			.

## SCHEDULE OF ITEMS

REVISED:

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1170-01-70  
1170-01-71  
1170-01-73  
6999-18-70FEDERAL ID(S):  
WISC 2012708  
N/A  
WISC 2012709  
WISC 2012714

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS   CTS	BID AMOUNT DOLLARS   CTS
0100	203.0500.S REMOVING OLD STRUCTURE OVER WATERWAY (STATION) 02. 788+91.88 NB	LUMP	LUMP	.
0110	203.0500.S REMOVING OLD STRUCTURE OVER WATERWAY (STATION) 03. 32+81.96 KS	LUMP	LUMP	.
0120	204.0100 REMOVING PAVEMENT	91,280.000 SY	.	.
0130	204.0110 REMOVING ASPHALTIC SURFACE	4,912.000 SY	.	.
0140	204.0150 REMOVING CURB & GUTTER	1,955.000 LF	.	.
0150	204.0155 REMOVING CONCRETE SIDEWALK	274.000 SY	.	.
0160	204.0165 REMOVING GUARDRAIL	5,970.000 LF	.	.
0170	204.0170 REMOVING FENCE	20,866.000 LF	.	.
0180	204.0180 REMOVING DELINEATORS AND MARKERS	196.000 EACH	.	.
0190	204.0195 REMOVING CONCRETE BASES	9.000 EACH	.	.



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6999-18-70FEDERAL ID(S):  
WISC 2012708  
N/A  
WISC 2012709  
WISC 2012714

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS   CTS	BID AMOUNT DOLLARS   CTS
0200	204.0210 REMOVING MANHOLES	3.000 EACH	.	.
0210	204.0220 REMOVING INLETS	41.000 EACH	.	.
0220	204.0245 REMOVING STORM SEWER (SIZE) 01. 12-INCH	435.000 LF	.	.
0230	204.0245 REMOVING STORM SEWER (SIZE) 02. 15-INCH	72.000 LF	.	.
0240	204.0245 REMOVING STORM SEWER (SIZE) 03. 18-INCH	72.000 LF	.	.
0250	204.0270 ABANDONING CULVERT PIPES	11.000 EACH	.	.
0260	204.9060.S REMOVING (ITEM DESCRIPTION) 03. PARTIAL PIPE	11.000 EACH	.	.
0270	204.9090.S REMOVING (ITEM DESCRIPTION) 01. MODULAR BLOCK RETAINING WALL	23.000 LF	.	.
0280	204.9090.S REMOVING (ITEM DESCRIPTION) 02. CABLE GUARD	650.000 LF	.	.
0290	205.0100 EXCAVATION COMMON	450,304.000 CY	.	.

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CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0300	205.0200 EXCAVATION ROCK	11,529.000				
		CY	.		.	
0310	205.0400 EXCAVATION MARSH	2,234.000				
		CY	.		.	
0320	206.1000 EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 01. B-37-153	LUMP	LUMP			.
0330	206.1000 EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 02. B-37-154	LUMP	LUMP			.
0340	206.1000 EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 03. B-37-436	LUMP	LUMP			.
0350	206.1000 EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 04. B-37-156	LUMP	LUMP			.
0360	206.2000 EXCAVATION FOR STRUCTURES CULVERTS (STRUCTURE) 01. C-37-27	LUMP	LUMP			.
0370	206.2000 EXCAVATION FOR STRUCTURES CULVERTS (STRUCTURE) 02. B-37-167	LUMP	LUMP			.

## SCHEDULE OF ITEMS

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1170-01-70

WISC 2012708

1170-01-71

N/A

1170-01-73

WISC 2012709

6999-18-70

WISC 2012714

CONTRACTOR : \_\_\_\_\_

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0380	206.2000 EXCAVATION FOR STRUCTURES CULVERTS (STRUCTURE) 03. C-37-4	LUMP	LUMP	.
0390	206.6000.S TEMPORARY SHORING	1,728.000 SF	.	.
0400	208.0100 BORROW	5,000.000 CY	.	.
0410	210.0100 BACKFILL STRUCTURE	1,960.000 CY	.	.
0420	213.0100 FINISHING ROADWAY (PROJECT) 01. 1170-01-70	1.000 EACH	.	.
0430	213.0100 FINISHING ROADWAY (PROJECT) 02. 1170-01-73	1.000 EACH	.	.
0440	213.0100 FINISHING ROADWAY (PROJECT) 03. 6999-18-70	1.000 EACH	.	.
0450	214.0100 OBLITERATING OLD ROAD	16.000 STA	.	.
0460	305.0110 BASE AGGREGATE DENSE 3/4-INCH	11,700.000 TON	.	.
0470	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH	130,506.000 TON	.	.

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N/A  
WISC 2012709  
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CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0480	310.0110 BASE AGGREGATE OPEN GRADED	26,862.000 TON	.		.	
0490	312.0110 SELECT CRUSHED MATERIAL	149,333.000 TON	.		.	
0500	405.0100 COLORING CONCRETE RED	422.000 CY	.		.	
0510	415.0070 CONCRETE PAVEMENT 7-INCH	5,241.000 SY	.		.	
0520	415.0080 CONCRETE PAVEMENT 8-INCH	15,021.000 SY	.		.	
0530	415.0085 CONCRETE PAVEMENT 8 1/2-INCH	11,741.000 SY	.		.	
0540	415.0100 CONCRETE PAVEMENT 10-INCH	68,540.000 SY	.		.	
0550	415.0410 CONCRETE PAVEMENT APPROACH SLAB	820.000 SY	.		.	
0560	415.1080 CONCRETE PAVEMENT HES 8-INCH	2,400.000 SY	.		.	
0570	415.1100 CONCRETE PAVEMENT HES 10-INCH	1,375.000 SY	.		.	

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WISC 2012708  
N/A  
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CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0580	415.6000.S ROUTE AND SEAL	36,602.000 LF	.		.	
0590	416.0160 CONCRETE DRIVEWAY 6-INCH	971.000 SY	.		.	
0600	416.0508 CONCRETE ROUNDAABOUT TRUCK APRON 8-INCH	1,344.000 SY	.		.	
0610	416.0620 DRILLED DOWEL BARS	106.000 EACH	.		.	
0620	416.1010 CONCRETE SURFACE DRAINS	71.200 CY	.		.	
0630	440.4410.S INCENTIVE IRI RIDE	15,752.000 DOL	1.00000		15752.00	
0640	455.0115 ASPHALTIC MATERIAL PG64-22	709.000 TON	.		.	
0650	455.0120 ASPHALTIC MATERIAL PG64-28	154.000 TON	.		.	
0660	455.0122 ASPHALTIC MATERIAL PG64-34	370.000 TON	.		.	
0670	455.0605 TACK COAT	4,521.000 GAL	.		.	

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CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0680	460.1100 HMA PAVEMENT TYPE E-0.3	9,854.000 TON	.		.	
0690	460.1101 HMA PAVEMENT TYPE E-1	7,968.000 TON	.		.	
0700	460.1103 HMA PAVEMENT TYPE E-3	4,633.000 TON	.		.	
0710	460.2000 INCENTIVE DENSITY HMA PAVEMENT	14,370.000 DOL	1.00000		14370.00	
0720	465.0105 ASPHALTIC SURFACE	312.000 TON	.		.	
0730	465.0110 ASPHALTIC SURFACE PATCHING	10.000 TON	.		.	
0740	465.0120 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES	454.000 TON	.		.	
0750	465.0125 ASPHALTIC SURFACE TEMPORARY	27,785.000 TON	.		.	
0760	465.0315 ASPHALTIC FLUMES	24.000 SY	.		.	
0770	465.0400 ASPHALTIC SHOULDER RUMBLE STRIP	29,649.000 LF	.		.	

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CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0780	502.0100 CONCRETE MASONRY BRIDGES	3,217.000 CY	.		.	
0790	502.3100 EXPANSION DEVICE (STRUCTURE) 01. B-37-153	LUMP	LUMP		.	
0800	502.3100 EXPANSION DEVICE (STRUCTURE) 02. B-37-154	LUMP	LUMP		.	
0810	502.3200 PROTECTIVE SURFACE TREATMENT	8,080.000 SY	.		.	
0820	502.5005 MASONRY ANCHORS TYPE L NO. 5 BARS	1,046.000 EACH	.		.	
0830	502.6110 MASONRY ANCHORS TYPE S 3/4-INCH	10.000 EACH	.		.	
0840	503.0155 PRESTRESSED GIRDER TYPE I 54W-INCH	3,567.000 LF	.		.	
0850	504.0100 CONCRETE MASONRY CULVERTS	126.000 CY	.		.	
0860	505.0405 BAR STEEL REINFORCEMENT HS BRIDGES	41,520.000 LB	.		.	
0870	505.0410 BAR STEEL REINFORCEMENT HS CULVERTS	12,920.000 LB	.		.	

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WISC 2012708  
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CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS   CTS	BID AMOUNT DOLLARS   CTS
0880	505.0605 BAR STEEL REINFORCEMENT HS COATED BRIDGES	622,380.000 LB	.	.
0890	506.2605 BEARING PADS ELASTOMERIC NON-LAMINATED	56.000 EACH	.	.
0900	506.3015 WELDED STUD SHEAR CONNECTORS 7/8X6-INCH	9,240.000 EACH	.	.
0910	506.4000 STEEL DIAPHRAGMS (STRUCTURE) 01. B-37-436	52.000 EACH	.	.
0920	506.4000 STEEL DIAPHRAGMS (STRUCTURE) 02. B-37-156	15.000 EACH	.	.
0930	509.1500 CONCRETE SURFACE REPAIR	130.000 SF	.	.
0940	509.5100.S POLYMER OVERLAY	3,790.000 SY	.	.
0950	513.2000 RAILING PIPE (STRUCTURE) 01. CTH U RETAINING WALL	LUMP	LUMP	.
0960	516.0500 RUBBERIZED MEMBRANE WATERPROOFING	215.000 SY	.	.
0970	517.0900.S PREPARATION AND COATING OF TOP FLANGES (STRUCTURE) 01. B-37-153	LUMP	LUMP	.



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WISC 2012708  
N/A  
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CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0980	517.0900.S PREPARATION AND COATING OF TOP FLANGES (STRUCTURE) 02. B-37-154	LUMP	LUMP			.
0990	517.1010.S CONCRETE STAINING (STRUCTURE) 01. B-37-153	5,380.000 SF		.		.
1000	517.1010.S CONCRETE STAINING (STRUCTURE) 02. B-37-154	5,380.000 SF		.		.
1010	517.1010.S CONCRETE STAINING (STRUCTURE) 03. B-37-436	14,240.000 SF		.		.
1020	517.1800.S STRUCTURE REPAINTING RECYCLED ABRASIVE (STRUCTURE) 01. B-37-153	LUMP	LUMP			.
1030	517.1800.S STRUCTURE REPAINTING RECYCLED ABRASIVE (STRUCTURE) 02. B-37-154	LUMP	LUMP			.
1040	517.4500.S NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS (STRUCTURE) 01. B-37-153	LUMP	LUMP			.
1050	517.4500.S NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS (STRUCTURE) 02. B-37-154	LUMP	LUMP			.

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WISC 2012708  
N/A  
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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
1060	517.6001.S PORTABLE DECONTAMINATION FACILITY	1.000 EACH	.		.	
1070	520.4012 CULVERT PIPE TEMPORARY 12-INCH	1,344.000 LF	.		.	
1080	520.4018 CULVERT PIPE TEMPORARY 18-INCH	2,393.000 LF	.		.	
1090	520.4024 CULVERT PIPE TEMPORARY 24-INCH	602.000 LF	.		.	
1100	520.4036 CULVERT PIPE TEMPORARY 36-INCH	6.000 LF	.		.	
1110	520.4042 CULVERT PIPE TEMPORARY 42-INCH	130.000 LF	.		.	
1120	520.8000 CONCRETE COLLARS FOR PIPE	1.000 EACH	.		.	
1130	521.0112 CULVERT PIPE CORRUGATED STEEL 12-INCH	329.000 LF	.		.	
1140	521.0115 CULVERT PIPE CORRUGATED STEEL 15-INCH	133.000 LF	.		.	
1150	521.0118 CULVERT PIPE CORRUGATED STEEL 18-INCH	551.000 LF	.		.	

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			DOLLARS	CTS	DOLLARS	CTS
1160	521.0124 CULVERT PIPE CORRUGATED STEEL 24-INCH	131.000 LF	.		.	
1170	521.0130 CULVERT PIPE CORRUGATED STEEL 30-INCH	188.000 LF	.		.	
1180	521.0136 CULVERT PIPE CORRUGATED STEEL 36-INCH	77.000 LF	.		.	
1190	521.1012 APRON ENDWALLS FOR CULVERT PIPE STEEL 12-INCH	22.000 EACH	.		.	
1200	521.1015 APRON ENDWALLS FOR CULVERT PIPE STEEL 15-INCH	6.000 EACH	.		.	
1210	521.1018 APRON ENDWALLS FOR CULVERT PIPE STEEL 18-INCH	14.000 EACH	.		.	
1220	521.1024 APRON ENDWALLS FOR CULVERT PIPE STEEL 24-INCH	2.000 EACH	.		.	
1230	521.1030 APRON ENDWALLS FOR CULVERT PIPE STEEL 30-INCH	4.000 EACH	.		.	
1240	521.1036 APRON ENDWALLS FOR CULVERT PIPE STEEL 36-INCH	1.000 EACH	.		.	
1250	521.1518 APRON ENDWALLS FOR CULVERT PIPE SLOPED SIDE DRAINS STEEL 18-INCH 6 TO 1	1.000 EACH	.		.	

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WISC 2012708  
N/A  
WISC 2012709  
WISC 2012714

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
1260	521.1618 APRON ENDWALLS FOR CULVERT PIPE SLOPED SIDE DRAINS STEEL 18-INCH 10 TO 1	2.000 EACH		.		.
1270	522.0118 CULVERT PIPE REINFORCED CONCRETE CLASS III 18-INCH	769.000 LF		.		.
1280	522.0121 CULVERT PIPE REINFORCED CONCRETE CLASS III 21-INCH	250.000 LF		.		.
1290	522.0124 CULVERT PIPE REINFORCED CONCRETE CLASS III 24-INCH	364.000 LF		.		.
1300	522.0130 CULVERT PIPE REINFORCED CONCRETE CLASS III 30-INCH	101.000 LF		.		.
1310	522.0136 CULVERT PIPE REINFORCED CONCRETE CLASS III 36-INCH	481.000 LF		.		.
1320	522.0142 CULVERT PIPE REINFORCED CONCRETE CLASS III 42-INCH	243.000 LF		.		.
1330	522.0148 CULVERT PIPE REINFORCED CONCRETE CLASS III 48-INCH	254.000 LF		.		.
1340	522.0172 CULVERT PIPE REINFORCED CONCRETE CLASS III 72-INCH	222.000 LF		.		.
1350	522.1012 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 12-INCH	6.000 EACH		.		.

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			DOLLARS	CTS	DOLLARS	CTS
1360	522.1015 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 15-INCH	13.000 EACH	.		.	
1370	522.1018 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 18-INCH	8.000 EACH	.		.	
1380	522.1021 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 21-INCH	4.000 EACH	.		.	
1390	522.1024 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH	9.000 EACH	.		.	
1400	522.1030 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 30-INCH	4.000 EACH	.		.	
1410	522.1036 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 36-INCH	7.000 EACH	.		.	
1420	522.1042 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 42-INCH	2.000 EACH	.		.	
1430	522.1048 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 48-INCH	2.000 EACH	.		.	

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
1440	522.1072 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 72-INCH	2.000 EACH	.		.	
1450	524.0618 APRON ENDWALLS FOR CULVERT PIPE SALVAGED 18-INCH	1.000 EACH	.		.	
1460	524.0630 APRON ENDWALLS FOR CULVERT PIPE SALVAGED 30-INCH	1.000 EACH	.		.	
1470	532.0200.S WALL MODULAR BLOCK GRAVITY	322.000 SF	.		.	
1480	550.0020 PRE-BORING ROCK OR CONSOLIDATED MATERIALS	319.000 LF	.		.	
1490	550.1100 PILING STEEL HP 10-INCH X 42 LB	1,052.000 LF	.		.	
1500	601.0409 CONCRETE CURB & GUTTER 30-INCH TYPE A	15,918.000 LF	.		.	
1510	601.0411 CONCRETE CURB & GUTTER 30-INCH TYPE D	11,019.000 LF	.		.	
1520	601.0553 CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE D	14.000 LF	.		.	
1530	601.0555 CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE A	2,403.000 LF	.		.	

## SCHEDULE OF ITEMS

REVISED:

CONTRACT:  
20121211027PROJECT(S):  
1170-01-70  
1170-01-71  
1170-01-73  
6999-18-70FEDERAL ID(S):  
WISC 2012708  
N/A  
WISC 2012709  
WISC 2012714

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS   CTS	BID AMOUNT DOLLARS   CTS
1540	601.0557 CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE D	701.000 LF	.	.
1550	601.0574 CONCRETE CURB & GUTTER 4-INCH SLOPED 30-INCH TYPE G	534.000 LF	.	.
1560	601.0580 CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE R	800.000 LF	.	.
1570	601.0600 CONCRETE CURB PEDESTRIAN	240.000 LF	.	.
1580	602.0405 CONCRETE SIDEWALK 4-INCH	91,050.000 SF	.	.
1590	602.0420 CONCRETE SIDEWALK 7-INCH	1,672.000 SF	.	.
1600	602.0505 CURB RAMP DETECTABLE WARNING FIELD YELLOW	736.000 SF	.	.
1610	603.1142 CONCRETE BARRIER TYPE S42	1,696.000 LF	.	.
1620	603.1442 CONCRETE BARRIER TYPE S42C	1,132.000 LF	.	.
1630	603.8000 CONCRETE BARRIER TEMPORARY PRECAST DELIVERED	13,855.000 LF	.	.

## SCHEDULE OF ITEMS

CONTRACT:  
20121211027PROJECT(S):  
1170-01-70  
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6999-18-70FEDERAL ID(S):  
WISC 2012708  
N/A  
WISC 2012709  
WISC 2012714

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
1640	603.8125 CONCRETE BARRIER TEMPORARY PRECAST INSTALLED	52,475.000 LF	.		.	
1650	604.0400 SLOPE PAVING CONCRETE	1,010.000 SY	.		.	
1660	606.0200 RIPRAP MEDIUM	2,211.000 CY	.		.	
1670	606.0300 RIPRAP HEAVY	970.000 CY	.		.	
1680	606.0700 GROUTED RIPRAP HEAVY	202.000 CY	.		.	
1690	607.5000 STORM SEWER ROCK EXCAVATION	2,627.000 CY	.		.	
1700	608.0312 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH	2,638.000 LF	.		.	
1710	608.0315 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 15-INCH	2,881.000 LF	.		.	
1720	608.0318 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 18-INCH	2,125.000 LF	.		.	
1730	608.0321 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 21-INCH	895.000 LF	.		.	



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WISC 2012708  
N/A  
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CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS   CTS	BID AMOUNT DOLLARS   CTS
1740	608.0324 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 24-INCH	1,729.000 LF	.	.
1750	608.0330 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 30-INCH	454.000 LF	.	.
1760	608.0336 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 36-INCH	530.000 LF	.	.
1770	611.0420 RECONSTRUCTING MANHOLES	7.000 EACH	.	.
1780	611.0530 MANHOLE COVERS TYPE J	24.000 EACH	.	.
1790	611.0606 INLET COVERS TYPE B	3.000 EACH	.	.
1800	611.0610 INLET COVERS TYPE BW	5.000 EACH	.	.
1810	611.0612 INLET COVERS TYPE C	5.000 EACH	.	.
1820	611.0624 INLET COVERS TYPE H	116.000 EACH	.	.
1830	611.0627 INLET COVERS TYPE HM	8.000 EACH	.	.

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CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
1840	611.0642 INLET COVERS TYPE MS	41.000 EACH	.		.	
1850	611.0652 INLET COVERS TYPE T	4.000 EACH	.		.	
1860	611.0654 INLET COVERS TYPE V	5.000 EACH	.		.	
1870	611.2004 MANHOLES 4-FT DIAMETER	35.000 EACH	.		.	
1880	611.2005 MANHOLES 5-FT DIAMETER	12.000 EACH	.		.	
1890	611.2006 MANHOLES 6-FT DIAMETER	3.000 EACH	.		.	
1900	611.3220 INLETS 2X2-FT	8.000 EACH	.		.	
1910	611.3225 INLETS 2X2.5-FT	7.000 EACH	.		.	
1920	611.3230 INLETS 2X3-FT	105.000 EACH	.		.	
1930	611.3901 INLETS MEDIAN 1 GRATE	6.000 EACH	.		.	

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CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
1940	611.3902 INLETS MEDIAN 2 GRATE	22.000 EACH	.		.	
1950	611.8110 ADJUSTING MANHOLE COVERS	8.000 EACH	.		.	
1960	611.8115 ADJUSTING INLET COVERS	1.000 EACH	.		.	
1970	611.8120.S COVER PLATES TEMPORARY	8.000 EACH	.		.	
1980	611.9800.S PIPE GRATES	31.000 EACH	.		.	
1990	612.0106 PIPE UNDERDRAIN 6-INCH	24,218.000 LF	.		.	
2000	612.0206 PIPE UNDERDRAIN UNPERFORATED 6-INCH	264.000 LF	.		.	
2010	612.0212 PIPE UNDERDRAIN UNPERFORATED 12-INCH	355.000 LF	.		.	
2020	612.0406 PIPE UNDERDRAIN WRAPPED 6-INCH	480.000 LF	.		.	
2030	612.0806 APRON ENDWALLS FOR UNDERDRAIN REINFORCED CONCRETE 6-INCH	24.000 EACH	.		.	

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CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
2040	614.0150 ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	16.000 EACH	.		.	
2050	614.0220 STEEL THRIE BEAM BULLNOSE TERMINAL	2.000 EACH	.		.	
2060	614.0230 STEEL THRIE BEAM	275.000 LF	.		.	
2070	614.0250 STEEL THRIE BEAM STRUCTURE APPROACH TEMPORARY	21.000 LF	.		.	
2080	614.0305 STEEL PLATE BEAM GUARD CLASS A	508.000 LF	.		.	
2090	614.0360 STEEL PLATE BEAM GUARD TEMPORARY	500.000 LF	.		.	
2100	614.0380 STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL TEMPORARY	1.000 EACH	.		.	
2110	614.0805 CRASH CUSHIONS PERMANENT LOW MAINTENANCE	2.000 EACH	.		.	
2120	614.0905 CRASH CUSHIONS TEMPORARY	19.000 EACH	.		.	
2130	614.2300 MGS GUARDRAIL 3	2,763.000 LF	.		.	

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CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
2140	614.2500 MGS THRIE BEAM TRANSITION	359.000 LF	.		.	
2150	614.2610 MGS GUARDRAIL TERMINAL EAT	9.000 EACH	.		.	
2160	614.2620 MGS GUARDRAIL TERMINAL TYPE 2	1.000 EACH	.		.	
2170	616.0206 FENCE CHAIN LINK 6-FT	20,286.000 LF	.		.	
2180	616.0700.S FENCE SAFETY	200.000 LF	.		.	
2190	618.0100 MAINTENANCE AND REPAIR OF HAUL ROADS (PROJECT) 01. 1170-01-70	1.000 EACH	.		.	
2200	618.0100 MAINTENANCE AND REPAIR OF HAUL ROADS (PROJECT) 02. 1170-01-73	1.000 EACH	.		.	
2210	618.0100 MAINTENANCE AND REPAIR OF HAUL ROADS (PROJECT) 03. 6999-18-70	1.000 EACH	.		.	
2220	619.1000 MOBILIZATION	1.000 EACH	.		.	

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CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
2230	620.0300 CONCRETE MEDIAN SLOPED NOSE	1,297.000 SF	.		.	
2240	624.0100 WATER	5,048.000 MGAL	.		.	
2250	625.0100 TOPSOIL	448,950.000 SY	.		.	
2260	627.0200 MULCHING	264,650.000 SY	.		.	
2270	628.1504 SILT FENCE	20,575.000 LF	.		.	
2280	628.1520 SILT FENCE MAINTENANCE	20,575.000 LF	.		.	
2290	628.1905 MOBILIZATIONS EROSION CONTROL	32.000 EACH	.		.	
2300	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL	32.000 EACH	.		.	
2310	628.2004 EROSION MAT CLASS I TYPE B	117,300.000 SY	.		.	
2320	628.2006 EROSION MAT URBAN CLASS I TYPE A	39,850.000 SY	.		.	

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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
2330	628.2023 EROSION MAT CLASS II TYPE B	9,650.000 SY	.		.	
2340	628.6510 SOIL STABILIZER TYPE B	6.000 ACRE	.		.	
2350	628.7005 INLET PROTECTION TYPE A	178.000 EACH	.		.	
2360	628.7010 INLET PROTECTION TYPE B	45.000 EACH	.		.	
2370	628.7015 INLET PROTECTION TYPE C	176.000 EACH	.		.	
2380	628.7020 INLET PROTECTION TYPE D	12.000 EACH	.		.	
2390	628.7504 TEMPORARY DITCH CHECKS	2,560.000 LF	.		.	
2400	628.7555 CULVERT PIPE CHECKS	325.000 EACH	.		.	
2410	628.7560 TRACKING PADS	6.000 EACH	.		.	
2420	628.7570 ROCK BAGS	895.000 EACH	.		.	

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WISC 2012708  
N/A  
WISC 2012709  
WISC 2012714

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
2430	629.0210 FERTILIZER TYPE B	272.000 CWT	.		.	
2440	630.0120 SEEDING MIXTURE NO. 20	6,065.000 LB	.		.	
2450	630.0130 SEEDING MIXTURE NO. 30	3,360.000 LB	.		.	
2460	630.0140 SEEDING MIXTURE NO. 40	710.000 LB	.		.	
2470	630.0160 SEEDING MIXTURE NO. 60	150.000 LB	.		.	
2480	630.0200 SEEDING TEMPORARY	390.000 LB	.		.	
2490	632.0101 TREES (SPECIES, ROOT, SIZE) 01. RAINBOW PILLAR SERVICEBERRY	5.000 EACH	.		.	
2500	633.0100 DELINEATOR POSTS STEEL	171.000 EACH	.		.	
2510	633.0500 DELINEATOR REFLECTORS	311.000 EACH	.		.	
2520	633.1000 DELINEATOR BRACKETS	53.000 EACH	.		.	



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6999-18-70FEDERAL ID(S):  
WISC 2012708  
N/A  
WISC 2012709  
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CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
2530	633.1100 DELINEATORS TEMPORARY	124.000 EACH	.		.	
2540	633.5200 MARKERS CULVERT END	2.000 EACH	.		.	
2550	634.0612 POSTS WOOD 4X6-INCH X 12-FT	5.000 EACH	.		.	
2560	634.0614 POSTS WOOD 4X6-INCH X 14-FT	53.000 EACH	.		.	
2570	634.0616 POSTS WOOD 4X6-INCH X 16-FT	81.000 EACH	.		.	
2580	634.0618 POSTS WOOD 4X6-INCH X 18-FT	38.000 EACH	.		.	
2590	634.0620 POSTS WOOD 4X6-INCH X 20-FT	34.000 EACH	.		.	
2600	634.0622 POSTS WOOD 4X6-INCH X 22-FT	4.000 EACH	.		.	
2610	634.0808 POSTS TUBULAR STEEL 2X2-INCH X 8-FT	10.000 EACH	.		.	
2620	634.0809 POSTS TUBULAR STEEL 2X2-INCH X 9.5-FT	10.000 EACH	.		.	

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WISC 2012708  
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CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS   CTS	BID AMOUNT DOLLARS   CTS
2630	634.0810 POSTS TUBULAR STEEL 2X2-INCH X 10-FT	7.000 EACH	.	.
2640	634.0811 POSTS TUBULAR STEEL 2X2-INCH X 11-FT	71.000 EACH	.	.
2650	634.0812 POSTS TUBULAR STEEL 2X2-INCH X 12-FT	17.000 EACH	.	.
2660	634.0814 POSTS TUBULAR STEEL 2X2-INCH X 14-FT	21.000 EACH	.	.
2670	634.0816 POSTS TUBULAR STEEL 2X2-INCH X 16-FT	9.000 EACH	.	.
2680	635.0200 SIGN SUPPORTS STRUCTURAL STEEL HS	6,370.000 LB	.	.
2690	636.0100 SIGN SUPPORTS CONCRETE MASONRY	57.000 CY	.	.
2700	636.0500 SIGN SUPPORTS STEEL REINFORCEMENT	724.000 LB	.	.
2710	636.1500 SIGN SUPPORTS STEEL COATED REINFORCEMENT HS	2,950.000 LB	.	.
2720	637.0101 SIGNS TYPE I	2,443.500 SF	.	.

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CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS   CTS	BID AMOUNT DOLLARS   CTS
2730	637.0103 SIGNS TYPE III	240.000		
		SF	.	.
2740	637.0202 SIGNS REFLECTIVE TYPE II	2,769.720		
		SF	.	.
2750	637.0402 SIGNS REFLECTIVE FOLDING TYPE II	86.620		
		SF	.	.
2760	638.2101 MOVING SIGNS TYPE I	2.000		
		EACH	.	.
2770	638.2102 MOVING SIGNS TYPE II	39.000		
		EACH	.	.
2780	638.2103 MOVING SIGNS TYPE III	2.000		
		EACH	.	.
2790	638.2601 REMOVING SIGNS TYPE I	16.000		
		EACH	.	.
2800	638.2602 REMOVING SIGNS TYPE II	411.000		
		EACH	.	.
2810	638.3000 REMOVING SMALL SIGN SUPPORTS	254.000		
		EACH	.	.
2820	638.3100 REMOVING STRUCTURAL STEEL SIGN SUPPORTS	14.000		
		EACH	.	.

## SCHEDULE OF ITEMS

CONTRACT:

PROJECT(S):

FEDERAL ID(S):

20121211027

1170-01-70

WISC 2012708

1170-01-71

N/A

1170-01-73

WISC 2012709

6999-18-70

WISC 2012714

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS   CTS	BID AMOUNT DOLLARS   CTS
2830	638.4000 MOVING SMALL SIGN SUPPORTS	28.000 EACH	.	.
2840	641.6600 SIGN BRIDGE (STRUCTURE) 01. S-37-91	LUMP	LUMP	.
2850	641.8100 OVERHEAD SIGN SUPPORT (STRUCTURE) 01. S-37-105	LUMP	LUMP	.
2860	641.8100 OVERHEAD SIGN SUPPORT (STRUCTURE) 02. S-37-106	LUMP	LUMP	.
2870	641.8100 OVERHEAD SIGN SUPPORT (STRUCTURE) 03. S-37-107	LUMP	LUMP	.
2880	641.8100 OVERHEAD SIGN SUPPORT (STRUCTURE) 04. S-37-108	LUMP	LUMP	.
2890	641.8100 OVERHEAD SIGN SUPPORT (STRUCTURE) 05. S-37-109	LUMP	LUMP	.
2900	641.8100 OVERHEAD SIGN SUPPORT (STRUCTURE) 06. S-37-110	LUMP	LUMP	.
2910	642.5201 FIELD OFFICE TYPE C	1.000 EACH	.	.
2920	643.0200 TRAFFIC CONTROL SURVEILLANCE AND MAINTENANCE (PROJECT) 01. 1170-01-70	579.000 DAY	.	.

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CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
2930	643.0200 TRAFFIC CONTROL SURVEILLANCE AND MAINTENANCE (PROJECT) 02. 1170-01-73	579.000 DAY	.		.	
2940	643.0200 TRAFFIC CONTROL SURVEILLANCE AND MAINTENANCE (PROJECT) 03. 6999-18-70	579.000 DAY	.		.	
2950	643.0300 TRAFFIC CONTROL DRUMS	145,800.000 DAY	.		.	
2960	643.0420 TRAFFIC CONTROL BARRICADES TYPE III	27,900.000 DAY	.		.	
2970	643.0500 TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS	675.000 EACH	.		.	
2980	643.0600 TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER BASES	675.000 EACH	.		.	
2990	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A	40,850.000 DAY	.		.	
3000	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C	16,800.000 DAY	.		.	
3010	643.0800 TRAFFIC CONTROL ARROW BOARDS	670.000 DAY	.		.	
3020	643.0900 TRAFFIC CONTROL SIGNS	66,970.000 DAY	.		.	

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CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS   CTS	BID AMOUNT DOLLARS   CTS
3030	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II	219.000 EACH	.	.
3040	643.1050 TRAFFIC CONTROL SIGNS PCMS	4,290.000 DAY	.	.
3050	643.2000 TRAFFIC CONTROL DETOUR (PROJECT) 01. 1170-01-70	1.000 EACH	.	.
3060	643.2000 TRAFFIC CONTROL DETOUR (PROJECT) 02. 1170-01-73	1.000 EACH	.	.
3070	643.2000 TRAFFIC CONTROL DETOUR (PROJECT) 03. 6999-18-70	1.000 EACH	.	.
3080	643.3000 TRAFFIC CONTROL DETOUR SIGNS	180,422.000 DAY	.	.
3090	645.0105 GEOTEXTILE FABRIC TYPE C	285.000 SY	.	.
3100	645.0111 GEOTEXTILE FABRIC TYPE DF SCHEDULE A	14,024.000 SY	.	.
3110	645.0120 GEOTEXTILE FABRIC TYPE HR	7,361.000 SY	.	.
3120	645.0135 GEOTEXTILE FABRIC TYPE SR	2,481.000 SY	.	.

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WISC 2012708  
N/A  
WISC 2012709  
WISC 2012714

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
3130	646.0106 PAVEMENT MARKING EPOXY 4-INCH	143,288.000 LF	.		.	
3140	646.0126 PAVEMENT MARKING EPOXY 8-INCH	4,293.000 LF	.		.	
3150	646.0600 REMOVING PAVEMENT MARKINGS	60,779.000 LF	.		.	
3160	646.0841.S PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH	7,090.000 LF	.		.	
3170	646.0843.S PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH	10,410.000 LF	.		.	
3180	647.0156 PAVEMENT MARKING ARROWS EPOXY TYPE 1	2.000 EACH	.		.	
3190	647.0166 PAVEMENT MARKING ARROWS EPOXY TYPE 2	22.000 EACH	.		.	
3200	647.0356 PAVEMENT MARKING WORDS EPOXY	20.000 EACH	.		.	
3210	647.0456 PAVEMENT MARKING CURB EPOXY	625.000 LF	.		.	

## SCHEDULE OF ITEMS

CONTRACT:  
20121211027PROJECT(S):  
1170-01-70  
1170-01-71  
1170-01-73  
6999-18-70FEDERAL ID(S):  
WISC 2012708  
N/A  
WISC 2012709  
WISC 2012714

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
3220	647.0566 PAVEMENT MARKING STOP LINE EPOXY 18-INCH	402.000 LF	.		.	
3230	647.0606 PAVEMENT MARKING ISLAND NOSE EPOXY	15.000 EACH	.		.	
3240	647.0726 PAVEMENT MARKING DIAGONAL EPOXY 12-INCH	882.000 LF	.		.	
3250	647.0736 PAVEMENT MARKING DIAGONAL EPOXY 18-INCH	85.000 LF	.		.	
3260	647.0746 PAVEMENT MARKING DIAGONAL EPOXY 24-INCH	965.000 LF	.		.	
3270	647.0776 PAVEMENT MARKING CROSSWALK EPOXY 12-INCH	1,604.000 LF	.		.	
3280	647.0955 REMOVING PAVEMENT MARKINGS ARROWS	6.000 EACH	.		.	
3290	647.0965 REMOVING PAVEMENT MARKINGS WORDS	6.000 EACH	.		.	
3300	649.0100 TEMPORARY PAVEMENT MARKING 4-INCH	127,937.000 LF	.		.	
3310	649.0400 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH	180.000 LF	.		.	



## SCHEDULE OF ITEMS

CONTRACT:  
20121211027PROJECT(S):  
1170-01-70  
1170-01-71  
1170-01-73  
6999-18-70FEDERAL ID(S):  
WISC 2012708  
N/A  
WISC 2012709  
WISC 2012714

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
3320	649.0701 TEMPORARY PAVEMENT MARKING 8-INCH	4,050.000 LF	.		.	
3330	649.1300 TEMPORARY PAVEMENT MARKING STOP LINE 24-INCH	154.000 LF	.		.	
3340	649.1400 TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 24-INCH	369.000 LF	.		.	
3350	650.4000 CONSTRUCTION STAKING STORM SEWER	225.000 EACH	.		.	
3360	650.4500 CONSTRUCTION STAKING SUBGRADE	67,659.000 LF	.		.	
3370	650.5000 CONSTRUCTION STAKING BASE	31,963.000 LF	.		.	
3380	650.5500 CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER	22,090.000 LF	.		.	
3390	650.6000 CONSTRUCTION STAKING PIPE CULVERTS	20.000 EACH	.		.	
3400	650.6500 CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 01. B-37-153	LUMP	LUMP		.	

## SCHEDULE OF ITEMS

CONTRACT:  
20121211027PROJECT(S):  
1170-01-70  
1170-01-71  
1170-01-73  
6999-18-70FEDERAL ID(S):  
WISC 2012708  
N/A  
WISC 2012709  
WISC 2012714

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS   CTS	BID AMOUNT DOLLARS   CTS
3410	650.6500 CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 02. B-37-154	LUMP	LUMP	.
3420	650.6500 CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 03. S-37-91	LUMP	LUMP	.
3430	650.6500 CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 04. B-37-436	LUMP	LUMP	.
3440	650.6500 CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 05. C-37-27	LUMP	LUMP	.
3450	650.6500 CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 06. B-37-167	LUMP	LUMP	.
3460	650.6500 CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 07. S-37-64	LUMP	LUMP	.
3470	650.6500 CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 08. B-37-156	LUMP	LUMP	.
3480	650.6500 CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 09. C-37-4	LUMP	LUMP	.

## SCHEDULE OF ITEMS

CONTRACT:

PROJECT(S):

FEDERAL ID(S):

20121211027

1170-01-70

WISC 2012708

1170-01-71

N/A

1170-01-73

WISC 2012709

6999-18-70

WISC 2012714

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS   CTS	BID AMOUNT DOLLARS   CTS
3490	650.7000 CONSTRUCTION STAKING CONCRETE PAVEMENT	35,696.000 LF	.	.
3500	650.8500 CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS (PROJECT) 01. 1170-01-70	LUMP	LUMP	.
3510	650.8500 CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS (PROJECT) 03. 6999-18-70	LUMP	LUMP	.
3520	650.9910 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) 01. 1170-01-70	LUMP	LUMP	.
3530	650.9910 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) 02. 1170-01-73	LUMP	LUMP	.
3540	650.9910 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) 03. 6999-18-70	LUMP	LUMP	.
3550	650.9920 CONSTRUCTION STAKING SLOPE STAKES	67,659.000 LF	.	.
3560	652.0125 CONDUIT RIGID METALLIC 2-INCH	250.000 LF	.	.
3570	652.0210 CONDUIT RIGID NONMETALLIC SCHEDULE 40 1-INCH	50.000 LF	.	.

## SCHEDULE OF ITEMS

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20121211027PROJECT(S):  
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6999-18-70FEDERAL ID(S):  
WISC 2012708  
N/A  
WISC 2012709  
WISC 2012714

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS   CTS	BID AMOUNT DOLLARS   CTS
3580	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	21,770.000 LF	.	.
3590	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH	1,034.000 LF	.	.
3600	652.0615 CONDUIT SPECIAL 3-INCH	447.000 LF	.	.
3610	652.0700.S INSTALL CONDUIT INTO EXISTING ITEM	1.000 EACH	.	.
3620	652.0800 CONDUIT LOOP DETECTOR	1,048.000 LF	.	.
3630	652.0900 LOOP DETECTOR SLOTS	1,048.000 LF	.	.
3640	653.0135 PULL BOXES STEEL 24X36-INCH	9.000 EACH	.	.
3650	653.0140 PULL BOXES STEEL 24X42-INCH	59.000 EACH	.	.
3660	653.0222 JUNCTION BOXES 18X12X6-INCH	3.000 EACH	.	.
3670	653.0900 ADJUSTING PULL BOXES	4.000 EACH	.	.

## SCHEDULE OF ITEMS

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1170-01-71  
1170-01-73  
6999-18-70FEDERAL ID(S):  
WISC 2012708  
N/A  
WISC 2012709  
WISC 2012714

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
3680	653.0905 REMOVING PULL BOXES	6.000 EACH	.		.	
3690	654.0101 CONCRETE BASES TYPE 1	13.000 EACH	.		.	
3700	654.0102 CONCRETE BASES TYPE 2	4.000 EACH	.		.	
3710	654.0105 CONCRETE BASES TYPE 5	135.000 EACH	.		.	
3720	654.0107 CONCRETE BASES TYPE 7	9.000 EACH	.		.	
3730	654.0111 CONCRETE BASES TYPE 11	13.000 EACH	.		.	
3740	654.0217 CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL	7.000 EACH	.		.	
3750	654.0220 CONCRETE CONTROL CABINET BASES TYPE 10	1.000 EACH	.		.	
3760	655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG	911.000 LF	.		.	
3770	655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG	263.000 LF	.		.	

## SCHEDULE OF ITEMS

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1170-01-73  
6999-18-70FEDERAL ID(S):  
WISC 2012708  
N/A  
WISC 2012709  
WISC 2012714

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
3780	655.0250 CABLE TRAFFIC SIGNAL 9-14 AWG	1,495.000 LF	.		.	
3790	655.0260 CABLE TRAFFIC SIGNAL 12-14 AWG	1,529.000 LF	.		.	
3800	655.0510 ELECTRICAL WIRE TRAFFIC SIGNALS 12 AWG	612.000 LF	.		.	
3810	655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG	1,793.000 LF	.		.	
3820	655.0610 ELECTRICAL WIRE LIGHTING 12 AWG	21,894.000 LF	.		.	
3830	655.0615 ELECTRICAL WIRE LIGHTING 10 AWG	475.000 LF	.		.	
3840	655.0620 ELECTRICAL WIRE LIGHTING 8 AWG	49,737.000 LF	.		.	
3850	655.0625 ELECTRICAL WIRE LIGHTING 6 AWG	3,167.000 LF	.		.	
3860	655.0630 ELECTRICAL WIRE LIGHTING 4 AWG	11,100.000 LF	.		.	
3870	655.0635 ELECTRICAL WIRE LIGHTING 2 AWG	2,646.000 LF	.		.	

## SCHEDULE OF ITEMS

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6999-18-70FEDERAL ID(S):  
WISC 2012708  
N/A  
WISC 2012709  
WISC 2012714

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS   CTS	BID AMOUNT DOLLARS   CTS
3880	655.0700 LOOP DETECTOR LEAD IN CABLE	4,257.000 LF	.	.
3890	655.0800 LOOP DETECTOR WIRE	2,328.000 LF	.	.
3900	656.0200 ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 01. 38+34 U	LUMP	LUMP	.
3910	656.0200 ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 02. 60+24 U	LUMP	LUMP	.
3920	656.0200 ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 04. 25+45 TR	LUMP	LUMP	.
3930	656.0200 ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 05. 16+00 K	LUMP	LUMP	.
3940	656.0200 ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 06. 13+10	LUMP	LUMP	.
3950	656.0200 ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 07. 764'NB'+20	LUMP	LUMP	.

## SCHEDULE OF ITEMS

CONTRACT:  
20121211027PROJECT(S):  
1170-01-70  
1170-01-71  
1170-01-73  
6999-18-70FEDERAL ID(S):  
WISC 2012708  
N/A  
WISC 2012709  
WISC 2012714

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS   CTS	BID AMOUNT DOLLARS   CTS
3960	656.0500 ELECTRICAL SERVICE BREAKER DISCONNECT BOX (LOCATION) 01. 766'NB'+85	LUMP	LUMP	.
3970	657.0100 PEDESTAL BASES	16.000 EACH	.	.
3980	657.0210 TRANSFORMER BASES BREAKAWAY 15-17 INCH BOLT CIRCLE	8.000 EACH	.	.
3990	657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE	138.000 EACH	.	.
4000	657.0305 POLES TYPE 2	4.000 EACH	.	.
4010	657.0322 POLES TYPE 5-ALUMINUM	131.000 EACH	.	.
4020	657.0337 POLES TYPE 17-ALUMINUM	8.000 EACH	.	.
4030	657.0420 TRAFFIC SIGNAL STANDARDS ALUMINUM 13-FT	6.000 EACH	.	.
4040	657.0425 TRAFFIC SIGNAL STANDARDS ALUMINUM 15-FT	7.000 EACH	.	.



## SCHEDULE OF ITEMS

CONTRACT:  
20121211027PROJECT(S):  
1170-01-70  
1170-01-71  
1170-01-73  
6999-18-70FEDERAL ID(S):  
WISC 2012708  
N/A  
WISC 2012709  
WISC 2012714

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
4050	657.0430 TRAFFIC SIGNAL STANDARDS ALUMINUM 10-FT	1.000 EACH	.		.	
4060	657.0585 TROMBONE ARMS 15-FT	1.000 EACH	.		.	
4070	657.0590 TROMBONE ARMS 20-FT	1.000 EACH	.		.	
4080	657.0595 TROMBONE ARMS 25-FT	2.000 EACH	.		.	
4090	657.0610 LUMINAIRE ARMS SINGLE MEMBER 4 1/2-INCH CLAMP 6-FT	46.000 EACH	.		.	
4100	657.0615 LUMINAIRE ARMS SINGLE MEMBER 4 1/2-INCH CLAMP 8-FT	2.000 EACH	.		.	
4110	657.0710 LUMINAIRE ARMS TRUSS TYPE 4 1/2-INCH CLAMP 12-FT	83.000 EACH	.		.	
4120	657.0725 LUMINAIRE ARMS TRUSS TYPE 6-INCH CLAMP 15-FT	16.000 EACH	.		.	
4130	658.0110 TRAFFIC SIGNAL FACE 3-12 INCH VERTICAL	10.000 EACH	.		.	
4140	658.0115 TRAFFIC SIGNAL FACE 4-12 INCH VERTICAL	9.000 EACH	.		.	

## SCHEDULE OF ITEMS

CONTRACT:  
20121211027PROJECT(S):  
1170-01-70  
1170-01-71  
1170-01-73  
6999-18-70FEDERAL ID(S):  
WISC 2012708  
N/A  
WISC 2012709  
WISC 2012714

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
4150	658.0155 TRAFFIC SIGNAL FACE 3-12 INCH HORIZONTAL	4.000 EACH	.		.	
4160	658.0215 BACKPLATES SIGNAL FACE 3 SECTION 12-INCH	14.000 EACH	.		.	
4170	658.0220 BACKPLATES SIGNAL FACE 4 SECTION 12-INCH	9.000 EACH	.		.	
4180	658.0416 PEDESTRIAN SIGNAL FACE 16-INCH	8.000 EACH	.		.	
4190	658.0500 PEDESTRIAN PUSH BUTTONS	8.000 EACH	.		.	
4200	658.0600 LED MODULES 12-INCH RED BALL	14.000 EACH	.		.	
4210	658.0605 LED MODULES 12-INCH YELLOW BALL	12.000 EACH	.		.	
4220	658.0610 LED MODULES 12-INCH GREEN BALL	10.000 EACH	.		.	
4230	658.0615 LED MODULES 12-INCH RED ARROW	9.000 EACH	.		.	
4240	658.0620 LED MODULES 12-INCH YELLOW ARROW	20.000 EACH	.		.	

## SCHEDULE OF ITEMS

CONTRACT:  
20121211027PROJECT(S):  
1170-01-70  
1170-01-71  
1170-01-73  
6999-18-70FEDERAL ID(S):  
WISC 2012708  
N/A  
WISC 2012709  
WISC 2012714

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
4250	658.0625 LED MODULES 12-INCH GREEN ARROW	13.000 EACH	.		.	
4260	658.0635 LED MODULES PEDESTRIAN COUNTDOWN TIMER 16-INCH	8.000 EACH	.		.	
4270	658.5069 SIGNAL MOUNTING HARDWARE (LOCATION) 01. BUS 51 AND CTH U	LUMP	LUMP		.	
4280	659.0115 LUMINAIRES UTILITY HPS 150 WATTS	73.000 EACH	.		.	
4290	659.0125 LUMINAIRES UTILITY HPS 250 WATTS	74.000 EACH	.		.	
4300	659.0700 LIGHTING UNITS WALKWAY	13.000 EACH	.		.	
4310	659.0802 PLAQUES SEQUENCE IDENTIFICATION	2.000 EACH	.		.	
4320	661.0400.S LIGHTING CONTROL CABINET (TYPE) 01. 3060	4.000 EACH	.		.	
4330	670.0100 FIELD SYSTEM INTEGRATOR	LUMP	LUMP		.	
4340	670.0200 ITS DOCUMENTATION	LUMP	LUMP		.	

## SCHEDULE OF ITEMS

CONTRACT:  
20121211027PROJECT(S):  
1170-01-70  
1170-01-71  
1170-01-73  
6999-18-70FEDERAL ID(S):  
WISC 2012708  
N/A  
WISC 2012709  
WISC 2012714

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
4350	672.0250 BASE CAMERA POLE 50-FT	1.000 EACH	.		.	
4360	673.0225.S INSTALL POLE MOUNTED CABINET	1.000 EACH	.		.	
4370	674.0200 CABLE MICROWAVE DETECTOR	50.000 LF	.		.	
4380	675.0300 INSTALL MOUNTED CONTROLLER MICROWAVE DETECTOR ASSEMBLY	5.000 EACH	.		.	
4390	675.0400.S INSTALL ETHERNET SWITCH	1.000 EACH	.		.	
4400	677.0100 INSTALL CAMERA POLE	1.000 EACH	.		.	
4410	677.0200 INSTALL CAMERA ASSEMBLY	1.000 EACH	.		.	
4420	677.0300.S INSTALL VIDEO ENCODER	1.000 EACH	.		.	
4430	690.0150 SAWING ASPHALT	21,342.000 LF	.		.	
4440	690.0250 SAWING CONCRETE	2,161.000 LF	.		.	

## SCHEDULE OF ITEMS

CONTRACT:  
20121211027PROJECT(S):  
1170-01-70  
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1170-01-73  
6999-18-70FEDERAL ID(S):  
WISC 2012708  
N/A  
WISC 2012709  
WISC 2012714

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
4450	715.0415 INCENTIVE STRENGTH CONCRETE PAVEMENT	21,081.000 DOL	1.00000		21081.00	
4460	715.0502 INCENTIVE STRENGTH CONCRETE STRUCTURES	20,058.000 DOL	1.00000		20058.00	
4470	999.1500.S CRACK AND DAMAGE SURVEY	LUMP	LUMP		.	
4480	ASP.1T0A ON-THE-JOB TRAINING APPRENTICE AT \$5.00/HR	2,100.000 HRS	5.00000		10500.00	
4490	ASP.1T0G ON-THE-JOB TRAINING GRADUATE AT \$5. 00/HR	4,800.000 HRS	5.00000		24000.00	
4500	SPV.0030 SPECIAL 01. FERTILIZER FOR LAWN TYPE TURF	29.000 CWT	.		.	
4510	SPV.0035 SPECIAL 01. MISCELLANEOUS ROCK EXCAVATION	200.000 CY	.		.	
4520	SPV.0035 SPECIAL 02. COARSE AGGREGATE, SIZE NO. 2	10.000 CY	.		.	
4530	SPV.0045 SPECIAL 01. PCMS CELLULAR COMMUNICATIONS	950.000 DAY	.		.	
4540	SPV.0055 SPECIAL 01. LANE RENTAL ASSESSMENT	1.000 DOL	1.00000		1.00	

## SCHEDULE OF ITEMS

CONTRACT:  
20121211027PROJECT(S):  
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WISC 2012708  
N/A  
WISC 2012709  
WISC 2012714

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
4550	SPV.0060 SPECIAL 02. CLEANING AND PAINTING BEARINGS	50.000 EACH	.		.	
4560	SPV.0060 SPECIAL 03. CONNECTION TO EXISTING INLETS	3.000 EACH	.		.	
4570	SPV.0060 SPECIAL 04. REFOCUS VEHICLE DETECTOR ASSEMBLY	8.000 EACH	.		.	
4580	SPV.0060 SPECIAL 05. ADJUST VALVE BOX	18.000 EACH	.		.	
4590	SPV.0060 SPECIAL 06. VERTICAL OFFSET WATERMAIN	2.000 EACH	.		.	
4600	SPV.0060 SPECIAL 07. VERTICAL OFFSET FORCE MAIN	1.000 EACH	.		.	
4610	SPV.0060 SPECIAL 08. RAMP CLOSURE GATES HARDWIRED 28-FT	2.000 EACH	.		.	
4620	SPV.0060 SPECIAL 09. RAMP CLOSURE GATES SOLAR POWERED 40-FT	1.000 EACH	.		.	
4630	SPV.0060 SPECIAL 10. LANDSCAPE PLANTING SURVELILLANCE AND CARE CYCLE	24.000 EACH	.		.	
4640	SPV.0060 SPECIAL 11. AVALANCHE REED GRASS #1 CG	570.000 EACH	.		.	

## SCHEDULE OF ITEMS

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WISC 2012708  
N/A  
WISC 2012709  
WISC 2012714

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
4650	SPV.0060 SPECIAL 12. NORTHWIND SWITCH GRASS #1 CG	140.000 EACH	.		.	
4660	SPV.0060 SPECIAL 13. FLAME GRASS #1 CG	464.000 EACH	.		.	
4670	SPV.0060 SPECIAL 14. LADYS MANTLE #1 CG	152.000 EACH	.		.	
4680	SPV.0060 SPECIAL 15. HAPPY RETURNS DAYLILY #1 CG	210.000 EACH	.		.	
4690	SPV.0060 SPECIAL 16. XENOX STONECROP #1 CG	695.000 EACH	.		.	
4700	SPV.0060 SPECIAL 17. MOONSHINE YARROW #1 CG	374.000 EACH	.		.	
4710	SPV.0060 SPECIAL 19. GATE VALVE AND BOX, 8-INCH	6.000 EACH	.		.	
4720	SPV.0060 SPECIAL 20. DUCTILE IRON CROSS 8-INCH X 8-INCH	2.000 EACH	.		.	
4730	SPV.0060 SPECIAL 21. DUCTILE IRON PLUG 8-INCH	6.000 EACH	.		.	
4740	SPV.0060 SPECIAL 22. SANITARY MANHOLE CASTING	4.000 EACH	.		.	

## SCHEDULE OF ITEMS

CONTRACT:  
20121211027PROJECT(S):  
1170-01-70  
1170-01-71  
1170-01-73  
6999-18-70FEDERAL ID(S):  
WISC 2012708  
N/A  
WISC 2012709  
WISC 2012714

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
4750	SPV.0060 SPECIAL 23. HIGH TENSION CABLE GUARD TL-3 TERMINAL	6.000 EACH	.		.	
4760	SPV.0060 SPECIAL 25. REMOVING AND SALVAGING STREET LIGHT	1.000 EACH	.		.	
4770	SPV.0060 SPECIAL 26. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 1	16.000 EACH	.		.	
4780	SPV.0060 SPECIAL 27. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 2	4.000 EACH	.		.	
4790	SPV.0060 SPECIAL 28. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 2R	4.000 EACH	.		.	
4800	SPV.0060 SPECIAL 29. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 3	14.000 EACH	.		.	
4810	SPV.0060 SPECIAL 30. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 3R	6.000 EACH	.		.	
4820	SPV.0060 SPECIAL 31. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC WORDS	20.000 EACH	.		.	



## SCHEDULE OF ITEMS

CONTRACT:

PROJECT(S):

FEDERAL ID(S):

20121211027

1170-01-70

WISC 2012708

1170-01-71

N/A

1170-01-73

WISC 2012709

6999-18-70

WISC 2012714

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS   CTS	BID AMOUNT DOLLARS   CTS
4830	SPV.0060 SPECIAL 32. SALVAGE AND REINSTALL LIGHTING UNIT	1.000 EACH	.	.
4840	SPV.0060 SPECIAL 35. HIGH TENSION CABLE GUARD TL-3 TERMINAL SAFENCE	1.000 EACH	.	.
4850	SPV.0060 SPECIAL 40. TRAFFIC SIGNAL CONTROLLER FULLY ACTUATED 8 PHASE AND CABINET	1.000 EACH	.	.
4860	SPV.0060 SPECIAL 41. SALVAGE AND REINSTALL GATE VALVE AND BOX	3.000 EACH	.	.
4870	SPV.0060 SPECIAL 42. DUCTILE IRON TEE, 8-INCH X 8-INCH	1.000 EACH	.	.
4880	SPV.0060 SPECIAL 43. DUCTILE IRON TEE, 8-INCH X 6-INCH	2.000 EACH	.	.
4890	SPV.0060 SPECIAL 44. DUCTILE IRON 45-DEGREE BEND	2.000 EACH	.	.
4900	SPV.0060 SPECIAL 45. INSTALL HYDRANT	1.000 EACH	.	.
4910	SPV.0060 SPECIAL 46. SALVAGE AND REINSTALL HYDRANT	1.000 EACH	.	.
4920	SPV.0060 SPECIAL 47. TRACER WIRE BOX	1.000 EACH	.	.

## SCHEDULE OF ITEMS

CONTRACT:  
20121211027PROJECT(S):  
1170-01-70  
1170-01-71  
1170-01-73  
6999-18-70FEDERAL ID(S):  
WISC 2012708  
N/A  
WISC 2012709  
WISC 2012714

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
4930	SPV.0060 SPECIAL 48. GATE VALVE AND BOX, 6-INCH	1.000 EACH	.		.	
4940	SPV.0060 SPECIAL 49. REMOVE MICROWAVE DETECTOR	4.000 EACH	.		.	
4950	SPV.0060 SPECIAL 50. SALVAGE SOLAR POWER SYSTEM	4.000 EACH	.		.	
4960	SPV.0060 SPECIAL 51. REMOVE POLE TYPE 5	3.000 EACH	.		.	
4970	SPV.0060 SPECIAL 52. INSTALL WIRELESS ETHERNET BRIDGE	4.000 EACH	.		.	
4980	SPV.0060 SPECIAL 53. INSTALL ANTENNA	1.000 EACH	.		.	
4990	SPV.0060 SPECIAL 54. INSTALL SALVAGED TYPE 5 POLE	1.000 EACH	.		.	
5000	SPV.0090 SPECIAL 04. EXCAVATE AND BACKFILL UTILITY TRENCH	155.000 LF	.		.	
5010	SPV.0090 SPECIAL 05. HIGH TENSION CABLE GUARD TL-3 SOCKETED	5,051.000 LF	.		.	
5020	SPV.0090 SPECIAL 08. DUCTILE IRON WATERMAIN 8-INCH	966.000 LF	.		.	

## SCHEDULE OF ITEMS

CONTRACT:  
20121211027PROJECT(S):  
1170-01-70  
1170-01-71  
1170-01-73  
6999-18-70FEDERAL ID(S):  
WISC 2012708  
N/A  
WISC 2012709  
WISC 2012714

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
5030	SPV.0090 SPECIAL 09. PVC SANITARY SEWER MAIN 8-INCH	942.000 LF	.		.	
5040	SPV.0090 SPECIAL 10. SALVAGE FENCE	800.000 LF	.		.	
5050	SPV.0090 SPECIAL 11. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC CROSSWALK 12-INCH	675.000 LF	.		.	
5060	SPV.0090 SPECIAL 12. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC 8-INCH	482.000 LF	.		.	
5070	SPV.0090 SPECIAL 13. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC 18-INCH	165.000 LF	.		.	
5080	SPV.0090 SPECIAL 14. PVC SANITARY LATERAL, 6-INCH	53.000 LF	.		.	
5090	SPV.0090 SPECIAL 15. DUCTILE IRON WATERMAIN, 6-INCH	10.000 LF	.		.	
5100	SPV.0105 SPECIAL 01. RESEARCH AND LOCATE EXISTING PROPERTY MONUMENTS PROJECT 1170-01-70	LUMP	LUMP		.	

## SCHEDULE OF ITEMS

CONTRACT:	PROJECT(S):	FEDERAL ID(S):
20121211027	1170-01-70	WISC 2012708
	1170-01-71	N/A
	1170-01-73	WISC 2012709
	6999-18-70	WISC 2012714

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
5110	SPV.0105 SPECIAL 02. RESEARCH AND LOCATE EXISTING PROPERTY MONUMENTS PROJECT 6999-18-70	LUMP	LUMP			.
5120	SPV.0105 SPECIAL 03. VERIFY AND REPLACE EXISTING PROPERTY MONUMENTS PROJECT 1170-01-70	LUMP	LUMP			.
5130	SPV.0105 SPECIAL 04. VERIFY AND REPLACE EXISTING PROPERTY MONUMENTS PROJECT 6999-18-70	LUMP	LUMP			.
5140	SPV.0105 SPECIAL 05. RAILING TUBULAR SCREENING GALVANIZED B-37-436	LUMP	LUMP			.
5150	SPV.0105 SPECIAL 07. CONCRETE PAVEMENT JOINT LAYOUT 1170-01-70	LUMP	LUMP			.
5160	SPV.0105 SPECIAL 08. REMOVE AND REINSTALL SIGN BRIDGE CANTILEVERED S-37-64	LUMP	LUMP			.
5170	SPV.0105 SPECIAL 09. REMOVE AND SALVAGE TRAFFIC SIGNALS USH 51 NB RAMP AND CTH U	LUMP	LUMP			.

## SCHEDULE OF ITEMS

CONTRACT:

PROJECT(S):

FEDERAL ID(S):

20121211027

1170-01-70

WISC 2012708

1170-01-71

N/A

1170-01-73

WISC 2012709

6999-18-70

WISC 2012714

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
5180	SPV.0105 SPECIAL 10. TEMPORARY TRAFFIC SIGNALS FOR INTERSECTION USH 51 NB AT CTH U	LUMP	LUMP			.
5190	SPV.0105 SPECIAL 11. TEMPORARY TRAFFIC SIGNALS FOR INTERSECTION USH 51 NB AT BUS 51	LUMP	LUMP			.
5200	SPV.0105 SPECIAL 12. TEMPORARY TRAFFIC SIGNALS FOR INTER- SECTION CTH U AT OVERLOOK/WESTWOOD DR	LUMP	LUMP			.
5210	SPV.0105 SPECIAL 13. TEMPORARY TRAFFIC SIGNALS FOR INTERSECTION CTH K AT OVERLOOK DR	LUMP	LUMP			.
5220	SPV.0105 SPECIAL 14. REMOVING AND RAZING PARCEL 17	LUMP	LUMP			.
5230	SPV.0105 SPECIAL 15. REMOVING AND RAZING PARCEL 18	LUMP	LUMP			.
5240	SPV.0105 SPECIAL 16. CRASH CUSHION TEMPORARY ONSITE	LUMP	LUMP			.
5250	SPV.0105 SPECIAL 17. GPS BASED TRAFFIC SIGNAL PREEMPTION BUS 51 AND COLLEGE DRIVE	LUMP	LUMP			.

## SCHEDULE OF ITEMS

CONTRACT:  
20121211027PROJECT(S):  
1170-01-70  
1170-01-71  
1170-01-73  
6999-18-70FEDERAL ID(S):  
WISC 2012708  
N/A  
WISC 2012709  
WISC 2012714

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS   CTS	BID AMOUNT DOLLARS   CTS
5260	SPV.0105 SPECIAL 18. GPS BASED TRAFFIC SIGNAL PREEMPTION BUS 51 AND CAMPUS DRIVE	LUMP	LUMP	.
5270	SPV.0105 SPECIAL 19. GPS BASED TRAFFIC SIGNAL PREEMPTION BUS 51 AND RANDOLPH STREET	LUMP	LUMP	.
5280	SPV.0105 SPECIAL 20. TEMPORARY TRAFFIC SIGNALS FOR INTERSECTION USH 51 SB AT BUS 51	LUMP	LUMP	.
5290	SPV.0105 SPECIAL 21. TEMPORARY SAND BAG DIKE	LUMP	LUMP	.
5300	SPV.0105 SPECIAL 30. CONCRETE PAVEMENT JOINT LAYOUT 6999-18-70	LUMP	LUMP	.
5310	SPV.0120 SPECIAL 01. WATER FOR SEEDED AREAS	9,980.000 MGAL	.	.
5320	SPV.0165 SPECIAL 01. WEED BARRIER	8,200.000 SF	.	.
5330	SPV.0165 SPECIAL 02. ROCK MULCH 1-INCH SIZE 3-INCH DEEP	6,080.000 SF	.	.
5340	SPV.0165 SPECIAL 03. ROCK MULCH 1-INCH SIZE 6-INCH DEEP	2,120.000 SF	.	.

## SCHEDULE OF ITEMS

CONTRACT:  
20121211027PROJECT(S):  
1170-01-70  
1170-01-71  
1170-01-73  
6999-18-70FEDERAL ID(S):  
WISC 2012708  
N/A  
WISC 2012709  
WISC 2012714

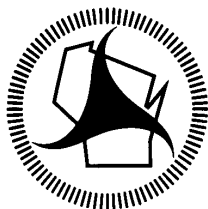
CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
5350	SPV.0180 SPECIAL 01. PREPARING TOPSOIL FOR LAWN TYPE TURF	37,050.000 SY	.		.	
5360	SPV.0180 SPECIAL 02. INSULATION 2-INCH	380.000 SY	.		.	
5370	SPV.0180 SPECIAL 04. WET DETENTION POND LINER	7,700.000 SY	.		.	
5380	SPV.0180 SPECIAL 05. TOPSOIL SPECIAL	910.000 SY	.		.	
5390	SPV.0195 SPECIAL 01. 3-INCH CLEAN ROADSTONE	1,447.000 TON	.		.	
5400	SPV.0200 SPECIAL 01. SANITARY MANHOLE	42.400 VF	.		.	
	SECTION 0001 TOTAL				.	
	TOTAL BID				.	





**PLEASE ATTACH SCHEDULE OF ITEMS HERE**



## Wisconsin Department of Transportation

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### Division of Transportation Systems Development

Bureau of Project Development  
4802 Sheboygan Avenue, Rm 601  
P O Box 7916  
Madison, WI 53707-7916

December 3, 2012

Telephone: (608) 266-1631  
Facsimile (FAX): (608) 266-8459

### NOTICE TO ALL CONTRACTORS:

**Proposal #27: 1170-01-70, WISC 2012 708**  
**Wausau – Merrill**  
**CTH K/B51 Interchange**  
**USH 51**  
**Marathon County**

**1170-01-71**  
**Wausau – Merrill**  
**CTH U Overhead**  
**USH 51**  
**Marathon County**

**1170-01-73, WISC 2012 709**  
**Wausau – Merrill**  
**Bridge Street to Decator Drive**  
**USH 51**  
**Marathon County**

**6999-18-70, WISC 2012 714**  
**Merrill Avenue/County Road U**  
**City of Wausau**  
**USH 51**  
**Marathon County**

### Letting of December 11, 2012

This is Addendum No. 1, which provides for the following:

#### Special Provisions

Deleted Special Provisions	
Article No.	Description
108	Ductile Iron Watermain, 8-Inch; Item SPV.0090.08

## Schedule of Items

Revised Bid Item Quantities – ID 1170-01-70					
Bid Item	Item Description	Unit	Old Quantity	Revised Quantity	Proposal Total
205.0100	Excavation Common	CY	227223	219499	442570
205.0200	Excavation Rock	CY	11529	14407	14407
601.0409	Concrete Curb and Gutter 30-Inch Type A	LF	13354	12941	15505
601.0574	Concrete Curb and Gutter 4-Inch Sloped 30-Inch Type G	LF	534	947	947
611.0610	Inlet Covers Type BW	EA	5	6	6
611.0624	Inlet Covers Type H	EA	58	61	119
611.2004	Manholes 4-FT	EA	22	23	36
611.3225	Inlets 2x2.5-FT	EA	6	7	8
611.3230	Inlets 2x3-FT	EA	53	58	110

Revised Bid Item Quantities – ID 1170-01-73					
Bid Item	Item Description	Unit	Old Quantity	Revised Quantity	Proposal Total
208.0100	Borrow	CY	5000	6150	6150

Added Bid Item Quantities – ID 1170-01-70					
Bid Item	Item Description	Unit	Old Quantity	Revised Quantity	Proposal Total
611.0630	Inlet Covers Type HM-GJ	EA	0	4	4

## Plan Sheets

Revised Plan Sheets	
Plan Sheet	Plan Sheet Title (brief description of changes to sheet)
25	Typical Sections – CTH K Roundabout (updated curb and gutter to match the correct bid item name)
40	Construction Details (updated curb and gutter type for splitter island)
67	Intersection Detail – CTH K/Bus 51 & A Ramp/B Ramp (updated curb and gutter type for splitter island)
68	Intersection Detail – CTH K/Bus 51 & C Ramp/D Ramp (updated curb and gutter type for splitter island)
80	Paving Detail – CTH K (updated paving grades)
82	Paving Detail – CTH K (updated paving grades)
183	Storm Sewer – Pond A (Outlet pipe elevations added to plan sheet)
184	Storm Sewer – Pond B (Outlet pipe elevations added to plan sheet)
185	Storm Sewer Detail Chart (Modified some inlet covers to Type HM-GJ in splitter island)
186	Storm Sewer Detail Chart (Modified some inlet covers to Type HM-GJ in splitter island)
187	Storm Sewer Detail Chart (Modified some inlet covers to Type HM-GJ in splitter island)
530	Alignment Diagram – Temporary (Added NT alignment information)
550	Miscellaneous Quantities (Updated Earthwork Summary Table to include rock excavation on B Ramp and to update Mass Ordinate calculation)
553	Miscellaneous Quantities (fixed column spacing on Endwalls and Culvert Pipe Reinforced Concrete table)

554	Miscellaneous Quantities (Updated Category and Project totals in Storm Sewer Schedule Temporary Drainage)
555	Miscellaneous Quantities (Updated Storm Sewer Manholes, Inlets, and Covers for change to curb and gutter in splitter islands)
556	Miscellaneous Quantities (Updated Concrete Curb and Gutter table for splitter island updates from pages 67-68)
591	Miscellaneous Quantities (Updated Earthwork Summary Table to update Mass Ordinate calculation. Borrow Quantities for Stage 4 updated based on changes to page 550)
608	Miscellaneous Quantities (Updated Earthwork Summary Table to update Mass Ordinate calculation)
667	Plan & Profile – B Ramp (Show approximate rock elevation and culvert information)
696	Plan & Profile – CTH K (Northbound) (Modified profile at roundabout to allow for OSOW vehicles to make thru movement)
700	Plan & Profile – CTH K (Southbound) (Modified profile at roundabout to allow for OSOW vehicles to make thru movement)
1074	Earthwork Data (Update to Mass Haul calculation for the B Ramp)
1075	Earthwork Data (Update to Mass Haul calculation for the D and F Ramps)
1080	Earthwork Data (Update to Mass Haul calculation for the AT Ramp)
1085	Earthwork Data (Update to Mass Haul calculation for the NR line)
1086	Earthwork Data (Update to Mass Haul calculation for the NR line)
1166	Cross Sections: B Ramp (Updated to include approximate rock elevation)
1167	Cross Sections: B Ramp (Updated to include approximate rock elevation)
1168	Cross Sections: B Ramp (Updated to include culvert pipe information)
1247	Cross Sections: CTH K Northbound (Updated for grade changes on page 82)
1267	Cross Sections: CTH K Southbound (Updated for grade changes on page 82)
1273	Cross Sections: Roundabout KE (Updated for grade changes on page 80)

The responsibility for notifying potential subcontractors and suppliers of these changes remains with the prime contractor.

Sincerely,

*Terry Lammert*

Proposal Development Specialist  
Proposal Management Section

### **Schedule of Items**

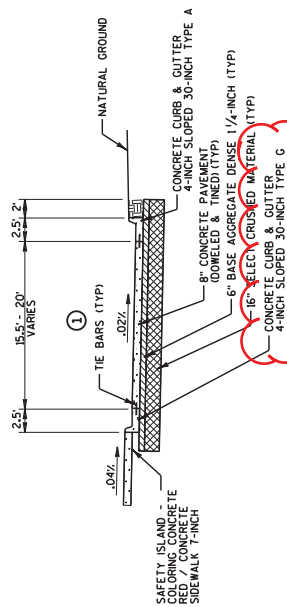
Attached, dated December 3, 2012 are the revised Schedule of Items Pages 4, 5, 16, 17, 18, 19, 20, and 57.

### **Plan Sheets**

The following 8½ x 11-inch sheets are attached and made part of the plans for this proposal:

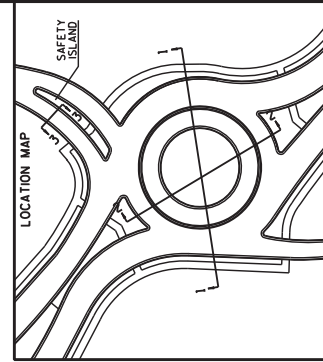
Revised: 25, 40, 67-68, 80, 82, 183 - 187, 530, 550, 553 – 556, 591, 608, 667, 696, 700, 1074-1075, 1080, 1085 – 1086, 1166 - 1168, 1247, 1267, and 1273.

END OF ADDENDUM



TYPICAL FINISHED SECTION ~~USH STAMPS~~ SECTION 3-3  
PARTIAL BYPASS LANE

① TIE BARS ARE INCIDENTAL TO CONCRETE PAVEMENT  
(UNLESS DRILLED INTO EXISTING PAVEMENT)



Addendum No. 1  
ID 1170-01-70  
Revised Sheet 25  
December 3, 2012

PROJECT NO: 1170-01-70

HWY: USH 51

COUNTY: MARATHON

TYPICAL SECTIONS - CTH K ROUNDABOUT

SHEET 25

FILE NAME : T:\410525 - 410527\00N1170-01-75 MAIN\LINE PROJECT\Plan\020301-15.dgn

PLOT DATE : 11/27/2012

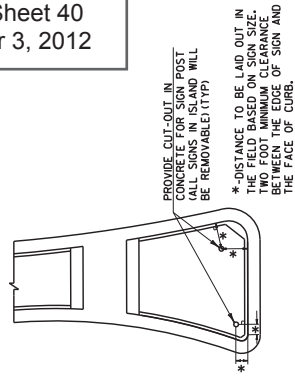
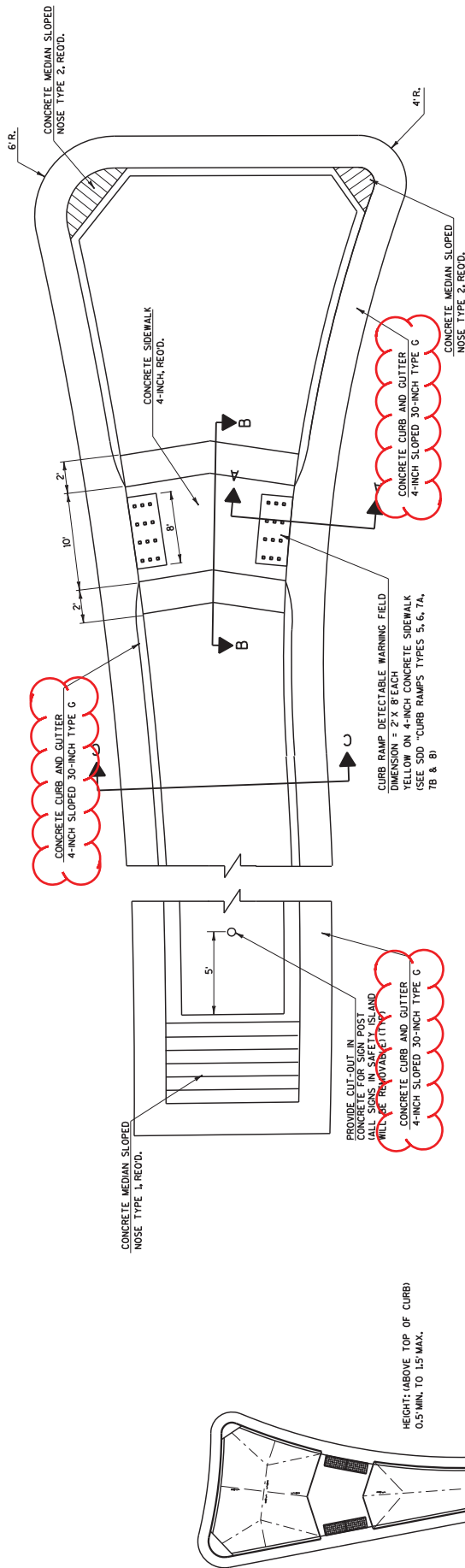
PLOT BY : AYRES-EC

PLOT NAME :

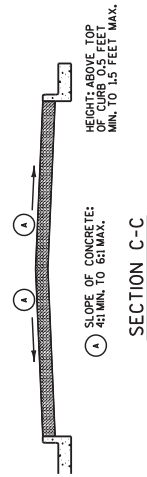
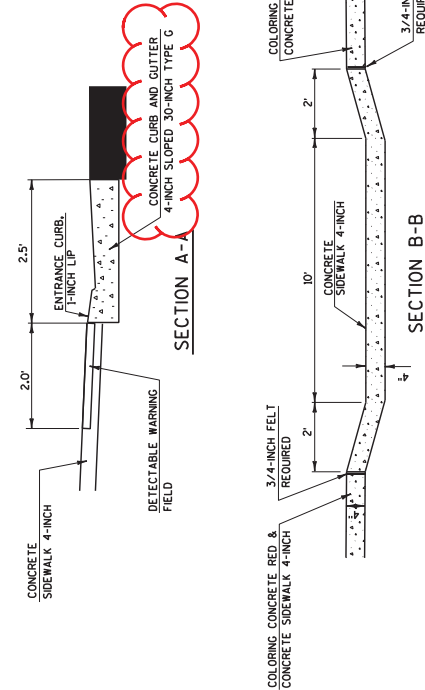
PLOT SCALE : 1:1200

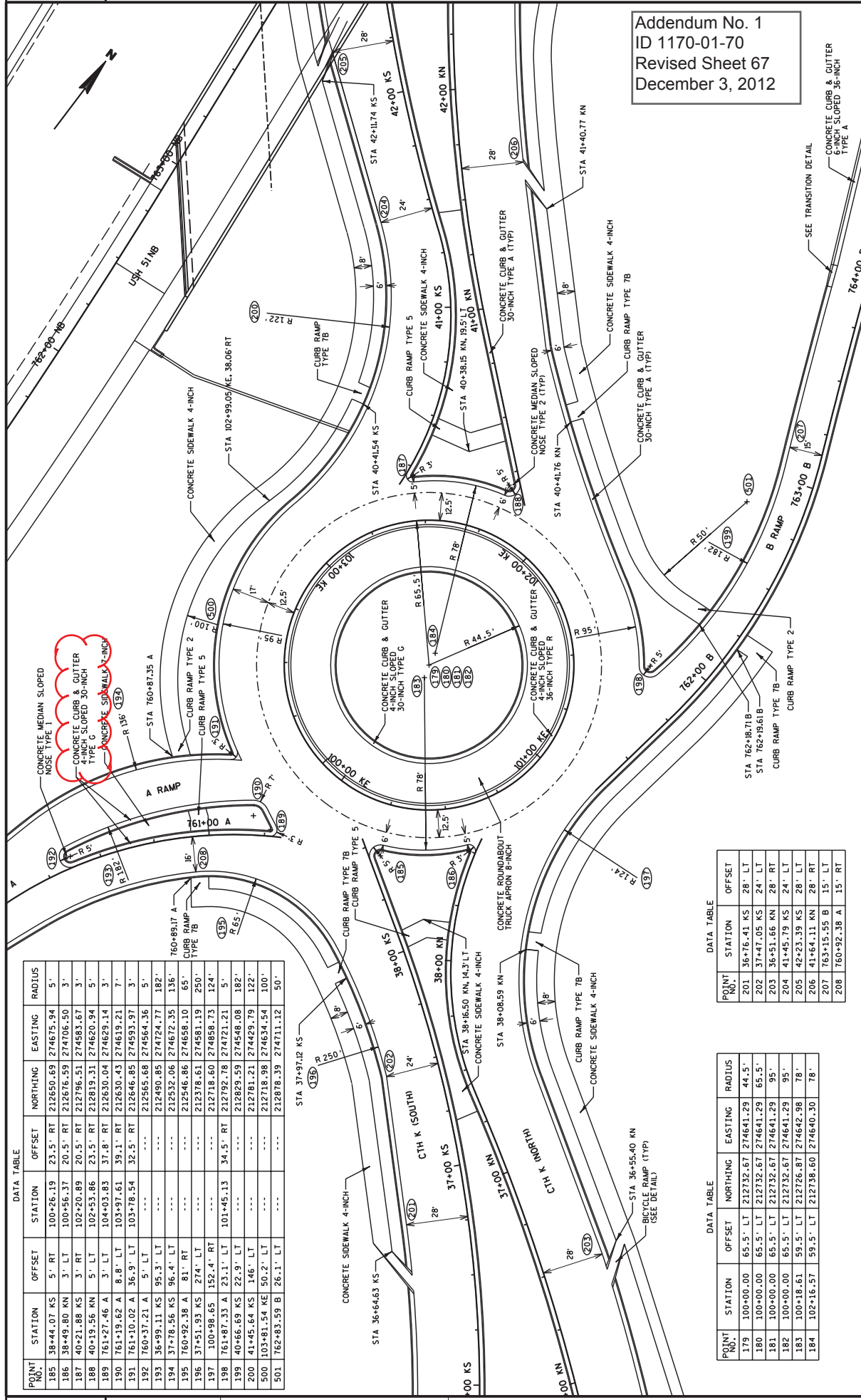
WISDOT/CADD'S SHEET 42

Addendum No. 1  
ID 1170-01-70  
Revised Sheet 40  
December 3, 2012



## ISLAND SIGN LOCATION DETAIL (TYP)





Addendum No. 1  
ID 1170-01-70  
Revised Sheet 67  
December 3, 2012

DATA TABLE

POINT NO.	STATION	OFFSET	NORTHING	EASTING	RADIUS
185	38+44.07 KS	5' RT	100+26.19	274675.94	5'
186	38+49.00 KN	3' LT	100+56.37	274706.50	3'
187	40+21.88 KS	3' RT	102+20.89	274583.67	3'
188	40+19.56 KN	5' LT	102+53.86	274620.94	5'
189	761+27.46 A	3' LT	104+03.83	274629.14	3'
190	761+19.62 A	8.8' LT	103+97.61	274619.21	7'
191	761+10.02 A	36.9' LT	103+78.54	274593.97	3'
192	760+37.21 A	5' LT	102+56.37	274583.67	5'
193	36+99.11 KS	95.3' LT	102+56.37	274583.67	95.3'
194	37+78.56 KS	96.4' LT	102+56.37	274583.67	96.4'
195	760+92.38 A	81' RT	102+56.37	274583.67	81'
196	37+51.93 KS	274' LT	102+56.37	274583.67	274'
197	100+98.65	152.4' RT	102+56.37	274583.67	152.4'
198	761+87.33 A	23.1' LT	101+45.13	274721.21	5'
199	40+66.69 KS	22.9' LT	102+56.37	274583.67	22.9'
200	41+45.64 KS	146' LT	102+56.37	274583.67	146'
500	103+81.54 KE	50.2' LT	102+56.37	274583.67	50.2'
501	762+83.59 B	26.1' LT	102+56.37	274583.67	26.1'

DATA TABLE

POINT NO.	STATION	OFFSET	NORTHING	EASTING	RADIUS
201	36+76.41 KS	28' LT	102+56.37	274583.67	28'
202	37+47.05 KS	24' LT	102+56.37	274583.67	24'
203	36+51.66 KN	28' RT	102+56.37	274583.67	28'
204	41+45.79 KS	24' LT	102+56.37	274583.67	24'
205	42+23.39 KS	28' LT	102+56.37	274583.67	28'
206	41+64.11 KN	28' RT	102+56.37	274583.67	28'
207	763+15.55 B	15' LT	102+56.37	274583.67	15'
208	760+92.38 A	15' RT	102+56.37	274583.67	15'

DATA TABLE

POINT NO.	STATION	OFFSET	NORTHING	EASTING	RADIUS
179	100+00.00	65.5' LT	212732.67	274641.29	44.5'
180	100+00.00	65.5' LT	212732.67	274641.29	65.5'
181	100+00.00	65.5' LT	212732.67	274641.29	95'
182	100+00.00	65.5' LT	212732.67	274641.29	95'
183	100+18.61	59.5' LT	212732.67	274641.29	78'
184	102+16.57	59.5' LT	212732.67	274641.29	78'

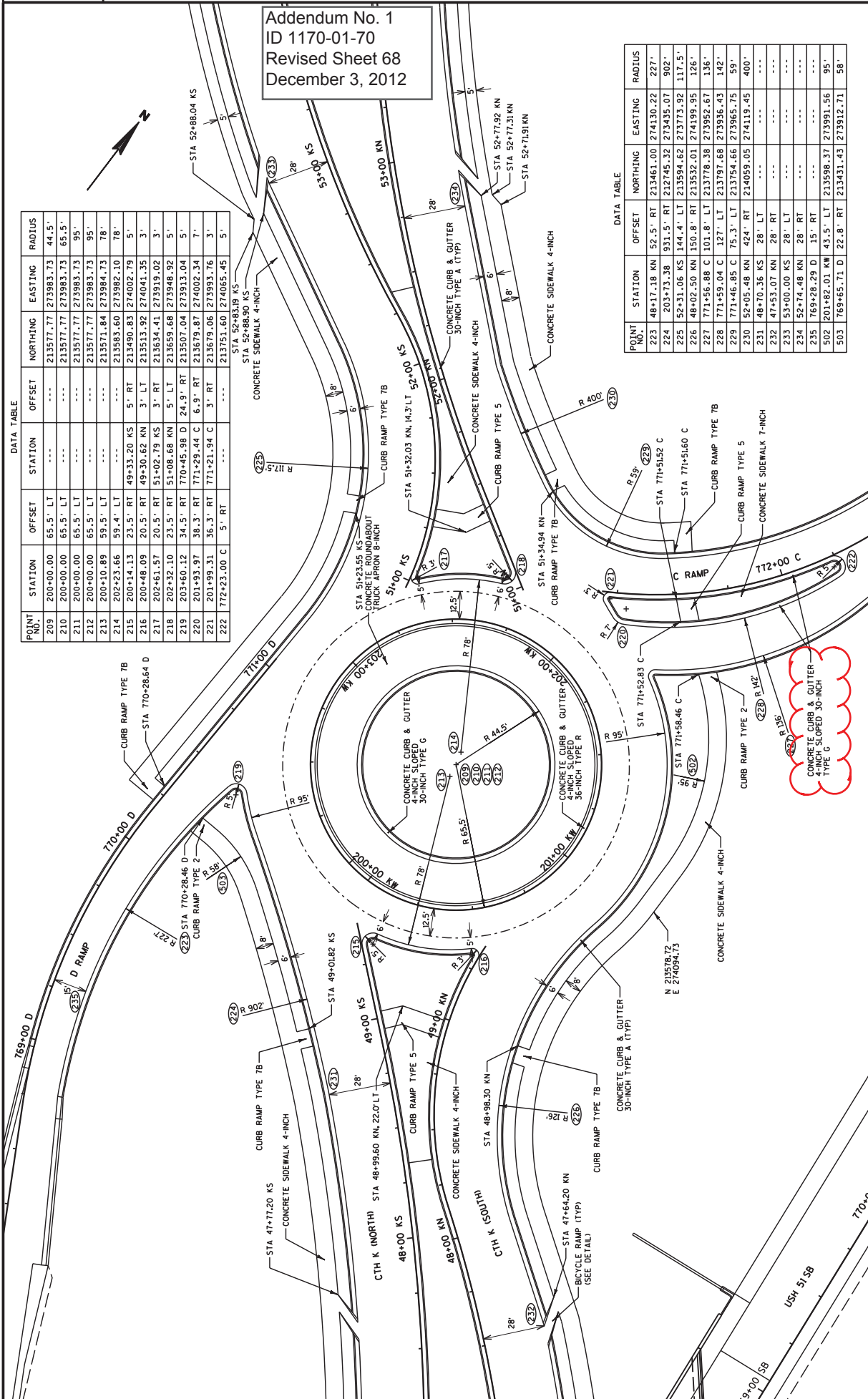
DATA TABLE

POINT NO.	STATION	OFFSET	STATION	OFFSET	NORTHING	EASTING	RADIUS
209	200+00.00	65.5' LT	---	---	213577.77	273983.73	44.5'
210	200+00.00	65.5' LT	---	---	213577.77	273983.73	65.5'
211	200+00.00	65.5' LT	---	---	213577.77	273983.73	95'
212	200+00.00	65.5' LT	---	---	213577.77	273983.73	95'
213	200+10.89	59.5' LT	---	---	213571.84	273984.73	78'
214	202+23.66	59.4' LT	---	---	213583.60	273982.10	78'
215	200+14.13	23.5' RT	49+33.20 KS	5' RT	213490.83	274002.79	5'
216	200+48.09	20.5' RT	49+30.62 KN	3' LT	213513.92	274041.35	3'
217	202+61.57	20.5' RT	51+02.79 KS	3' RT	213634.41	273919.02	3'
218	202+32.10	23.5' RT	51+08.68 KN	5' LT	213659.68	273948.92	5'
219	203+60.12	34.5' RT	770+45.98 D	24.9' RT	213507.04	273913.04	5'
220	201+93.97	38.3' RT	771+29.44 C	6.9' RT	213879.87	274002.34	7'
221	201+99.31	36.3' RT	771+21.94 C	3' RT	213679.06	273993.76	3'
222	772+23.00 C	5' RT	---	---	213751.60	274065.45	5'

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DATA TABLE

POINT NO.	STATION	OFFSET	NORTHING	EASTING	RADIUS
223	48+17.18 KN	52.5' RT	213461.00	274130.22	227'
224	203+73.38	931.5' RT	212745.32	273435.07	902'
225	52+31.06 KS	144.4' LT	213594.62	273773.92	117.5'
226	48+02.50 KN	150.8' RT	213532.01	274199.95	126'
227	771+56.88 C	101.8' LT	213778.38	273952.67	136'
228	771+59.04 C	127' LT	213797.68	273936.43	142'
229	771+46.95 C	75.3' LT	213754.66	273965.75	59'
230	52+05.48 KN	424' RT	214059.05	274119.45	400'
231	48+70.36 KS	28' LT	---	---	---
232	47+53.07 KN	28' RT	---	---	---
233	53+00.00 KS	28' LT	---	---	---
234	52+74.48 KN	28' RT	---	---	---
235	769+28.29 D	15' RT	---	---	---
502	201+82.01 KN	43.5' LT	213598.37	273991.56	95'
503	769+65.71 D	22.8' RT	213431.43	273912.71	58'

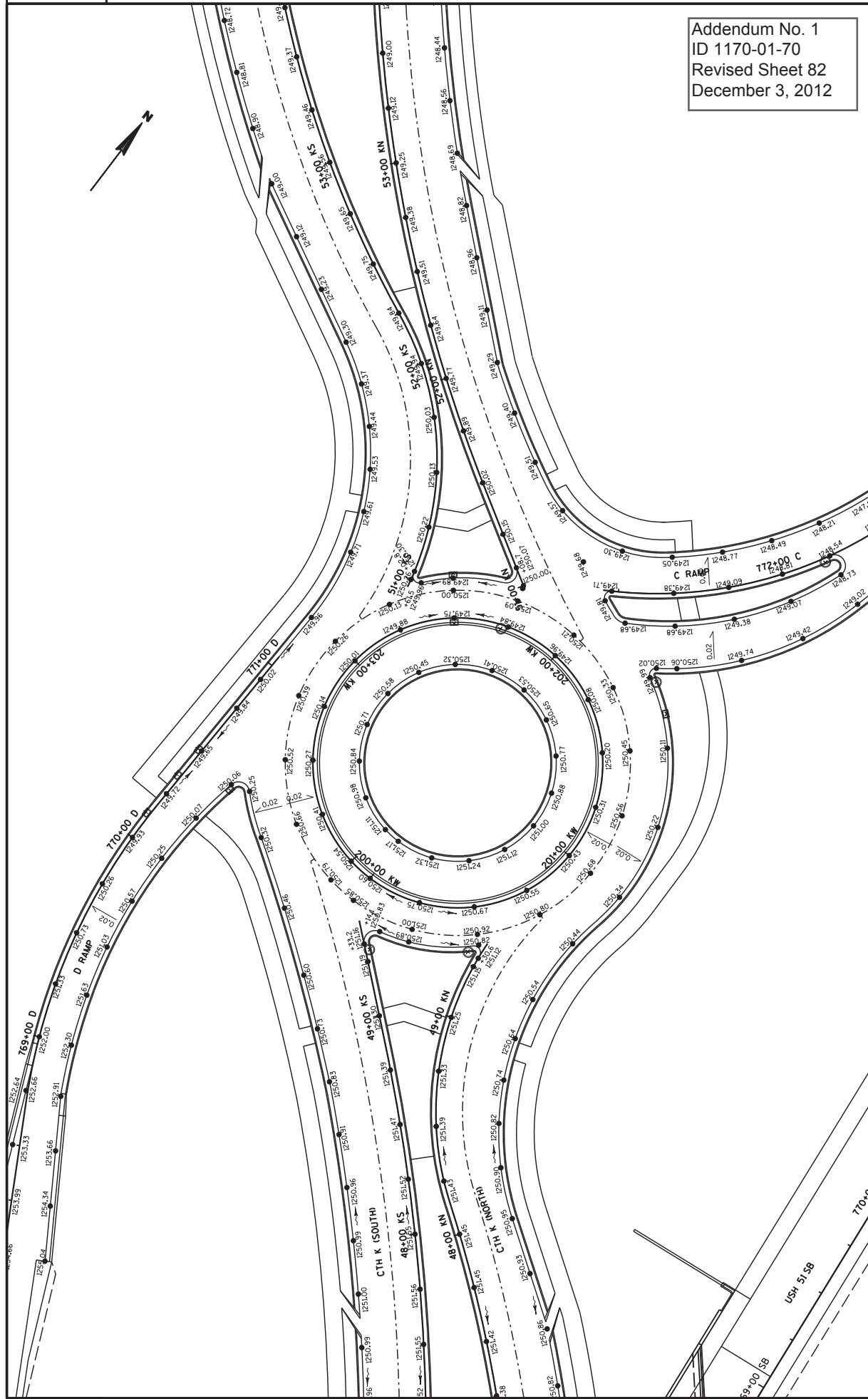








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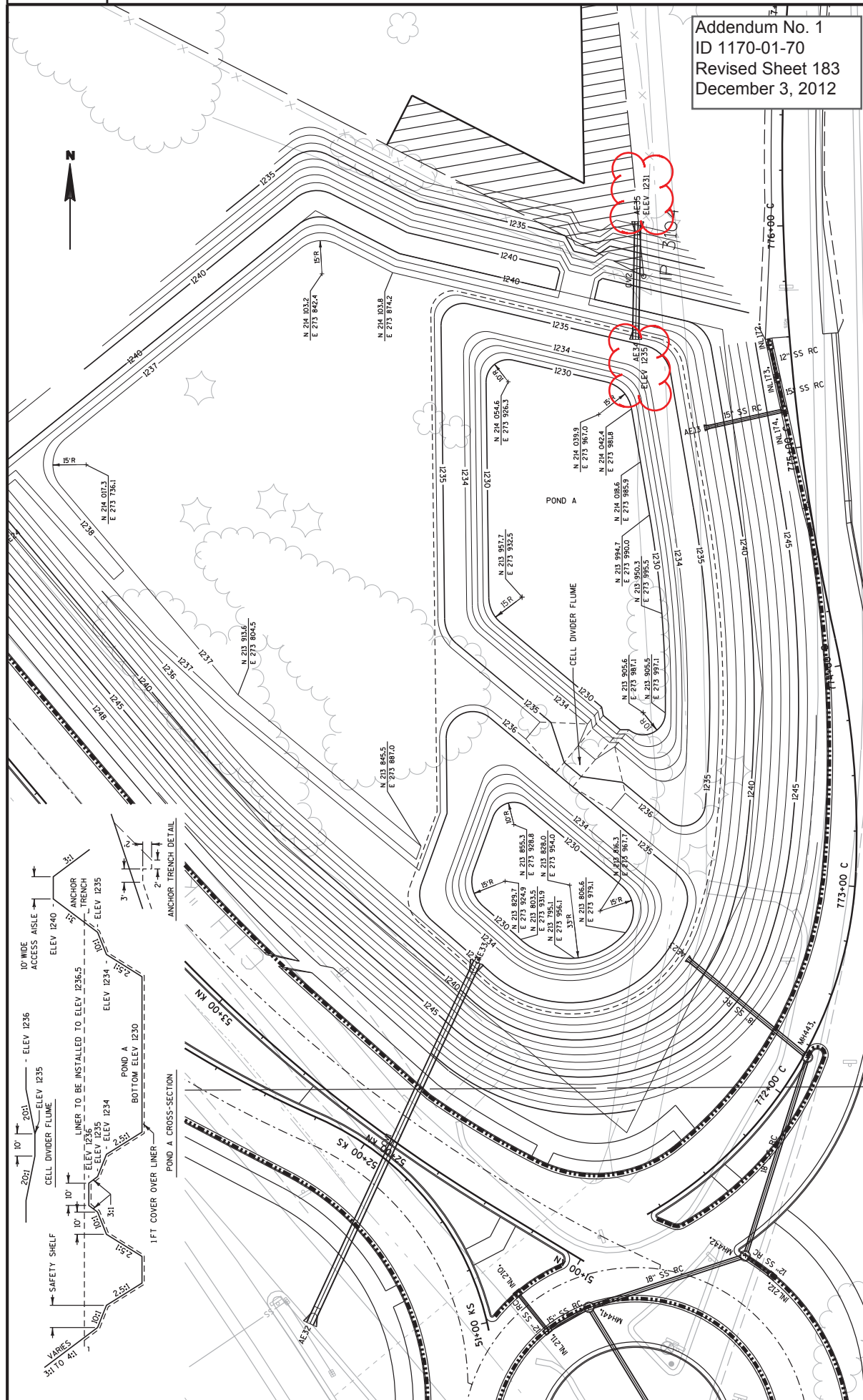


PROJECT NO: 1170-01-70	HWY: USH 51	COUNTY: MARATHON	PAVING DETAIL - CTH K	PLOT NAME :	PLOT SCALE : 1:40	SHEET 82	E WISDOT/CADD SHEET 42
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FILE NAME : T:\410525 - 410527\00N1170-01-75 MAINLINE PROJECT\Plan\021213.pd.dgn

PLOT DATE : 11/28/2012

PLOT BY : AYRES-EC







## IN-TEXT COVERS

[illegible]

Addendum No. 1  
ID 1170-01-70  
Revised Sheet 185  
December 3, 2012

PROJECT NO: 1170-01-70

**COUNTY: MARATHON**

## STORM SEWER DETAIL CHART

**SHEET NO:**

**INTER COVERS**

**INTER COVERS**

**PROJECT NO: 1170-01-70**

STORM SEWER SCHEDULE

STRUCTURE NUMBER	STATION	***** OFFSET	INLETS				INLET COVERS				MANHOLES				MANHOLE COVERS				SLOPE %				
			2x2-FT		2x3-FT		MEDIAN 1		MEDIAN 2		TYPE BW		TYPE H		TYPE BM		TYPE HM-GJ			TYPE J		*****	
			EACH	EACH	EACH	EACH	GRATE	GRATE	GRATE	GRATE	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH		EACH	EACH	EACH	EACH
INL220	57+79.5 KN	29.5 RT	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
AE25	57+80.1 KN	66 RT	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
INL221	60+13.6 KN	22.4 LT	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
AE26	60+13.3 KN	73.1 RT	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
INL101	748+52.9 NB	87.9 RT	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
INL102	747+99 NB	33 RT	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
MH400	745+39.7 NB	33 RT	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
INL103	748+04.6 E	20.5 LT	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
INL104	748+04.9 E	9 RT	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
INL105	745+23.8 E	9 RT	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
INL106	743+78.9 E	9 RT	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
MH500	743+78.9 E	27 RT	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
INL107	745+23.8 E	20 LT	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
INL108	745+26.5 A	9 RT	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
MH401	742+49.3 NB	33 RT	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
MH402	740+05.1 NB	33 RT	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
INL109	740+06.2 NB	26.8 LT	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	
AE28	740+05.2 NB	101.4 RT	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	

NOTES:

\* FLOWLINE ELEVATIONS FOR INLETS IN CURBS AND GUTTER AREAS ARE AT THE FLOWLINE OF THE GUTTER.

\*\* FOR NEW STRUCTURES, TOP OF BOX ELEVATIONS ARE TYPICALLY FLOWLINE/RIM ELEVATIONS MINUS CASTING DEPTH AND 6" FOR ADJUSTING RINGS. DEPTH FOR ADJUSTMENT MAY VARY.

\*\*\* FOR INFORMATION ONLY. JOINT TIES ARE INCIDENTAL TO SSPRC.

\*\*\*\* STRUCTURE STATION AND OFFSET MEASURED TO CENTER OF STRUCTURE.

\*\*\*\*\* SPECIAL MH LID REQUIRED FOR TYPE V INLET COVERS

1.) ALL SUBSURFACE ELEVATIONS ARE PIPE FLOWLINES.

2.) CALCULATED DEPTH = DISTANCE FROM TOP OF BOX TO DISCHARGE ELEVATION.

3.) PIPE LENGTHS MEASURED FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.

4.) STORM SEWER PIPE IS REINFORCED, CLASS III, UNLESS NOTED OTHERWISE.

5.) ALL STRUCTURES HAVE THE STATUS "NEW".

6.) SLOPE IS CALCULATED BETWEEN INSIDE WALLS OF STRUCTURES. LENGTH LISTED IS BETWEEN CENTER OF

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ID 1170-01-70  
Revised Sheet 187  
December 3, 2012

P.I. DATA

P.I. 311+35.75 SR  
N 207710.80  
E 274305.01

CURVE DATA

P.I. 314+19.50 SR  
N 207993.56  
E 274281.37  
Δ = 1°00'12"  
D = 130.00'  
T = 233.75'  
L = 466.92'  
E = 7.15'  
R = 3820.00'  
P.C. 311+55.75 SR  
P.T. 316+82.61 SR

CURVE DATA

P.I. 318+86.44 SR  
N 208451.22  
E 274185.92  
Δ = 1°00'12"  
D = 130.00'  
T = 233.75'  
L = 466.93'  
E = 7.15'  
R = 3820.00'  
P.C. 316+52.68 SR  
P.T. 321+15.61 SR

CURVE DATA

P.I. 330+36.18 SR  
N 209597.56  
E 274090.12  
Δ = 0°32'05"  
D = 194.00'  
T = 742.80'  
L = 1481.42'  
E = 34.17'  
R = 8057.00'  
P.C. 327+74.80 SR  
P.T. 337+74.80 SR

CURVE DATA

P.I. 354+14.35 SR  
N 211967.90  
E 274329.11  
Δ = 6°40'45"  
D = 194.00'  
T = 222.91'  
L = 445.32'  
E = 6.50'  
R = 3820.00'  
P.C. 352+51.44 SR  
P.T. 358+36.76 SR



OVERLOOK DR

CTH U

CTH K

PT 415+08.52 NT  
PT 414+36.78 NT  
PC 412+90.45 NT

PT 406+00.95 NT  
PC 402+12.13 NT  
ID 398+93.24 NT

PT 400+86.16 NT  
PC 397+00.00 NT

PT 374+25.24 SR  
PC 372+50.25 SR

PT 370+15.49 SR

PC 369+00.50 SR

PT 362+84.53 SR

PC 356+36.76 SR

PT 354+14.35 SR

PC 351+91.44 SR

PT 337+14.80 SR

PC 330+36.18 SR

PT 322+19.61 SR

PC 316+52.67 SR

PT 311+35.75 SR

PC 314+19.50 SR

PT 318+86.44 SR

PC 311+35.75 SR

PT 314+19.50 SR

PC 311+35.75 SR

PT 318+86.44 SR

PC 311+35.75 SR

PT 314+19.50 SR

PC 311+35.75 SR

PT 318+86.44 SR

PC 311+35.75 SR

PT 314+19.50 SR

PC 311+35.75 SR

PT 318+86.44 SR

PC 311+35.75 SR

PT 314+19.50 SR

PC 311+35.75 SR

PT 318+86.44 SR

PC 311+35.75 SR

PT 314+19.50 SR

PC 311+35.75 SR

Addendum No. 1  
ID 1170-01-70  
Revised Sheet 530  
December 3, 2012

CURVE DATA

P.I. 413+63.63 NT  
N 217884.99  
E 274329.11  
Δ = 2°11'08"  
D = 130.00'  
T = 233.75'  
L = 466.92'  
E = 7.15'  
R = 3820.00'  
P.C. 412+90.45 NT  
P.T. 414+36.78 NT

CURVE DATA

P.I. 398+93.24 NT  
N 216418.65  
E 274329.11  
Δ = 5°47'31"  
D = 130.00'  
T = 193.24'  
L = 386.16'  
E = 386.00'  
P.C. 397+00.00 NT  
P.T. 400+86.16 NT

CURVE DATA

P.I. 374+25.24 SR  
N 213560.30  
E 274270.81  
Δ = 5°14'45"  
D = 130.00'  
T = 247.42'  
L = 349.90'  
E = 4.01'  
R = 3820.00'  
P.C. 372+50.25 SR  
P.T. 376+00.00 SR

CURVE DATA

P.I. 359+63.37 SR  
N 212504.53  
E 274447.45  
Δ = 18°06'17"  
D = 247.42'  
L = 649.91'  
E = 25.85'  
R = 2050.00'  
P.C. 356+36.76 SR  
P.T. 362+84.53 SR

CURVE DATA

P.I. 370+75.49 SR  
N 213616.63  
E 274329.11  
Δ = 5°14'45"  
D = 130.00'  
T = 175.00'  
L = 349.75'  
E = 4.01'  
R = 3820.00'  
P.C. 369+00.50 SR  
P.T. 372+50.25 SR

CURVE DATA

P.I. 385+11.16 SR  
N 215041.15  
E 274163.53  
Δ = 5°14'45"  
D = 130.00'  
T = 175.00'  
L = 349.75'  
E = 4.01'  
R = 3820.00'  
P.C. 372+50.25 SR  
P.T. 376+00.00 SR

CURVE DATA

P.I. 404+06.71 NT  
N 216932.44  
E 274329.11  
Δ = 5°48'27"  
D = 130.00'  
T = 222.91'  
L = 445.32'  
E = 6.50'  
R = 3820.00'  
P.C. 402+12.13 NT  
P.T. 406+00.95 NT

CURVE DATA

P.I. 415+08.52 NT  
N 218028.67  
E 273935.39  
Δ = 2°08'46"  
D = 130.00'  
T = 233.75'  
L = 445.32'  
E = 6.50'  
R = 3820.00'  
P.C. 414+36.78 NT  
P.T. 418+09.72 NT

PROJECT NO: 1170-01-73

HWY: USH 51

COUNTY: MARATHON

ALIGNMENT DIAGRAM

TEMPORARY

SHEET 530

FILE NAME : T:\410525 - 410527\OGN\1170-01-73 MAINLINE PROJECT\Plan027205.odt.dgn

PLOT DATE : 11/26/2012

PLOT BY : AYRES-EC

PLOT SCALE : 1:1800

WISDOT/CADD SHEET 42



## EARTHWORK SUMMARY

DIVISION	STATION TO STATION	LOCATION	CUT CY	205.0100 EXCAVATION COMMON CY	205.0100 EXCAVATION PAVEMENT UNUSABLE CY	(9) AVAILABLE MATERIAL CY	(8) EBS CY	205.0400 EXCAVATION MARSH CY	205.0200 EXCAVATION ROCK CY	FILL CY	UNEPAVED FILL CY	(2) (4) EXPANDED FILL CY	(5) MASS ORDINATE +/- CY	(1) WASTE CY	(3) 208.0100 BORROW CY	COMMENTS
4+50 N - 5+75 N		N LINE	589	---	---	589	---	---	---	10	10	13	577	---	---	CATEGORY 0090
40+00 SW - 43+74 SW		SW LINE	72	---	---	72	---	---	---	80	80	100	-28	---	---	CATEGORY 0090
25+00 TL - 36+25 TL		TL LINE	2211	---	---	2211	---	---	---	2199	2199	2749	-538	---	---	CATEGORY 0090
6+25 TR - 9+76 TR		TR LINE	261	---	---	261	---	---	---	67	67	84	177	---	---	CATEGORY 0090
WASTE TO THE 1170-01-73 PROJECT			---	---	---	---	---	---	---	---	---	188	-188	---	---	
DIVISION 1 SUBTOTAL			589	---	---	3133	---	---	---	2356	2356	3133	---	---	---	
363+50 BT - 365+63 BT		BT RAMP	53	---	---	53	---	---	---	53	53	66	-13	---	---	
342+00 ET - 345+50 ET		ET RAMP	352	---	---	352	---	---	---	82	82	103	250	---	---	
342+00 FT - 346+00 FT		FT RAMP	108	---	---	108	---	---	---	286	286	358	-250	---	---	
746+00 E - 750+50 E		E RAMP	6091	---	---	6091	---	---	---	965	965	1206	4415	---	---	
743+00 F - 751+50 F		F RAMP	27347	---	---	17833	---	---	8984	5496	5496	-4386	23316	---	---	
223+00 V - 230+50 V		V LINE	1956	---	---	1956	---	---	---	4686	4686	5858	-3902	---	---	
201+00 V - 223+00 V		V LINE	9513	---	---	9513	---	---	---	4308	4308	5385	4128	---	---	
POND B		POND B	28136	---	---	27546	---	---	---	252	252	315	27231	---	---	
WASTE TO THE 1170-01-73 PROJECT			---	---	---	---	---	---	---	---	---	20270	-20270	---	---	
WASTE TO THE 6998-18-70 PROJECT			---	---	---	---	---	---	---	---	---	12369	-12369	---	---	
DIVISION 2 SUBTOTAL			64572	1590	---	62982	---	---	8984	16128	6216	40446	22536	---	---	
370+90 CT - 384+50 CT		CT RAMP	1260	---	---	1260	---	---	---	4370	4370	5463	-4203	---	---	
WASTE TO THE 1170-01-73 PROJECT			---	---	---	---	---	---	---	---	---	13042	-13042	---	---	
WASTE FROM PREVIOUS STAGES (7)			---	---	---	---	---	---	---	---	---	-22536	22536	---	---	
DIVISION 3A SUBTOTAL			1260	---	---	1260	---	---	---	4370	4370	-4032	5292	5292	---	
40+50 KN - 49+00 KN		KN LINE	5007	1950	---	3057	---	---	---	2442	2442	3053	5	---	---	
31+00 KS - 38+50 KS		KS LINE	3148	2350	---	398	---	---	---	1734	1734	2168	-1370	---	---	
40+00 KS - 47+00 KS		KS LINE	5178	---	---	5178	---	---	---	1491	1491	1841	3164	---	---	
WASTE TO THE 1170-01-73 PROJECT			---	---	---	---	---	---	---	---	---	7041	-7041	---	---	
WASTE FROM PREVIOUS STAGES (7)			---	---	---	---	---	---	---	---	---	-5292	5292	---	---	
DIVISION 4 SUBTOTAL			13333	4500	---	8833	---	---	---	5667	5667	8833	---	---	---	
372+00 CU - 376+50 CU		CU RAMP	207	---	---	207	---	---	---	4319	4319	5399	-5192	---	---	
771+50 C - 784+50 C		C RAMP	4688	650	---	4038	---	---	---	3379	3379	4224	-186	---	---	
754+50 D - 770+50 D		D RAMP	40512	1140	---	39372	504	---	---	1959	2186	2732	36640	---	---	
740+50 F - 743+00 F		F RAMP	6693	---	---	4213	---	---	2480	54	-2674	-3343	7556	---	---	
200+00 KW - 204+00 KW		KW LINE	700	---	---	700	---	---	---	1500	1500	1875	-1175	---	---	
51+00 KN - 61+50 KN		KN LINE	3599	---	---	3599	---	---	---	2871	2871	3589	10	---	---	
61+50 KN - 73+50 KN		KN LINE/KS LINE	10704	---	---	10704	---	---	---	1119	1119	1399	9305	---	---	CATEGORY 0100
51+00 KS - 61+50 KS		KS LINE	6660	---	---	6660	---	---	---	750	750	938	5723	---	---	
DIVISION 5 SUBTOTAL			71283	1790	---	69493	504	---	2180	15951	13450	18812	52681	---	---	
753+50 A - 761+00 A		A RAMP	20979	---	---	20979	---	---	---	307	307	384	20595	---	---	
766+00 B - 775+00 B		B RAMP	5382	5091	---	5091	---	---	291	26	-294	-368	5459	---	---	
100+00 KE - 104+00 KE		KE LINE	5559	---	---	5559	---	---	---	9	9	11	5548	---	---	
REMOVAL OF CT LINE		CT RAMP	4370	---	---	4370	---	---	---	---	---	---	4370	---	---	
REMOVAL OF CU LINE		CU RAMP	4319	---	---	4319	---	---	---	---	---	---	4319	---	---	
POND A		POND A	11223	---	---	11223	---	---	---	4185	4185	5231	5992	---	---	
DIVISION 6A SUBTOTAL			51541	---	---	51541	---	---	291	4527	4207	5259	46282	46282	---	
738+50 E - 746+00 E		E RAMP	4352	---	---	4352	---	---	---	431	431	539	3813	---	---	
DIVISION 6B SUBTOTAL			4352	---	---	4352	---	---	---	431	431	539	3813	---	---	
761+50 B - 766+00 B		B RAMP	10297	7645	---	6625	---	---	---	222	-2695	-3369	9994	---	---	
775+00 B - 781+00 B		B RAMP	725	---	---	725	---	---	---	11	11	14	711	---	---	
31+00 KN - 38+50 KN		KN LINE	3695	---	---	3195	---	---	---	1190	1190	1488	1708	---	---	
DIVISION 6C SUBTOTAL			12065	1320	---	10545	---	---	---	1423	-1494	-1868	12413	---	---	
CATEGORY 0010 TOTALS			206251	---	---	---	---	---	---	14407	---	---	---	---	---	
CATEGORY 0090 TOTALS			2544	---	---	---	---	---	---	---	---	---	---	---	---	
CATEGORY 0100 TOTALS			10704	---	---	---	---	---	---	---	---	---	---	---	---	
PROJECT ID TOTALS			219499	---	---	---	---	---	---	---	---	---	---	---	---	

Addendum No. 1  
ID 1170-01-70  
Revised Sheet 550  
December 3, 2012

ALL ITEMS ON THIS SHEET  
ARE CATEGORY 0010  
UNLESS OTHERWISE NOTED

PROJECT NO: 1170-01-70

COUNTY: MARATHON

HWY: USH 51

MISCELLANEOUS QUANTITIES

SHEET 550

(1) WASTE = EXPANDED FILL - EXCAVATION COMMON (FOR INFORMATION ONLY - NOT A BID ITEM)

(2) EXPANSION FACTOR = 1.25

(3) BORROW = EXPANDED FILL - AVAILABLE MATERIAL

(4) EXPANDED FILL = UNEPAVED FILL \* EXPANSION FACTOR

(5) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.

(6) UNEPAVED FILL = FILL - (ROCK \* 1.1) + (MARSH EXCAVATION \* 1.5) - (MARSH EXCAVATION \* 0.6) + (EBS \* 1.25) - (EBS \* 0.8) - ASSUMES THAT ALL MARSH AND EBS CAN BE USED IN FILL AREAS

(7) EARTHWORK FROM PREVIOUS STAGES TO BE USED INTO THIS STAGE

(8) EBS PAID AS EXCAVATION COMMON

(9) AVAILABLE MATERIAL = COMMON EXCAVATION - SALVAGED/UNUSABLE MATERIAL.

**ENDWALLS AND CULVERT PIPES REINFORCED CONCRETE**

STATION TO STATION	LOCATION	522.1012 12-INCH EACH	522.1015 15-INCH EACH	522.1018 18-INCH EACH	522.1024 24-INCH EACH	522.1030 30-INCH EACH	522.1036 36-INCH EACH	522.1072 72-INCH EACH	522.0124 24-INCH LF	522.0130 30-INCH LF	522.0136 36-INCH LF	522.0172 72-INCH LF	611.9800-S PIPE GRATES EACH	(1) JOINT TIES EACH
60+82 KN	LT & RT	---	---	---	---	---	---	---	---	---	---	222	---	12
52+00 KN	LT & RT	---	---	---	---	---	2	---	---	---	179	---	---	12
775+79 C	LT	---	---	---	---	2	---	---	---	53	---	---	---	12
766+53 B	LT & RT	---	---	---	2	---	---	---	192	---	---	---	---	12
755+20 NB	RT	---	---	---	---	2	---	---	---	---	88	---	---	12
740+05 NB - 748+53 NB	LT & RT	---	---	---	---	1	---	---	---	---	---	---	1	6
746+00 F - 749+00 F	LT & RT	2	---	---	---	---	---	---	---	---	---	---	2	12
759+00 D - 767+50 D	LT & RT	1	1	---	---	---	---	---	---	---	---	---	2	12
775+12 C - 783+00 C	LT & RT	2	---	---	---	---	---	---	---	---	---	---	2	12
30+76 KS - 30+79 KS	LT & RT	1	---	---	---	---	---	---	---	---	---	---	1	6
31+35 KN - 31+78 KN	LT & RT	1	---	---	---	---	---	---	---	---	---	---	1	6
34+90 KS - 36+02 KS	LT & RT	1	---	---	---	---	---	---	---	---	---	---	---	6
34+00 KN - 35+15 KN	LT & RT	1	---	---	---	---	---	---	---	---	---	---	2	12
761+85 B - 763+85 B	LT & RT	1	---	---	---	---	---	---	---	---	---	---	1	6
38+00 KN - 44+00 KN	LT & RT	---	---	---	1	---	---	---	---	---	---	---	1	6
770+10 D - 770+50 D	LT & RT	1	---	---	---	---	---	---	---	---	---	---	1	6
48+75 KN - 51+00 KN	LT & RT	---	---	2	---	---	---	---	---	---	---	---	2	12
54+95 KN - 55+50 KN	LT & RT	1	---	---	---	---	---	---	---	---	---	---	1	6
57+80 KN - 57+98 KN	LT & RT	---	---	---	---	---	---	---	---	---	---	---	1	6
60+12 KS - 60+12 KS	LT & RT	1	---	---	---	---	---	---	---	---	---	---	1	6

**TOTALS**

6 10 2 3 3 4 2 192 53 267 222 19

**\*CATEGORY TOTALS**

6 10 2 3 3 4 2 208 53 267 222 19

**\*PROJECT ID TOTALS**

6 10 2 5 3 4 2 364 101 267 222 19

(1) FOR INFORMATION ONLY. NOT A BID ITEM.

**ENDWALLS AND CULVERT PIPES CORRUGATED STEEL**

STATION	LOCATION	521.1012 12-INCH EACH	521.1015 15-INCH EACH	521.1024 24-INCH EACH	521.0118 30-INCH EACH	521.0112 30-INCH EACH	521.0115 15-INCH LF	521.0118 18-INCH LF	521.0124 24-INCH LF	521.0130 30-INCH LF	THICKNESS INCHES
230+38 V	LT & RT	---	---	---	---	---	---	---	---	---	0.064
228+00 V	RT	2	---	---	---	---	---	52	---	---	0.064
226+50 V	RT	---	---	---	---	---	48	---	---	---	0.064
222+75 V	LT & RT	2	---	---	---	---	84	---	---	---	0.064
222+67 V	LT & RT	2	---	---	---	---	78	---	---	---	0.064
221+03 V	LT	2	---	---	---	---	28	---	---	---	0.064
214+00 V	RT	2	---	---	---	---	---	---	---	---	0.064
208+94 V	LT	2	---	---	---	---	42	---	---	---	0.064
208+94 V	RT	2	---	---	---	---	29	---	---	---	0.064
205+31 V	LT & RT	2	---	---	---	---	104	---	---	---	0.064
205+24 V	LT & RT	---	---	2	---	---	---	---	94	0.079	0.079
203+30 V	LT & RT	---	---	2	---	---	---	---	94	0.079	0.079
202+29 V	LT	2	---	---	---	---	25	---	---	---	0.064
56+01 KN	RT	---	2	---	---	---	27	---	---	---	0.064
		---	---	---	---	---	60	---	---	---	0.064

**CATEGORY TOTALS**

8 6 8 2 4 202 133 242 131 189

**\* OTHER QUANTITIES LOCATED ELSEWHERE IN PLAN**

ALL ITEMS ON THIS SHEET  
ARE CATEGORY 0010  
UNLESS OTHERWISE NOTED

**PROJECT NO: 1170-01-70****HWY: USH 51****COUNTY: MARATHON****MISCELLANEOUS QUANTITIES****SHEET 553****E**

Addendum No. 1  
ID 1170-01-70  
Revised Sheet 553  
December 3, 2012

**CULVERT PIPE TEMPORARY**

STATION TO STATION	LOCATION	520.4012		LF
		12-INCH	24-INCH	
350+50 AT - 352+00 AT	AT RAMP RT	---	150	
370+90 CT	CT RAMP	54	---	
372+25 CT	CT RAMP	88	---	
373+00 CU	CU RAMP	---	74	
<b>TOTALS</b>		<b>54</b>	<b>312</b>	
<b>CATEGORY TOTALS</b>		<b>249</b>	<b>470</b>	

**CULVERT PIPE REINFORCED CONCRETE TYPE III 24-INCH**

STATION	LOCATION	522.0124		LF	REMARKS
		12-INCH	24-INCH		
359+40 AT	AT RAMP LT	16	EXTEND EXISTING PIPE		
<b>TOTAL</b>		<b>16</b>			
<b>CATEGORY TOTAL</b>		<b>208</b>			
<b>*PROJECT ID TOTAL</b>		<b>364</b>			

**STORM SEWER PIPE REINFORCED CONCRETE**

STATION TO STATION	LOCATION	608.0312		LF	REMARKS
		12-INCH	24-INCH		
746+00 F - 749+00 F	LT & RT	109	---		
759+00 D - 767+50 D	LT & RT	86	---		
775+12 C - 783+00 C	LT & RT	215	---		
740+05 NB - 748+53 NB	LT & RT	529	---		
30+76 KS - 30+79 KS	LT & RT	30	---		
31+35 KN - 31+78 KN	LT & RT	34	---		
34+90 KS - 36+02 KS	LT & RT	177	---		
34+00 KN - 35+15 KN	LT & RT	91	---		
761+85 B - 763+85 B	LT & RT	92	---		
38+00 KN - 44+00 KN	LT & RT	218	---		
770+10 D - 770+50 D	LT & RT	60	---		
48+75 KN - 51+00 KN	LT & RT	37	---		
54+95 KN - 55+50 KN	LT & RT	65	---		
57+60 KN - 57+98 KN	LT & RT	48	---		
60+12 KN - 60+12 KN	LT & RT	---	---		
<b>CATEGORY TOTALS</b>		<b>1792</b>	<b>1264</b>	<b>991</b>	<b>586</b>
<b>TOTAL</b>		<b>1792</b>	<b>1264</b>	<b>991</b>	<b>586</b>

608.0312 608.0315 608.0318 608.0321 608.0324 608.0330  
STORM SEWER PIPE REINFORCED CONCRETE, CLASS III

**STORM SEWER SCHEDULE TEMPORARY DRAINAGE**

STRUCTURE NUMBER	STATION	OFFSET	4-FT DIAMETER	MANHOLES	2x2-FT	INLETS	MEDIAN	2	INLET COVERS	TYPE	MS	EACH	FLOWLINE ELEV	BOX ELEV	DEPTH	INVERT ELEV	DISCHARGE ELEV	FROM	TO	520.4012		520.4024		CONNECTION	SPV.0060.03
																				12-INCH	18-INCH	24-INCH	SLOPE		
743+78 E	10' RT	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1239.52	1239.50	MANHOLE	18	---	---	---	0.1	---	---
742+00 E	26.9' RT	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1239.50	1239.50	DITCH	177	---	---	---	0.0	---	---
900	354+20 AT	37' RT	---	---	---	---	---	---	---	---	---	---	1242.46	1242.46	4.00	1238.46	1238.00	EX. INLET	---	---	---	---	1.6	---	---
901	358+50 AT	19' RT	---	---	---	---	---	---	---	---	---	---	1244.64	1244.64	3.00	1241.64	1241.00	DITCH	---	---	---	---	0.8	---	---
364+00 BT	46' LT	---	---	---	---	---	---	---	---	---	---	---	---	---	---	1241.00	1239.44	PIPE END	902	---	---	---	1.0	---	---
902	365+58 BT	24' LT	---	---	---	---	---	---	---	---	---	---	1248.46	1247.71	8.27	1239.44	1239.44	EX. ENDWALL	---	---	---	---	---	---	---
903	380+25 CT	26.4' RT	---	---	---	---	---	---	---	---	---	---	1238.85	1238.85	2.50	1236.35	1230.72	EX. INLET	---	---	---	---	1.6	---	---
904	359+50 DT	23.4' RT	---	---	---	---	---	---	---	---	---	---	1261.06	1260.31	2.50	1257.81	1256.35	DITCH	---	---	---	---	4.3	---	---
<b>TOTALS</b>																				<b>195</b>	<b>485</b>	<b>158</b>		<b>2</b>	
<b>*CATEGORY TOTALS</b>																				<b>249</b>	<b>485</b>	<b>470</b>		<b>2</b>	
<b>*PROJECT ID TOTALS</b>																				<b>249</b>	<b>485</b>	<b>470</b>		<b>2</b>	

Addendum No. 1  
ID 1170-01-70  
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December 3, 2012

- 1.) ALL SUBSURFACE ELEVATIONS ARE PIPE FLOWLINES.
- 2.) CALCULATED DEPTH = DISTANCE FROM TOP OF BOX TO DISCHARGE ELEVATION.
- 3.) PIPE LENGTHS MEASURED FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.
- 4.) ALL STRUCTURES HAVE THE STATUS "NEW".

\* OTHER QUANTITIES LOCATED ELSEWHERE IN PLAN

ALL ITEMS ON THIS SHEET  
ARE CATEGORY 0010  
UNLESS OTHERWISE NOTED

PROJECT NO: 1170-01-70

HWY: USH 51

COUNTY: MARATHON

MISCELLANEOUS QUANTITIES

SHEET 554

E

## STORM SEWER MANHOLES, INLETS, AND COVERS

STATION - STATION	LOCATION	2x2-FT EACH	2x2.5-FT EACH	2x3-FT EACH	INLETS	611.3230	611.3901	611.3902	611.0610	611.0624	611.0627	611.0630	611.0642	611.0652	611.0654	611.2004	611.2005	611.0530	611.8120.S
STATION - STATION	LOCATION	2x2-FT EACH	2x2.5-FT EACH	2x3-FT EACH	MEDIAN 1	GRATE	GRATE	MEDIAN 2	TYPE BW	TYPE H	TYPE HM	TYPE HM-GU	TYPE MS	TYPE T	TYPE V	4-FT EACH	5-FT EACH	MANHOLES COVERS TYPE J	COVER PLATES TEMPORARY EACH
745+25 A - 760+90 A	LT & RT	---	1	5	---	---	---	---	1	3	---	3	---	---	---	1	---	---	---
746+00 F - 749+00 F	LT & RT	---	---	2	---	---	---	---	---	---	2	---	---	---	---	---	---	---	---
759+00 D - 767+50 D	LT & RT	---	---	2	---	---	---	---	---	---	2	---	1	---	---	---	---	---	---
772+20 C - 783+00 C	LT & RT	---	---	3	---	---	---	---	---	---	3	1	2	---	---	---	---	---	3
740+05 NB - 748+53 NB	LT & RT	---	6	1	---	---	---	---	5	---	1	---	2	---	4	2	2	1	2
30+76 KS - 30+79 KS	LT & RT	---	---	1	---	---	---	---	---	1	---	---	---	---	---	---	---	---	---
31+35 KN - 31+78 KN	LT & RT	---	---	3	---	---	---	---	---	3	---	---	---	---	---	1	---	1	---
34+90 KS - 36+02 KS	LT & RT	---	---	3	---	---	---	---	---	3	---	---	---	---	---	---	---	---	---
34+00 KN - 35+15 KN	LT & RT	---	---	2	---	---	---	---	---	3	---	---	---	---	---	1	---	---	---
761+85 B - 763+85 B	LT & RT	---	---	4	---	---	---	---	---	4	---	---	---	---	---	---	---	---	---
38+00 KN - 44+00 KN	LT & RT	---	1	16	---	---	---	---	---	21	---	---	2	---	---	8	---	2	---
770+10 D - 770+50 D	LT & RT	---	---	4	---	---	---	---	---	4	---	---	---	---	---	---	---	---	---
48+75 KN - 51+00 KN	LT & RT	---	---	3	---	---	---	---	---	6	---	---	---	---	---	5	---	---	---
54+95 KN - 55+50 KN	LT & RT	---	---	5	---	---	---	---	---	7	---	---	---	---	---	2	---	---	---
57+80 KN - 57+98 KN	LT & RT	---	---	3	---	---	---	---	---	5	---	---	---	---	---	2	---	---	---
60+12 KS - 60+12 KS	LT & RT	---	---	---	---	---	1	---	---	---	---	---	1	---	---	---	---	---	---
<b>TOTALS</b>		<b>1</b>	<b>7</b>	<b>58</b>	<b>3</b>	<b>3</b>	<b>6</b>	<b>61</b>	<b>8</b>	<b>4</b>	<b>6</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>22</b>	<b>2</b>	<b>4</b>	<b>5</b>	
<b>*CATEGORY TOTALS</b>		<b>2</b>	<b>7</b>	<b>58</b>	<b>3</b>	<b>6</b>	<b>6</b>	<b>61</b>	<b>8</b>	<b>4</b>	<b>12</b>	<b>4</b>	<b>4</b>	<b>23</b>	<b>2</b>	<b>4</b>	<b>5</b>		
<b>*PROJECT ID TOTALS</b>		<b>2</b>	<b>7</b>	<b>58</b>	<b>3</b>	<b>8</b>	<b>6</b>	<b>61</b>	<b>8</b>	<b>4</b>	<b>16</b>	<b>4</b>	<b>4</b>	<b>23</b>	<b>2</b>	<b>4</b>	<b>5</b>		

## PIPE UNDERDRAIN 6-INCH ITEMS

STATION TO STATION	LOCATION	6-INCH LF	612.0106 UNPERFORATED 6-INCH LF	612.0206 FOR UNDERDRAIN REINFORCED CONCRETE 6-INCH EACH	612.0806 APRON ENDWALLS FOR UNDERDRAIN TYPE DF SCHEDULE A	645.0111 GEOTEXTILE FABRIC TYPE DF SCHEDULE A	STATION TO STATION	607.5000 CY	REMARKS
31+61 KN - 58+00 KN	RT	2600	---	---	---	1806	762+00 B - 766+50 B	290	RAMP B AT USH 51-CTH K STM SEWER
55+00 KN - 58+75 KN	LT	375	---	---	---	260	738+00 - 748+50 NB	530	USH 51 MAINLINE STM SEWER
32+93 KS - 35+75 KS	RT	283	---	---	---	197	746+00 F - 749+00 F	50	RAMP F AT USH 51-CTH U STM SEWER
32+93 KS - 58+75 KS	LT	2554	---	---	---	1774	31+00 K - 44+00 K	740	CTH K, EAST OF USH 51, STM SEWER
56+00 KS - 58+75 KS	RT	275	---	---	---	191	44+00 K - 58+00 K	40	CTH K, WEST OF USH 51, STM SEWER
100+00 KE - 104+14 KE	LT	414	---	---	---	288			
200+00 KW - 204+14 KW	LT	414	---	---	---	288			
757+10 A - 761+33 A	RT	423	---	---	---	294			
760+37 A - 761+29 A	LT	104	---	---	---	72			
761+29 B - 766+80 B	RT	551	---	---	---	383			
771+18 C - 775+47 C	LT	414	---	---	---	288			
771+21 C - 772+26 C	RT	127	---	---	---	88			
764+50 D - 771+05 D	LT	655	---	---	---	455			
768+00 D - 770+47 D	RT	247	---	---	---	172			
743+79 E - 750+78 E	RT	699	---	---	---	485			
743+00 F - 751+96 F	LT	896	---	---	---	622			
751+64 F - 751+84 F	RT	33	---	---	---	23			
201+10 V - 230+24 V	LT/RT, OVERLOOK DR	4028	264	24	---	---			
<b>CATEGORY TOTALS</b>		<b>15092</b>	<b>264</b>	<b>24</b>		<b>7686</b>			
<b>*PROJECT ID TOTALS</b>		<b>16042</b>	<b>264</b>	<b>24</b>		<b>8346</b>			

\* OTHER QUANTITIES LOCATED ELSEWHERE IN PLAN

ALL ITEMS ON THIS SHEET  
ARE CATEGORY 0010  
UNLESS OTHERWISE NOTED

PROJECT NO: 1170-01-70

HWY: USH 51

COUNTY: MARATHON

MISCELLANEOUS QUANTITIES

SHEET

555

E

Addendum No. 1  
ID 1170-01-70  
Revised Sheet 555  
December 3, 2012

CONCRETE CURB AND GUTTER																			
STATION TO STATION				LOCATION				TYPE A				TYPE D				TYPE R			
601.0409 601.0411				601.0555 601.0557				601.0574 601.0580				601.0580 601.0586				601.0586 601.0592			
30-INCH				36-INCH				4-INCH SLOPED				4-INCH SLOPED				4-INCH SLOPED			
TYPE A				TYPE D				TYPE R				TYPE G				TYPE R			
LF				LF				LF				LF				LF			
30+80 KN - 58+75 KN				LT, CTH K NB				---				75				---			
31+35 KN - 58+75 KN				RT, CTH K NB				---				75				---			
30+65 KS - 58+75 KS				LT, CTH K SB				---				75				---			
30+65 KS - 58+75 KS				RT, CTH K SB				---				75				---			
230+24 V - 230+74 V				LT, OVERLOOK DR				---				75				---			
230+24 V - 230+74 V				RT, OVERLOOK DR				---				75				---			
228+73 V - 230+62 V				LT, MEDIAN				---				353				---			
228+73 V - 230+62 V				RT, A RAMP				---				60				---			
754+50 A - 761+10 A				LT, A RAMP				---				90				---			
757+10 A - 761+33 A				RT, A RAMP				---				60				---			
760+32 A - 761+30 A				RT, MEDIAN				---				---				196			
761+87 B - 764+30 A				LT, B RAMP				---				90				---			
761+29 B - 766+80 B				RT, B RAMP				---				80				---			
771+18 C - 775+50 C				LT, C RAMP				---				88				---			
771+42 C - 775+50 C				RT, C RAMP				---				86				---			
771+21 C - 772+28 C				RT, MEDIAN				---				---				217			
764+50 D - 771+05 D				LT, D RAMP				---				447				---			
768+00 D - 770+47 D				RT, D RAMP				---				76				---			
748+00 E - 750+88 E				LT, E RAMP				---				288				---			
750+00 E - 750+78 E				RT, E RAMP				---				107				---			
743+00 F - 751+99 F				LT, F RAMP				---				919				---			
751+64 F - 751+86 F				RT, F RAMP				---				32				---			
100+00 KE - 104+12 KE				LT, KE ROUNDABOUT				---				---				267			
100+00 KE - 104+12 KE				RT, KE ROUNDABOUT				---				83				---			
200+00 KW - 204+12 KW				LT, KW ROUNDABOUT				---				---				267			
200+00 KW - 204+12 KW				RT, KW ROUNDABOUT				---				---				400			
71+01 U - 71+07 U				LT, BUS 51 RIGHT-TURN ISLAND				---				9				---			
71+35 U - 71+43 U				RT, BUS 51 RIGHT-TURN ISLAND				---				9				---			
71+47 U - 71+73 U				LT, CTH U RIGHT-TURN ISLAND				---				42				---			
71+61 U - 71+83 U				RT, CTH U RIGHT-TURN ISLAND				---				22				---			
71+68 U - 71+79 U				LT, BUS 51 RIGHT-TURN ISLAND				---				10				---			
71+74 U - 71+82 U				RT, BUS 51 RIGHT-TURN ISLAND				---				9				---			
14+40 K - 14+46 K				RT				---				10				---			
14+80 K - 14+89 K				LT, MEDIAN ISLAND				---				9				---			
14+80 K - 14+89 K				LT, LEFT-TURN ISLAND				---				18				---			
14+80 K - 14+89 K				LT, CTH U RIGHT-TURN ISLAND				---				18				---			
14+80 K - 14+89 K				RT, CTH U RIGHT-TURN ISLAND				---				9				---			
CATEGORY TOTALS				12941				668				2363				300			
*PROJECT ID TOTALS				13354				682				2363				315			
CATEGORY TOTALS				12941				668				2363				300			
*PROJECT ID TOTALS				13354				682				2363				315			
CATEGORY TOTALS				12941				668				2363				300			
*PROJECT ID TOTALS				13354				682				2363				315			
CATEGORY TOTALS				12941				668				2363				300			
*PROJECT ID TOTALS				13354				682				2363				315			
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*PROJECT ID TOTALS				13354				682				2363				315			
CATEGORY TOTALS				12941				668				2363				300			
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CATEGORY TOTALS				12941				668				2363				300			
*PROJECT ID TOTALS				13354				682				2363				315			
CATEGORY TOTALS				12941				668				2363				300			
*PROJECT ID TOTALS				13354				682				2363				315			
CATEGORY TOTALS				12941				668				2363				300			
*PROJECT ID TOTALS				13354				682				2363				315			
CATEGORY TOTALS				12941				668				2363				300			
*PROJECT ID TOTALS				13354				682				2363				315			
CATEGORY TOTALS				12941				668				2363				300			
*PROJECT ID TOTALS				13354				682				2363				315			
CATEGORY TOTALS				12941				668				2363				300			
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CATEGORY TOTALS				12941				668				2363				300			
*PROJECT ID TOTALS				13354				682				2363				315			
CATEGORY TOTALS				12941				668				2363				300			
*PROJECT ID TOTALS				13354				682				2363				315			
CATEGORY TOTALS				12941				668				2363				300			
*PROJECT ID TOTALS				13354				682				2363				315			
CATEGORY TOTALS				12941				668				2363				300			
*PROJECT ID TOTALS				13354				682				2363				315			
CATEGORY TOTALS				12941				668				2363				300			
*PROJECT ID TOTALS				13354				682				2363				315			
CATEGORY TOTALS				12941				668				2363				300			
*PROJECT ID TOTALS				13354				682				2363				315			
CATEGORY TOTALS				12941				668				2363				300			
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CATEGORY TOTALS				12941				668				2363				300			
*PROJECT ID TOTALS				13354				682				2363				315			
CATEGORY TOTALS				12941				668				2363							

## EARTHWORK SUMMARY

DIVISION	STATION TO STATION	LOCATION	CUT CY	205.0100 EXCAVATION COMMON CY	SALVAGED/ UNUSABLE PAYMENT MATERIAL CY	(9) AVAILABLE MATERIAL CY	(8) EBS CY	205.0400 EXCAVATION MARSH CY	205.0200 EXCAVATION ROCK CY	FILL CY	UNEXPANDED FILL CY	(2) (4) EXPANDED FILL CY	(5) ORDINATE +/- CY	(1) WASTE CY	(3) 208.0100 BORROW CY
DIVISION 1	350+00 AT - 360+50 AT	AT RAMP	2144	2144	---	2144	---	1002	---	2214	3116	3895	-1751	---	---
	353+50 DT - 366+00 DT	DT RAMP	989	989	---	989	---	---	---	1942	1942	2428	-1439	---	---
	705+00 NS - 727+00 NS	NS LINE (STAGE 1A)	2812	2812	---	2812	---	---	---	838	838	1048	-2605	---	---
	348+00 ST - 353+00 ST	ST LINE	1215	1215	---	1215	---	---	---	35	35	44	1171	---	---
	WASTE FROM THE 1170-01-70 PROJECT		---	---	---	---	---	---	---	---	---	-188	---	---	---
	WASTE FROM THE 6999-18-70 PROJECT		---	---	---	---	---	---	---	---	---	-117	117	---	---
	UNDISTRIBUTED BORROW (10)		---	---	---	---	---	---	---	---	---	---	---	---	5000
	DIVISION 1 SUBTOTAL		7160	7160	---	7160	---	1002	---	5029	5931	7109	52	---	5000
	364+00 NR - 411+00 NR	NR LINE	4425	4425	---	4425	---	---	---	18943	18943	23679	-19254	---	---
	706+50 NS - 724+00 NS	NS LINE (STAGE 1B)	2380	2380	---	2380	---	---	---	633	633	791	1989	---	---
DIVISION 2	413+00 NR - 423+00 NR	NR LINE	433	433	---	433	---	---	---	2430	2430	3038	-2605	---	---
	WASTE FROM 1170-01-70 PROJECT		---	---	---	---	---	---	---	---	---	-20270	20270	---	---
	DIVISION 2 SUBTOTAL		7238	7238	---	7238	---	---	---	22006	22006	7238	---	---	---
	324+00 NR - 361+00 NR	NR LINE	6894	6894	---	6894	---	885	---	20674	21471	26838	-19944	---	---
	711+00 SB - 720+00 SB	SB LANES	1257	1257	93	1164	---	---	---	---	---	---	1164	---	---
	710+00 NB - 720+00 NB	NB LANES	5847	5847	90	5757	---	---	---	15	15	19	5738	---	---
	WASTE FROM 1170-01-70 PROJECT		---	---	---	---	---	---	---	---	---	-13042	13042	---	---
	DIVISION 3A SUBTOTAL		13998	13998	183	13815	---	885	---	20689	21186	13815	---	---	---
	361+00 NR - 364+00 NR	NR LINE	164	164	---	164	---	347	---	6372	6684	8355	-8191	---	---
	WASTE FROM 1170-01-70 PROJECT		---	---	---	---	---	---	---	---	---	-7041	7041	---	---
DIVISION 4	DIVISION 4 SUBTOTAL		164	164	---	164	---	347	---	6372	6684	1314	-1150	---	1150
	720+00 SB - 764+00 SB	SB LANES	46032	46032	2950	43082	---	---	---	8128	7970	9963	33120	---	---
	769+00 SB - 811+00 SB	SB LANES	25133	25133	2860	22273	---	---	---	2120	2120	2650	19623	---	---
	355+00 SR - 380+00 SR	SR LINE	2239	2239	---	2239	---	---	---	1657	1657	2071	168	---	---
	DIVISION 5 SUBTOTAL		74004	74004	5810	67594	---	---	---	11905	11747	11684	52910	---	---
	720+00 NB - 740+00 NB	NB LANES	19550	19550	1340	18210	---	---	---	390	390	488	17723	---	---
	747+00 NB - 763+00 NB	NB LANES	20788	20788	1070	19718	---	---	---	981	981	1226	18492	---	---
	767+00 NB - 811+00 NB	NB LANES	21468	21468	2940	18528	---	---	---	33	33	41	18487	---	---
	DIVISION 6A SUBTOTAL		61806	61806	5350	56456	---	---	---	1404	1404	1755	54701	---	---
	740+00 NB - 747+00 NB	NB LANES	6625	6625	470	6155	---	---	---	---	---	---	6155	---	---
DIVISION 6B	DIVISION 6B SUBTOTAL		6625	6625	470	6155	---	---	---	---	---	---	6155	---	---
	713+00 NB - 763+00 NB	MEDIAN	4533	4533	---	4533	---	---	---	102	102	128	4406	---	---
	768+00 NB - 811+00 NB	MEDIAN	18581	18581	---	18581	---	---	---	225	225	281	18300	---	---
	DIVISION 7 SUBTOTAL		23114	23114	---	23114	---	---	---	327	327	409	22705	---	---
	PROJECT ID TOTALS		193509	193509	---	2234	---	---	---	---	---	---	---	---	6150
	(1) WASTE = EXPANDED FILL - EXCAVATION COMMON (FOR INFORMATION ONLY - NOT A BID ITEM)														
	(2) EXPANSION FACTOR = 1.25														
	(3) BORROW = EXPANDED FILL - AVAILABLE MATERIAL														
	(4) EXPANDED FILL = UNEXPANDED FILL * EXPANSION FACTOR														
	(5) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION, PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.														
DIVISION 7	(6) UNEXPANDED FILL = FILL - (ROCK * 1.1) + (MARSH EXCAVATION * 1.5) - (MARSH EXCAVATION * 0.6) + (EBS * 1.25) - (EBS * 0.8) - ASSUMES THAT ALL MARSH AND EBS CAN BE USED IN FILL AREAS														
	(7) EARTHWORK (SUCH AS FOND B) FROM PREVIOUS STAGES MAY BE COMPLETED INTO THIS STAGE														
	(8) EBS PAID FOR AS EXCAVATION COMMON.														
	(9) AVAILABLE MATERIAL = COMMON EXCAVATION - SALVAGED/UNUSABLE MATERIAL.														
	(10) UNDISTRICTED BORROW IS USED TO ACCOUNT FOR POTENTIAL UNUSABLE MATERIAL WITHIN THE PROJECT DURING THE EARLY STAGES OF CONSTRUCTION														
	PROJECT NO: 1170-01-73														
	HWY: USH 51														
	COUNTY: MARATHON														
	MISCELLANEOUS QUANTITIES														
	SHEET														
	591														
	E														

Addendum No. 1  
ID 1170-01-70  
Revised Sheet 591  
December 3, 2012

ITEMS ON THIS SHEET  
CATEGORY 0010  
EBS OTHERWISE NOTED

**EARTHWORK SUMMARY**

DIVISION	STATION TO STATION	LOCATION	CUT CY	205.0100 EXCAVATION COMMON CY	(8) EBS CY	205.0400 EXCAVATION MARSH CY	205.0200 EXCAVATION ROCK CY	FILL CY	UNEXPANDED FILL CY	(6) FILL CY	(2) (4) EXPANDED FILL CY	(5) MASS ORDINATE +/- CY	(1) WASTE CY	(3) 208.0100 BORROW CY
	4+90 L - 5+50 L	L LINE	117	117	---	---	---	---	---	---	---	117	---	---
	WASTE TO THE 1170-01-73 PROJECT		---	---	---	---	---	---	---	---	117	-117	---	---
	<b>DIVISION 1 SUBTOTAL</b>			117	---	---	---	---	---	---	117	---	---	---
	254+25 M - 255+75 M	M LINE	192	192	---	---	---	---	---	---	1384	-1192	---	---
	12+00 R - 14+50 R	R LINE	1363	1363	---	---	---	1	1	1	1362	725	---	---
	19+50 U - 22+00 U	U LINE	735	735	---	---	---	8	8	10	725	-12746	---	---
	22+00 U - 49+00 U	U LINE	18854	18854	---	---	---	25280	25280	31600	7055	-518	---	---
	51+00 U - 71+00 U	U LINE	8301	8301	---	---	---	7055	7055	-12369	12369	---	---	---
	WASTE FROM 1170-01-70 PROJECT		---	---	---	---	---	---	---	---	---	---	---	---
	<b>DIVISION 2 SUBTOTAL</b>			29445	---	---	---	33451	33451	29445	---	---	---	---

**CATEGORY TOTALS****29562**

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- (1) WASTE = EXPANDED FILL - EXCAVATION COMMON (FOR INFORMATION ONLY - NOT A BID ITEM)  
 (2) EXPANSION FACTOR = 1.25  
 (3) BORROW = EXPANDED FILL - EXCAVATION COMMON  
 (4) EXPANDED FILL = UNEXPANDED FILL \* EXPANSION FACTOR  
 (5) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION, PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION, MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION  
 (6) UNEXPANDED FILL = FILL - (ROCK \* 1.1) + (MARSH EXCAVATION \* 1.5) - (MARSH EXCAVATION \* 0.6) + (EBS \* 1.25) - (EBS \* 0.8) - ASSUMES THAT ALL MARSH AND EBS CAN BE USED IN FILL AREAS  
 (7) EARTHWORK (SUCH AS POND B) FROM PREVIOUS STAGES MAY BE COMPLETED INTO THIS STAGE  
 (8) EBS PAID FOR AS EXCAVATION COMMON

**BASE AGGREGATE DENSE**

STATION TO STATION	LOCATION	TON	305.0110 3/4-INCH	305.0120 1 1/4-INCH	TON	310.0110 OPEN GRADED
19+50 U - 48+68 U	CTH U	81	---	---	8201	9902
51+13 U - 71+47 U	CTH U	---	---	---	4534	5623
200+80 V - 201+10 V	OVERLOOK DR	4	---	---	68	71
12+00 R - 14+72 R	ARTHUR AVE	55	---	---	467	517
4+90 L - 5+50 L	18TH AVE	30	---	---	---	200
254+17 M - 255+94 M	MERRILL CUL-DE-SAC	50	---	---	---	550
PROJECT WIDE	P.E. DRIVEWAYS	260	---	---	100	---
PROJECT WIDE	C.E. DRIVEWAYS	600	---	---	120	---
24+89 U - 71+13 U	SIDEWALK	---	---	---	1110	---
23+64 U - 69+50 U	PIPE UNDERDRAIN	---	---	---	---	937
<b>CATEGORY TOTALS</b>		<b>1080</b>			<b>14600</b>	<b>17800</b>

Addendum No. 1  
 ID 1170-01-70  
 Revised Sheet 608  
 December 3, 2012

**OBLITERATING OLD ROAD**

PROJECT	EACH	213.0100	214.0100
			STA
18TH AVE	4		
MERRILL AVE	1		
<b>CATEGORY TOTAL</b>	<b>1</b>	<b>5</b>	

**\* OTHER QUANTITIES LOCATED ELSEWHERE IN PLAN**

ALL ITEMS ON THIS SHEET  
 ARE CATEGORY 0010  
 UNLESS OTHERWISE NOTED

PROJECT NO: 6999-18-70

HWY: USH 51

COUNTY: MARATHON

MISCELLANEOUS QUANTITIES

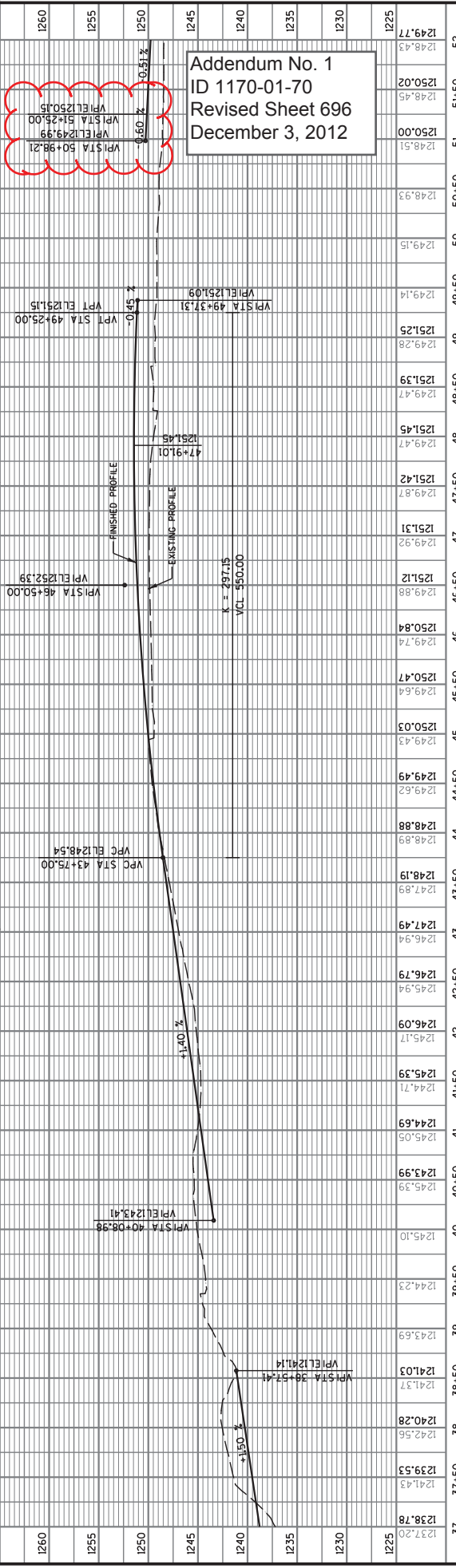
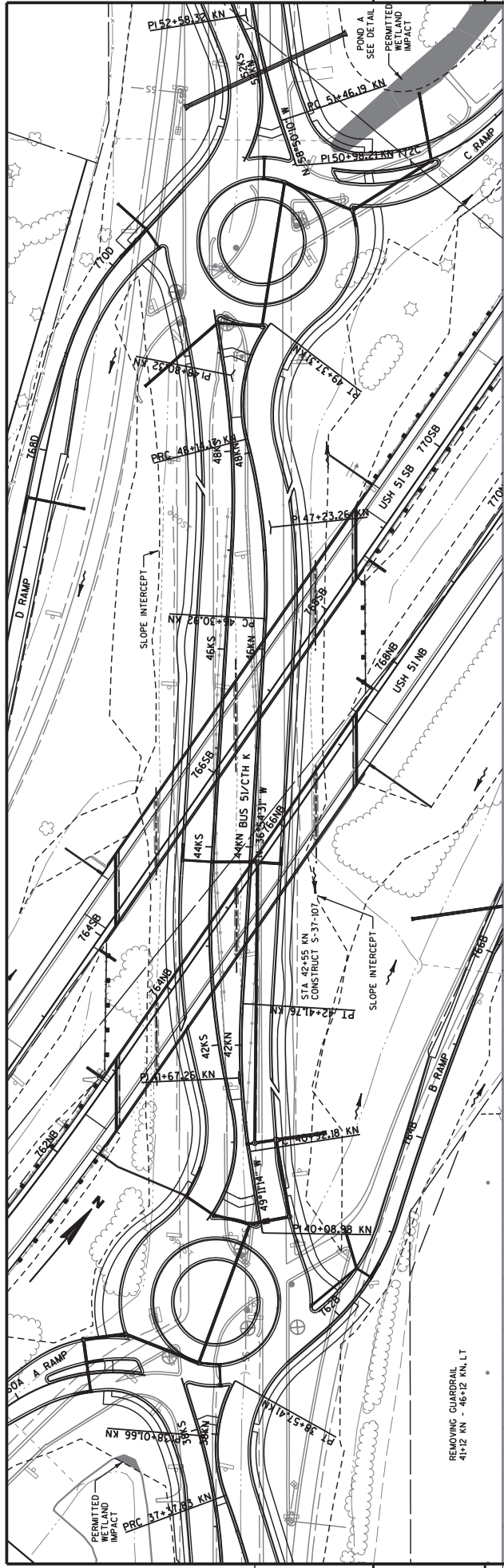
SHEET 608

E









Addendum No. 1  
ID 1170-01-70  
Revised Sheet 696  
December 3, 2012

PROJECT NO: 1170-01-70		COUNTY: MARATHON		PLAN & PROFILE - CTH K (NORTHBOUND)		SHEET 696	
HWY: USH 51		PLOT DATE: 11/28/2012		PLOT BY: AYRES-EC		PLOT SCALE: 1:100	
FILE NAME: T:\410525 - 410527\001170-01-75 MAINLINE PROJECT\Plan\050135.pdkn.dgn		PLOT NAME:		WISDOT/CADD SHEET 40		E	



## EARTHWORK DATA - A RAMP

STATION	COMMON		FILL		MASS HAUL	
	SF	CY	SF	CY	CY	

753+50.00	350.35	6.60	0.00	0.00	0.00	0.00
754+00.00	339.72	9.67	638.95	18.83	620.12	18.83
754+50.00	340.94	6.23	630.24	18.40	1231.96	18.40
755+00.00	404.03	0.00	689.79	7.21	1914.54	7.21
755+50.00	799.78	5.28	1114.64	6.11	3023.06	6.11
756+00.00	242.45	0.00	965.03	6.11	3981.98	6.11
756+50.00	327.38	0.00	527.62	0.00	4509.60	0.00
757+00.00	441.25	0.00	711.69	0.00	5221.30	0.00
757+50.00	510.37	0.00	881.13	0.00	6102.43	0.00
758+00.00	642.89	0.00	1067.83	0.00	7170.26	0.00
758+50.00	836.74	0.00	1370.03	0.00	8540.29	0.00
759+00.00	1038.46	0.00	1736.30	0.00	10276.58	0.00
759+17.00	1105.32	0.00	674.89	0.00	10951.48	0.00
759+50.00	1242.11	0.00	1434.54	0.00	12386.02	0.00
760+00.00	1441.59	0.00	2484.91	0.00	14870.93	0.00
760+50.00	1633.33	0.70	2847.15	0.81	17717.26	0.81
761+00.00	1826.71	1.57	3203.74	2.63	20918.38	2.63

## EARTHWORK DATA - B RAMP

STATION	CUT		FILL		ROCK		MASS HAUL	
	SF	CY	SF	CY	SF	CY	CY	

761+50.00	57.02	0.00	0.00	0.00	0.00	0.00	0.00	0
762+00.00	112.54	0.00	2.17	157.00	0.00	2.51	154.48843	0
762+50.00	87.72	0.00	11.57	185.43	0.00	15.90	324.01157	0
763+00.00	413.15	45.60	18.42	463.77	42.22	34.71	768.90278	0
763+50.00	481.15	173.60	16.15	828.06	202.96	40.01	1633.0579	0
764+00.00	928.16	239.70	22.98	1304.92	382.69	45.29	3036.1921	0
764+50.00	989.55	263.00	24.18	1775.66	465.46	54.58	4931.8148	0
765+00.00	1050.75	275.10	17.64	1889.17	498.24	48.40	6959.419	0
765+50.00	997.25	277.90	4.45	1896.30	512.04	25.57	9022.162	0
766+00.00	943.67	314.50	4.41	1797.15	548.52	10.25	11014.75	0
766+50.00	538.93	0.00	8.62	1372.78	291.20	15.08	12481.648	0
767+00.00	201.85	0.00	0.95	685.91	0.00	11.08	13156.479	0
767+50.00	137.99	0.00	0.00	314.67	0.00	1.10	13470.046	0
768+00.00	99.95	0.00	0.00	220.31	0.00	0.00	13690.361	0
768+50.00	83.86	0.00	0.02	170.19	0.00	0.02	13860.532	0
769+00.00	88.74	0.00	0.04	159.81	0.00	0.07	14020.278	0
769+50.00	112.04	0.00	0.00	185.91	0.00	0.05	14206.139	0
770+00.00	139.69	0.00	0.29	233.08	0.00	0.34	14438.887	0
770+50.00	136.13	0.00	1.03	255.39	0.00	1.53	14692.748	0
771+00.00	137.50	0.00	0.01	253.36	0.00	1.20	14944.905	0
771+50.00	120.15	0.00	0.00	238.56	0.00	0.01	15183.458	0
772+00.00	120.79	0.00	0.00	223.09	0.00	0.00	15406.551	0
772+50.00	114.54	0.00	0.00	217.90	0.00	0.00	15624.449	0
773+00.00	133.20	0.00	1.11	229.39	0.00	1.28	15852.553	0
773+50.00	103.47	0.00	0.00	219.14	0.00	1.28	16070.407	0
774+00.00	82.40	0.00	0.00	172.10	0.00	0.00	16242.509	0
774+50.00	65.65	0.00	0.00	137.08	0.00	0.00	16379.593	0
775+00.00	35.59	0.00	0.00	93.74	0.00	0.00	16473.333	0
775+50.00	29.44	0.00	0.05	60.21	0.00	0.06	16533.488	0
776+00.00	34.20	0.00	0.00	58.93	0.00	0.06	16592.356	0
776+50.00	5.87	0.00	1.15	37.10	0.00	1.33	16628.127	0
777+00.00	4.46	0.00	1.20	9.56	0.00	2.72	16634.972	0
777+50.00	4.47	0.00	2.61	8.27	0.00	4.41	16638.831	0
778+00.00	8.01	0.00	0.48	11.56	0.00	3.58	16646.81	0
778+50.00	24.17	0.00	0.00	29.80	0.00	0.56	16676.051	0
779+00.00	43.07	0.00	0.00	62.26	0.00	0.00	16738.31	0
779+50.00	44.89	0.00	0.48	81.44	0.00	0.56	16819.199	0
780+00.00	57.27	0.00	0.00	94.59	0.00	0.56	16913.236	0
780+50.00	77.56	0.00	0.00	124.84	0.00	0.00	17038.079	0
781+00.00	80.56	0.00	0.00	146.41	0.00	0.00	17184.486	0

## EARTHWORK DATA - C RAMP

STATION	COMMON		FILL		MASS HAUL	
	SF	CY	SF	CY	CY	

771+50.00	34.66	486.88	0.00	0.00	0.00	0.00
772+00.00	74.90	552.74	101.44	1203.26	1203.26	-1101.82
772+50.00	80.64	173.78	144.02	840.88	840.88	-1798.68
773+00.00	135.89	73.42	200.49	286.11	286.11	-1884.30
773+50.00	113.12	41.17	230.56	132.63	132.63	-1786.36
774+00.00	98.98	34.92	196.39	88.07	88.07	-1678.04
774+50.00	49.18	31.55	137.19	76.93	76.93	-1617.79
775+00.00	46.01	35.77	10.58	9.35	9.35	-1616.56
775+50.00	47.78	137.41	76.42	176.39	176.39	-1716.53
776+00.00	41.95	200.78	83.08	391.42	391.42	-2024.87
776+50.00	144.00	127.20	172.18	379.61	379.61	-2232.30
777+00.00	130.51	101.89	254.18	265.15	265.15	-2243.27
777+50.00	164.03	74.54	272.72	204.20	204.20	-2174.75
778+00.00	125.89	21.99	268.44	111.72	111.72	-2018.03
778+50.00	126.59	4.87	233.78	31.09	31.09	-1815.34
779+00.00	85.50	6.31	196.38	12.94	12.94	-1631.90
779+50.00	124.30	2.15	194.26	9.79	9.79	-1447.44
780+00.00	174.53	0.51	276.69	3.08	3.08	-1173.82
780+50.00	141.05	0.00	292.20	0.59	0.59	-882.21
781+00.00	137.28	0.00	257.71	0.00	0.00	-624.49
781+50.00	156.85	0.00	272.34	0.00	0.00	-352.15
782+00.00	41.92	0.00	184.05	0.00	0.00	-168.10
782+50.00	39.86	0.00	75.72	0.00	0.00	-92.38
783+00.00	37.88	0.00	71.98	0.00	0.00	-20.40
783+50.00	37.20	0.00	69.52	0.00	0.00	49.12
784+00.00	41.64	0.00	73.00	0.00	0.00	122.12
784+50.00	104.64	0.00	135.44	0.00	0.00	257.56
785+00.00	119.15	0.00	207.21	0.00	0.00	464.78

Mass haul does not account for unusable material.

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EARTHWORK DATA - D RAMP						
STATION	COMMON			FILL		MASS HAUL
	COMMON SF	COMMON CY	COMMON CY	FILL SF	FILL CY	
754+50.00	91.47	0.00	0.00	82.20	0.00	42.81
755+00.00	8.97	93.00	866.50	94.58	0.00	908.39
755+50.00	36.50	42.10	659.81	182.81	175.72	1624.95
756+00.00	161.69	0.00	183.51	284.78	88.15	1775.80
756+50.00	366.74	0.00	489.29	73.19	0.00	1359.71
757+00.00	587.23	2.62	883.31	0.00	3.03	479.44
757+50.00	705.98	1.12	1197.42	4.33	0.00	713.65
758+00.00	838.33	0.40	1429.92	1.76	0.00	2141.81
758+50.00	931.34	0.10	1638.58	0.58	0.00	3779.81
759+00.00	1048.68	1.53	1833.35	1.89	0.00	5611.28
759+50.00	876.03	3.32	1782.14	5.61	0.00	7387.81
760+00.00	941.56	0.00	1682.95	3.84	0.00	9066.92
760+50.00	952.10	0.00	1753.39	0.00	0.00	10820.31
761+00.00	959.72	0.00	1770.20	0.00	0.00	12590.51
761+50.00	962.38	0.00	1779.72	0.00	0.00	14370.23
762+00.00	1146.73	0.00	1952.88	0.00	0.00	16323.11
762+50.00	1071.39	0.00	2053.81	0.00	0.00	18376.93
763+00.00	1113.65	0.00	2023.19	0.00	0.00	20400.11
763+50.00	1124.91	6.06	2072.74	7.01	0.00	22465.84
764+00.00	1029.79	0.00	1995.09	7.01	0.00	24453.92
764+50.00	720.78	0.01	1620.90	0.01	0.00	26074.80
765+00.00	995.33	0.00	1588.99	0.01	0.00	27663.78
765+50.00	1014.61	0.00	1861.06	0.00	0.00	29524.84
766+00.00	917.06	0.00	1788.58	0.06	0.00	31313.36
766+50.00	808.02	2.89	1597.30	3.40	0.00	32907.26
767+00.00	666.94	7.14	1365.70	11.61	0.00	34261.35
767+50.00	535.74	9.92	1113.59	19.75	0.00	35355.20
768+00.00	517.66	51.15	975.37	70.68	0.00	36259.89
768+50.00	381.48	52.16	832.54	119.57	0.00	36972.85
769+00.00	278.10	49.50	610.72	117.66	0.00	37465.91
769+50.00	20.73	26.87	276.69	88.39	0.00	37654.22
770+00.00	41.26	27.27	57.40	62.66	0.00	37648.95
770+50.00	138.71	3.79	166.64	35.95	0.00	37779.64

EARTHWORK DATA - E RAMP						
STATION	COMMON			FILL		MASS HAUL
	COMMON SF	COMMON CY	COMMON CY	FILL SF	FILL CY	
738+50.00	35.71	70.86	0.00	104.51	0.00	123.64
739+00.00	49.97	104.51	79.33	63.40	194.34	218.22
739+50.00	57.77	63.40	99.76	19.28	163.45	150.46
740+00.00	118.76	0.03	230.56	0.00	22.35	57.74
740+50.00	130.24	0.00	221.40	0.00	0.00	279.11
741+00.00	108.87	0.00	208.18	0.00	0.00	487.28
741+50.00	115.96	0.00	269.32	0.00	0.00	756.61
742+00.00	174.91	0.00	346.50	0.00	0.00	1103.11
742+50.00	199.31	0.00	383.69	0.00	0.00	1486.79
743+00.00	215.07	0.00	430.25	0.00	0.00	1917.04
743+50.00	249.60	0.00	857.93	10.19	2264.78	2542.02
744+00.00	136.96	8.80	289.12	11.89	2542.02	3375.28
744+50.00	175.29	1.47	389.32	1.70	3375.28	3812.72
745+00.00	245.18	0.00	445.64	0.00	3812.72	4187.41
745+50.00	236.11	0.00	437.44	0.00	4187.41	4476.08
746+00.00	236.33	0.00	374.69	0.00	4744.45	5180.77
746+50.00	168.33	0.00	289.79	1.11	5846.24	6588.51
747+00.00	144.64	0.96	274.62	6.25	7338.57	8036.19
747+50.00	151.95	4.44	274.62	38.37	8036.19	8698.24
748+00.00	360.71	28.71	474.69	93.97	8698.24	9313.36
748+50.00	459.48	52.48	759.44	93.97	9313.36	9979.81
749+00.00	505.91	78.51	893.88	151.61	9979.81	10313.36
749+50.00	538.66	109.09	967.19	217.13	10313.36	10613.36
750+00.00	542.17	152.83	1000.77	303.15	10613.36	10913.36
750+50.00	597.94	187.25	1055.66	393.61	10913.36	11213.36

EARTHWORK DATA - F RAMP									
STATION	COMMON			FILL		ROCK		FILL	
	COMMON SF	COMMON CY	COMMON CY	FILL SF	FILL CY	ROCK SF	ROCK CY	FILL CY	MASS HAUL CY
740+50.00	390.51	58.96	21.28	0.00	0.00	0.00	0.00	0.00	0.00
741+00.00	531.91	95.88	9.38	854.09	143.37	35.49	872.37	16.39	2064.92
741+50.00	683.17	145.66	4.78	1125.07	223.65	8.54	3615.93	4.79	5674.93
742+00.00	845.28	269.96	2.60	1415.23	384.83	2.15	7555.53	4.20	9094.84
742+50.00	1048.15	624.62	1.54	1753.18	828.31	4.44	10910.03	0.61	13016.63
743+00.00	620.94	346.80	0.32	1545.45	899.46	0.00	18422.15	0.00	21873.36
743+50.00	776.25	372.69	3.31	1293.69	666.19	712.09	4.44	0.00	25622.46
744+00.00	900.55	396.37	0.53	1552.59	757.24	0.00	15482.64	0.00	18422.15
744+50.00	1068.56	421.45	0.00	1823.25	914.03	0.00	21873.36	0.00	25622.46
745+00.00	1270.29	443.72	0.00	2165.60	801.08	0.00	25622.46	0.00	29115.42
745+50.00	1556.34	484.39	0.00	2617.25	859.36	0.00	31848.87	61.24	33678.25
746+00.00	1800.79	502.76	0.00	3108.45	914.03	0.00	34744.36	35207.04	35133.94
746+50.00	1762.68	792.05	0.00	3299.51	1198.90	0.00	34744.36	690.02	34707.57
747+00.00	1382.28	893.43	3.69	2912.00	1560.63	4.27	29115.42	0.00	34039.95
747+50.00	1161.77	371.12	49.22	2355.60	1170.88	0.00	31848.87	190.49	33678.25
748+00.00	880.49	0.09	115.36	1890.98	343.71	0.08	327.20	0.00	34744.36
748+50.00	624.25	0.00	167.34	1393.28	0.00	0.00	484.71	0.00	35207.04
749+00.00	398.93	0.00	251.45	947.39	0.00	0.00	690.02	0.00	35133.94
749+50.00	267.35	0.00	344.73	616.93	0.00	0.00	890.75	0.00	34707.57
750+00.00	234.18	0.00	424.88	464.38	0.00	0.00	1073.56	0.00	34039.95
750+50.00	204.24	0.00	502.68	405.94	0.00	0.00	1347.07	0.00	33037.52
751+00.00	167.97	0.00	661.19	344.64	0.00	0.00	1791.24	0.00	31401.81
751+50.00	0.00	0.00	886.44	155.53	0.00	0.00	0.00	0.00	0.00

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EARTHWORK DATA - E RAMP WIDENING						
STATION	COMMON			FILL		MASS HAUL
	COMMON SF	COMMON CY	COMMON CY	FILL SF	FILL CY	
746+00.00	277.30	0.00	0.00	0.00	0.00	0.00
746+50.00	205.13	0.00	446.69	0.00	0.00	446.69
747+00.00	170.18	0.96	347.51	1.11	793.09	793.09
747+50.00	148.38	4.54	294.96	6.37	1081.69	1081.69
748+00.00	133.00	19.89	260.54	28.28	1313.95	1313.95

EARTHWORK DATA - F RAMP WIDENING						
STATION	COMMON			FILL		MASS HAUL
	COMMON SF	COMMON CY	COMMON CY	FILL SF	FILL CY	
746+00.00	1728.30	0.00	0.00	0.00	0.00	0.00
746+50.00	1702.96	0.00	3177.09	0.00	0.00	3177.09
747+00.00	1348.58	0.96	2825.50	1.11	6001.48	6001.48



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EARTHWORK DATA - TEMP AT RAMP

STATION	COMMON		MARSH		FILL		COMMON		MARSH		FILL		MASS HAUL
	SF	CY	SF	CY	SF	CY	SF	CY	SF	CY	SF	CY	

350+00.00	45.63	0.00	0.00	0.00	8.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
350+50.00	52.53	0.00	9.75	90.89	0.00	0.00	21.16	69.73	357.79	926.12	1493.97	1726.61	69.73
351+00.00	270.76	0.00	0.00	299.34	0.00	0.00	11.28	357.79	926.12	1493.97	1726.61	69.73	357.79
351+50.00	343.04	0.00	0.00	568.33	0.00	0.00	0.00	926.12	1493.97	1726.61	69.73	357.79	926.12
352+00.00	270.24	0.00	0.00	567.85	0.00	0.00	0.00	1493.97	1726.61	69.73	357.79	926.12	1493.97
352+50.00	6.06	0.00	20.04	255.83	0.00	23.19	58.78	1680.22	1621.38	1534.01	1357.03	1159.57	1002.88
353+00.00	7.32	0.00	30.75	12.39	0.00	58.78	1680.22	1621.38	1534.01	1357.03	1159.57	1002.88	845.76
353+50.00	8.79	0.00	32.97	14.92	0.00	73.75	104.42	1534.01	1357.03	1159.57	1002.88	845.76	662.26
354+00.00	9.62	0.00	57.25	17.05	0.00	104.42	1534.01	1357.03	1159.57	1002.88	845.76	662.26	427.70
354+50.00	28.31	0.00	126.00	35.12	0.00	212.09	254.86	427.70	162.87	105.97	497.74	916.14	1449.02
355+00.00	27.78	0.00	89.48	51.94	0.00	249.40	1159.57	1002.88	845.76	662.26	427.70	162.87	105.97
355+50.00	10.38	0.00	76.43	35.33	0.00	192.03	186.02	845.76	662.26	427.70	162.87	105.97	497.74
356+00.00	20.83	0.00	84.29	28.90	0.00	186.02	223.08	662.26	427.70	162.87	105.97	497.74	916.14
356+50.00	21.92	0.00	108.45	39.58	0.00	223.08	254.86	427.70	162.87	105.97	497.74	916.14	1449.02
357+00.00	0.00	0.00	111.75	20.30	0.00	254.86	427.70	162.87	105.97	497.74	916.14	1449.02	1755.18
357+50.00	0.00	0.00	117.06	0.00	0.00	264.83	162.87	105.97	497.74	916.14	1449.02	1755.18	1749.87
358+00.00	0.00	0.00	58.96	115.22	0.00	268.84	105.97	497.74	916.14	1449.02	1755.18	1749.87	1749.87
358+50.00	10.15	0.00	95.88	92.03	0.00	143.37	239.87	497.74	916.14	1449.02	1755.18	1749.87	1749.87
359+00.00	23.71	0.00	145.66	79.17	0.00	31.35	223.65	198.15	916.14	1449.02	1755.18	1749.87	1749.87
359+50.00	18.01	0.00	269.96	40.56	0.00	38.63	384.83	138.58	1449.02	1755.18	1749.87	1749.87	1749.87
360+00.00	5.74	0.00	0.00	21.99	0.00	249.96	46.94	1755.18	1749.87	1749.87	1749.87	1749.87	1749.87
360+50.00	0.00	0.00	0.00	5.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

EARTHWORK DATA - TEMP BT RAMP

STATION	COMMON		FILL		COMMON		FILL		COMMON		FILL		MASS HAUL
	SF	CY	SF	CY	SF	CY	SF	CY	SF	CY	SF	CY	

363+50.00	1.39	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
364+00.00	0.12	0.00	0.00	1.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
364+50.00	0.00	0.00	12.58	0.11	14.56	-13.05	31.59	34.19	23.51	13.59	0.00	0.00	0.00
365+00.00	11.28	14.71	10.44	30.06	19.39	23.51	13.59	0.00	0.00	0.00	0.00	0.00	0.00
365+50.00	21.19	2.04	0.13	10.58	0.65	13.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00
365+63.00	22.74	0.13	10.58	0.65	13.59	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

EARTHWORK DATA - TEMP CT RAMP

STATION	COMMON		FILL		COMMON		FILL		MASS HAUL
	SF	CY	SF	CY	SF	CY	SF	CY	

370+90.00	0.00	0.00	71.31	0.00	0.00	0.00	0.00	0.00	0.00
371+00.00	0.60	1.98	0.00	0.11	16.97	16.85	11.97	641.38	1268.73
371+50.00	7.15	0.00	0.00	7.18	2.29	11.97	641.38	1268.73	1506.08
372+00.00	0.00	549.53	0.00	6.62	636.03	641.38	1268.73	1506.08	2398.89
372+25.00	0.00	534.53	0.00	6.62	636.03	641.38	1268.73	1506.08	3590.02
372+50.00	55.63	526.55	25.75	614.05	1857.03	3016.30	4107.92	4820.52	5134.42
373+00.00	30.24	543.76	79.51	1238.78	3016.30	4107.92	4820.52	5134.42	5192.02
373+50.00	9.00	430.79	36.33	1127.95	4107.92	4820.52	5134.42	5192.02	5192.02
374+00.00	12.65	202.22	20.05	732.65	4820.52	5134.42	5192.02	5192.02	5192.02
374+50.00	1.97	1.26	13.54	235.51	5042.50	5134.42	5192.02	5192.02	5192.02
375+00.00	2.29	0.49	3.94	2.03	5040.58	5134.42	5192.02	5192.02	5192.02
375+50.00	12.87	14.62	14.04	17.49	5044.03	5134.42	5192.02	5192.02	5192.02
376+00.00	19.33	11.31	29.81	30.01	5044.22	5134.42	5192.02	5192.02	5192.02
376+50.00	36.37	8.54	51.57	22.97	5015.63	5134.42	5192.02	5192.02	5192.02
377+00.00	45.14	9.19	75.47	20.52	4960.67	5134.42	5192.02	5192.02	5192.02
377+50.00	42.31	10.30	80.97	22.56	4902.26	5134.42	5192.02	5192.02	5192.02
378+00.00	39.38	12.55	75.64	26.45	4853.07	5134.42	5192.02	5192.02	5192.02
378+50.00	37.46	10.84	71.15	27.07	4808.99	5134.42	5192.02	5192.02	5192.02
379+00.00	35.41	7.78	67.47	21.55	4763.07	5134.42	5192.02	5192.02	5192.02
379+50.00	35.92	5.98	66.05	15.93	4712.95	5134.42	5192.02	5192.02	5192.02
380+00.00	30.55	3.33	61.55	10.78	4662.18	5134.42	5192.02	5192.02	5192.02
380+25.00	28.97	2.51	27.56	3.38	4638.00	5134.42	5192.02	5192.02	5192.02
380+50.00	20.56	1.74	22.93	2.46	4617.53	5134.42	5192.02	5192.02	5192.02
381+00.00	33.32	1.17	49.89	3.37	4571.01	5134.42	5192.02	5192.02	5192.02
381+50.00	27.08	0.90	55.93	2.40	4517.48	5134.42	5192.02	5192.02	5192.02
382+00.00	31.42	0.57	54.17	1.70	4465.02	5134.42	5192.02	5192.02	5192.02
382+50.00	33.19	0.00	59.82	0.66	4405.85	5134.42	5192.02	5192.02	5192.02
383+00.00	29.53	0.00	58.07	0.00	4347.78	5134.42	5192.02	5192.02	5192.02
383+50.00	24.85	0.00	50.35	0.00	4297.42	5134.42	5192.02	5192.02	5192.02
384+00.00	26.39	0.00	47.44	0.00	4249.98	5134.42	5192.02	5192.02	5192.02
384+50.00	24.85	0.00	47.44	0.00	4202.54	5134.42	5192.02	5192.02	5192.02

EARTHWORK DATA - TEMP CU RAMP

STATION	COMMON		FILL		COMMON		FILL		MASS HAUL
	SF	CY	SF	CY	SF	CY	SF	CY	

372+00.00	2.41	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
372+25.00	0.00	175.93	0.00	1.12	101.81	100.70	345.48	892.73	1506.08
372+50.00	0.00	247.06	0.00	0.00	244.79	345.48	892.73	1506.08	2398.89
373+00.00	39.91	257.69	36.95	584.20	927.64	2398.89	3590.02	4623.40	5055.48
373+50.00	37.61	334.26	71.78	685.13	927.64	2398.89	3590.02	4623.40	5134.42
374+00.00	0.00	467.22	34.82	1191.12	1033.38	463.16	5134.42	5192.02	5192.02
374+50.00	0.00	561.91	0.00	330.93	0.00	1033.38	463.16	5134.42	5192.02
375+00.00	0.00	330.93	0.00	31.07	463.16	5134.42	5192.02	5192.02	5192.02
375+50.00	33.56	69.24	25.81	31.07	110.01	5134.42	5192.02	5192.02	5192.02
376+00.00	0.00	23.96	0.00	57.60	5192.02	5192.02	5192.02	5192.02	5192.02
376+50.00	0.00	23.96	0.00	57.60	5192.02	5192.02	5192.02	5192.02	5192.02

## EARTHWORK DATA - USH 51 MEDIAN

STATION	COMMON		FILL		COMMON		FILL		MASS HAUL
	SF	CY	SF	CY	SF	CY	SF	CY	

804+00.00	123.51	0.00	478.74	0.00	16140.34	0.00	16140.34	0.00	16140.34
805+00.00	129.65	0.00	468.81	0.00	16609.16	0.00	16609.16	0.00	16609.16
806+00.00	117.32	0.00	457.35	0.00	17066.51	0.00	17066.51	0.00	17066.51
807+00.00	79.93	0.00	365.28	0.00	17431.79	0.00	17431.79	0.00	17431.79
808+00.00	61.31	0.00	261.56	0.00	17431.79	0.00	17431.79	0.00	17431.79
809+00.00	46.40	0.00	199.46	0.00	17431.79	0.00	17431.79	0.00	17431.79
810+00.00	57.28	0.00	192.00	0.00	17431.79	0.00	17431.79	0.00	17431.79
811+00.00	58.36	0.00	214.15	0.00	17431.79	0.00	17431.79	0.00	17431.79

## EARTHWORK DATA - NB RUNA ROUND (NR)

STATION	COMMON		FILL		COMMON		FILL		MASS HAUL
	SF	CY	SF	CY	SF	CY	SF	CY	

324+00.00	16.25	0.00	39.02	0.00	0.00	0.00	0.00	0.00	0
325+00.00	18.07	0.00	37.06	63.56	0.00	176.11	112.56	0.00	112.56
326+00.00	28.84	0.00	48.67	86.87	0.00	198.45	224.13	0.00	224.13
327+00.00	27.82	0.00	44.56	104.93	0.00	215.81	335.02	0.00	335.02
328+00.00	28.57	0.00	41.39	104.43	0.00	198.96	429.55	0.00	429.55
329+00.00	30.87	0.00	44.82	110.07	0.00	199.56	-519.04	0.00	-519.04
330+00.00	29.85	0.00	49.74	112.44	0.00	218.89	625.48	0.00	625.48
331+00.00	29.43	0.00	54.34	109.78	0.00	240.93	756.63	0.00	756.63
332+00.00	28.70	0.00	80.79	107.65	0.00	312.80	961.78	0.00	961.78
332+39.00	29.52	0.00	132.49	42.05	0.00	192.54	1112.28	0.00	1112.28
332+50.00	32.38	0.00	134.60	12.61	0.00	68.01	1167.68	0.00	1167.68
333+00.00	61.07	0.00	171.92	86.53	0.00	354.77	1435.92	0.00	1435.92
333+22.00	58.02	0.00	156.23	48.52	0.00	167.11	1554.51	0.00	1554.51
333+50.00	33.10	0.00	167.29	47.25	0.00	209.69	1716.96	0.00	1716.96
334+00.00	34.00	0.00	140.10	62.13	0.00	355.78	2010.60	0.00	2010.60
335+00.00	29.00	0.00	114.60	116.67	0.00	589.58	2483.52	0.00	2483.52
336+00.00	33.21	0.00	89.14	115.20	0.00	471.62	2899.94	0.00	2899.94
337+00.00	51.96	0.00	75.59	157.72	0.00	381.32	3063.53	0.00	3063.53
338+00.00	48.33	0.00	127.35	185.72	0.00	469.77	3347.58	0.00	3347.58
338+40.00	46.76	0.00	187.65	70.44	0.00	291.67	3568.81	0.00	3568.81
338+55.00	59.00	0.00	160.53	29.38	0.00	120.90	3660.33	0.00	3660.33
339+00.00	48.55	0.00	181.28	89.63	0.00	356.05	3926.75	0.00	3926.75
340+00.00	45.50	0.00	62.47	174.17	0.00	564.24	4316.82	0.00	4316.82
341+00.00	40.66	0.00	41.60	159.56	0.00	240.90	4398.17	0.00	4398.17
341+50.00	45.76	0.00	28.06	80.02	0.00	80.63	4398.78	0.00	4398.78
342+00.00	41.49	0.00	21.75	80.79	0.00	57.65	4375.64	0.00	4375.64
342+50.00	17.69	0.00	12.26	54.80	0.00	39.36	4360.21	0.00	4360.21
343+00.00	22.41	0.00	3.20	37.13	0.00	17.89	4340.97	0.00	4340.97
344+00.00	35.41	0.00	4.85	107.07	0.00	18.63	4252.53	0.00	4252.53
345+00.00	48.44	0.00	1.93	155.28	0.00	15.69	4112.95	0.00	4112.95
346+00.00	40.38	0.00	1.45	164.48	0.00	7.82	3956.29	0.00	3956.29
347+00.00	79.73	0.00	2.10	222.43	0.00	8.22	3742.08	0.00	3742.08
348+00.00	80.22	0.00	6.41	296.20	0.00	19.70	3465.58	0.00	3465.58
349+00.00	75.87	0.00	8.87	289.06	0.00	35.37	3211.89	0.00	3211.89
350+00.00	51.77	0.00	9.52	236.37	0.00	42.57	3018.09	0.00	3018.09
351+00.00	277.82	0.00	5.46	610.35	0.00	34.68	2442.42	0.00	2442.42
352+00.00	89.04	0.00	0.00	679.37	0.00	12.64	1775.68	0.00	1775.68
352+66.00	59.79	0.00	23.52	181.90	0.00	35.93	1629.71	0.00	1629.71
353+00.00	39.16	0.00	34.92	62.30	0.00	45.99	-1613.41	0.00	-1613.41
354+00.00	28.58	0.00	81.24	125.44	0.00	268.89	1756.85	0.00	1756.85

Addendum No. 1  
ID 1170-01-70  
Revised Sheet 1085  
December 3, 2012

## EARTHWORK DATA - NB RUNA ROUND (NR)

STATION	COMMON		FILL		COMMON		FILL		MASS HAUL
	SF	CY	SF	CY	SF	CY	SF	CY	

355+00.00	23.50	0.00	85.24	96.44	0.00	385.37	2045.78	0.00	2045.78
355+50.00	22.37	0.00	109.54	42.47	0.00	225.44	2228.74	0.00	2228.74
356+00.00	29.86	0.00	170.41	48.36	0.00	324.02	2504.40	0.00	2504.40
356+50.00	27.65	0.00	261.07	53.25	0.00	499.40	2950.55	0.00	2950.55
357+00.00	35.92	0.00	362.97	58.86	0.00	722.27	3613.96	0.00	3613.96
357+50.00	47.05	0.00	518.29	76.82	0.00	1019.98	4557.11	0.00	4557.11
358+00.00	54.65	0.00	706.58	94.17	0.00	1417.67	5880.62	0.00	5880.62
359+00.00	79.86	134.37	1029.61	249.09	0.00	4018.96	9650.48	0.00	9650.48
360+00.00	77.59	118.88	1131.54	291.57	468.98	5002.66	14889.17	0.00	14889.17
361+00.00	85.97	105.95	980.68	302.89	416.35	4889.40	19944.08	0.00	19944.08
362+00.00	0.00	81.22	683.49	159.20	346.61	3852.25	24027.06	0.00	24027.06
363+00.00	0.00	0.00	367.88	0.00	0.00	2433.73	26460.78	0.00	26460.78
364+00.00	2.41	0.00	352.01	4.46	0.00	1666.41	28122.73	0.00	28122.73
365+00.00	20.21	0.00	427.28	41.89	0.00	1803.91	29884.76	0.00	29884.76
365+50.00	4.24	0.00	408.50	22.64	0.00	967.34	30829.46	0.00	30829.46
366+00.00	8.07	0.00	329.54	11.40	0.00	854.21	31672.27	0.00	31672.27
366+50.00	23.60	0.00	237.82	29.32	0.00	656.67	32299.61	0.00	32299.61
367+00.00	24.06	0.00	172.23	44.13	0.00	474.59	32730.08	0.00	32730.08
368+00.00	32.39	0.00	91.32	104.54	0.00	610.07	33235.61	0.00	33235.61
369+00.00	30.23	0.00	70.27	115.96	0.00	374.05	33493.70	0.00	33493.70
370+00.00	33.73	0.00	57.31	118.44	0.00	295.32	33670.58	0.00	33670.58
371+00.00	32.66	0.00	67.13	122.94	0.00	288.06	33835.69	0.00	33835.69
372+00.00	28.05	0.00	50.36	112.43	0.00	271.97	33995.23	0.00	33995.23
373+00.00	57.84	0.00	60.77	159.06	0.00	257.25	34093.42	0.00	34093.42
374+00.00	49.18	0.00	56.54	198.19	0.00	271.55	34166.79	0.00	34166.79
374+50.00	38.90	0.00	140.45	81.56	0.00	228.00	34313.23	0.00	34313.23
374+74.00	35.65	0.00	156.70	33.13	0.00	165.08	34445.18	0.00	34445.18
375+00.00	73.17	0.00	169.31	52.39	0.00	196.21	34588.99	0.00	34588.99
375+50.00	74.73	0.00	234.40	136.94	0.00	467.26	34919.31	0.00	34919.31
376+00.00	66.51	0.00	259.68	130.78	0.00	571.85	35360.38	0.00	35360.38
376+50.00	69.72	0.00	172.89	126.14	0.00	500.66	35734.90	0.00	35734.90
377+00.00	52.64	0.00	171.75	113.30	0.00	398.89	36020.49	0.00	36020.49
377+50.00	38.92	0.00	133.37	84.78	0.00	353.15	36288.86	0.00	36288.86
378+00.00	25.90	0.00	77.15	60.02	0.00	243.66	36472.50	0.00	36472.50
379+00.00	28.29	0.00	30.35	100.35	0.00	248.84	36620.99	0.00	36620.99
380+00.00	46.29	0.00	53.82	138.11	0.00	194.84	36677.72	0.00	36677.72
381+00.00	29.05	0.00	47.68	139.52	0.00	234.95	36773.16	0.00	36773.16
382+00.00	28.80	0.00	49.61	107.13	0.00	225.21	36891.23	0.00	36891.23
383+00.00	21.94	0.00	64.12	93.96	0.00	263.26	37060.54	0.00	37060.54
384+00.00	22.12	0.00	76.25	81.59	0.00	324.93	37303.87	0.00	37303.87

## EARTHWORK DATA - NB RUNAROUND (NR)

STATION	COMMON		FILL		COMMON		MARSH		FILL		MASS HAUL
	SF	CY	SF	CY	SF	CY	SF	CY	SF	CY	

385+00.00	19.55	0.00	75.27	77.17	0.00	350.74					37577.45
385+50.00	19.14	0.00	78.45	35.82	0.00	177.92					37719.54
386+00.00	25.32	0.00	138.12	41.17	0.00	250.66					37929.03
386+50.00	35.36	0.00	133.46	56.19	0.00	314.33					38187.18
387+00.00	27.13	0.00	115.48	57.86	0.00	288.13					38417.44
387+50.00	17.34	0.00	135.02	41.18	0.00	289.93					38666.20
387+75.00	16.19	0.00	147.66	15.52	0.00	163.59					38814.26
388+00.00	16.99	0.00	125.83	15.36	0.00	158.27					38957.17
388+50.00	17.85	0.00	46.82	32.26	0.00	199.83					39124.74
389+00.00	6.47	0.00	0.00	22.52	0.00	54.19					39156.41
389+50.00	15.13	0.00	95.63	20.00	0.00	110.68					39247.09
389+75.00	15.12	0.00	166.47	14.00	0.00	151.68					39384.76
390+00.00	16.06	0.00	158.98	14.44	0.00	188.34					39558.67
390+50.00	16.47	0.00	158.95	30.12	0.00	367.97					39896.52
391+00.00	16.78	0.00	139.39	30.79	0.00	345.30					40211.04
392+00.00	13.05	0.00	123.58	55.24	0.00	608.73					40764.52
393+00.00	15.90	0.00	136.12	53.61	0.00	601.16					41312.07
394+00.00	13.43	0.00	170.46	54.31	0.00	709.68					41967.43
395+00.00	14.50	0.00	157.26	51.72	0.00	758.61					42674.32
396+00.00	15.98	0.00	142.74	56.44	0.00	694.44					43312.32
397+00.00	14.45	0.00	155.87	56.35	0.00	691.23					43947.19
398+00.00	17.82	0.00	127.36	59.76	0.00	655.63					44543.06
399+00.00	15.88	0.00	117.27	62.41	0.00	566.27					45046.92
400+00.00	19.83	0.00	100.92	66.13	0.00	505.07					45485.86
401+00.00	17.19	0.00	94.75	68.56	0.00	452.94					45870.25
402+00.00	22.68	0.00	60.15	73.83	0.00	358.56					46154.98
402+76.00	20.30	0.00	120.09	60.49	0.00	317.09					46411.58
403+00.00	19.76	0.00	124.13	17.80	0.00	135.68					46529.45
404+00.00	20.96	0.00	82.12	75.41	0.00	477.43					46931.47
405+00.00	18.74	0.00	72.76	73.52	0.00	358.52					47216.47
406+00.00	22.17	0.00	55.32	75.76	0.00	296.48					47437.20
407+00.00	23.57	0.00	35.35	84.70	0.00	209.88					47562.38
408+00.00	21.92	0.00	10.93	84.24	0.00	107.13					47585.27
409+00.00	21.44	0.00	1.70	80.30	0.00	29.24					47534.21
410+00.00	20.06	0.00	0.00	76.85	0.00	3.94					47461.29
411+00.00	19.21	0.00	0.00	72.72	0.00	0.00					47388.57

## EARTHWORK DATA - NB RUNAROUND (NR)

STATION	COMMON		FILL		COMMON		FILL		MASS HAUL
	SF	CY	SF	CY	SF	CY	SF	CY	

413+00.00	5.80	0.00	32.05	0.00	0.00	0.00			0.00
414+00.00	14.47	0.00	8.22	37.54	0.00	93.22			-55.68
415+00.00	12.62	0.00	51.86	50.17	0.00	139.07			144.59
416+00.00	12.93	0.00	107.22	47.31	0.00	368.24			465.51
417+00.00	17.57	0.00	151.26	56.48	0.00	598.33			1007.37
418+00.00	0.00	0.00	155.00	32.54	0.00	708.94			1683.76
418+55.00	0.00	0.00	192.81	0.00	0.00	442.81			2126.58
419+00.00	1.62	0.00	98.19	1.35	0.00	303.13			2428.35
420+00.00	17.06	0.00	21.84	34.59	0.00	277.85			2671.61
421+00.00	17.74	0.00	8.14	64.44	0.00	69.40			2676.56
422+00.00	13.53	0.00	3.76	57.91	0.00	27.55			2646.20
423+00.00	13.78	0.00	0.00	50.57	0.00	8.70			2604.33

## EARTHWORK DATA - NS LINE - INSIDE MEDIAN WIDENING

STATION	COMMON		FILL		COMMON		FILL		MASS HAUL
	SF	CY	SF	CY	SF	CY	SF	CY	

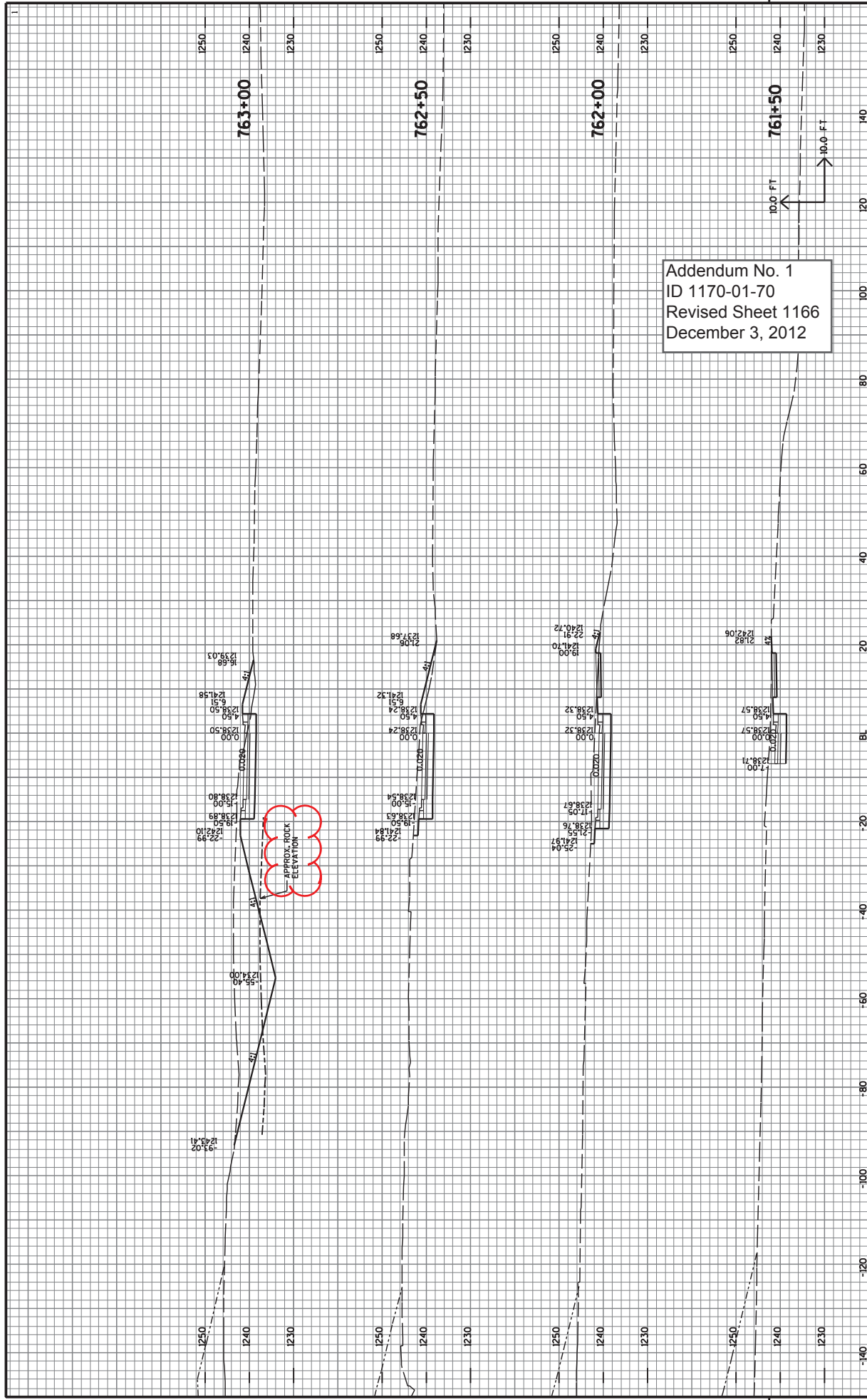
705+00.00	30.29	0.00	0.38	0.00	0.00	0.00			0.00
705+50.00	29.47	0.00	7.76	55.33	0.00	9.42			45.91
706+00.00	29.42	0.00	1.27	54.53	0.00	10.45			89.99
706+50.00	33.55	0.00	3.62	58.31	0.00	5.66			142.63
707+00.00	33.76	0.00	8.18	62.32	0.00	13.66			191.30
707+50.00	33.49	0.00	9.79	62.27	0.00	20.80			232.77
708+00.00	31.74	0.00	10.03	60.40	0.00	22.94			270.23
708+50.00	30.37	0.00	11.54	57.51	0.00	24.97			302.77
709+00.00	29.83	0.00	12.39	55.74	0.00	27.70			330.82
709+50.00	32.42	0.00	13.19	57.64	0.00	29.61			358.85
710+00.00	35.85	0.00	9.05	63.21	0.00	25.74			396.32
710+50.00	34.19	0.00	12.44	64.85	0.00	24.87			436.30
711+00.00	34.15	0.00	12.88	63.28	0.00	29.31			470.27
711+50.00	35.47	0.00	15.15	64.46	0.00	32.44			502.29
711+88.00	35.80	0.00	15.18	50.15	0.00	26.68			525.77
712+00.00	37.11	0.00	8.66	16.20	0.00	6.62			535.35
712+50.00	34.39	0.00	13.84	66.20	0.00	26.04			575.51
713+00.00	36.73	0.00	11.34	65.85	0.00	29.14			612.22
713+50.00	36.56	0.00	11.97	67.86	0.00	26.98			653.10
714+00.00	35.69	0.00	15.62	66.90	0.00	31.93			688.07
714+50.00	36.40	0.00	19.31	66.75	0.00	40.43			714.39
715+00.00	37.89	0.00	14.95	68.79	0.00	39.65			743.52

## EARTHWORK DATA - NS LINE - INSIDE MEDIAN WIDENING

STATION	COMMON		FILL		COMMON		FILL		MASS HAUL
	SF	CY	SF	CY	SF	CY	SF	CY	

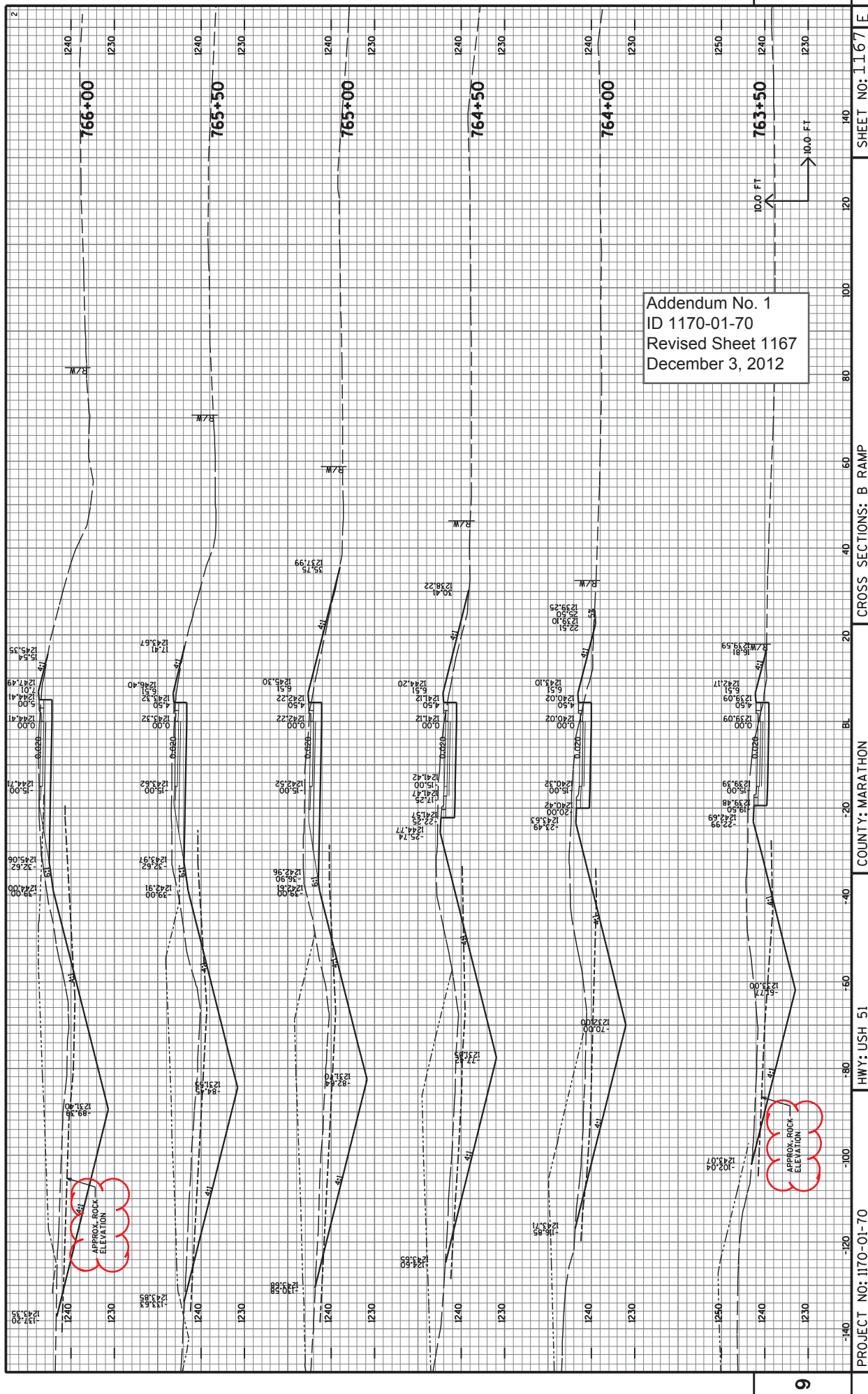
715+50.00	37.67	0.00	12.13	69.96	0.00	31.34			782.14
716+00.00	37.75	0.00	9.68	69.83	0.00	25.24			826.73
716+50.00	37.78	0.00	6.94	69.94	0.00	19.24			877.43
717+00.00	36.47	0.00	8.55	68.75	0.00	17.93			928.25
717+50.00	35.33	0.00	12.18	66.48	0.00	23.99			970.74
718+00.00	34.84	0.00	16.21	64.97	0.00	32.86			1002.85
718+50.00	34.69	0.00	24.14	64.38	0.00	46.70			1020.53
719+00.00	35.87	0.00	18.85	65.33	0.00	49.76			1036.11
719+50.00	36.36	0.00	19.93	66.88	0.00	44.88			1058.10
720+00.00	42.14	0.00	12.55	72.69	0.00	37.59			1093.20
720+50.00	45.65	0.00	7.16	81.29	0.00	22.81			1151.67
721+00.00	39.51	0.00	8.54	78.85	0.00	18.17			1212.35
721+50.00	44.71	0.00	7.59	77.98	0.00	18.67			1271.66
722+00.00	44.84	0.00	11.08	82.92	0.00	21.61			1332.97
722+50.00	40.08	0.00	11.44	78.63	0.00	26.06			1385.54
723+00.00	36.32	0.00	17.15	70.74	0.00	33.09			1423.19
723+50.00	36.21	0.00	8.61	67.16	0.00	29.81			1460.53
723+60.00	36.81	0.00	7.71	13.52	0.00	3.78			1470.28
724+00.00	34.84	0.00	3.76	53.07	0.00	10.62			1512.73
724+50.00	28.14	0.00	3.96	58.31	0.00	8.94			1562.11
725+00.00	27.99	0.00	0.00	51.97	0.00	4.58			1609.50
725+50.00	24.93	0.00	5.71	49.00	0.00	6.61			1651.89
726+00.00	28.60	0.00	0.51	49.56	0.00	7.20			1694.25
726+50.00	17.55	0.00	0.00	42.73	0.00	0.59			1736.40
727+00.00	12.94	0.00	0.00	28.23	0.00	0.00			1764.63

Addendum No. 1  
ID 1170-01-70  
Revised Sheet 1086  
December 3, 2012

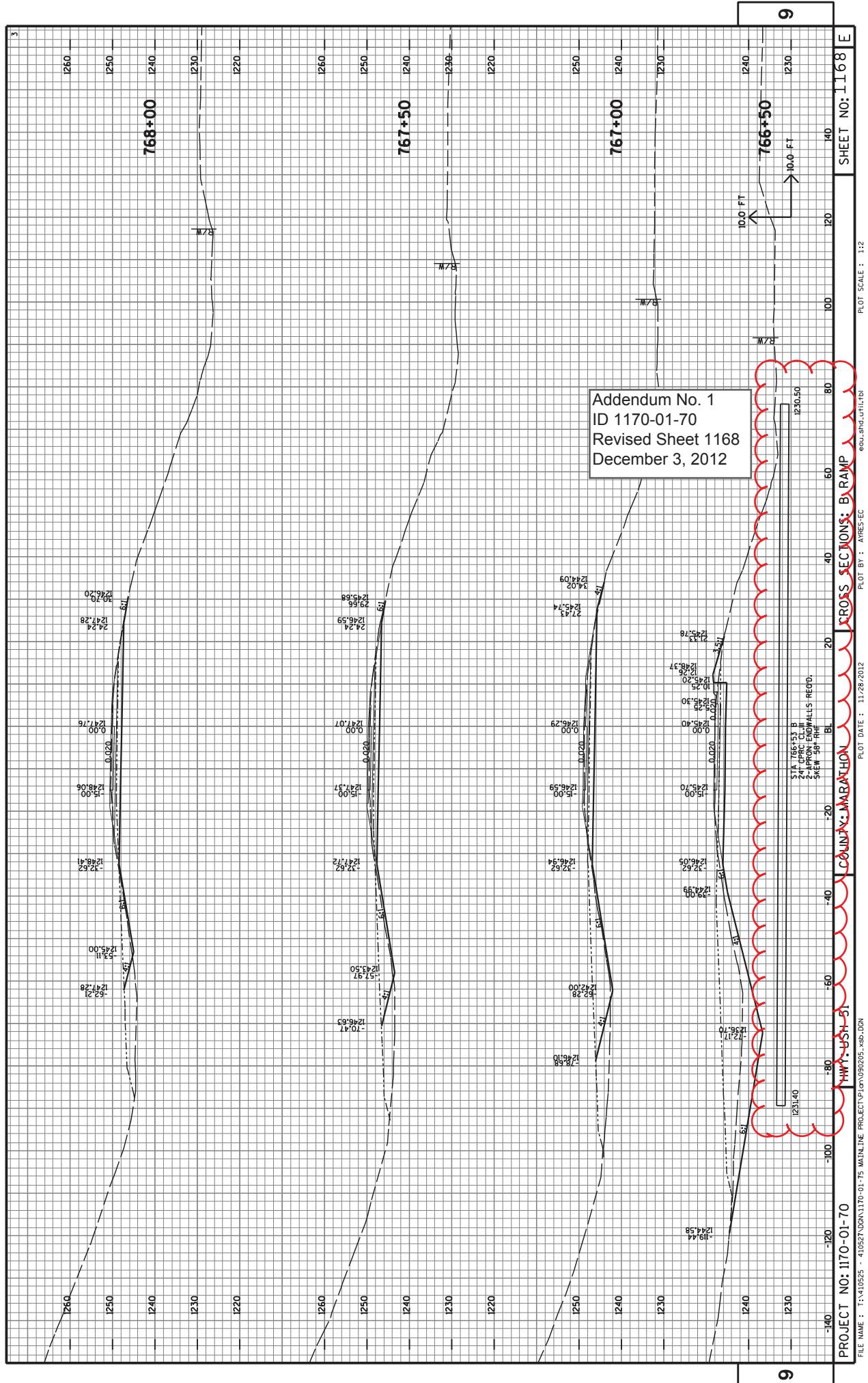


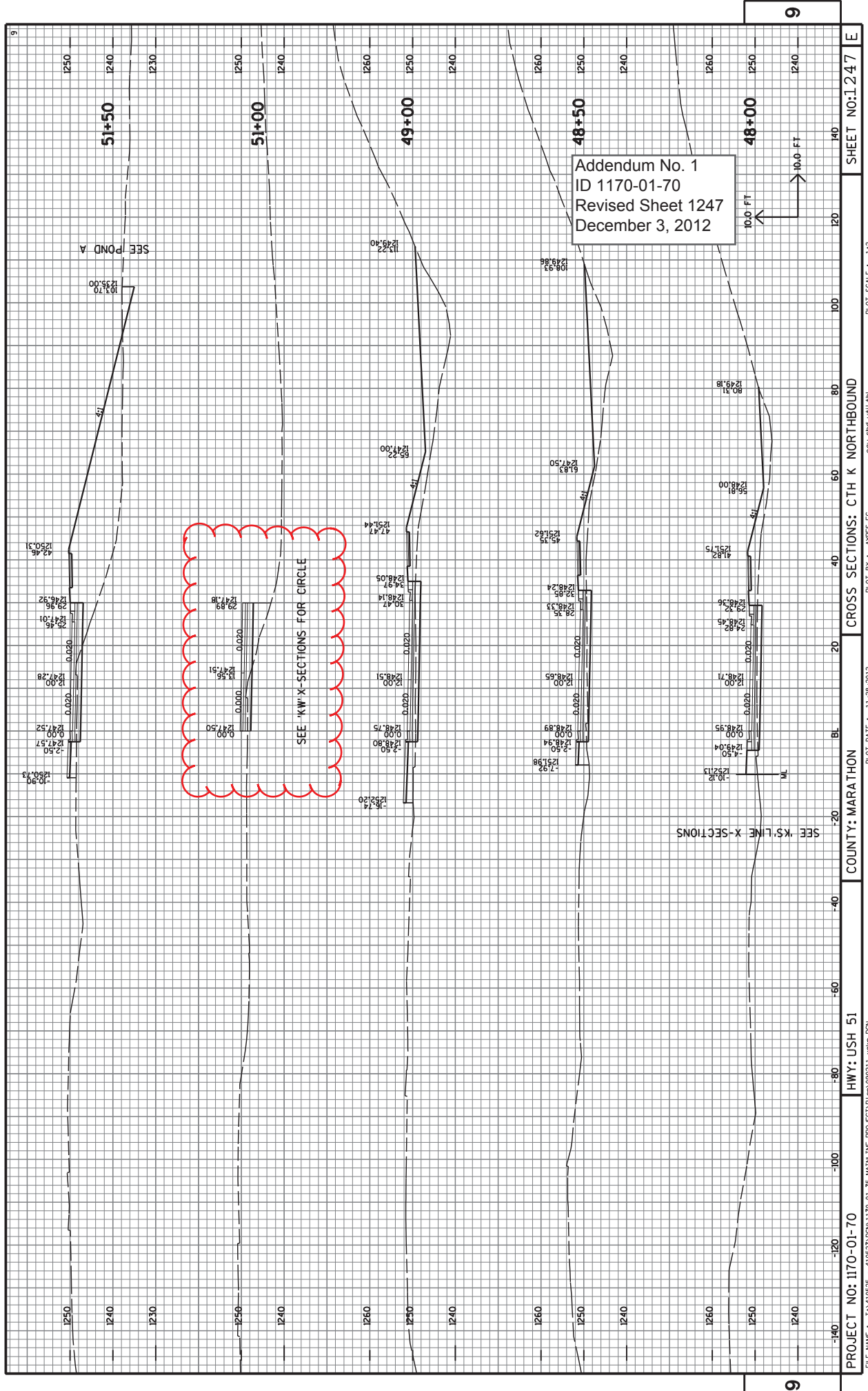
Addendum No. 1  
 ID 1170-01-70  
 Revised Sheet 1166  
 December 3, 2012

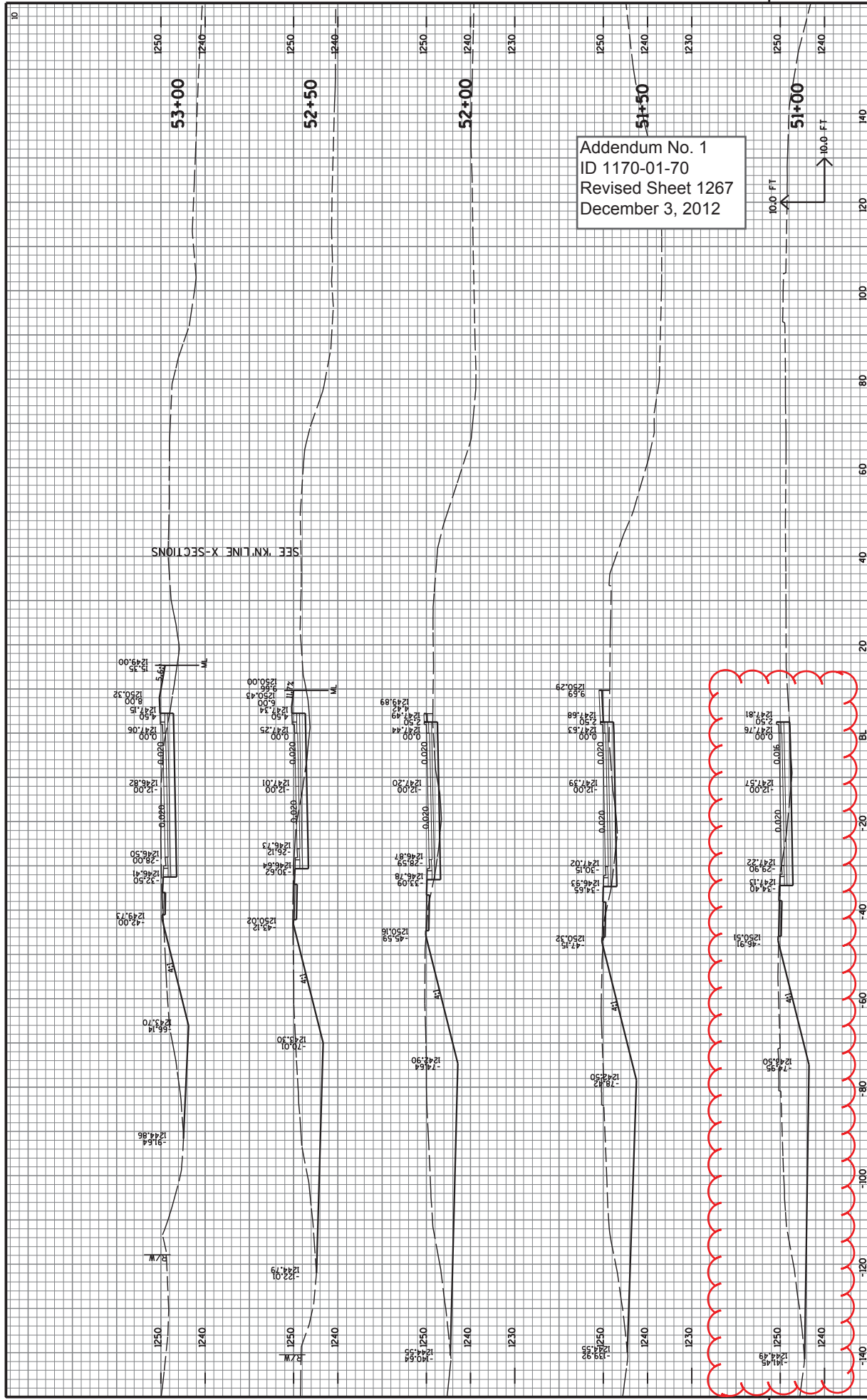




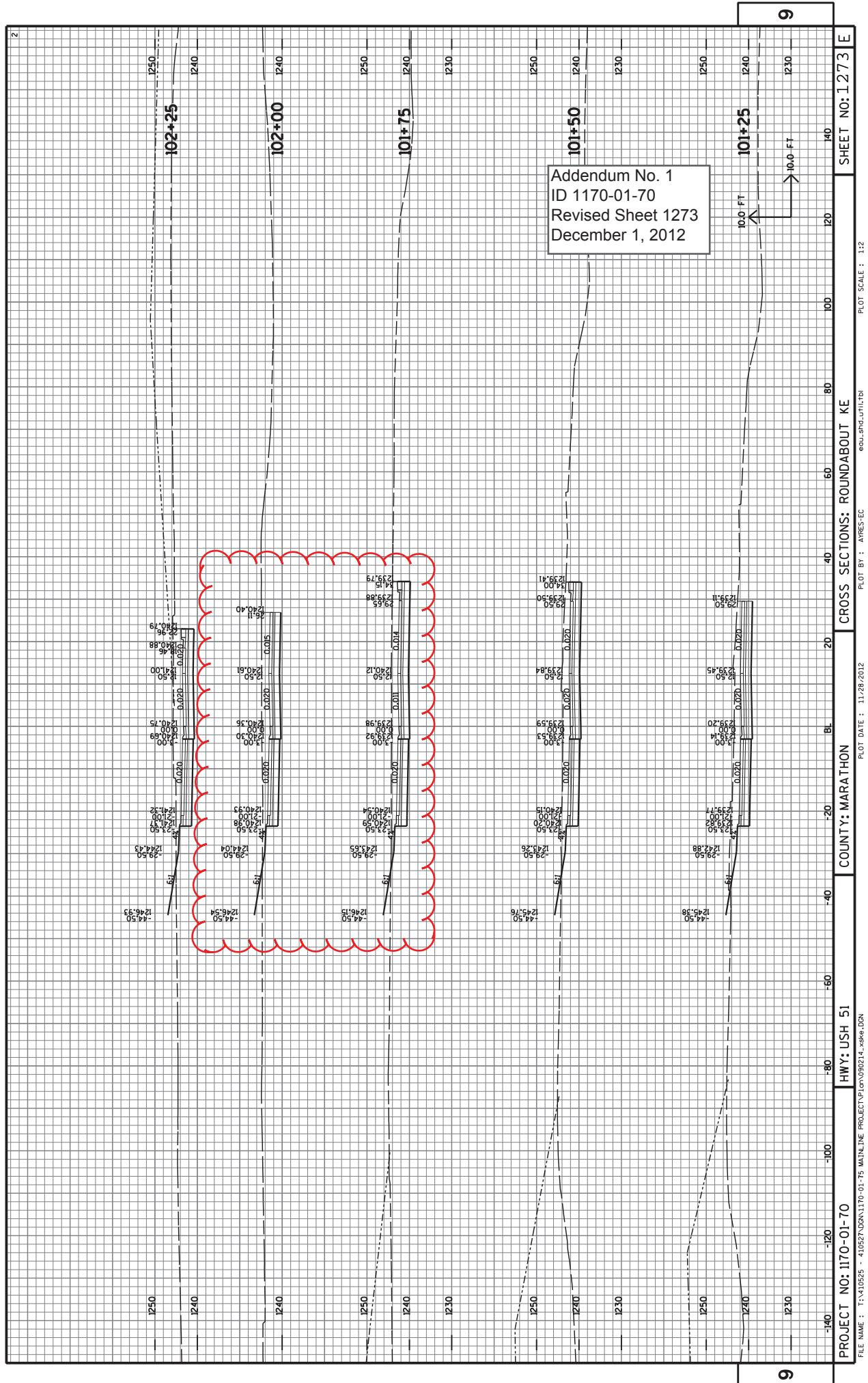
Addendum No. 1  
ID 1170-01-70  
Revised Sheet 1167  
December 3, 2012







Addendum No. 1  
ID 1170-01-70  
Revised Sheet 1267  
December 3, 2012



## SCHEDULE OF ITEMS

CONTRACT:	PROJECT(S):	FEDERAL ID(S):
20121211027	1170-01-70	WISC 2012708
	1170-01-71	N/A
	1170-01-73	WISC 2012709
	6999-18-70	WISC 2012714

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0300	205.0200 EXCAVATION ROCK	14,407.000				
		CY	.		.	
0310	205.0400 EXCAVATION MARSH	2,234.000				
		CY	.		.	
0320	206.1000 EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 01. B-37-153	LUMP	LUMP			.
0330	206.1000 EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 02. B-37-154	LUMP	LUMP			.
0340	206.1000 EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 03. B-37-436	LUMP	LUMP			.
0350	206.1000 EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 04. B-37-156	LUMP	LUMP			.
0360	206.2000 EXCAVATION FOR STRUCTURES CULVERTS (STRUCTURE) 01. C-37-27	LUMP	LUMP			.
0370	206.2000 EXCAVATION FOR STRUCTURES CULVERTS (STRUCTURE) 02. B-37-167	LUMP	LUMP			.

## SCHEDULE OF ITEMS

REVISED:

CONTRACT:	PROJECT(S):	FEDERAL ID(S):
20121211027	1170-01-70	WISC 2012708
	1170-01-71	N/A
	1170-01-73	WISC 2012709
	6999-18-70	WISC 2012714

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0380	206.2000 EXCAVATION FOR STRUCTURES CULVERTS (STRUCTURE) 03. C-37-4	LUMP	LUMP			.
0390	206.6000.S TEMPORARY SHORING	1,728.000 SF	.		.	
0400	208.0100 BORROW	6,150.000 CY	.		.	
0410	210.0100 BACKFILL STRUCTURE	1,960.000 CY	.		.	
0420	213.0100 FINISHING ROADWAY (PROJECT) 01. 1170-01-70	1.000 EACH	.		.	
0430	213.0100 FINISHING ROADWAY (PROJECT) 02. 1170-01-73	1.000 EACH	.		.	
0440	213.0100 FINISHING ROADWAY (PROJECT) 03. 6999-18-70	1.000 EACH	.		.	
0450	214.0100 OBLITERATING OLD ROAD	16.000 STA	.		.	
0460	305.0110 BASE AGGREGATE DENSE 3/4-INCH	11,700.000 TON	.		.	
0470	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH	130,506.000 TON	.		.	

## SCHEDULE OF ITEMS

REVISED:

CONTRACT:	PROJECT(S):	FEDERAL ID(S):
20121211027	1170-01-70	WISC 2012708
	1170-01-71	N/A
	1170-01-73	WISC 2012709
	6999-18-70	WISC 2012714

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
1440	522.1072 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 72-INCH	2.000 EACH	.		.	
1450	524.0618 APRON ENDWALLS FOR CULVERT PIPE SALVAGED 18-INCH	1.000 EACH	.		.	
1460	524.0630 APRON ENDWALLS FOR CULVERT PIPE SALVAGED 30-INCH	1.000 EACH	.		.	
1470	532.0200.S WALL MODULAR BLOCK GRAVITY	322.000 SF	.		.	
1480	550.0020 PRE-BORING ROCK OR CONSOLIDATED MATERIALS	319.000 LF	.		.	
1490	550.1100 PILING STEEL HP 10-INCH X 42 LB	1,052.000 LF	.		.	
1500	601.0409 CONCRETE CURB & GUTTER 30-INCH TYPE A	15,505.000 LF	.		.	
1510	601.0411 CONCRETE CURB & GUTTER 30-INCH TYPE D	11,019.000 LF	.		.	
1520	601.0553 CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE D	14.000 LF	.		.	
1530	601.0555 CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE A	2,403.000 LF	.		.	



## SCHEDULE OF ITEMS

REVISED:

CONTRACT:	PROJECT(S):	FEDERAL ID(S):
20121211027	1170-01-70	WISC 2012708
	1170-01-71	N/A
	1170-01-73	WISC 2012709
	6999-18-70	WISC 2012714

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
1540	601.0557 CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE D	701.000 LF	.		.	
1550	601.0574 CONCRETE CURB & GUTTER 4-INCH SLOPED 30-INCH TYPE G	947.000 LF	.		.	
1560	601.0580 CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE R	800.000 LF	.		.	
1570	601.0600 CONCRETE CURB PEDESTRIAN	240.000 LF	.		.	
1580	602.0405 CONCRETE SIDEWALK 4-INCH	91,050.000 SF	.		.	
1590	602.0420 CONCRETE SIDEWALK 7-INCH	1,672.000 SF	.		.	
1600	602.0505 CURB RAMP DETECTABLE WARNING FIELD YELLOW	736.000 SF	.		.	
1610	603.1142 CONCRETE BARRIER TYPE S42	1,696.000 LF	.		.	
1620	603.1442 CONCRETE BARRIER TYPE S42C	1,132.000 LF	.		.	
1630	603.8000 CONCRETE BARRIER TEMPORARY PRECAST DELIVERED	13,855.000 LF	.		.	

## SCHEDULE OF ITEMS

REVISED:

CONTRACT:	PROJECT(S):	FEDERAL ID(S):
20121211027	1170-01-70	WISC 2012708
	1170-01-71	N/A
	1170-01-73	WISC 2012709
	6999-18-70	WISC 2012714

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
1740	608.0324 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 24-INCH	1,729.000 LF	.		.	
1750	608.0330 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 30-INCH	454.000 LF	.		.	
1760	608.0336 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 36-INCH	530.000 LF	.		.	
1770	611.0420 RECONSTRUCTING MANHOLES	7.000 EACH	.		.	
1780	611.0530 MANHOLE COVERS TYPE J	24.000 EACH	.		.	
1790	611.0606 INLET COVERS TYPE B	3.000 EACH	.		.	
1800	611.0610 INLET COVERS TYPE BW	6.000 EACH	.		.	
1810	611.0612 INLET COVERS TYPE C	5.000 EACH	.		.	
1820	611.0624 INLET COVERS TYPE H	119.000 EACH	.		.	
1830	611.0627 INLET COVERS TYPE HM	8.000 EACH	.		.	

## SCHEDULE OF ITEMS

CONTRACT:	PROJECT(S):	FEDERAL ID(S):
20121211027	1170-01-70	WISC 2012708
	1170-01-71	N/A
	1170-01-73	WISC 2012709
	6999-18-70	WISC 2012714

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
1840	611.0642 INLET COVERS TYPE MS	41.000 EACH	.		.	
1850	611.0652 INLET COVERS TYPE T	4.000 EACH	.		.	
1860	611.0654 INLET COVERS TYPE V	5.000 EACH	.		.	
1870	611.2004 MANHOLES 4-FT DIAMETER	36.000 EACH	.		.	
1880	611.2005 MANHOLES 5-FT DIAMETER	12.000 EACH	.		.	
1890	611.2006 MANHOLES 6-FT DIAMETER	3.000 EACH	.		.	
1900	611.3220 INLETS 2X2-FT	8.000 EACH	.		.	
1910	611.3225 INLETS 2X2.5-FT	8.000 EACH	.		.	
1920	611.3230 INLETS 2X3-FT	110.000 EACH	.		.	
1930	611.3901 INLETS MEDIAN 1 GRATE	6.000 EACH	.		.	

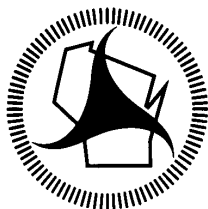
## SCHEDULE OF ITEMS

REVISED:

CONTRACT:	PROJECT(S):	FEDERAL ID(S):
20121211027	1170-01-70	WISC 2012708
	1170-01-71	N/A
	1170-01-73	WISC 2012709
	6999-18-70	WISC 2012714

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
5350	SPV.0180 SPECIAL 01. PREPARING TOPSOIL FOR LAWN TYPE TURF	37,050.000 SY	.		.	
5360	SPV.0180 SPECIAL 02. INSULATION 2-INCH	380.000 SY	.		.	
5370	SPV.0180 SPECIAL 04. WET DETENTION POND LINER	7,700.000 SY	.		.	
5380	SPV.0180 SPECIAL 05. TOPSOIL SPECIAL	910.000 SY	.		.	
5390	SPV.0195 SPECIAL 01. 3-INCH CLEAN ROADSTONE	1,447.000 TON	.		.	
5400	SPV.0200 SPECIAL 01. SANITARY MANHOLE	42.400 VF	.		.	
5410	611.0630 INLET COVERS TYPE HM-GJ	4.000 EACH	.		.	
	SECTION 0001 TOTAL				.	
	TOTAL BID				.	



## Wisconsin Department of Transportation

December 5, 2012

### Division of Transportation Systems Development

Bureau of Project Development  
4802 Sheboygan Avenue, Rm 601  
P O Box 7916  
Madison, WI 53707-7916

Telephone: (608) 266-1631  
Facsimile (FAX): (608) 266-8459

### NOTICE TO ALL CONTRACTORS:

**Proposal #27: 1170-01-70, WISC 2012708**  
**Wausau – Merrill**  
**CTH K/B51 Interchange**  
**USH 51**  
**Marathon County**

**1170-01-71**  
**Wausau – Merrill**  
**CTH U Overhead**  
**USH 51**  
**Marathon County**

**1170-01-73, WISC 2012709**  
**Wausau – Merrill**  
**Bridge Street to Decator Drive**  
**USH 51**  
**Marathon County**

**6999-18-70, WISC 2012714**  
**Wausau – Merrill**  
**Business 51 to Westwood Drive**  
**Merrill Avenue/County Road U**  
**City of Wausau**  
**Marathon County**

### Letting of December 11, 2012

This is Addendum No. 2, which provides for the following:

### Special Provisions

Revised Special Provisions	
Article No.	Description
3	Prosecution and Progress
4	Traffic
87	Lane Rental Assessment, Item SPV.0055.01

### Schedule of Items

Revised Bid Item Quantities – ID 1170-01-70					
Bid Item	Item Description	Unit	Old Quantity	Revised Quantity	Proposal Total
205.0100	Excavation Common	CY	219,499	226,851	451,780
603.8000	Concrete Barrier Temporary Precast Delivered	LF	870	2475	35,715

<b>Revised Bid Item Quantities – ID 1170-01-73</b>					
Bid Item	Item Description	Unit	Old Quantity	Revised Quantity	Proposal Total
205.0100	Excavation Common	CY	193,509	195,208	451,780
208.0100	Borrow	CY	6,150	5,000	5,000
603.8000	Concrete Barrier Temporary Precast Delivered	LF	12,985	33,240	35,715
603.8125	Concrete Barrier Temporary Precast Installed	LF	47,100	49,815	55,190
614.0905	Crash Cushion Temporary	EA	14	18	23

<b>Revised Bid Item Quantities – ID 6999-18-70</b>					
Bid Item	Item Description	Unit	Old Quantity	Revised Quantity	Proposal Total
205.0100	Excavation Common	CY	29,562	29,721	451,780

### Plan Sheets

<b>Revised Plan Sheets</b>	
Plan Sheet	Plan Sheet Title (brief description of changes to sheet)
371	Traffic Control – Stage 1 (Updated to include Concrete Barrier Temporary Precast to protect existing pier)
372	Traffic Control – Stage 1 (Updated to include Concrete Barrier Temporary Precast to protect existing pier)
392	Traffic Control – Stage 2A & 2B (Updated to include Concrete Barrier Temporary Precast to protect existing pier)
393	Traffic Control – Stage 2A & 2B (Updated to include Concrete Barrier Temporary Precast to protect existing pier)
438	Traffic Control – Stage 5A (Updated to include Concrete Barrier Temporary Precast to protect new pier)
439	Traffic Control – Stage 5A (Updated to include Concrete Barrier Temporary Precast to protect new pier)
452	Traffic Control – Stage 5B (Updated to include Concrete Barrier Temporary Precast to protect new pier)
453	Traffic Control – Stage 5B (Updated to include Concrete Barrier Temporary Precast to protect new pier)
465	Traffic Control – Stage 6A (Updated to include Concrete Barrier Temporary Precast to protect new pier)
475	Traffic Control – Stage 6B (Updated to include Concrete Barrier Temporary Precast to protect new pier)
507	Detour – Stage 1 (Nighttime Closure of USH 51) (Updated to show Barricades on CTH U)
550	Miscellaneous Quantities (Updated Earthwork Summary Table to match earthwork data table)
556	Miscellaneous Quantities (updated Concrete Barrier Temporary Precast table to account for additional delivered quantities)
591	Miscellaneous Quantities (Updated Earthwork Summary Table to match earthwork data table)
596	Miscellaneous Quantities (updated Concrete Barrier Temporary Precast table to account for additional delivered quantities)
608	Miscellaneous Quantities (Updated Earthwork Summary Table to match earthwork data table)

The responsibility for notifying potential subcontractors and suppliers of these changes remains with the prime contractor.

Sincerely,

*Terry Lammert*

Proposal Development Specialist  
Proposal Management Section

1170-01-70  
December 3, 2012

### 3. Prosecution and Progress.

[illegible]

#### **4. Traffic**

Delete the 2<sup>nd</sup> paragraph under section Traffic Staging, Stage 1 (Construction Year 2013) and replace with the following:

Closure of northbound and southbound USH 51 will be allowed during the following hours: 8:00 PM to 6:00 AM for the removal of Structure B-37-0069. Closure of USH 51 is allowed for up to 4 nights. Closure of USH 51 is only allowed on Monday, Tuesday, Wednesday or Thursday night. The closure of USH 51 for removal of Structure B-37-0069 is only allowed prior to May 1, 2013. Detour northbound traffic onto the E ramp, frontage road, and B ramp. Detour southbound traffic onto the C ramp, frontage road, and F ramp.

#### **87. Lane Rental Assessment, Item SPV.0055.01**

Delete the 7<sup>th</sup> paragraph in section A.1 and replace with the following:

Lane Rental will not be assessed for the USH 51 closures for B-37-0069 removal noted in the plans under the title "Traffic Control – Stage 1", as long as the closure does not occur for more than 4 nights as described in the "Traffic" article. Additional lane closures beyond those included in the plans under the title "Traffic Control – Stage 1" will be assessed if the closures exceed the credited hours.

#### **Schedule of Items**

Attached, dated December 5, 2012, are the revised Schedule of Items Pages 3, 17, 18 and 22.

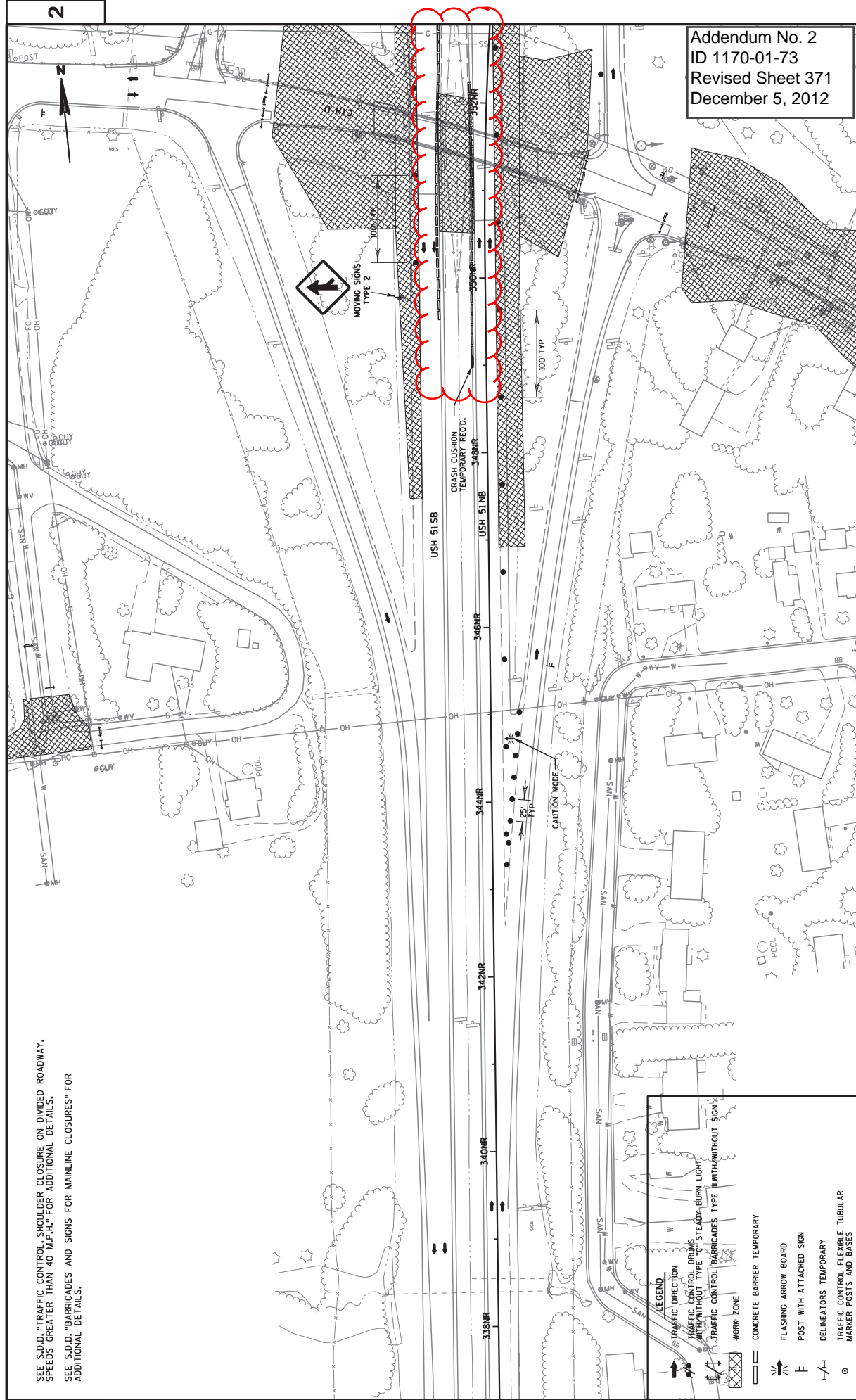
#### **Plan Sheets**

The following 8½ x 11-inch sheets are attached and made part of the plans for this proposal:  
Revised: 371, 372, 392, 393, 438, 439, 452, 453, 465, 475, 507, 550, 556, 591, 596 and 608.

END OF ADDENDUM



SEE S.D.D. "TRAFFIC CONTROL SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 M.P.H." FOR ADDITIONAL DETAILS.  
SEE S.D.D. "BARRICADES AND SIGNS FOR MAINLINE CLOSURES" FOR ADDITIONAL DETAILS.



Addendum No. 2  
ID 1170-01-73  
Revised Sheet 371  
December 5, 2012

PROJECT NO: 1190-01-70/73

HWY: USH 51

COUNTY: MARATHON

TRAFFIC CONTROL - STAGE 1

SHEET 371

E

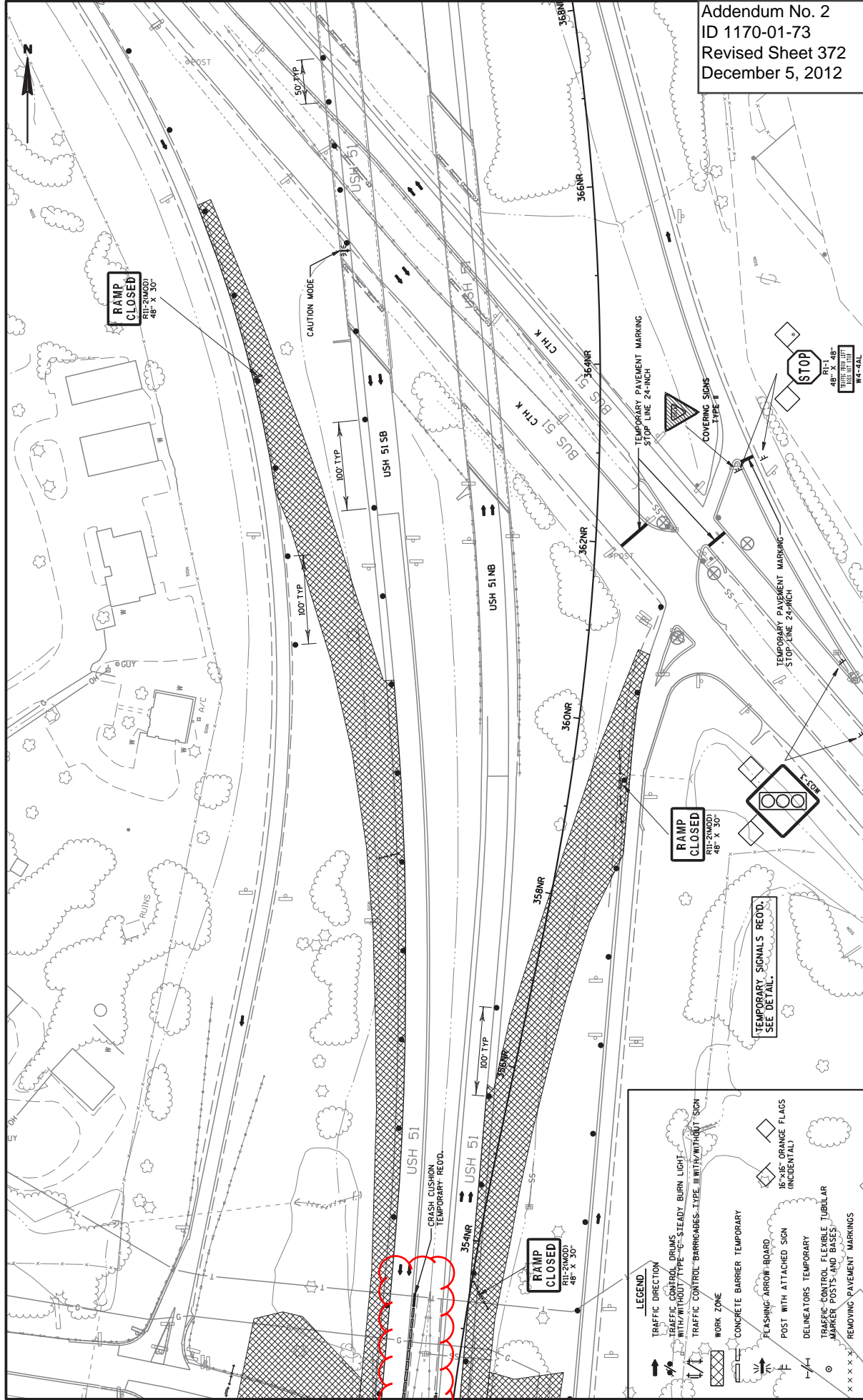
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PLOT DATE : 12/1/2012

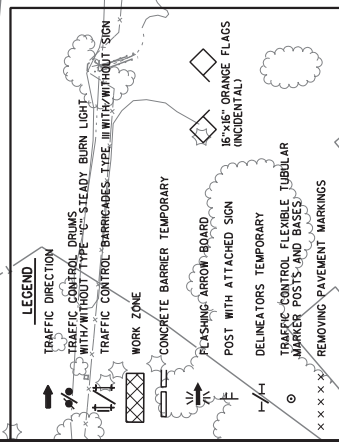
PLOT BY : AYRES-EC

PLOT SCALE : 1:100

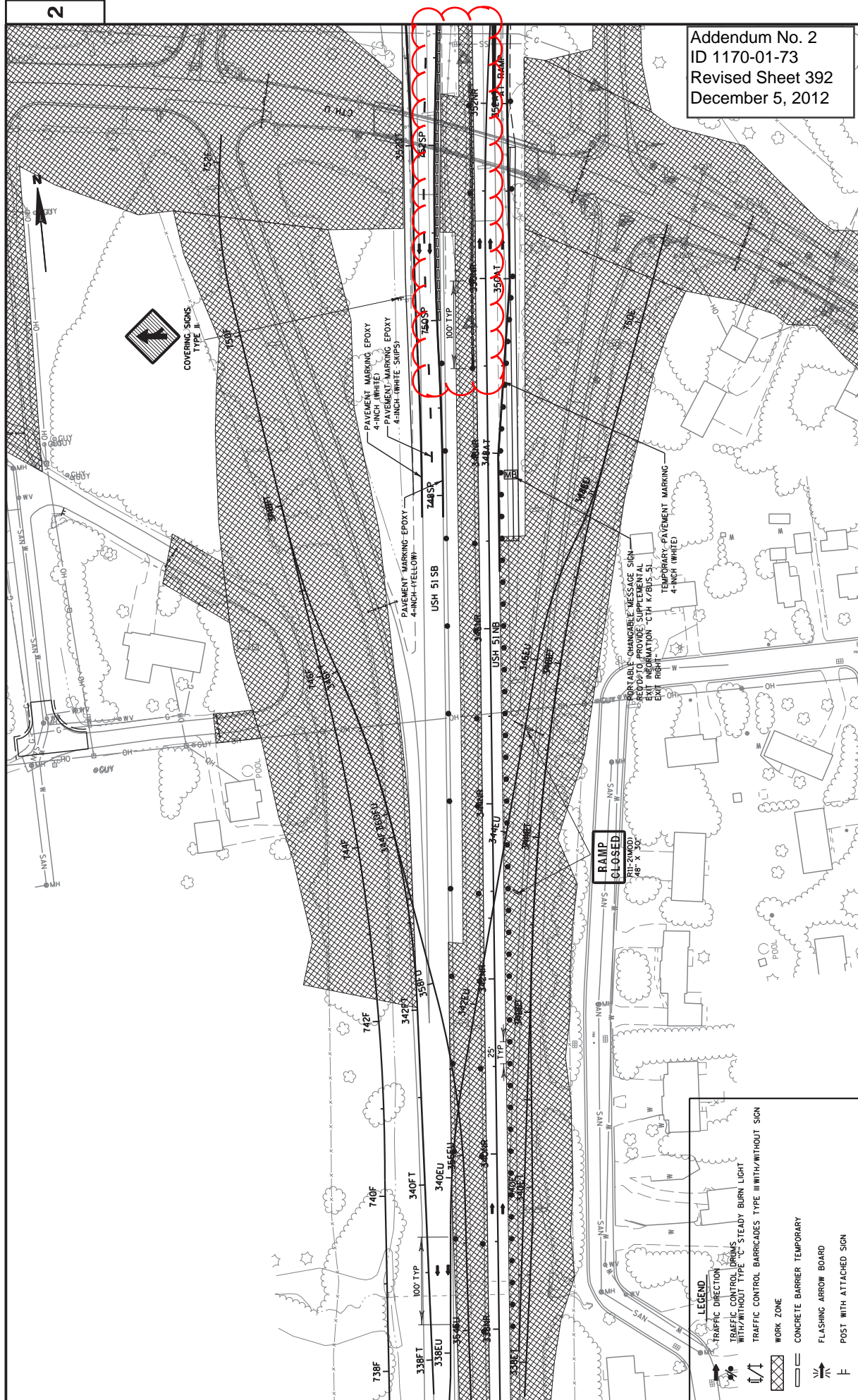
WISDOT/CADD SHEET 42



Addendum No. 2  
ID 1170-01-73  
Revised Sheet 372  
December 5, 2012



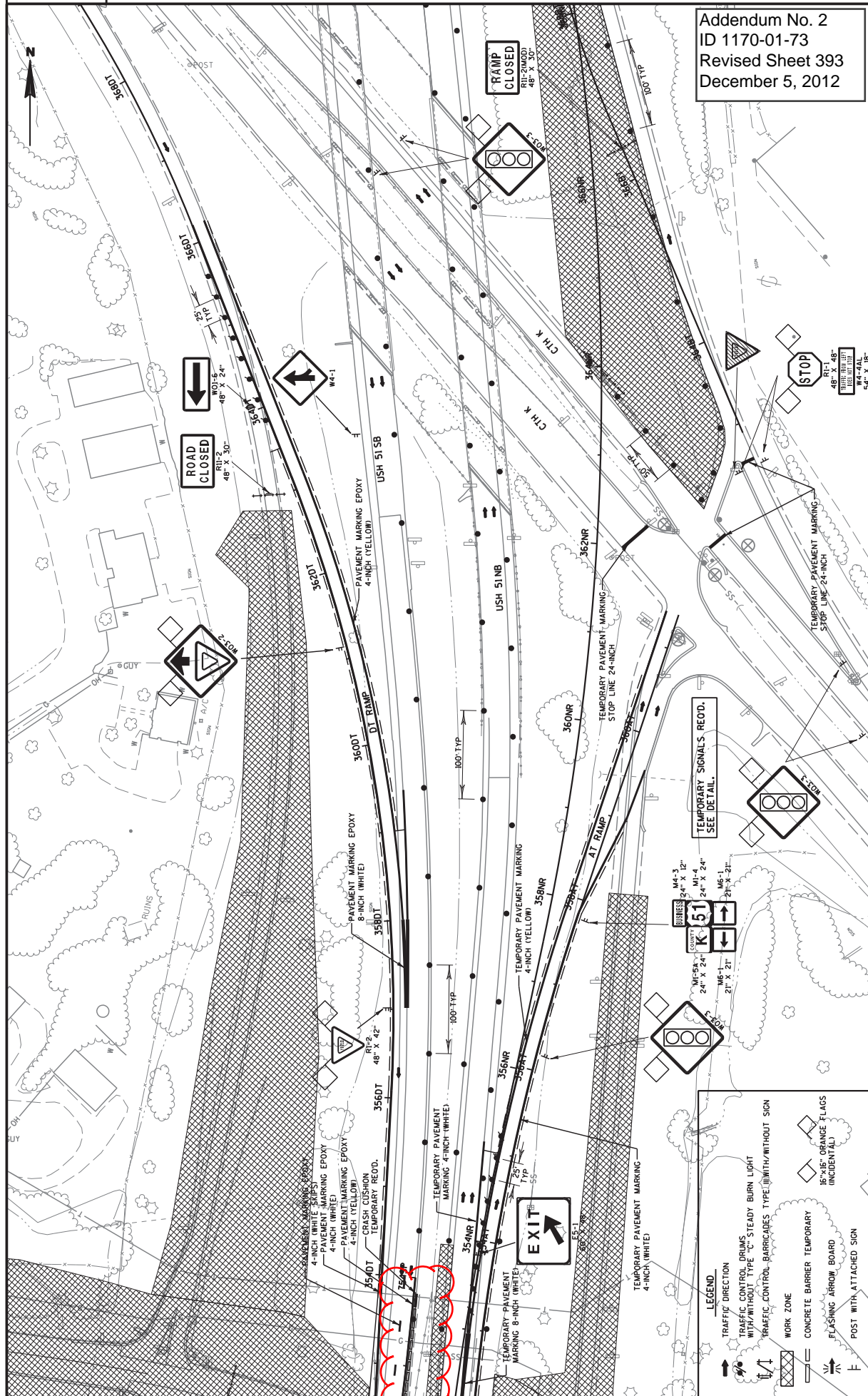


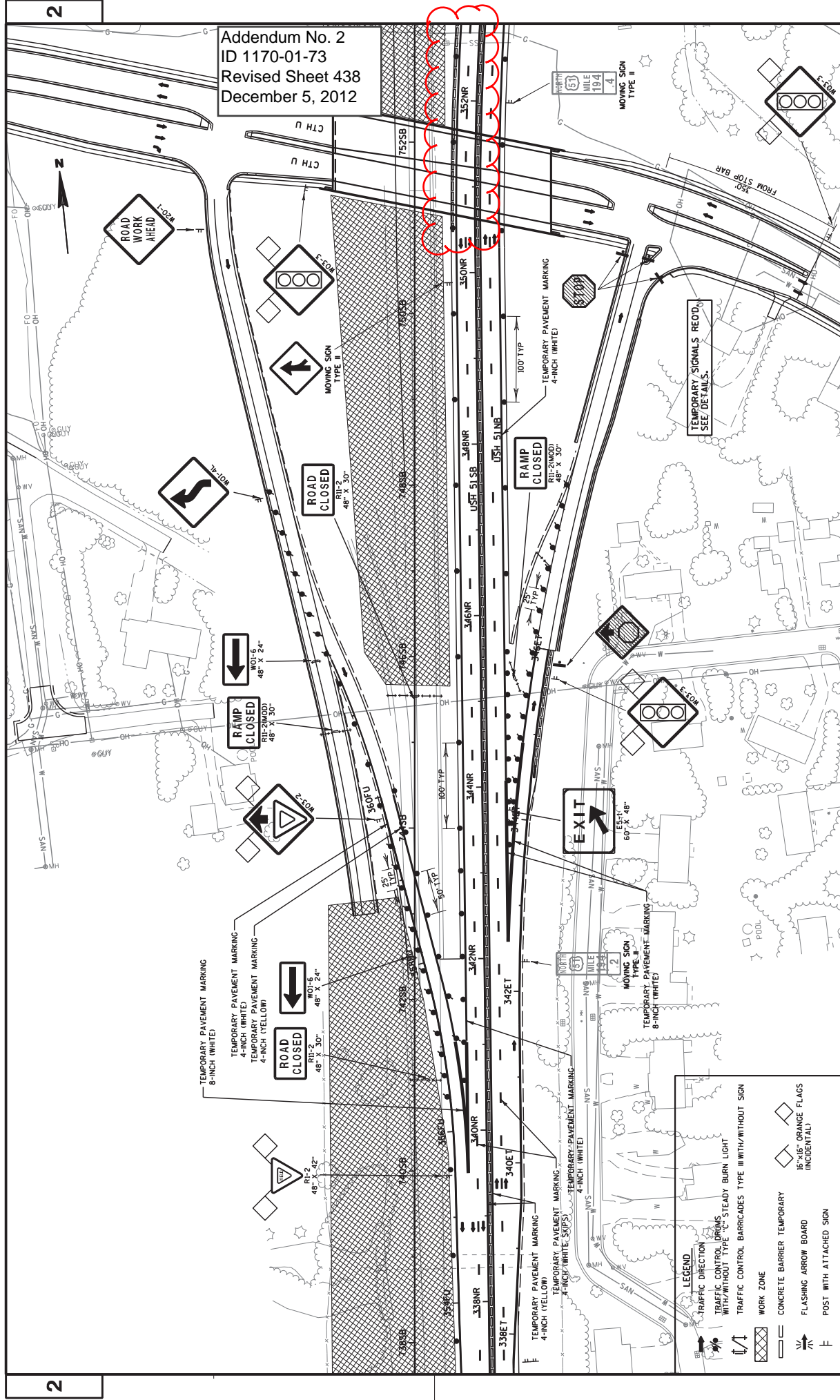


Addendum No. 2  
ID 1170-01-73  
Revised Sheet 392  
December 5, 2012

- LEGEND**
- TRAFFIC DIRECTION
  - TRAFFIC CONTROL DRUMS WITH/WITHOUT TYPE "C" STEADY BURN LIGHT
  - TRAFFIC CONTROL BARRICADES TYPE III WITH/WITHOUT SIGN
  - WORK ZONE
  - CONCRETE BARRIER TEMPORARY
  - FLASHING ARROW BOARD
  - POST WITH ATTACHED SIGN



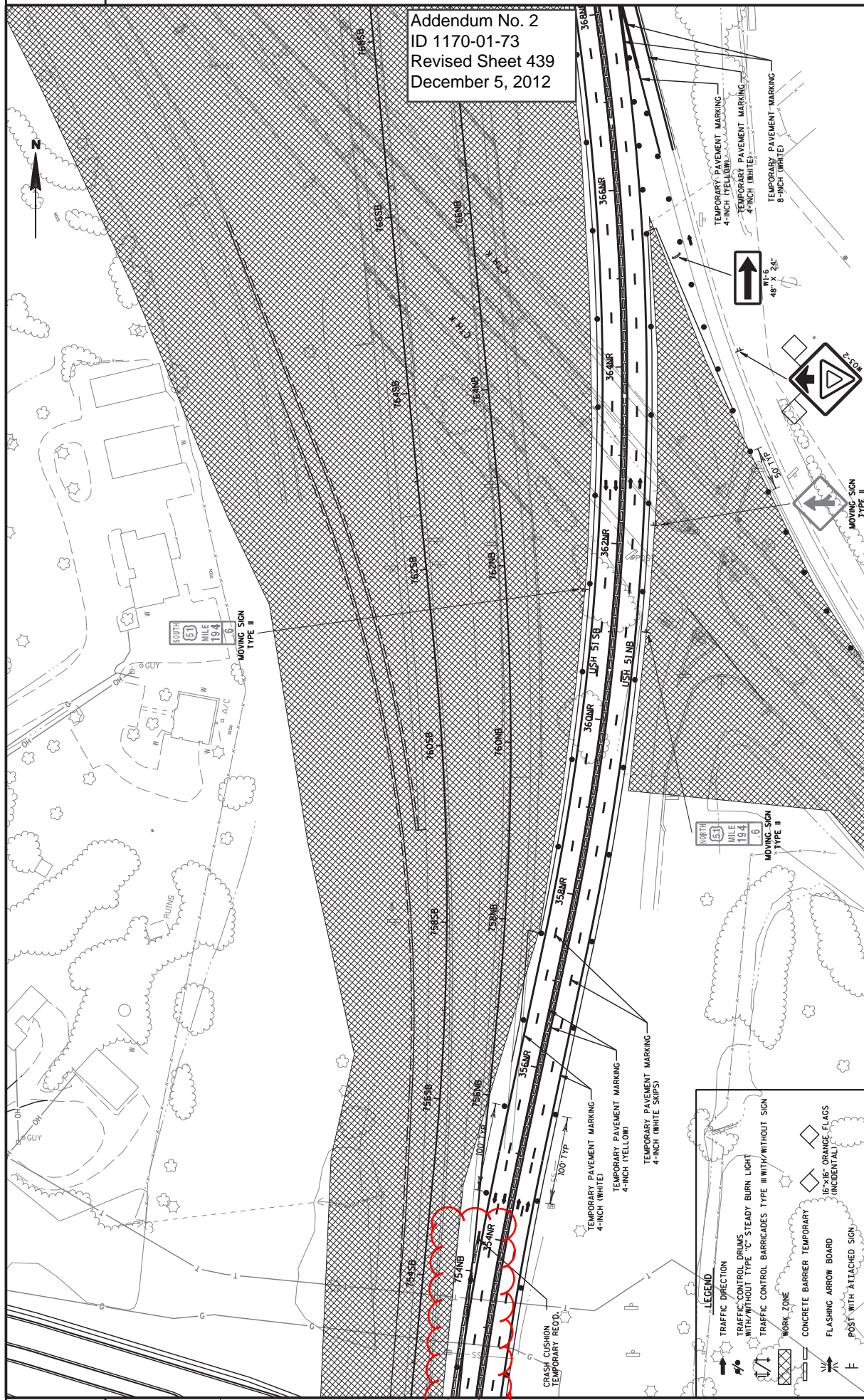


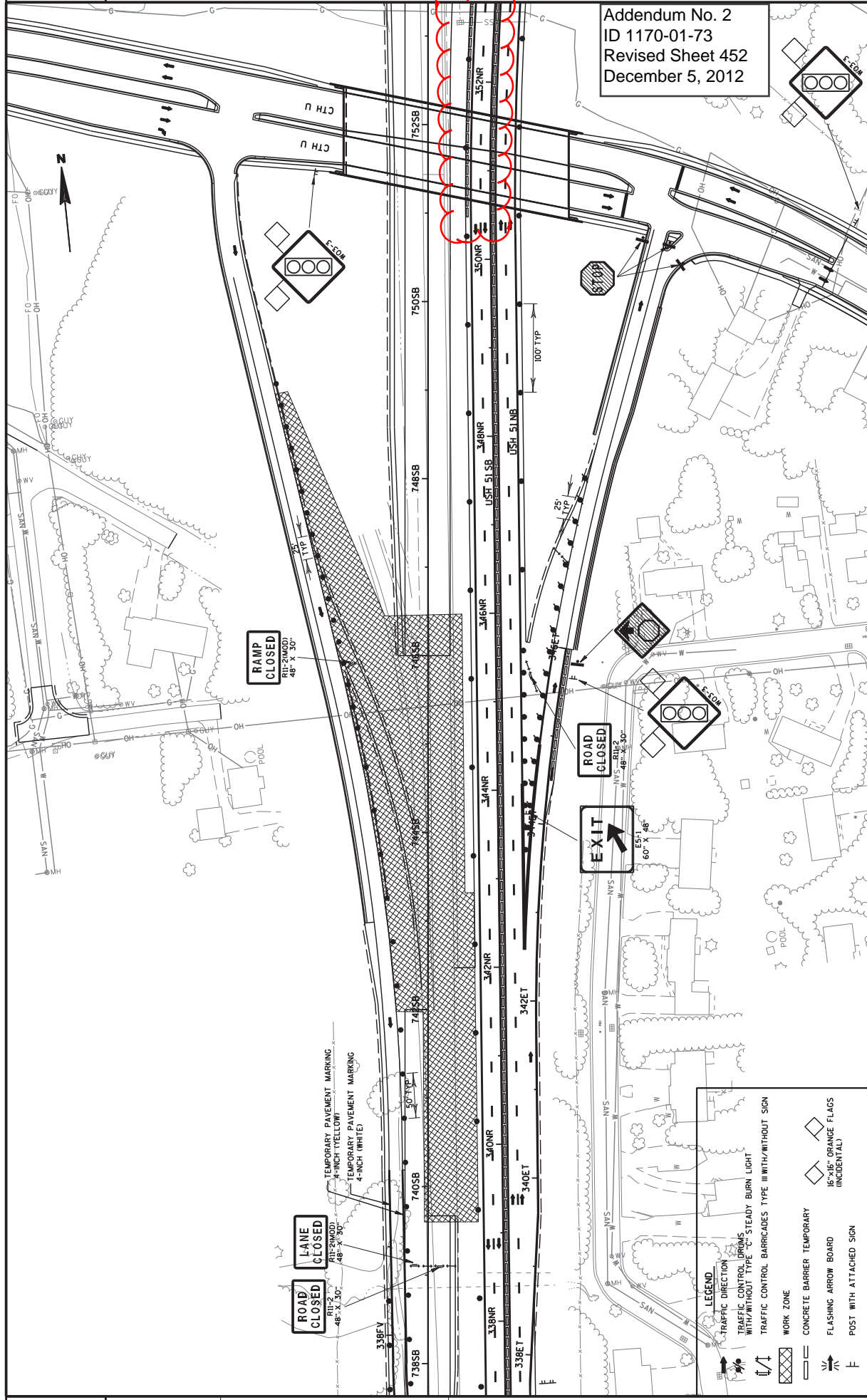


Addendum No. 2  
ID 1170-01-73  
Revised Sheet 438  
December 5, 2012



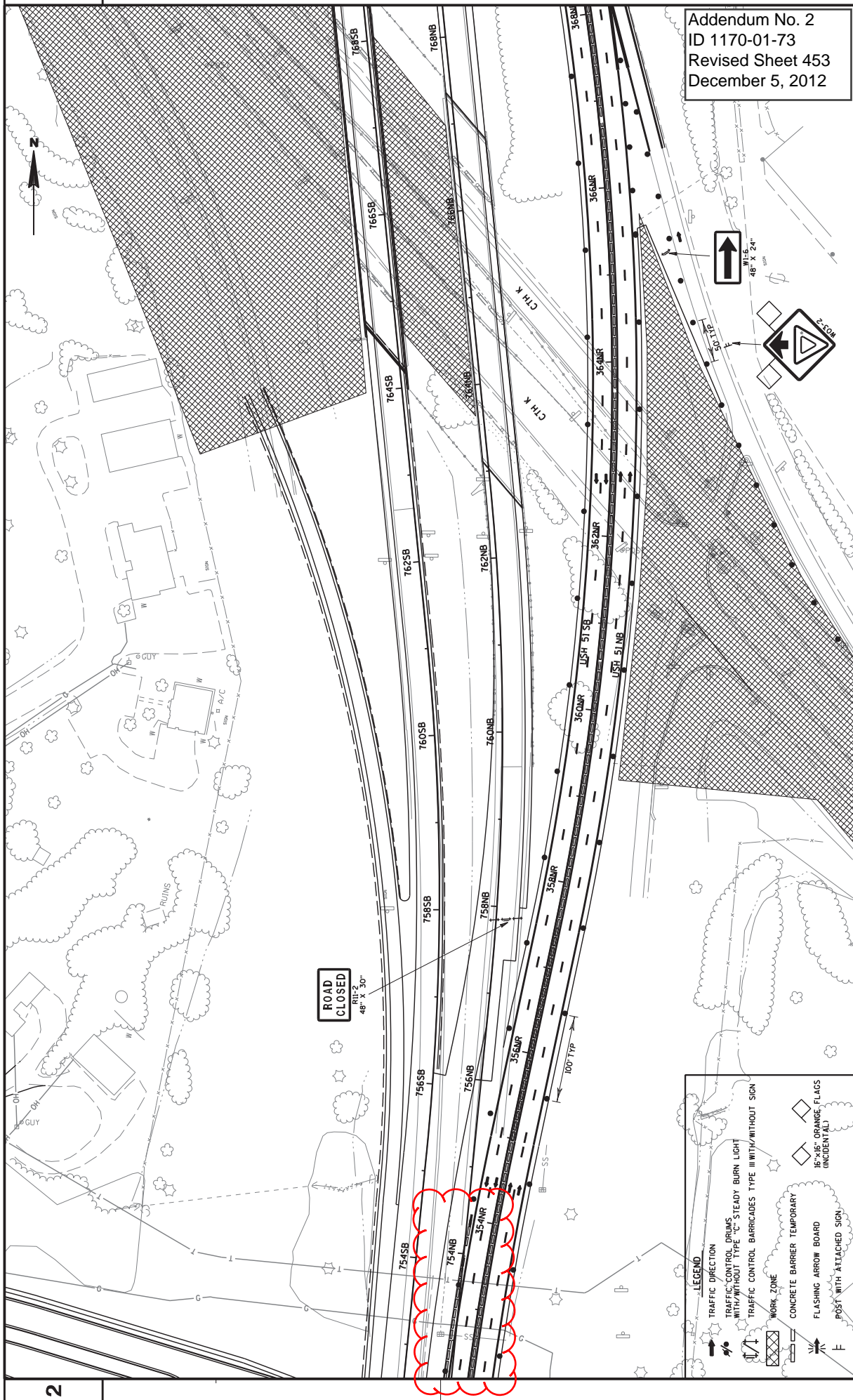
PROJECT NO: 1170-01-70/73	HWY: USH 51	COUNTY: MARATHON	TRAFFIC CONTROL - STAGE 5A	E
FILE NAME : T:\10525 - 410527\NON-1170-01-75 MAIN\LINE PROJECT\PIG026514.dwg, dgn			PLOT DATE : 12/11/2012	PLOT BY : AHES-EC
			PLOT SCALE : 1:1100	WISDOT/CADDIS SHEET 42





Addendum No. 2  
ID 1170-01-73  
Revised Sheet 452  
December 5, 2012

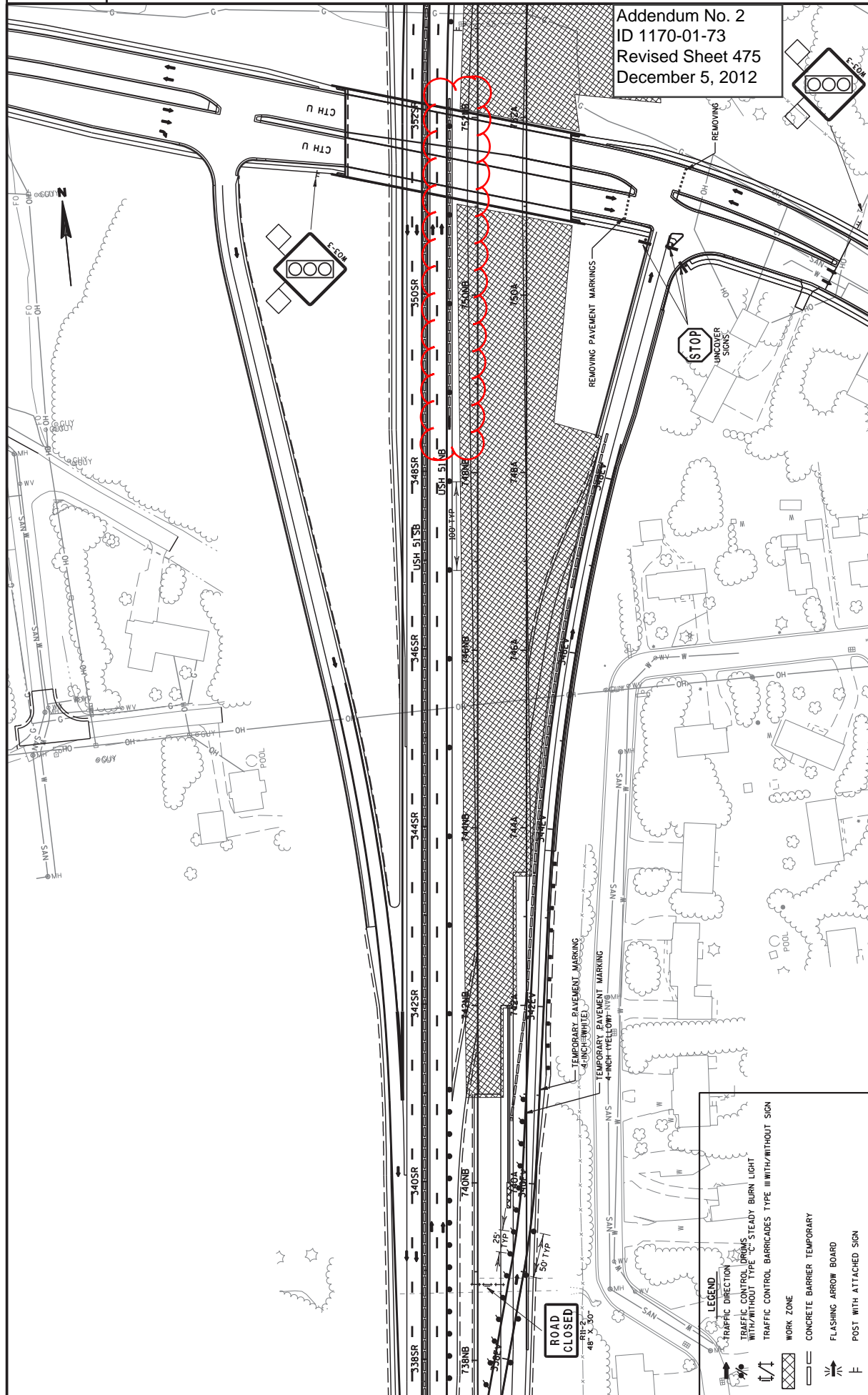




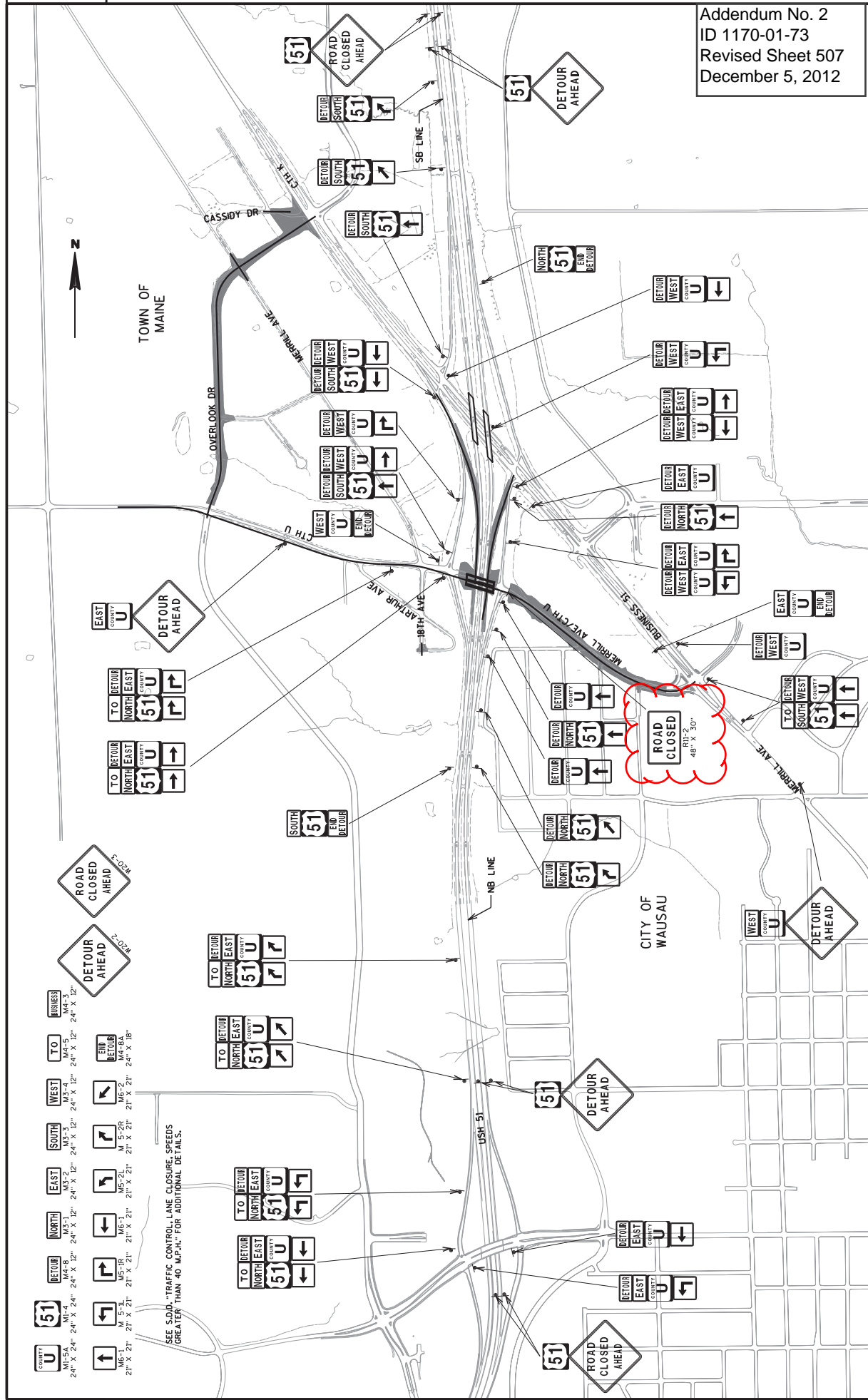




PROJECT NO: 1170-01-70/73	HWY: USH 51	COUNTY: MARATHON	TRAFFIC CONTROL - STAGE 6B	SHEET 475
FILE NAME: T:\110525 - 410527\NON1170-01-75 MAINLINE PROJECT\PIG026633.66b.dgn		PLOT DATE: 12/1/2012		PLOT NAME: PLOT BY: APRES-EC
				PLOT SCALE: 1:100
				WISDOT/CADDIS SHEET 42



PROJECT NO: 1170-01-70/71/73 & 6999-18-70	HWY: USH 51	COUNTY: MARATHON	DETOUR - STAGE 1 NIGHTTIME CLOSURE OF USH 51	SHEET 507
FILE NAME : T:\110525 - 410527\JON1170-01-715 MAINLINE PROJECT\PLAN027012.dwg			PLOT DATE : 12/1/2012	PLOT BY : AYES-EC
			PLOT SCALE : 1:800	WISDOT/CADDIS SHEET 42





Addendum No. 2  
ID 1170-01-70  
Revised Sheet 550  
December 5, 2012

EARTHWORK SUMMARY																
DIVISION	STATION TO STATION	LOCATION	CUT CY	EXCAVATION CY	SALVAGED/ UNUSABLE PAVEMENT MATERIAL CY	(9) AVAILABLE MATERIAL CY	(8) EBS CY	205.0400 MARSH CY	205.0200 EXCAVATION ROCK CY	FILL CY	(6) UNEXPANDED FILL CY	(2) (4) EXPANDED CY	(5) MASS ORDINATE +/- CY	(1) WASTE CY	(3) BORROW CY	COMMENTS
DIVISION 1 SUBTOTAL																
	363+50 BT - 365+63 BT	BT RAMP	53	53	---	53	---	---	---	53	53	66	-13	---	---	---
	342+00 ET - 345+50 ET	ET RAMP	352	352	---	352	---	---	---	286	286	103	250	---	---	---
	342+00 FT - 346+00 FT	FT RAMP	108	108	---	108	---	---	---	286	286	138	-250	---	---	---
	745+00 E - 750+50 E	E RAMP	746	746	---	746	---	---	---	530	530	5483	2919	---	---	---
	745+00 F - 750+50 F	F RAMP	3330	3330	---	3330	---	---	8984	530	530	5483	2919	---	---	---
	223+00 V - 230+50 V	V LINE	1356	1356	---	1356	---	---	---	4686	4686	5858	-3902	---	---	---
	201+00 V - 223+00 V	V LINE	9513	9513	---	9513	---	---	---	4308	4308	5385	4128	---	---	---
	POND B	POND B	28136	28136	---	27546	---	---	---	252	252	315	27231	---	---	---
WASTE TO THE 1170-01-73 PROJECT																
WASTE TO THE 6995-18-70 PROJECT																
DIVISION 2 SUBTOTAL																
	370+90 CT - 384+50 CT	CT RAMP	1260	1260	---	1260	---	---	---	4370	4370	5463	-4203	---	---	---
WASTE TO THE 1170-01-73 PROJECT																
WASTE FROM PREVIOUS STAGES (7)																
DIVISION 3A SUBTOTAL																
	40+50 KN - 49+00 KN	KN LINE	5007	5007	---	3057	---	---	---	2442	2442	3053	5	---	---	---
	31+00 KS - 38+50 KS	KS LINE	3148	3148	---	2550	---	---	---	1734	1734	1734	-1570	---	---	---
	40+50 KS - 49+00 KS	KS LINE	5178	5178	---	5178	---	---	---	1491	1491	1864	3314	---	---	---
WASTE TO THE 1170-01-73 PROJECT																
WASTE FROM PREVIOUS STAGES (7)																
DIVISION 4 SUBTOTAL																
	372+00 CU - 376+50 CU	CU RAMP	207	207	---	207	---	---	---	4319	4319	5399	-5192	---	---	---
	771+50 C - 784+50 C	C RAMP	4688	4688	---	4038	---	---	---	3379	3379	4224	-186	---	---	---
	754+50 D - 770+50 D	D RAMP	40512	40512	---	11140	---	---	---	2186	2186	2732	36640	---	---	---
	740+50 F - 743+00 F	F RAMP	6993	6993	---	4213	---	---	2460	54	54	4213	7556	---	---	---
	200+00 KW - 204+00 KW	KN LINE	700	700	---	700	---	---	---	1500	1500	1875	-1175	---	---	---
	61+00 KN - 61+50 KN	KN LINE	3700	3700	---	3200	---	---	---	2871	2871	3319	9585	---	---	---
	61+00 KS - 61+50 KS	KN LINE	10704	10704	---	6500	---	---	---	891	891	9319	9585	---	---	---
	51+00 KS - 61+50 KS	KS LINE	6660	6660	---	6660	---	---	---	750	750	938	5793	---	---	---
DIVISION 5 SUBTOTAL																
	753+50 A - 761+00 A	A RAMP	20979	20979	---	1790	---	---	2480	15727	13226	16332	52961	---	---	---
	766+00 B - 775+00 B	B RAMP	5382	5091	---	20979	---	---	---	48	48	60	20919	---	---	---
	100+00 KE - 104+00 KE	KE LINE	5559	5559	---	5091	---	---	291	26	-294	5459	-368	---	---	---
	REMOVAL OF CU LINE	CU RAMP	4370	4370	---	5559	---	---	---	9	9	11	5548	---	---	---
	REMOVAL OF CU LINE	CU RAMP	4319	4319	---	4319	---	---	---	---	---	---	4370	---	---	---
	POND A	POND A	11223	11223	---	11223	---	---	---	4185	4185	5231	5992	---	---	---
DIVISION 6A SUBTOTAL																
	738+50 E - 746+00 E	E RAMP	4352	4352	---	4352	---	---	---	431	431	539	3813	---	---	---
DIVISION 6B SUBTOTAL																
	761+50 B - 766+00 B	B RAMP	10297	7645	---	6625	---	---	2652	222	-2695	-3369	9994	---	---	---
	775+00 B - 781+00 B	B RAMP	725	725	---	725	---	---	---	11	11	14	711	---	---	---
	31+00 KN - 38+50 KN	KN LINE	3695	3695	---	3195	---	---	---	1190	1190	1468	1708	---	---	---
DIVISION 6C SUBTOTAL																
	738+50 E - 746+00 E	E RAMP	4352	4352	---	4352	---	---	---	431	431	539	3813	---	---	---
CATEGORY 0010 TOTALS																
CATEGORY 0090 TOTALS																
CATEGORY 0100 TOTALS																
PROJECT ID TOTALS																
(1) WASTE = EXPANDED FILL - EXCAVATION COMMON (FOR INFORMATION ONLY - NOT A BID ITEM)																
(2) EXPANSION FACTOR = 1.25																
(3) BORROW = EXPANDED FILL - AVAILABLE MATERIAL																
(4) EXPANDED FILL = UNEXPANDED FILL * EXPANSION FACTOR																
(5) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION, PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION, MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.																
(6) UNEXPANDED FILL = FILL - (ROCK * 1.1) + (MARSH EXCAVATION * 1.5) - (MARSH EXCAVATION * 0.6) + (EBS * 1.25) - (EBS * 0.8) - ASSUMES THAT ALL MARSH AND EBS CAN BE USED IN FILL AREAS																
(7) EARTHWORK FROM PREVIOUS STAGES TO BE USED INTO THIS STAGE																
(8) EBS PAID AS EXCAVATION COMMON																
(9) AVAILABLE MATERIAL = COMMON EXCAVATION - SALVAGED/UNUSABLE MATERIAL.																
ALL ITEMS ARE CATEGORIZED UNLESS OTHERWISE NOTED																
NO: 1170-01-70 HWY: USH 51 COUNTY: MARATHON MISCELLANEOUS QUANTITIES SHEET 5																



## EARTHWORK SUMMARY

DIVISION	STATION TO STATION	LOCATION	CUT CY	205.0100 EXCAVATION COMMON CY	SALVAGED/ UNUSABLE PAYMENT MATERIAL CY	(9) AVAILABLE MATERIAL CY	(8) EBS CY	205.0400 EXCAVATION MARSH CY	205.0200 EXCAVATION ROCK CY	FILL CY	UNEXPANDED FILL CY	(2) (4) EXPANDED FILL CY	(5) MASS ORDINATE +/- CY	(1) WASTE CY	(3) 208.0100 BORROW CY
DIVISION 1	350+00 AT - 360+50 AT	AT RAMP	2144	2144	---	2144	---	1002	---	2214	3116	3895	-1751	---	---
	353+50 DT - 366+00 DT	DT RAMP	989	989	---	989	---	---	---	1942	1942	2428	-1439	---	---
	705+00 NS - 727+00 NS	NS LINE (STAGE 1A)	2812	2812	---	2812	---	---	---	838	838	1048	-1765	---	---
	348+00 ST - 353+00 ST	ST LINE	1215	1215	---	1215	---	---	---	35	35	44	1171	---	---
	WASTE FROM THE 1170-01-70 PROJECT		---	---	---	---	---	---	---	---	---	---	-188	---	---
	WASTE FROM THE 6999-18-70 PROJECT		---	---	---	---	---	---	---	---	---	---	117	---	---
	UNDISTRIBUTED BORROW (10)		---	---	---	---	---	---	---	---	---	---	---	---	5000
	DIVISION 1 SUBTOTAL		---	7160	---	7160	---	1002	---	5029	5931	7109	52	---	5000
	364+00 NR - 411+00 NR	NR LINE	4425	4425	---	4425	---	---	---	18953	18953	23691	-19266	---	---
	706+50 NS - 724+00 NS	NS LINE (STAGE 1B)	2380	2380	---	2380	---	---	---	633	633	791	1589	---	---
DIVISION 2	413+00 NR - 423+00 NR	NR LINE	433	433	---	433	---	---	---	2430	2430	3038	-2605	---	---
	WASTE FROM 1170-01-70 PROJECT		---	---	---	---	---	---	---	---	---	---	20282	---	---
	DIVISION 2 SUBTOTAL		---	7238	---	7238	---	---	---	22016	22016	7238	---	---	---
	324+00 NR - 361+00 NR	NR LINE	6894	6894	---	6894	---	885	---	20674	21471	26838	-19944	---	---
	711+00 SB - 720+00 SB	SB LANES	5110	5110	---	5017	---	---	---	---	---	---	5017	---	---
	710+00 NB - 720+00 NB	NB LANES	5847	5847	90	5757	---	---	---	15	15	19	5738	---	---
	WASTE FROM 1170-01-70 PROJECT		---	---	---	---	---	---	---	---	---	-9189	9189	---	---
	DIVISION 3A SUBTOTAL		---	17851	183	17668	---	885	---	20689	21486	17668	---	---	---
	361+00 NR - 364+00 NR	NR LINE	164	164	---	164	---	347	---	6362	6674	8343	-8179	---	---
	WASTE FROM 1170-01-70 PROJECT		---	---	---	---	---	---	---	---	---	-8179	8179	---	---
DIVISION 3	DIVISION 3 SUBTOTAL		---	164	---	164	---	347	---	6362	6674	164	---	---	---
	720+00 SB - 764+00 SB	SB LANES	42179	42179	2950	39229	---	---	---	7936	7936	9920	29309	---	---
	769+00 SB - 811+00 SB	SB LANES	25133	25133	2860	22773	---	---	---	2120	2120	2650	19623	---	---
	355+00 SR - 380+00 SR	SR LINE	2239	2239	---	2239	---	---	---	1657	1657	2071	168	---	---
	DIVISION 5 SUBTOTAL		---	69551	5810	63741	---	---	---	11713	11713	14641	49100	49100	---
	720+00 NB - 740+00 NB	NB LANES	20224	20224	1340	18884	---	---	---	390	390	488	18397	---	---
	747+00 NB - 763+00 NB	NB LANES	20788	20788	1070	19718	---	---	---	981	981	1226	18492	---	---
	767+00 NB - 811+00 NB	NB LANES	21468	21468	2940	18528	---	---	---	3058	3058	3823	14706	---	---
	DIVISION 6A SUBTOTAL		---	62480	5350	57130	---	---	---	4429	4429	5536	51594	---	---
	740+00 NB - 747+00 NB	NB LANES	7650	7650	470	7180	---	---	---	---	---	---	7180	---	---
DIVISION 6	DIVISION 6B SUBTOTAL		---	7650	470	7180	---	---	---	---	---	---	7180	---	---
	713+00 NB - 763+00 NB	MEDIAN	4533	4533	---	4533	---	---	---	102	102	128	4406	---	---
	768+00 NB - 811+00 NB	MEDIAN	18581	18581	---	18581	---	---	---	225	225	281	18300	---	---
	DIVISION 7 SUBTOTAL		---	23114	---	23114	---	---	---	327	327	409	22705	22705	---
	PROJECT ID TOTALS		---	195208	---	---	---	2234	---	---	---	---	---	---	5000
	(1) WASTE = EXPANDED FILL - EXCAVATION COMMON (FOR INFORMATION ONLY - NOT A BID ITEM)														
	(2) EXPANSION FACTOR = 1.25														
	(3) BORROW = EXPANDED FILL - AVAILABLE MATERIAL														
	(4) EXPANDED FILL = UNEXPANDED FILL * EXPANSION FACTOR														
	(5) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION, PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION, MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION.														
	(6) UNEXPANDED FILL = FILL - (ROCK * 1.1) + (MARSH EXCAVATION * 1.5) - (MARSH EXCAVATION * 0.6) + (EBS * 1.25) - (EBS * 0.8) - ASSUMES THAT ALL MARSH AND EBS CAN BE USED IN FILL AREAS														
	(7) EARTHWORK (SUCH AS FOND B) FROM PREVIOUS STAGES MAY BE COMPLETED INTO THIS STAGE														
	(8) EBS PAID FOR AS EXCAVATION COMMON.														
	(9) AVAILABLE MATERIAL = COMMON EXCAVATION - SALVAGED/UNUSABLE MATERIAL.														
	(10) UNDISTRICTED BORROW IS USED TO ACCOUNT FOR POTENTIAL UNUSABLE MATERIAL WITHIN THE PROJECT DURING THE EARLY STAGES OF CONSTRUCTION														

PROJECT NO: 1170-01-73

HWY: USH 51

COUNTY: MARATHON

MISCELLANEOUS QUANTITIES

SHEET 591

E

ALL ITEMS ON THIS SHEET  
ARE CATEGORY 0010  
UNLESS OTHERWISE NOTEDAddendum No. 2  
ID 1170-01-73  
Revised Sheet 591  
December 5, 2012

CONCRETE BARRIER TEMPORARY PRECAST

STATION TO STATION		LOCATION	STAGE	DELIVERED	603.8000	603.8125	CRASH CUSHION	614.0905	CRASH	TEST		OBJECT	MARKING	CONDITION	WIDTH
				LF	LF	LF	TEMPORARY	TEMPORARY							
349+00	NR - 352+25	NR	NR LINE LT	1	325	325	1	1	OM-3L	TL-3	2'				
349+50	NR - 353+25	NR	NR LINE LT	1	375	375	1	1	OM-3L	TL-3	2'				
350+50	NM - 324+00	NM	NM LINE RT	1B	1850	1850	---	---	---	TL-3	2'				
350+50	NM - 324+00	NM	NM LINE LT	1B	1850	1850	---	---	---	TL-3	2'				
350+50	NM - 326+25	NM	NM LINE LT	1B	1850	1850	1	1	OM-3L	TL-3	2'				
350+50	NS - 325+75	NS	NS LINE RT	1B	1850	1850	1	1	OM-3R	TL-3	2'				
350+50	NS - 327+50	NS	NS LINE LT	1B	1750	1750	1	1	OM-3L	TL-3	2'				
350+50	NS - 324+25	NW	NW LINE RT	1C	---	---	1	1	OM-3R	TL-3	2'				
350+50	NS - 324+00	NS	NS LINE LT	1C	---	---	1	1	OM-3L	TL-3	2'				
350+50	SP - 753+75	SP	SP LINE RT	2A	---	---	1	1	OM-3L	TL-3	2'				
350+50	SP - 753+00	SP	SP LINE RT	2A	---	---	1	1	OM-3L	TL-3	2'				
350+50	NR - 334+60	NR	NR LINE RT	3A	2160	2160	---	---	---	TL-3	2'				
350+50	NR - 332+50	NR	NR LINE LT	3A	850	850	1	1	OM-3L	TL-3	2'				
350+50	NR - 352+50	NR	NR LINE LT	3A	1925	1925	1	1	OM-3L	TL-3	2'				
350+50	NR - 350+25	NR	NR LINE RT	3A	1075	1075	1	1	OM-3C	TL-3	2'				
350+50	NR - 388+50	NR	NR LINE LT	3A	950	950	---	---	---	TL-3	2'				
350+50	NR - 411+00	NR	NR LINE LT	3A	2175	2175	1	1	OM-3L	TL-3	2'				
350+50	NR - 359+40	NR	NR LINE RT	3B	915	915	---	---	---	TL-3	2'				
350+50	NR - 378+50	NR	NR LINE RT	3B	1300	1300	---	---	---	TL-3	2'				
350+50	NR - 359+50	NR	NR LINE	3B	1900	1900	---	---	---	TL-3	2'				
350+50	NR - 419+50	NR	NR LINE RT	5A	4040	10750	1	1	OM-3L	TL-3	2'				
350+50	NR - 354+00	NR	NR LINE LT	5A	350	350	---	---	---	TL-3	2'				
350+50	SR - 356+00	SR	SR LINE RT	6A	3950	3950	1	1	OM-3L	TL-3	2'				
350+50	SR - 352+25	SR	SR LINE RT	6A	375	375	1	1	OM-3R	TL-3	2'				
350+50	NR - 812+70	NB	NB LINE	6A	---	---	---	---	---	TL-3	2'				
350+50	EV - 348+40	EV	EV LINE LT	6B	780	780	---	---	---	TL-3	2'				
350+50	SR - 408+20	SR	SR LINE	6C	700	3920	1	1	OM-3R	TL-3	2'				
350+50	SR - 412+70	SR	SR LINE	6C	1420	1420	1	1	OM-3L	TL-3	2'				
CATEGORY TOTALS				33240	49815		18								

PIPE UNDERDRAIN

STATION		LOCATION	LF	UNPERFORATED	612.0212	APRON ENDWALLS	521.1012	GEOTEXTILE	645.0120
				12-INCH		FOR CULVERT PIPE		FABRIC	
						STEEL 12-INCH		TYPE HR	
						EACH			
762+23	NB	SURFACE DRAIN	80	1	1	2	8	8	
764+51	NB	SURFACE DRAIN	50	1	1	2	8	8	
811+09	NB	SURFACE DRAIN	45	1	1	2	8	8	
811+21	NB	SURFACE DRAIN	90	1	1	2	8	8	
813+05	NB	SURFACE DRAIN	90	1	1	2	8	8	
TOTALS			355	5	5	10	40	40	
*CATEGORY TOTALS			355	6	6	246	668	668	

\* OTHER QUANTITIES LOCATED ELSEWHERE IN PLAN

MGS GUARDRAIL

STATION TO STATION		LOCATION	LF	THRIE BEAM	614.2300	614.2610	614.2620
				TRANSITION			
				GUARDRAIL 3			
				EAT			
				TYPE 2			
				EACH			
757+02	NB - 756+94	NB	RT	8	---	---	---
760+35	NB - 759+82	NB	RT	---	---	---	---
761+97	NB - 757+02	NB	RT	495	---	---	---
762+36	NB - 761+97	NB	RT	39	---	---	---
762+60	NB - 760+35	NB	LT	---	---	---	---
762+99	NB - 762+60	NB	LT	39	---	---	---
763+48	NB	LT (MEDIAN)	---	---	---	---	---
768+02	SB	RT (MEDIAN)	---	---	---	---	---
808+10	NB - 808+63	NB	LT	---	---	---	---
808+43	NB - 808+96	NB	RT	---	---	---	---
808+63	NB - 810+88	NB	LT	---	---	---	---
808+96	NB - 810+83	NB	RT	---	---	---	---
810+83	NB - 811+22	NB	RT	39	---	---	---
810+88	NB - 811+27	NB	LT	39	---	---	---
721+75	SB - 724+75	SB	RT	---	---	---	---
768+94	SB - 771+19	SB	RT	39	---	---	---
769+59	SB - 771+46	SB	LT	39	---	---	---
771+19	SB - 771+72	SB	RT	---	---	---	---
771+46	SB - 771+99	SB	LT	---	---	---	---
811+30	NB	LT (MEDIAN)	---	---	---	---	---
812+84	SB	RT (MEDIAN)	---	---	---	---	---
812+88	SB - 813+27	SB	RT	---	---	---	---
812+92	SB - 813+31	SB	LT	39	---	---	---
813+27	SB - 815+52	SB	RT	---	---	---	---
813+31	SB - 815+18	SB	LT	---	---	---	---
815+18	SB - 815+71	SB	LT	---	---	---	---
815+52	SB - 816+05	SB	RT	---	---	---	---
CATEGORY TOTALS				320	2601	8	1

STEEL PLATE BEAM GUARD TEMPORARY

STATION TO STATION		LOCATION	LF	THRIE BEAM	614.0250	614.0360	614.0380
				APPROACH			
				BEAMGUARD			
				EAT			
				TYPE 2			
				EACH			
412+88	NR - 418+65	NR	RT	21	---	---	---
CATEGORY TOTALS				21	500	1	1

STEEL PLATE BEAM GUARD CLASS A

STATION TO STATION		LOCATION	LF	THRIE BEAM	614.0220	614.0230	614.0250
				BULL NOSE			
				TERMINAL			
				EACH			
708+00	NB - 713+08	NB	RT	---	---	---	---
CATEGORY TOTAL				275	2	2	2

Addendum No. 2  
ID 1170-01-73  
Revised Sheet 596  
December 5, 2012

PROJECT NO: 1170-01-73

HWY: USH 51

COUNTY: MARATHON

MISCELLANEOUS QUANTITIES

SHEET

E

## EARTHWORK SUMMARY

DIVISION	STATION TO STATION	LOCATION	CUT CY	205.0100 EXCAVATION COMMON		(8) EBS CY	205.0400 EXCAVATION MARSH		205.0200 EXCAVATION ROCK		(6) UNEXPANDED FILL		(2) (4) EXPANDED FILL		(5) MASS ORDINATE +/-		(1) WASTE CY	(3) 208.0100 BORROW CY	
				CY			CY		CY		CY		CY		CY				CY
DIVISION 1	4+90 L - 5+50 L WASTE TO THE 1170-01-73 PROJECT	L LINE	117			---	---	---	---	---	---	---	---	---	---	---	---	---	
			117			---	---	---	---	---	---	---	---	---	---	---	---	---	
			---			---	---	---	---	---	---	---	---	---	---	---	---	---	
			117																
			---			---	---	---	---	---	---	---	---	---	---	---	---	---	
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DIVISION 1 SUBTOTAL																			
	254+25 M - 255+75 M	M LINE	192			---	---	---	---	---	1410	1763			-1571				
	12+00 R - 14+50 R	R LINE	1363			---	---	---	---	---	1	1			1362				
	19+50 U - 22+00 U	U LINE	894			---	---	---	---	---		10			884				
	22+00 U - 49+00 U	U LINE	18854			---	---	---	---	---	25280	31600			-12746				
	51+00 U - 71+00 U	U LINE	8301			---	---	---	---	---	7055	7055			8819				
	WASTE FROM 1170-01-70 PROJECT		---			---	---	---	---	---	---	---			-12589				
DIVISION 2 SUBTOTAL																			
			---			---	---	---	---	---	33754	29604			---				

## CATEGORY TOTALS

29721

- (1) WASTE = EXPANDED FILL - EXCAVATION COMMON (FOR INFORMATION ONLY - NOT A BID ITEM)  
(2) EXPANSION FACTOR = 1.25  
(3) BORROW = EXPANDED FILL - EXCAVATION COMMON  
(4) EXPANDED FILL = UNEXPANDED FILL \* EXPANSION FACTOR  
(5) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION, PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION, MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION  
(6) UNEXPANDED FILL = FILL - (ROCK \* 1.1) + (MARSH EXCAVATION \* 1.5) - (MARSH EXCAVATION \* 0.6) + (EBS \* 1.25) - (EBS \* 0.8) - ASSUMES THAT ALL MARSH AND EBS CAN BE USED IN FILL AREAS  
(7) EARTHWORK (SUCH AS POND B) FROM PREVIOUS STAGES MAY BE COMPLETED INTO THIS STAGE  
(8) EBS PAID FOR AS EXCAVATION COMMON

Addendum No. 2  
ID 6999-18-70  
Revised Sheet 608  
December 5, 2012

## BASE AGGREGATE DENSE

STATION TO STATION	LOCATION	TON	3/4-INCH	305.0110	1 1/4-INCH	TON	OPEN	310.0110
19+50 U - 48+68 U	CTH U	81	---	8201	---	9902	---	---
51+13 U - 71+47 U	CTH U	---	---	4534	---	5623	---	---
200+80 V - 201+10 V	OVERLOOK DR	4	---	68	---	71	---	---
12+00 R - 14+72 R	ARTHUR AVE	55	---	467	---	517	---	---
4+90 L - 5+50 L	18TH AVE	30	---	---	---	200	---	---
254+17 M - 255+94 M	MERRILL CUL-DE-SAC	50	---	---	---	550	---	---
PROJECT WIDE	P.E. DRIVEWAYS	260	---	---	---	---	---	---
PROJECT WIDE	C.E. DRIVEWAYS	600	---	---	---	---	---	---
24+89 U - 71+13 U	SIDEWALK	---	---	1110	---	---	---	---
23+64 U - 69+50 U	PIPE UNDERDRAIN	---	---	---	---	937	---	---
CATEGORY TOTALS		1080	---	14600	---	17800	---	---

## OBLITERATING OLD ROAD

PROJECT	EACH	213.0100	214.0100	STA
18TH AVE	4	---	---	---
MERRILL AVE	1	---	---	---
CATEGORY TOTAL		1	5	---

\* OTHER QUANTITIES LOCATED ELSEWHERE IN PLAN

ALL ITEMS ON THIS SHEET  
ARE CATEGORY 0010  
UNLESS OTHERWISE NOTED

PROJECT NO: 6999-18-70

HWY: USH 51

COUNTY: MARATHON

MISCELLANEOUS QUANTITIES

SHEET 608

E



## SCHEDULE OF ITEMS

CONTRACT:	PROJECT(S):	FEDERAL ID(S):
20121211027	1170-01-70	WISC 2012708
	1170-01-71	N/A
	1170-01-73	WISC 2012709
	6999-18-70	WISC 2012714

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0200	204.0210 REMOVING MANHOLES	3.000 EACH	.		.	
0210	204.0220 REMOVING INLETS	41.000 EACH	.		.	
0220	204.0245 REMOVING STORM SEWER (SIZE) 01. 12-INCH	435.000 LF	.		.	
0230	204.0245 REMOVING STORM SEWER (SIZE) 02. 15-INCH	72.000 LF	.		.	
0240	204.0245 REMOVING STORM SEWER (SIZE) 03. 18-INCH	72.000 LF	.		.	
0250	204.0270 ABANDONING CULVERT PIPES	11.000 EACH	.		.	
0260	204.9060.S REMOVING (ITEM DESCRIPTION) 03. PARTIAL PIPE	11.000 EACH	.		.	
0270	204.9090.S REMOVING (ITEM DESCRIPTION) 01. MODULAR BLOCK RETAINING WALL	23.000 LF	.		.	
0280	204.9090.S REMOVING (ITEM DESCRIPTION) 02. CABLE GUARD	650.000 LF	.		.	
0290	205.0100 EXCAVATION COMMON	451,790.000 CY	.		.	

## SCHEDULE OF ITEMS

REVISED:

CONTRACT:	PROJECT(S):	FEDERAL ID(S):
20121211027	1170-01-70	WISC 2012708
	1170-01-71	N/A
	1170-01-73	WISC 2012709
	6999-18-70	WISC 2012714

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
1540	601.0557 CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE D	701.000 LF	.		.	
1550	601.0574 CONCRETE CURB & GUTTER 4-INCH SLOPED 30-INCH TYPE G	947.000 LF	.		.	
1560	601.0580 CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE R	800.000 LF	.		.	
1570	601.0600 CONCRETE CURB PEDESTRIAN	240.000 LF	.		.	
1580	602.0405 CONCRETE SIDEWALK 4-INCH	91,050.000 SF	.		.	
1590	602.0420 CONCRETE SIDEWALK 7-INCH	1,672.000 SF	.		.	
1600	602.0505 CURB RAMP DETECTABLE WARNING FIELD YELLOW	736.000 SF	.		.	
1610	603.1142 CONCRETE BARRIER TYPE S42	1,696.000 LF	.		.	
1620	603.1442 CONCRETE BARRIER TYPE S42C	1,132.000 LF	.		.	
1630	603.8000 CONCRETE BARRIER TEMPORARY PRECAST DELIVERED	35,715.000 LF	.		.	

## SCHEDULE OF ITEMS

REVISED:

CONTRACT:	PROJECT(S):	FEDERAL ID(S):
20121211027	1170-01-70	WISC 2012708
	1170-01-71	N/A
	1170-01-73	WISC 2012709
	6999-18-70	WISC 2012714

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
1640	603.8125 CONCRETE BARRIER TEMPORARY PRECAST INSTALLED	55,190.000 LF	.		.	
1650	604.0400 SLOPE PAVING CONCRETE	1,010.000 SY	.		.	
1660	606.0200 RIPRAP MEDIUM	2,211.000 CY	.		.	
1670	606.0300 RIPRAP HEAVY	970.000 CY	.		.	
1680	606.0700 GROUTED RIPRAP HEAVY	202.000 CY	.		.	
1690	607.5000 STORM SEWER ROCK EXCAVATION	2,627.000 CY	.		.	
1700	608.0312 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH	2,638.000 LF	.		.	
1710	608.0315 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 15-INCH	2,881.000 LF	.		.	
1720	608.0318 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 18-INCH	2,125.000 LF	.		.	
1730	608.0321 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 21-INCH	895.000 LF	.		.	

## SCHEDULE OF ITEMS

CONTRACT:	PROJECT(S):	FEDERAL ID(S):
20121211027	1170-01-70	WISC 2012708
	1170-01-71	N/A
	1170-01-73	WISC 2012709
	6999-18-70	WISC 2012714

CONTRACTOR : \_\_\_\_\_

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
2040	614.0150 ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	16.000 EACH	.		.	
2050	614.0220 STEEL THRIE BEAM BULLNOSE TERMINAL	2.000 EACH	.		.	
2060	614.0230 STEEL THRIE BEAM	275.000 LF	.		.	
2070	614.0250 STEEL THRIE BEAM STRUCTURE APPROACH TEMPORARY	21.000 LF	.		.	
2080	614.0305 STEEL PLATE BEAM GUARD CLASS A	508.000 LF	.		.	
2090	614.0360 STEEL PLATE BEAM GUARD TEMPORARY	500.000 LF	.		.	
2100	614.0380 STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL TEMPORARY	1.000 EACH	.		.	
2110	614.0805 CRASH CUSHIONS PERMANENT LOW MAINTENANCE	2.000 EACH	.		.	
2120	614.0905 CRASH CUSHIONS TEMPORARY	23.000 EACH	.		.	
2130	614.2300 MGS GUARDRAIL 3	2,763.000 LF	.		.	