

HIGHWAY WORK PROPOSAL

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

Proposal Number:

14

COUNTY	STATE PROJECT ID	FEDERAL PROJECT ID	PROJECT DESCRIPTION	HIGHWAY
Waukesha	2753-06-71	WISC 2013 078	Silver Spring Drive CTH Y to Jackson Drive	CTH VV

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

Proposal Guaranty Required, \$ 100,000.00 Payable to: Wisconsin Department of Transportation	Attach Proposal Guaranty on back of this PAGE.
Bid Submittal Due Date: March 12, 2013 Time (Local Time): 9:00 AM	Firm Name, Address, City, State, Zip Code
Contract Completion Time Two hundred eight (208) Calendar Days	SAMPLE NOT FOR BIDDING PURPOSES
Assigned Disadvantaged Business Enterprise Goal 15%	This contract is exempt from federal oversight.

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

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

Subscribed and sworn to before me this date _____

(Signature, Notary Public, State of Wisconsin)

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

(Date Commission Expires)

Notary Seal

(Bidder Signature)

(Print or Type Bidder Name)

(Bidder Title)

For Department Use Only

Type of Work Grading, dense and open graded base, concrete curb and gutter, storm sewer pipe, manholes, inlets, asphaltic pavement, bridge structures over the Fox River, landscaping and finishing.	Date Guaranty Returned
Notice of Award Dated	

**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 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.

Name of Subcontractor	Class of Work	Estimated Value
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

DECEMBER 2000

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

Instructions for Certification

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

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

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

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

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

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SPECIAL PROVISIONS

1. General.

Perform work in accordance to these provisions and the State of Wisconsin, Department of Transportation, Standard Specifications for Highway and Structure Construction and the Waukesha County Standard Specification for Project 2753-06-71, Silver Spring Drive, CTH Y to Jackson Drive, CTH VV, Waukesha County, Wisconsin Department of Transportation, Standard Specifications for Highway and Structure Construction, 2013 Edition, as published by the department, and these special provisions..

In the event of a conflict, the Wisconsin Department of Transportation Standard Specifications and Specifications for Sewer and Water Construction in Wisconsin will take precedence.

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.

2. Scope of Work.

The work under this contract shall consist of grading, storm sewer, dense and open graded base, concrete curb and gutter, storm sewer pipe, manholes, inlets, asphalt concrete pavement, traffic signals two bridge structures over the Fox river, restoration, and all incidental items necessary to complete the work as shown on the plans and included in the proposal and contract.

104-005 (20090901)

3. Prosecution and Progress.

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

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

Prior to beginning operations under this contract, submit in writing the proposed schedule of operations to the engineer for approval.

At the beginning of Stage 1 operations, close CTH VV (Silver Spring Drive) and CTH Y (Lannon Road) to through traffic for a maximum of 145 calendar days. Do not reopen until completing the following work: All Stage 1 work including Structure B-67-335,

Structure B-67-336, 4-lane roadway to asphalt binder layer and operational traffic signals.

There are in stream restrictions as part of this project. The contractor is advised that the project schedule includes structure work commencing with the project start. The contractor shall coordinate activities with the DNR (including ECIP) to ensure protection is adequate and construction on the structures may begin with the notice to proceed.

Supplement standard spec 108.11 as follows:

If the contractor fails to complete the work necessary to reopen CTH VV (Silver Spring Drive) and CTH Y (Lannon Road) to traffic within 145 calendar days, the department will assess the contractor \$5,000.00 in interim liquidated damages for each calendar day the contract work remains incomplete beyond 145 calendar days. An entire calendar day will be charged for any period of time within a calendar day that the road remains closed beyond 12:01 AM.

Complete all remaining construction operations within 208 calendar days.

Supplement standard spec 108.11 as follows:

If the contractor fails to complete all remaining work prior within 208 calendar days, the department will assess liquidated damages in accordance to standard spec 108.11 for each calendar day the contract work remains incomplete beyond 208 calendar days. An entire calendar day will be charged for any period of time within a calendar day that the road remains closed beyond 12:01 AM.

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

1. Weather.
2. Labor disputes that are not industry wide.
3. Delays in material deliveries.

No extra costs will be allowed for “cold weather protection”, if needed.

Request approval from the department for any asphaltic concrete paving after October 15, 2013.

The contractor should be aware that his Schedule of Operations may need to indicate working with a large force and adequate equipment to assure that the work outlined above and contained within the plans and specifications will be completed within the contract time.

The contractor shall be aware that parcel 13 (Station 195+00 LT) requires additional septic work. It is anticipated that this work will be completed prior to May 1, 2013. Contact Karen Braun at Waukesha County at (262) 896-8538 for detailed information.

The contractor shall be aware that parcel 1 (Station 238+00 RT) requires building demolition by others. It is anticipated that this work will occur prior to February 1, 2013. Contact Karen Braun at Waukesha County at (262) 896-8538 for detailed information.

Fish Spawning

There shall be no in stream disturbance of Fox River as a result of construction activity under or for this contract, from April 1 to June 1 to avoid adverse impacts on migrating and endemic fish species in the river.

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.

Migratory Birds

Swallow nests have not been observed on or under the existing bridges. 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 has been established as May 1 through 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 superstructure prior to nest occupation by swallows, or by clearing the nests from all structures before nests become active in early spring. As a last resort, prevent swallows from nesting by installing a suitable netting device on the remaining structure prior to nesting activity.

No recent history exists of swallow nesting on the structures. Waukesha County will continue to inspect and prevent any nesting activity from occurring prior to construction on project 2753-06-71. Once construction begins, the contractor shall continue the monitoring and nesting prevention and this shall be incidental to the items of Removing Old Structure Over Waterway With Minimal Debris.

4. Traffic.

The construction sequence and associated traffic control will be accomplished as detailed on the plans and specifications and as described herein.

Employ flagmen, signs, and barricades as may be necessary or as directed by the engineer to safeguard and direct traffic at all locations where construction operations may interfere with or prevent the movement of local traffic.

Provide the Village of Menomonee Falls Police Department, the Waukesha County Sheriff's Department and the engineer with a current telephone number with which the contractor can be contacted during non-working hours in the event a safety hazard develops.

Construction staging on this project will occur in two stages. The following is a summary of the traffic control and staging plans contained within the contract documents.

Prior to beginning work contractor shall coordinate sign removals with Waukesha County forces. Notify Mr. Michael Grulke, (262) 548-7748, or Mr. Fred Patzer, (262) 424-9129, from Waukesha County at least five working days prior to the desired starting date for the removal of the signs and post materials.

Stage 1

Traffic:

CTH VV and CTH Y will be closed to through traffic beginning with the start of construction and continue through the completion of Stage 1 work.

During Stage 1, no traffic will be allowed on CTH VV between Station 169+50 and Station 177+00 to facilitate the construction of Structure B-67-335. The detour route will begin at the intersection of CTH VV and CTH V and follow CTH V (Town Line Road) to CTH K (Lisbon Road) to CTH YY (Pilgrim Road), and vice versa.

During Stage 1, no traffic will be allowed on CTH Y between Station 10+50 and Station 15+00 to facilitate the construction of Structure B-67-336. The detour route will begin at the intersection of CTH Y and CTH K and follow CTH K (Lisbon Road) to CTH V (Town Line Road) to STH 74 (Main Street) to CTH W (Good Hope Road), and vice versa.

For all other areas, access shall be maintained for local traffic and property owners on CTH VV, CTH Y and all side roads by means of a minimum of two 10-foot lanes at all times on existing, proposed or other hard surface (asphalt or gravel) sufficient to support traffic. Contractor shall maintain such surface in acceptable condition and as directed by the engineer.

Provide and maintain local access for residential properties on the project, except for the minimum time necessary to complete construction in the immediate vicinity of the property. Do not close or remove any driveway or access from service without a prior 48-hour notice given to the occupants of the premises. Provide an additional access if a drive-through or other business feature requires continuous access.

Traffic Control:

PCMS's indicating "ROAD TO BE CLOSED "DATE" shall be posted 7 days prior to closure at the following locations or as directed by the engineer:

- CTH VV/Carters Crossing, CTH VV/Jackson Drive, CTH Y Station 3+50, and CTH Y Station 17+00.

Upon road closure, PCMS's shall state "ROAD CLOSED AHEAD – USE POSTED DETOUR" for 14 days. PCMS's shall be located at the flowing locations or as directed by the engineer:

- CTH VV/CTH V, CTH VV/CTH YY, CTH Y/CTH W and CTH Y/CTH K.

All other traffic control devices shall be in place as shown in the plans or as directed by the engineer prior to construction operations begin.

Construction:

The following items shall be completed in Stage 1: Structures B-67-335 and B-67-336, grading, all culverts and storm sewer systems, curb and gutter, pavement structure through binder, temporary pavement marking, and traffic signals operational.

Prior to opening to traffic contractor shall coordinate signing placement with Waukesha County forces. Notify Mr. Michael Grulke, (262) 548-7748, or Mr. Fred Patzer, (262) 424-9129, from Waukesha County at least ten working days prior to the desired starting date for the removal of the signs and post materials.

Stage 2

Traffic:

All roads open to traffic as indicated on the plans.

Traffic Control:

CTH VV open to traffic via one lane in each direction as indicated in the plans or as directed by the engineer. Contractor may move traffic accordingly to accomplish remaining construction work.

All other roadways and areas shall be open to two-way traffic at all times.

Construction:

Contractor shall complete all the reaming work under contract. Including: Bioswales, asphaltic pavement surface course, permanent pavement markings, landscaping and any others incidental required.

All landscaping and bioswale work shall be completed prior to placement of the surface course of asphalt.

5. Holiday Work Restrictions.

Do not perform work on, nor haul materials of any kind along or across any portion of the highway carrying CTH VV traffic, and entirely clear the traveled way and shoulders of such portions of the highway of equipment, barricades, signs, lights, and any other material that might impede the free flow of traffic during the following holiday periods:

- From noon Friday, May 24, 2013 to 6:00 AM Tuesday, May 28, 2013 for Memorial Day;
- From noon Wednesday, July 3, 2013 to 6:00 AM Friday, July 5, 2013 for Independence Day;
- From noon Friday, August 30, 2013 to 6:00 AM Tuesday, September 3, 2013 for Labor Day.

107-005 (20050502)

6. Utilities.

This contract does not come under the provision of Administrative Rule Trans 220.

107-065 (20080501)

There are underground and overhead utility facilities within the project limits. There are known utility adjustments required for this construction project coordinate construction activities with a call to Diggers hotline or a direct call to the utilities that have facilities in the area as required per statutes. Use caution to ensure the integrity of underground and overhead facilities, and maintain code clearances from overhead facilities at all times.

Bidders are advised to contact each utility company listed in the plans, prior to preparing their bids, to obtain information on the status of existing and any new utility relocation work.

ANR Pipeline Company has buried facilities within the project at approximately the following locations:

- A 30-Inch underground crossing at Station 205+79, running north-south. The facilities will remain in place and will be extended outside the right-of-way. No conflicts are anticipated.
- Underground crossings at Station 205+79, Station 243+23, and Station 243+48. The facilities will remain in place and no conflicts are anticipated.

The contact for ANR Pipeline Company is Larry Huber, (920) 477-2235.

American Transmission Company (ATC) has overhead facilities within the project at approximately the following locations:

- There are two 345kV overhead lines crossing CTH VV in the north/south direction at Station 204+74 and Station 205+48. No conflicts with the transmission lines are anticipated, but the following conditions are to be adhered to by the contractor at all time.
- No stockpiling or staging of equipment/materials under or near the ATC transmission lines and towers.

- Unobstructed ATC access to the transmission lines and towers must be maintained at all times.
- Exercise caution when working and driving near transmission line structures to avoid damaging the steel members.
- Excavation is not allowed within 20' of the face of any structure.
- Electric fields from transmission lines can cause induced voltage and current on insufficiently grounded equipment that is near the line (such as larger vehicles). This can be uncomfortable to people and livestock who come in contact with it, and cause interference to certain electrical devices. The contractor would be responsible for installing any grounding or mitigation devices necessary on their equipment to minimize this issue.
- Maintain OSHA Safe Working Clearance from the ATC 345kV lines based on the latest OSHA requirements.

The contact for ATC is Chris Dailey, (262) 506-6884.

AT&T Wisconsin has buried and overhead facilities throughout the project at approximately the following locations:

- Underground facilities run along the south side of CTH VV from Station 176+00 to Station 181+00, RT.
- Underground facilities run along the north side of CTH VV from Station 178+13 to Station 179+00, LT.
- Underground facilities run along property line north of CTH VV at Station 188+00.
- Underground facilities cross CTH VV in the north/south direction at Station 179+00.
- Underground facilities run along the east side of CTH Y (Lannon Road) from Station 2+00 to Station 8+52, RT and from Station 10+53 to Station 17+00, RT.
- Underground facilities run along the west side of CTH Y (Lannon Road) from Station 6+40 to Station 8+59, LT.
- Underground facilities cross CTH Y (Lannon Road) in the east/west direction at the following locations: Station 6+37 and Station 8+70.
- Underground facilities run along the east side of Clover Lane from Station 50+49 to Station 56+00, LT.
- AT&T may have additional overhead facilities on WE Energies Electric owned poles.
- AT&T has underground fiber optic lines along the south side of CTH VV from Station 162+50 to Station 177+25.

- AT&T has underground fiber optic lines along the south side of CTH VV from Station 194+00 to Station 244+00.
- AT&T has underground fiber optic lines along the east side of CTH Y (Lannon Road) from Station 2+00 to Station 8+52.
- AT&T has underground fiber optic lines that cross CTH VV in the north/south direction at Station 217+40.
- AT&T may have additional fiber optic lines along CTH VV throughout the project. Locations to be determined.

The contact for AT&T Wisconsin is Steve Ubert, (414) 535-7420.

Proposed Relocations

General - Within the Road Reconstruction Area

Aerial cable or service wires attached to WE Energies poles that need to be relocated, will be rerouted to any new poles in the area installed by WE Energies.

CTH VV – Station 165+00 through Station 244+70 Main Roadway

Station 165+00 to Station 177+00 South Side of Roadway

AT&T present buried cables (3) located 5' to 15' north of the present south right-of-way line that are in conflict with the proposed bridge and grading will be combined into two new cable sheaths and buried 2' north of existing and proposed south right-of-way lines.

Station 177+00 to Station 244+70 South Side of Roadway

AT&T has buried cables near the present south right-of-way line, at various distances (50' to 60' south of the roadway baseline) that are in conflict with roadway grading. These cables will be combined into two new cable sheaths and attached to proposed WE Energies poles between Lannon Road and Jackson Drive.

Station 192+00 to Station 216+00 North Side of Roadway

One AT&T existing buried cable that is 55'+- north of the roadway baseline will be replaced as aerial plant on the proposed WE Energies pole line routing through the same area.

Station 189+00 to Station 192+36

The present buried cable crossing at Station 192+00 is replaced with a new buried cable starting at a proposed WE Energies pole installed at Station 188+83 RT 63', then routing east 18' at 63' south of the baseline to a new cable crossing at Station 189+00, then routing east 1' south of the north right-of-way line, to a proposed WE Energies pole at Station 192+36 LT 63'. Also, from the Station 192+00 crossing a buried cable will be installed 1' south of the north right-of-way line, routing west to Station 185+00 LT 65' to reach a service wire at that location.

CTH “Y” Station 3+87.50 to Station 16+34 (Lannon Road)

Station 3+87.50 to Station 8+76

Present buried cables (4) on the east side of the roadway, located 26’ to 47’ east of the roadway baseline, that are in conflict with the expanded roadway or ditch line will be exposed from Station 3+87 to Station 6+38 and moved (+ lowered) easterly toward the east right-of-way line avoiding grading work planned in the area. At Station 6+38, these cables are combined into three new cable sheaths and extended north at 2’ west of the east right-of-way line to Station 8+77, then routed north easterly 2’ off the right-of-way line at that location to a crossing at Station 179+12 of CTH “VV”.

The portion of existing buried cables identified above, continuing north from Station 6+38 to Station 8+77 are abandon after all AT&T work is completed in this area.

Present buried cables crossing at Station 6+37, Station 6+43 and 8+75 are replaced with a new buried cable crossing at Station 8+50 from connecting trenches 2’ off east and west right-of-way lines. AT Station 8+50 LT 48’ the new buried cable is extended north at, 2’ east of the west right-of-way line, to Station 8+61 where it will connect to the proposed E/W buried cable route along the south right-of-way line of CTH “VV”.

A present buried cable routing N/S at 26’ east of the baseline from Station 3+87 to a manhole located at Station 6+45 RT 31’ will be lowered to avoid conflicting with the proposed roadway sub-grade. The manhole frame and cover has to be adjusted prior to final paving in the area.

A new buried cable routing east 17’ from the manhole at 6+45 RT 31’ toward the east right-of-way line will connect to the AT&T mainline N/S trench at that location.

Between a new cable crossing at Station 4+05 and the pickup point of other cables at 6+38 a new buried cable is installed 2’ west of the east right-of-way line to provide a path for reaching an existing buried cable on the west side of the roadway.

Station 10+65 to Station 15+00

A present buried cable routing along the east side of the roadway and through the present bridge structure is replaced with a new buried cable installed 2’ west of the east right-of-way line, connecting to an existing closure near Station 15+00 RT 48’

One Mile Road/Spencers Pass Station 27+00 to Station 31+00

Station 27+00 to Station 30+32

A present buried cable routing N/S near the west right-of-way line and crossing CTH “VV” at Station 217+40 is in conflict with planned grading. It is replaced with a new buried cable installed 2’ east of the west right-of-way line, then crossing CTH “VV” at Station 217+00, connecting to a proposed WE Energies pole at Station 217+03 LT 62’.

Clover Lane Station 50+50 to Station 52+00

A present buried service wire routing, north off the east edge of the road, is replaced with a buried service wire installed from a planned WE Energies pole at Station 230+48 LT 61.5, then routing north 10' east of the west right-of-way line, to a road crossing at Station 52+00 where it will connect to the present buried line on the east side of the roadway.

It is imperative the contractor contact Diggers Hotline before removing any underground cables, to verify that they have been abandoned. The contractor must not assume that unmarked facilities have been abandoned.

AT&T plan to begin relocation work in November 20, 2012 and will be complete by February 1, 2013.

TCG – Telecorp Group has no facilities within the project limits.

The contact for TCG – Telecorp Group is Don Dietsch (262) 646-5602.

Time Warner Cable has buried and overhead facilities throughout the project at approximately the following locations:

- Overhead facilities attached to We Energies owned poles along the south side of CTH VV from Station 165+00 to Station 187+00, RT.
- Overhead facilities attached to We Energies owned poles along the north side of CTH VV from Station 217+18 to Station 245+00, LT.
- Overhead facilities run along the north side of CTH VV from Station 192+50 to Station 216+00.
- Underground facilities cross CTH VV in the north/south direction at Station 225+60.
- Overhead facilities attached to We Energies owned poles along the east side of CTH Y (Lannon Road) from Station 2+00 to Station 17+00, RT.
- Overhead facilities attached to We Energies owned poles along the west side of One Mile Road from Station 26+00 to Station 30+00, LT.
- Fiber optic lines throughout the corridor along CTH VV. Locations to be determined.

The contact person for Time Warner Cable is Lukas LaCrosse, (414) 908-4766.

Proposed Relocations

Village of Menomonee Falls - Sanitary has buried facilities throughout the project at approximately the following locations:

- A dual existing sewer line from the western project limits to Station 169+00 LT.
- An existing sewer line along the north side of CTH VV from Station 169+00 to Station 191+46.
- An existing sewer line along the centerline of Spencers Court from Station 30+65 to Station 33+21.
- Existing sanitary sewer crosses CTH VV at Station 168+50 and Station 178+65. A proposed sanitary sewer crosses CTH VV at Station 191+65 and runs southeast.

The contact for the Village of Menomonee Falls is Randal Hager, (262) 532-4800.

Village of Menomonee Falls – Water has buried facilities throughout the project at approximately the following locations:

- Water main runs along the south side of CTH VV from Station 158+00 to Station 171+85 RT and from Station 179+06 to Station 244+12 RT.
- Water main runs along the north side of CTH VV from Station 171+87 to Station 178+48.
- Water main runs along east side of One Mile Road and Spencers Court from Station 29+00 to Station 33+73 RT.
- Water main runs along the east side of Clover Lane from Station 50+57 to Station 50+91 RT.
- Water main crossings at Station 171+85, Station 178+80, Station 179+25, Station 188+25, Station 193+17, Station 195+44, Station 196+33, Station 198+90, Station 207+50, Station 209+05, Station 217+88, Station 230+81, Station 233+10, Station 236+46, and Station 244+12.
- Hydrants and water valves located throughout the project.

The contact for the Village of Menomonee Falls is Randal Hager, (262) 532-4800.

We Energies Electric has buried and overhead facilities throughout the project at approximately the following locations:

- Overhead facilities run along the south side of CTH VV from Station 165+00 to Station 191+08, RT.
- Overhead facilities run along the north side of CTH VV from Station 191+42 to Station 244+50, LT.
- Overhead facilities cross CTH VV in the north/south direction at the following locations: Station 178+30, Station 181+08, Station 191+20, Station 197+15, Station 216+75, Station 217+28, Station 218+30, Station 227+35, and Station 240+80.
- Overhead facilities run along the east side of CTH Y (Lannon Road) from Station 2+00 to Station 9+52 and Station 10+85 to Station 17+00.
- Overhead facilities cross CTH Y (Lannon Road) in the east/west direction at the following locations: Station 5+12, Station 9+52, and Station 14+99.

- Overhead facilities run along the west side of One Mile Road from Station 26+00 to Station 29+28, LT and cross One Mile Road at Station 26+00.
- Overhead facilities run along the east side of Spencers Court from Station 30+58 to Station 31+72, RT and cross Spencers Court at Station 30+57 and Station 32+50.
- Overhead facilities run along the west side of Clover Lane from Station 51+38 to Station 55+00, LT and cross Clover Lane at Station 51+05.
- Underground facilities run along the south side of CTH VV from Station 200+18 to Station 201+00, RT.
- Underground facilities run along the north side of CTH VV from Station 213+65 to Station 215+91, LT.
- Underground facilities crossing CTH VV in the north/south direction at the following locations: Station 168+50, Station 174+52, Station 177+26, Station 178+43, Station 184+90, Station 192+70, Station 200+10, and Station 225+58.
- The street light located at SE corner of the intersection of CTH VV and One Mile Rd at Station 218+25, 33'RT will be removed in conjunction with the road construction activities by WE Energies upon written direction from the Village of Menomonee Falls to remove said street light.

The contact for We Energies Electric is Steve King, (262) 968-5768.

Proposed Relocations

All power poles and buried facilities that are in conflict with the proposed improvements will be removed and new poles will be placed outside of construction limits or in areas where the contractor will work around existing or new poles.

Relocations and adjustments of WE Energies facilities will be constructed as follows:

Station No.	Sequence No.	Pole No.	Work Proposed
164+89 R47	100	06-14056	Pole to Remain
166+57 R57	110	12-_____	Install Pole
166+52 R47	115	05-16415	Remove Pole
168+12 R60	120	12-_____	Install Pole, 3' fill -grade around
168+51 L59	122	72-7443	Pole to Remain
168+53 R46	125	92-12170	Remove Pole
168+53 R60	130	12-_____	Install Pole, 4' fill -grade around
168+64 R46	135	06-14070	Remove Pole
170+17 R62	140	12-_____	Install Pole, 6' fill -grade around
170+35 R48	145	71-12326	Remove Pole
172+25 R63	150	12-_____	Install Pole, 8' fill -grade around
172+01 R47	155	71-12327	Remove Pole
174+75 R64	160	12-_____	Install Pole, 6.5' fill -grade around
174+02 R47	165	70-4267	Remove Pole
174+86 L74	162	12-_____	Install Pole
174+86 L86	162	-	Install Anchor

Station No.	Sequence No.	Pole No.	Work Proposed
176+65 R96	170	12-_____	Install Pole
176+65 R111	170	-	Install Anchor
176+68 L87	172	12-_____	Install Pole
176+68 L102	-	-	Install Anchor
176+56 L78	-	-	Install Anchor
11+97 R47	174	84-02690	Pole to Remain
11+85 R47	-	-	Install Anchor
12+04 R57	-	-	Install Anchor
176+02 R47	175	71-12328	Remove Pole
177+04 R47	177	96-01426	Remove Pole
178+15 R108	180	12-_____	Install Pole, -grade around
178+15 R78	-	-	Install Anchor
178+27 L84	183	03-08372	Remove Pole
178+40 R48	185	96-01427	Remove Pole
179+37 R64	190	12-_____	Install Pole
179+12 L74	192	12-_____	Install Pole
179+74 L86	-	-	Install Anchor
179+88 R49	195	06-14037	Remove Pole
181+24 R64	200	12-_____	Install Pole
181+26 R75	-	-	Install Anchor -Private Property
181+22 R49	205	06-14029	Remove Pole
183+05 R64	210	12-_____	Install Pole, 3' fill -grade around
183+05 R48	215	96-01489	Remove Pole
184+76 R64	220	12-_____	Install Pole, 3' fill -grade around
184+76	220-222	-	Directional Bore
184+90 R47	225	96-01490	Remove Pole
184+90	225-222	-	Abandon Cable
186+97 R64	230	12-_____	Install Pole -grade around
186+97 R48	235	96-01492	Remove Pole
188+83 R63	240	12-_____	Install Pole
188+83 R47	245	06-02937	Remove Pole
191+02 R63	250	12-_____	Install Pole, 4' fill -grade around
191+02 R88	-	-	Install Anchor -grade around
191+27 R63	-	-	Install Anchor -grade around
191+08 R56	255	06-02936	Remove Pole
191+32 L63	260	12-_____	Install Pole
191+07 L63	-	-	Install Anchor -grade around
191+32 L88	-	-	Install Anchor -private property
191+42 L47	265	unknown	Remove Pole
192+36 L63	270	12-_____	Install Pole
192+35 L46	275	96-01494	Remove Pole

Station No.	Sequence No.	Pole No.	Work Proposed
190+97 to 192+36	270-272	-	Trench Cable
190+97 L63 to L91	272-274	-	Trench Cable
192+88 L63	280	12-	Install Pole
192+86 L48	285	06-14038	Remove Pole
192+50 to 192+88	280-282	-	Trench Cable
192+50	282-284	-	Directional Bore cable
192+50 R80	284	12U	Install Ped
192+61 R48	283	87U6110	Remove ped
192+69	283-285	-	Abandon Cable
194+40 L63	290	12-	Install Pole
194+37 L47	295	06-14071	Remove Pole
195+65 L63	300	12-	Install Pole
195+62 L46	305	06-14066	Remove Pole
197+05 L63	310	12-	Install Pole -1' cut grade around
197+12 R65	312	12-	Install Pole -1.5' fill grade around
197+10 L47	315	06-14035	Remove Pole
197+21 R59	317	99-12045	Remove Pole
199+02 L63	320	12-	Install Pole -grade around
198+56 L47	325	06-14032	Remove Pole
201+00 L63	330	12-	Install Pole -4' cut grade around
201+00	330-332	-	Directional Bore Cable
200+11 L47	335	71-7909	Remove Pole
202+54 L63	340	12-	Install Pole -4' cut grade around
200+27 L47	345	06-14065	Remove Pole
204+09 L63	350	12-	Install Pole -2' fill grade around
203+96 L47	355	06-14030	Remove Pole
205+98 L63	360	12-	Install Pole -4' fill grade around
206+03 L47	365	06-14072	Remove Pole
208+06 L63	370	12-	Install Pole -2' fill grade around
208+09 L47	375	06-14073	Remove Pole
209+71 L63	380	12-	Install Pole -1' fill grade around
209+79 L52	385	06-14072	Remove Pole
211+30 L62	390	12-	Install Pole -1.5' fill grade around
211+30 L54	395	12-11470	Remove Pole
211+75 L54	397	06-02245	Remove Pole
05+12 R44	410	12-	Install Pole -1.5' cut grade around
05+12 R50	-	-	Install Anchor -grade around
05+12 R21	415	06-14095	Remove Pole
05+13 L40	412	12-	Install Pole
05+11 L17	413	06	Remove Pole
06+25 R49	420	12-	Install Pole

Station No.	Sequence No.	Pole No.	Work Proposed
07+38 R22	425	96-14037	Remove Pole
07+42 L40	427	96-14050	Remove Pole
213+60 L62	100	12-	Install Pole
213+60 L56	105	06-08881	Remove Pole
215+95 L62	110	12-	Install Pole
215+95 L57	115	06-08880	Remove Pole
217+03 L62	120	12-	Install Pole
217+11 L71	-	-	Install Anchor
216+37 R65	122	12-	Install Pole
216+31 R74	-	-	Install Anchor
216+37 R52	123	06-14095	Remove Pole
217+18 L57	125	05-16414	Remove Pole
217+19 L44	127	76-6641	Remove Pole -Street Light
218+28 L63	130	12-	Install Pole -1.5' fill grade around
218+42 L84	-	-	Install Anchor -grade around
217+40 R73	132	12-	Install Pole -grade around
217+21 R66	-	-	Install Anchor -grade around
217+40 R73	133	06-02941	Remove Pole
218+25 R33	134	Unknown	Relocate Street Light to 218+25 R71
218+37 R57	135	05-16413	Remove Pole
220+61 L63	140	12-	Install Pole -2.5' fill grade around
220+70 L57	145	06-02939	Remove Pole
223+07 L63	150	12-	Install Pole -4' fill grade around
223+07 L55	155	06-02913	Remove Pole
225+53 L63	160	12-	Install Pole -3' fill grade around
225+53 51	165	06-14061	Remove Pole
227+35 L61.5	170	12-	Install Pole -2' fill grade around
227+34 R65	172	12-	Install Pole -1' fill grade around
227+34 R56	173	71-2124	Remove Pole
227+35 L51	175	06-14024	Remove Pole
229+75 L61.5	180	12-	Install Pole -2' fill grade around
229+75 L51	185	06-14034	Remove Pole
230+48 61.5	190	12-	Install Pole -1.5' fill grade around
230+74 L37	191	71-2311	Remove Pole
51+379 L35	192	12-	Install Pole
51+39 L15	193	80-03525	Remove Pole
51+60 L15	194	84-02690	Pole to Remain
231+31 L50	195	06-14033	Remove Pole
231+04 R72	196	12-	Install Pole
231+04 R55	197	71-2135	Remove Pole
232+96 L64.5	200	12-	Install Pole -1' fill grade around

Station No.	Sequence No.	Pole No.	Work Proposed
232+48 R65	202	12-_____	Install Pole
232+48 R55	203	71-12340	Remove Pole
232+94 L49	205	06-14060	Remove Pole
234+56 L64.5	210	12-_____	Install Pole -2' fill grade around
234+54 L49	215	71-2119	Remove Pole
236+72 L64.5	220	12-_____	Install Pole -6' fill grade around
236+38 L48	225	71-2118	Remove Pole
238+87 L64.5	230	12-_____	Install Pole -7' fill grade around
237+89 L48	235	71-2117	Remove Pole
239+41 L58	237	11-00567	Remove Pole
241+00 L64.5	240	12-_____	Install Pole -1' fill grade around
240+80 R48	241	71-7777	Remove Pole
241+00 R65	242	12-_____	Install Pole
240+91 R70	244	12U_____	Install Ped
240+71 R49	243	81U6491	Remove Ped
240+74 L58	245	11-09026	Remove Pole
240+80 R57	247	11-00568	Remove Pole
242+47 L60	255	11-09027	Remove Pole
243+04 L64.5	250	12-_____	Install Pole -4' fill grade around
244+12 L62	265	11-09028	Remove Pole
245+52 L65	-	11-09030	Pole to Remain
247+22 L65	-	11-09031	Pole to Remain

The contractor should be aware that all utility pole relocations have been engineered to minimize the impact to the contractor's operations, but some facilities will be located within grading limits. The contractor will therefore be required to work around these facilities in accordance to state statutes.

It is imperative the contractor contact WE Energies before removing any electrical underground cables, to verify that they have been abandoned and carry no electrical current. The contractor must not assume that unmarked facilities have been abandoned. At no time is it acceptable to push, pull, cut or drill an unmarked facility without explicit consent from WE Energies. Contractor must call the WE Energies 24 hour Dispatch lines to arrange for this verification.

WE Energies Electric Dispatch, (800) 662-4797.

WE Energies plan to begin relocation work in November 1, 2012 and will be complete by February 1, 2013.

We Energies Gas Operations has buried facilities throughout the project at approximately the following locations:

- Gas main runs along south side of CTH VV from Station 178+03 to Station 180+64,
- Gas main runs along the north side of CTH VV from Station 217+37 to Station 248+20, LT.
- Gas main and/or services cross CTH VV in the north/south direction at the following locations: Station 179+65, Station 191+67, Station 226+46, Station 226+92, Station 231+68, Station 232+43, Station 232+45, Station 233+33, Station 239+51, and Station 240+16.
- Gas main runs along the west side of CTH Y (Lannon Road) from Station 4+84 to Station 8+01, LT.
- Gas main runs along the east side of CTH Y (Lannon Road) from Station 7+99 to Station 8+83, RT.
- Gas main crosses Lannon Road in the east/west direction at Station 4+84 and Station 8+00.
- Gas main runs along east side of Spencers Court from Station 30+51 to Station 33+39, RT.
- Gas main crosses Spencers Court in the east/west direction at Station 33+03.

The contact for We Energies Gas Operations is Thomas Minesal, (414) 944-5755.

Proposed Relocations

Relocations and adjustments of WE Energies facilities will be constructed as follows:

The proposed relocation will occur at the following locations:

- Station: 165+15 to Station: 176+86 at 2' South of the North Lot Line--8" Plastic.
- Station: 176+86 to Station: 177+18 from 2' South of the North Lot Line to 30' North of the North Lot Line--8" Plastic.
- Station: 117+18 to Station: 179+77 at 30' North of the North Lot Line then south to 2' South of the North Lot Line --8" Plastic.
- Crossing at Station: 179+95 from 2' South of the North Lot Line to 4' North of the South Lot Line--2" Plastic.
- Station: 179+77 to Station: 190+55 at 2' South of the North Lot Line --8" Plastic.
- Station: 190+50 to Station: 211+25 at 5' South of the North Lot Line --8" Plastic.
- Station: 218+22 to Station: 229+64 at 5' South of the North Lot Line --8" Plastic.
- Station: 229+64 to Station: 230+64 at 1' South of the North Lot Line --8" Plastic.
- Crossing--Station: 231+63 from 4' South of the North Lot Line to 3' North of the South Lot Line then east to Station: 232+63--2" Plastic.
- Station: 230+64 to Station: 239+15 at 4' South of the North Lot Line --8" Plastic.

Gas main to be abandoned in place:

- Station: 218+00 to Station: 230+30 at 50' North of Centerline--6" Plastic.
- Station: 230+30 to Station: 230+70 from 50' North of Centerline to 14' North of Centerline --6" plastic.
- Station: 230+70 to Station: 239+00 at 14' North of Centerline --6" steel.

Coating samples will be obtained and analyzed for asbestos from the main to be abandoned during gas main installation. The results will be given to GRAEF.

We Energies with the assistance of their abatement contractor will remove and dispose of any asbestos contaminated pipe that is exposed by the road contractor that impedes their operation provided a 5 day prior notification is received.

It will be the responsibility of the contractor to remove and dispose of any gas main that is directly in conflict with their operation that does not contain asbestos in the coating.

Any facilities not explicitly identified as being relocated have been deemed to be not in conflict and will remain in place as is. It is expected that contractors will work safely around any facilities left within the workzone but not in conflict. If plans change such that facilities become in conflict, it is expected that provisions found in TRANS 220.06 are followed in regards to any coordination that will be required.

It is imperative the contractor contact WE Energies before removing any gas facilities, to verify that they have been abandoned and carry no natural gas. The contractor must not assume that unmarked facilities have been abandoned. At no time is it acceptable to push, pull, cut or drill an unmarked facility without explicit consent from WE Energies. Contractor must call the WE Energies 24 hour Dispatch lines to arrange for this verification.

WE Energies Gas Dispatch, (800) 261-5325

WE Energies plan to begin relocation work in September 1, 2012 and will be complete by October 15, 2012.

Waukesha County has buried facilities within the project at approximately the following locations:

All signal equipment located at the intersection of CTH VV (Silver Spring Drive) and CTH Y (Lannon Road) from Station 173+85 to Station 181+85 (CTH VV) and from Station 6+70 to Station 13+35 (CTH Y). Equipment includes pull boxes, signal poles, control cabinet, loop detectors, and underground conduit.

Waukesha County also owns electric cathodic protection system on the Silver Spring bridge including underground electric, service meter and cabinet.

The contact for Waukesha County is Ed Hinrichs, (262) 548-7745.

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

The department personnel will inspect construction of sanitary sewer and water main under this contract. However, final acceptance of the sanitary sewer and water main construction will be by the Village of Menomonee Falls.

105-001 (20061009)

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

The department has obtained a U.S. Army Corps of Engineers Section 404 permit. Comply with the requirements of the permit in addition to requirements of the special provisions. A copy of the permit is available from the regional office by contacting Maria Kopka at (262) 717-9539 Ext. 4.

9. Erosion Control.

Supplement standard spec 107.20 with the following:

Implementation of the contractor's Erosion Control Implementation Plan (ECIP) cannot take place until the ECIP has been granted approval from the department. Take into account dust control during preparation of ECIP and throughout the duration of the project. Provide the ECIP to WDNR at least 14 days prior to the preconstruction conference.

In water restrictions dates can be modified, but all areas (wetland, upland and river) shall be protected and allow for free water and aquatic movements. All appropriate Best Management Practices (BMPs) must be placed at the proper times and weather dependent, final decisions/modifications may be required. No work associated with structures in river can occur if the area could be negatively impacted by high water, swift current, flooding conditions or threat of a discharge (dewatering and/or erosion).

Construction activities that occur between March 1 and June 1 must have minimal to no impact on the overall river system within the project area. A detailed demolition plan shall be included in the ECIP for dropping of the structure into the stream. Further, the ECIP shall detail the methods used and anticipate timeframes. The ECIP shall address maintaining unobstructed stream flow within a portion of the stream at all times while maintaining an isolated work area to prevent disturbed material from entering the stream. This could be addressed with the utilization of jersey barrier, turbidity barrier, rock bags, or other approved method.

Submit a structure removal and clean-up plan as part of the ECIP. In the ECIP, submit means acceptable to the DNR to safeguard the river and maintain flow during demolition and construction. As a minimum, split river flow and install turbidity barrier to protect the river and completely isolate the work zone at the up-stream transitions, support the turbidity barrier with concrete barrier and sealing the bottom with a continuous (toe to toe) line of rock bags.

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

All topsoil stripped (or windrowed) for salvage or stockpiled shall be temporary seeded within two days of disturbance.

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

To avoid conflicts with mowing and maintenance operations, remove all erosion mat installed during construction operations once seeding has established itself and as directed by the engineer. Removal of erosion mat is incidental to the appropriate bid item.

10. Environmental Protection, Butler Garter Snake.

The Butler Garter Snake, classified as an endangered species, is known to exist within the project limits. Adhere to the special silt fencing protection details at the locations indicated in the plans and as per the related specifications. Snake exclusion barrier fencing shall not be placed before November 1st. Any snakes found within the construction limits shall be carefully placed back on the other side to the protective fencing.

11. 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) for disinfection:

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

12. Clearing and Grubbing, Emerald Ash Borer.

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

Supplement standard spec 201.3 with the following:

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

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

Green ash (*F. pennsylvanica*) is found throughout the state, but is most common in southern Wisconsin. It may form pure stands or grow in association with black ash, red maple, swamp white oak, and elm. It grows as an associate in upland hardwood stands, but is most common in and around stream banks, floodplains, and swamps.

Black ash (*F. nigra*) is distributed over the entire state but is most frequently found in northern Wisconsin. It is most common in swamps, but is also found in other wet forest types.

Blue ash (*F. quadrangulata*) is a threatened species that is currently found only at a few sites in Waukesha County. The species is at the edge of its range in Wisconsin, but is common in states farther south. The species is not of commercial importance. Blue ash twigs are 4-sided.

White ash (*F. americana*) tends to occur primarily in upland forests, often with *Acer saccharum*.

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

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

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

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

ATCP 21.17 Emerald ash borer; import controls and quarantine.

Importing or Moving Regulated Items from Infested Areas; Prohibition.

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

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

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

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

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

Ash trees.

Ash limbs, branches, and roots.

Ash logs, slabs or untreated lumber with bark attached.

Cut firewood of all non-coniferous species.

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

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

Regulatory Considerations

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

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

Chipped Ash Trees

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

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

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

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

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

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

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

Ash logs, Branches, and Roots

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

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

Burning is optional if in compliance with standard spec 201.3.

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

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

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

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

Furnishing and Planting Plant Materials

Supplement standard spec 632.2.2 with the following:

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

Updates for Compliance

Each year, as a service, the Wisconsin department of agriculture, trade and consumer protection distributes an updated federal CFR listing to nursery license holders and other affected persons in this state. More frequent updates, if any, are available on the Department of Agriculture, Trade, and Consumer Protection (DATCP) website at www.datcp.state.wi.us. Subsection (1) applies to new regulated areas as those areas are identified in the CFR, regardless of whether affected persons receive update notices from

the DATCP. Persons may request update notices by calling (608) 224-4573, by visiting the DATCP website, or by writing to the following address:

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

Regulated Items

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

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

James Gondek, License Number AII-108099, inspected Structure B-67-0209 and B-67-0151 for asbestos on July 20, 2011. No regulated Asbestos Containing Material (RACM) was found on this structure. A copy of the inspection report is available from: Ed Hinrichs, Waukesha County Department of Public Works, (262) 548-7740.

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 Michael Cape, 141 NW Barstow Street, Waukesha, WI 53187-0798 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-67-0209, CTH Y over Fox River
- Site Name: Structure B-67-0151, CTH VV over Fox River
- Site Address: Section 30 Town 8-N Range 20-E Menomonee Falls
- Ownership Information: Waukesha County Department of Public Works, 515 West Moreland Blvd., Waukesha, WI 53188
- Contact: Ed Hinrichs (Construction Engineer)
- Phone: (262) 548-7740
- Age B-67-0209: 28 years old. This structure was constructed in 1984.
- Age B-67-0151: 41 years old. This structure was constructed in 1971.
- Area B-67-0209: 2184 SF of deck
- Area B-67-0151: 3717 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)

14. Notice to Contractor, Notification of Presumed Lead Based Paint.

Steel components of the bridge structures may be covered with paint containing lead. Any work which may disturb the paint must follow all applicable state and federal regulations regulating lead and paint waste.

15. Construction Over or Adjacent to Navigable Waters.

Supplement standard spec 107.19 with the following:

The Fox River is classified as a navigable waterway.

107-060 (20040415)

16. 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 (20030820)

17. Removing Old Structure Over Waterway With Minimal Debris Station 12+61, Item 203.0600.S.01, Removing Old Structure Over Waterway With Minimal Debris Station 173+28, Item 203.0600.S.02.

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

203.3.6.2 Removing Old Structure Over Waterway with Minimal Debris

- (1) Remove the existing Structure B-67-151 and B-67-209 over the Fox River in large sections and conforming to the contractor's approved structure removal and clean-up plan. During superstructure removal, prevent all large pieces and minimize the number of small pieces from entering the waterway or wetland. Remove all reinforcing steel, all concrete, and all other debris that falls into the waterway or wetland. 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 superstructure removal that prevent all large pieces and minimize the number of small pieces from entering the waterway or wetlands.
 - Methods to control dust and contain slurry.
 - 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
203.0600.S.01	Removing Old Structure Over Waterway With Minimal Debris Station 12+61	LS
203.0600.S.02	Removing Old Structure Over Waterway With Minimal Debris Station 173+28	LS

203-020 (20080902)

18. Hauling Restrictions.

Conduct operations in a manner that will cause a minimum of inconvenience to the free flow of vehicles on roadways carrying CTH VV and local streets traffic. The contractor will be allowed access to these roads at locations approved by the engineer.

When hauling across any public roads, provide the necessary flagging and signing to control the construction equipment movements. The flagging operations shall not impede traffic flow on the public roads.

19. Public Convenience and Safety.

Revise standard spec 107.8(6) as follows:

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

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

Replace standard spec 305.1.1 with the following:

1. This section describes constructing a dense graded base using crushed limestone obtained from quarries.

Replace standard spec 305.2.2.1(2) with the following:

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

21. QMP Base Aggregate.

A Description

A.1 General

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

- (4) Provide and maintain a quality control program, defined as all activities related to and documentation of the following:
 1. Production and placement control and inspection.
 2. Material sampling and testing.
- (5) Chapter 8 of the department's construction and materials manual (CMM) provides additional detailed guidance for QMP work and describes required sampling and testing procedures. The contractor may obtain the CMM from the department's web site at:

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

A.2 Contractor Testing for Small Quantities

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

Plan Quantity	Minimum Required Testing
≤ 1500 tons	One test from production, load-out, or placement at the contractor's option ^[1]
> 1500 tons and ≤ 6000 tons	Two tests of the same type, either from production, load-out, or placement at the contractor's option ^[1]
> 6000 tons and ≤ 9000 tons	Three placement tests ^{[2][3]}

- ^[1] If using production tests for acceptance, submit test results to the engineer for review prior to incorporating the material into the work. Production test results are valid for a period of 3 years.
- ^[2] For 3-inch material, obtain samples at load-out.
- ^[3] If the actual quantity overruns 9000 tons, create overrun sublots to test at a rate of one additional placement test for each 3000 tons, or fraction of 3000 tons, of overrun.
3. No control charts are required. Submit aggregate load-out and placement test results to the engineer within one business day of obtaining the sample. Assure that all properties are within the limits specified for each test.
4. Department verification testing is optional for quantities of 6000 tons or less.

- (3) Material represented by a 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:

Required Certification Level:	Sampling or Testing Roles:
Aggregate Technician IPP Aggregate Sampling Technician Aggregate Assistant Certified Technician (ACT-AGG)	Aggregate Sampling ^[1]
Aggregate Technician IPP Aggregate Assistant Certified Technician (ACT-AGG)	Aggregate Gradation Testing, Aggregate Fractured Particle Testing, Aggregate Liquid Limit and Plasticity Index Testing

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

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

B.3 Laboratory

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

B.4 Quality Control Documentation

B.4.1 General

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

B.4.2 Records

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

B.4.3 Control Charts

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

B.5 Contractor Testing

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

B.6 Test Methods

B.6.1 Gradation

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

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

B.6.2 Fracture

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

B.6.3 Liquid Limit and Plasticity

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

B.7 Corrective Action

B.7.1 General

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

B.7.2 Placement Corrective Action

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

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

B.8 Department Testing

B.8.1 General

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

B.8.2 Verification Testing

B.8.2.1 General

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

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

B.8.3 Independent Assurance

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

B.9 Dispute Resolution

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

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

C (Vacant)

D (Vacant)

E Payment

- (1) Costs for furnishing 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)

22. 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 straight edging according to the standard specifications. All other surfaces being tested under this provision are exempt from straight edging 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:

Segments with a Posted Speed Limit of 55 MPH or Greater	
Category	Description
HMA I	Asphalt pavement with multiple opportunities to achieve a smooth ride. The following operations performed under this contract are considered as opportunities: a layer of HMA, a leveling or wedging layer of HMA, and diamond grinding or 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.

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

C.4.3 Verification Testing

- (1) The department may conduct verification testing (QV) to validate the quality of the product. A 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:

Localized Roughness IRI (in/mile)	Pay Reduction^[1] (dollars)
> 175	(Length in Feet) x (IRI – 175)

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

- (3) The engineer will not direct corrective action or assess a pay reduction for an area of localized roughness without independent identification of that area as determined by physically riding the pavement. For corrections, use only techniques the engineer approves.
- (4) Re-profile corrected areas to verify that the IRI is less than 140 in/mile after correction. Submit a revised ProVAL 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:

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

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

HMA IV and PCC IV	
Initial IRI (inches/mile)	Pay Adjustment^{[1][2]} (dollars per standard segment)
< 50	250
≥ 50 to < 75	750 – (10 x IRI)
≥ 75	0

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

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

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

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23. 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/engrserve/approvedprod.htm>.
- (2) Have the gauge calibrated by the manufacturer or an approved calibration service within 12 months of its use on the project. Retain a copy of the manufacturer's calibration certificate with the gauge.
- (3) Prior to each construction season, and following any calibration of the gauge, the contractor must perform calibration verification for each gauge using the reference blocks located in the department's central office materials laboratory. To obtain information or schedule a time to perform calibration verification, contact the department's Radiation Safety Officer at:

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

B.3.2 Correlation of Nuclear Gauges

B.3.2.1 Correlation of QC and QV Nuclear Gauges

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

B.3.2.2 Correlation Monitoring

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

B.4 Quality Control Testing and Documentation

B.4.1 Lot and Sublot Requirements

B.4.1.1 Mainline Traffic Lanes, Shoulders, and Appurtenances

- (1) A lot consists of the tonnage placed each day for each layer and target density specified in standard spec 460.3.3.1. A lot may include partial sublots.
- (2) Divide the roadway into sublots. A sublot is 1500 lane feet for each layer and target density.
- (3) A sublot may include HMA placed on more than one day of paving. Test sublots at the pre-determined random locations regardless of when the HMA is placed. No additional testing is required for partial sublots at the beginning or end of a day's paving.
- (4) If a resulting partial quantity at the end of the project is less than 750 lane feet, include that partial quantity with the last full sublot of the lane. If a resulting partial quantity at the end of the project is 750 lane feet or more, create a separate sublot for that partial quantity.
- (5) Randomly select test locations for each sublot as specified in CMM 8.15 prior to paving and provide a copy to the engineer. Locate and mark QC density test sites when performing the tests. Perform density tests prior to opening the roadway to traffic.
- (6) Use Table 1 to determine the number of tests required at each station, depending on the width of the lane being tested. When more than one test is required at a station, offset the tests 10 feet longitudinally from one another to form a diagonal testing row across the lane.

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

Table 1

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

- (1) A lot represents a combination of the total daily tonnage for each layer and target density.
- (2) Each side road, crossover, turn lane, ramp, and roundabout must contain at least one sublot for each layer.
- (3) If a side road, crossover, turn lane, or ramp is 1500 feet or longer, determine sublots and random test locations as specified in B.4.1.1.

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

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

Table 2

B.4.2 Pavement Density Determination

B.4.2.1 Mainline Traffic Lanes and Appurtenances

- (1) Calculate the average 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/ft³ 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/ft³ 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/ft³, use the original QC tests for acceptance.
- (6) If the QV and QC subplot averages differ by more than 1.0 lb/ft³ 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:

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

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

460-020 (20100709)

24. Adjusting Manhole Covers.

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

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

Revise standard spec 611.3.7 by deleting the last paragraph.

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

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

611-005 (20030820)

25. Cover Plates Temporary, Item 611.8120.S.

A Description

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

B Materials

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

C (Vacant)

D Measurement

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

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
611.8120.S	Cover Plates Temporary	Each

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

The steel plates shall become the property of the contractor when no longer needed in the contract work.

611-006 (20030820)

26. 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)

27. Landscape Planting Surveillance and Care Cycles.

If the care specialist fails to perform any of the required care cycles as specified in standard spec 632.3.19.1, the department will assess daily damages in the amount of \$50.00 to cover the cost of performing the work with other forces. The department will assess these damages for each day the requirements of the care cycle remain incomplete, except when the engineer extends the required time period.

632-005 (20070510)

28. Stone or Rock Ditch Checks, Item 628.7560.S.**A Description**

This special provision describes furnishing and installing stone or rock ditch checks as shown on the plans or as directed by the engineer, or both, and as hereinafter provided.

B Materials

Provide materials conforming to size requirements for size no. 2 coarse aggregate for concrete masonry or riprap in accordance to the standard spec 501.2.5.4.4. Railroad ballast or breaker run stone conforming to the following applicable gradations may also be used:

Railroad Ballast	
Sieve Size	Percent by Weight Passing
2 Inch	100
1 Inch	20 – 55
3/8 Inch	0 -5

Breaker Run Stone	
Sieve Size	Percent by Weight Passing
5 Inch	100
1½ Inch	0 – 50
3/8 Inch	0 - 5

Incorporate stone or rock in the ditch checks that is hard, sound, and durable, and meets the approval of the engineer.

C Construction

Place stone or rock ditch checks immediately after shaping of the ditches or slopes is completed. Place stone or rock ditch checks at right angles to the direction of flow and construct to the dimensions and in accordance to the details shown in the plans.

Remove sediment from behind the stone or rock ditch checks when it has accumulated to one half of the original height of the dam.

D Measurement

The department will measure Stone or Rock Ditch Checks in volume by the cubic yard of material incorporated in the work.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
628.7560.S	Stone or Rock Ditch Checks	CY

Payment is full compensation for furnishing, producing, crushing, loading, hauling, placing, and shaping and maintaining Stone or Rock Ditch Check.

The quantity of sediment removed shall be multiplied by a factor of ten and paid for as Common Excavation.
628-050 (20080902)

29. Traffic Signals, General.

Work under this item shall consist of furnishing and installing all materials for traffic signals at the following intersections in Waukesha County, WI, in accordance to the plans and the State of Wisconsin Department of Transportation Standard Specifications for Highway and Structure Construction, 2012 Edition, and these special provisions.

- CTH VV and CTH Y

The contractor will furnish all materials, which include but are not limited to, the traffic signal cabinet and controller, and traffic signal control equipment as listed in the plans (such as, pedestal bases, transformer bases, traffic signal standards, poles, trombone arms, monotube poles and arms, traffic signal faces, backplates, pedestrian signal faces, pedestrian push buttons, traffic signal mounting hardware, video detection system, emergency vehicle preemption system, concrete foundations, etc.). Certain materials may be removed and reinstalled; if such items are included in this project, these items are identified as "SALVAGED" in the Miscellaneous Quantities tables in the plans.

Furnish the engineer with material lists and specifications of all traffic control equipment for approval prior to installation.

The contractor is responsible for requesting the electrical service installation or relocation from the power company and the county shall pay the installation costs. The contractor shall coordinate with the county to verify a county contact person and address to be listed in the electrical service application.

The contractor shall stake the proposed locations of traffic signal items 10 days prior to starting work so that the locations of the proposed facilities can be approved by the county. Any field changes regarding the location of the signal poles, pull boxes, etc. shall be approved either by the county or by the county's on-site construction management representative.

The contractor shall request an inspection of the underground wiring upon completion of its installation and a full inspection of the completed signal installation prior to, or at the time of, signal start up testing. This request shall be made to the county at least three working days prior to the time of the requested inspection.

Note that failure to comply with the state standards and specifications may result in the cost of the corrections to be made at the contractors expense.

30. Electrical Service Meter Breaker Pedestal Station 178+35, 79FT RT, Item 656.0200.01.

Append standard spec 656.3.4 with the following:

The contractor shall be responsible for arranging the electrical service installation.

Electrical utility company service installation and energy cost will be billed to and paid for by Waukesha County.

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

Append standard spec 656.5(3) with the following:

Payment is full compensation for grading the service trench; replacing topsoil; and for fertilizing, sodding, and mulching to restore the disturbed area of the service trench.

31. Traffic Signal Face, 3-12 Inch Vertical, Item 658.0110; Traffic Signal Face, 5-12 Inch Vertical, Item 658.0120; Traffic Signal Face, 3-12 Inch Horizontal, Item 658.0155.

The work under this item shall be in accordance to the requirements of standards spec 658 and as modified as follows:

Append standard spec 658.2.2.1 with the following:

(6) All signal head assemblies shall be equipped with LED, cutaway visors and backplates. The visor and backplate shall be a dull black.

32. LED Modules, 12-inch Red Ball, Item 658.0600; LED Modules, 12-inch Yellow Ball, Item 658.0605, LED Modules, 12-inch Green Ball, Item 658.0610; LED Modules, 12-inch Yellow Arrow, Item 658.0620; LED Modules, 12-inch Green Arrow, Item 658.0625.

The work under this item shall be in accordance to the requirements of standard spec 658 and as modified as follows:

Append standard spec 658.2.2.3 with the following:

(2) All Light Emitting Diode (LED) traffic signal modules shall meet the final approved version of the LED circular signal supplement purchase specification produced by the Institute of Transportation Engineers (ITE). The manufacturer shall provide the minimum warranty as stated in the ITE specifications. If the LED fails to function as intended due to workmanship or material defects the LED shall be replaced or repaired within the first 12 months from delivery. Also, if the LED signal modules exhibit luminous intensities less than the minimum values specified within the first 12 months the LED shall be replaced or repaired.

(3) Vehicular signal indications shall be 12-inch LED modules as indicated on material list. All faces shall give an appearance of an incandescent lamp. The signal face shall be an 18 count Dialight DuraLED signal or approved equal.

33. Video Detection System, General.

Video detection zones shall be set near the vicinity and within the approximate distance from the stop bar as shown on the plans.

In the event, at installation, a noticeable obstruction is present in line with the video detection zone(s), the contractor shall be obligated to advise the engineer before setting the zone.

The all cables associated with the video detection system shall be routed to the controller. Each lead shall be appropriately marked as to which street or avenue it is associated.

The video detection system as specified and shown in the traffic signal construction staging plans shall be complete in place, tested, and in full operation during each stage of construction.

The video detection system as specified and shown in the plans shall be complete in place, tested, and in full operation.

34. Approved Electrical Materials Listing and Updates to the Standard Electrical Specifications.

Materials from the companies listed herein are pre-qualified for use on Wisconsin Department of Transportation projects in accordance to all applicable specifications and/or Policy Memoranda. These materials have been inspected, tested, or evaluated for use.

All materials used are subject to inspection and testing and possible rejection for use in accordance to the standard specifications. Materials approved for use based on Underwriters Laboratory (U.L.) listing shall be marked or identified with the U.L label or markings.

In addition to being supplied from an approved manufacturer (listed herein) poles, arms, standards, and bases require additional documentation as detailed in standard spec 657.

Refer to the Wisconsin Department of Transportation website to obtain the Qualified Electrical Products List:

<http://www.dot.state.wi.us/business/engrserv/docs/ap4/electrical.pdf>

35. Filter Aggregate Layer, Item SPV.0035.01; Engineered Soil, Item SPV.0035.02; Storage Layer, Item SPV.0035.04.

A Description

This special provision describes furnishing and installing items for the construction of the bioretention devices in accordance to the standard specifications, as shown on the plans, and as hereinafter provided.

B Materials

B.1 General

The materials shall conform to the standard specifications and as specified below.

B.2 Storage Layer

The storage layer shall meet the requirements of standard spec 501.2.5 Course Aggregate No. 2. Material shall be washed.

B.3 Filter Aggregate Layer

The filter aggregate material shall be either pea gravel or crushed stone well graded from 0.25 to 1.5 inch size.

B.3.1 Submittals

Submit test results of grain size analysis of the proposed filter aggregate layer.

B.4 Engineered Soil Layer

The soil shall be engineered to the following specifications and consist of a mixture of 75% sand and 25% compost.

The compost component shall meet the requirements of Wisconsin Department of Natural Resources Specification S100, Compost.

The engineered soil mix shall be free of rocks, stumps, roots, brush, or other material over 1-inch in size. No other materials shall be mixed with the engineered soil that may be harmful to plant growth or prove a hindrance to planting maintenance.

The engineered soil layer shall be tested by the contractor who shall arrange and pay for analysis of topsoil by a qualified soil testing laboratory, acceptable to the department and independent of the contractor. Analysis shall indicate percentages of organic matter; gradation of sand, silt and clay content; deleterious material; pH; and mineral and plant nutrient quantities of nitrogen, phosphorus and potash nutrients and soil amendments to be added to produce satisfactory topsoil. A minimum of one test is required per bioretention area and all testing shall be performed at the same testing facility.

B.5 Submittals

Submit laboratory analysis results of the engineered soil.

C Construction

C.1 General

Construction site runoff from disturbed areas shall not be allowed to enter bioretention device. Runoff from pervious areas shall be diverted until final stabilization is completed. Construction shall be suspended during periods of rainfall and during periods of ponded water, soil smearing, soil clumping or other forms of compaction problems.

Compaction of soils beneath the floor of the bioretention device, side slopes, and soil used as backfill in the bioretention device shall be minimized. During construction, heavy equipment shall be prevented access to bioretention area. Acceptable equipment includes excavation track hoes, light equipment with turf type tires, marsh equipment, or wide track loaders.

If compaction occurs beneath the floor of the bioretention device, the soil shall be refractured to a depth of 12-inches. Raking and scarification shall alleviate smeared areas.

Conduct work during favorable weather conditions between April 15 and September 15. Do not proceed when air temperatures may exceed 90 degrees F or when ground surface is frozen except seeding may be performed in November prior to snow cover if seed is applied over mulch that was placed during period from September 15 to November 1.

C.2 Storage Layer Placement

Backfill storage layer 12 inches as shown on the bioretention plan and profiles. No compaction of the storage layer material will be required beyond that resulting from placing and spreading operations. Underdrains will be placed in the top 6 inches of the storage layer.

C.3 Filter Aggregate Layer Placement

Filter aggregate layer shall be placed on top of underdrains and storage layer as shown on the plans. No compaction shall be performed beyond that resulting from placing and spreading operations. Geotextile Fabric Type DF, Schedule A shall be placed on top of the Filter Aggregate Layer.

C.4 Engineered Soil Layer Placement

Prior to placement in the Bioretention Device, the engineered soil shall be pre-mixed and the moisture content shall be low enough to prevent clumping and compaction during placement.

The engineered soil shall be placed in multiple lifts of 12-inches in depth. No compaction shall be performed beyond that resulting from placing and spreading operations. Mild settling may occur and additional engineered soil shall be placed prior to mulching and planting operations to provide a level and uniform planting surface. Vibrating plate-style compactors shall not be used to induce settling.

D Measurement

The department will measure Filter Aggregate Layer, Engineered Soil, Storage Layer by the cubic 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.0035.01	Filter Aggregate Layer	CY
SPV.0035.02	Engineered Soil	CY
SPV.0035.04	Storage Layer	CY

Payment is full compensation for furnishing and installing all materials.

36. Surface Mulch, Item SPV.0035.03.

A General

Conform to the requirements of standard spec 632 and as hereinafter provided.

B Materials

Mulch shall be shredded hardwood mulch or chips aged to a minimum of 12 months and shall be placed at the surface of the bioretention area. Mulch shall be free of foreign material, including plant material.

C (Vacant)**D Measurement**

The department will measure Surface Mulch, as each, 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.0035.03	Surface Mulch	CY

Payment is full compensation for furnishing and installing all materials.

- 37. Perennials, Asclepia Tuberosa Plug 1", Item SPV.0060.01; Perennials, Achillea "Moonshine" Plug 1", Item SPV.0060.02; Perennials, Rudbeckia Hirta Plug 1", Item SPV.0060.03; Perennials, Asclepias Incarnata Plug 1", Item SPV.0060.04; Perennials, Achillea Millefolium "Fire King" Plug 1", Item SPV.0060.05; Perennials, Liatris Spicata Plug 1", Item SPV.0060.06; Perennials, Eupatorium Macalatum Plug 1", Item SPV.0060.07; Perennials, Monarda Fistulosa Plug 1", Item SPV.0060.08; Perennials, Aster Movae-Angliae Plug 1", Item SPV.0060.09.**

A Description

This special provision describes furnishing and installing bioretention plantings in accordance to the standard spec 631, as shown on the plans, and as hereinafter provided.

B Materials

The materials shall conform to the standard spec 632.2.

Tray cells shall be 1-1/2" square and 2-1/4" deep or larger and conform to American Standard for Nursery Stock (ANSI Z60.1-2004), latest edition, Container Class #SP1.

D Measurement

The department will measure Perennials (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.0060.01	Perennials, Asclepias Tuberosa Plug 1"	Each
SPV.0060.02	Perennials, Achillea "Moonshine" Plug 1"	Each
SPV.0060.03	Perennials, Rudbeckia Hirta Plug 1"	Each
SPV.0060.04	Perennials, Asclepias Incarnata Plug 1"	Each
SPV.0060.05	Perennials, Achillea Millefolium "Fire King" Plug 1"	Each
SPV.0060.06	Perennials, Liatris Spicata Plug 1"	Each
SPV.0060.07	Perennials, Eupatorium Maculatum Plug 1"	Each
SPV.0060.08	Perennials, Monarda Fistulosa Plug 1"	Each
SPV.0060.09	Perennials, Aster Novae-Angliae Plug 1"	Each

Payment is full compensation for furnishing and installing all materials.

- 38. Perennials, Hemerocallis "Pardon Me" CG #1, Item SPV.0060.10; Perennials, Hemerocallis "Stella De Oro" CG #1, Item SPV.0060.11; Perennials, Hemerocallis "Little Wine Cup" CG #1, Item SPV.0060.12; Perennials, Hemerocallis "Strawberry Candy" CG #1, Item SPV.0060.13;**

A Description

This special provision describes furnishing and installing bioretention plantings in accordance to the standard spec 631, as shown on the plans, and as hereinafter provided.

B Materials

The materials shall conform to the standard spec 632.2.

Tray cells shall be 1 gallon or larger container and conform to American Standard for Nursery Stock (ANSI Z60.1-2004), latest edition, Container Class #1.

D Measurement

The department will measure Perennials (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.0060.10	Perennials, Hemerocallis "Pardon Me" CG #1	Each
SPV.0060.11	Perennials, Hemerocallis "Stella De Oro" CG #1	Each
SPV.0060.12	Perennials, Hemerocallis "Little Wine Cup" CG #1	Each
SPV.0060.13	Perennials, Hemerocallis "Strawberry Candy" CG #1	Each

Payment is full compensation for furnishing and installing all materials.

39. Inlet Cover, Bioretention Standpipe, Item SPV.0060.14.

A Description

This special provision describes furnishing and installing bioretention standpipe inlet covers in accordance to the standard spec 611, as shown on the plans, and as hereinafter provided.

B Materials

Provide stool type ditch grate Neenah R-4342, EJIW 6489-N, or approved equal.

C (Vacant)

D Measurement

The department will measure Inlet Cover, Bioretention Standpipe 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.0060.14	Inlet Cover, Bioretention Standpipe	Each

Payment is full compensation for furnishing and installing all materials.

40. Traffic Signal Controller Fully Actuated 8-Phase, Item SPV.0060.15.

A Description

This specification describes furnishing and installing a fully equipped and operational NEMA TS2 Type 2 traffic signal control cabinet.

B General Requirements

B.1 General

Furnish and install equipment and assemble the cabinet conforming to the latest revision of NEMA Standards Publication TS 2-2003, *Traffic Controller Assemblies with NTCIP Requirements*, National Electrical Manufacturers Association, hereinafter called NEMA TS2 Standard, except where modified in this specification. All work shall conform to the Wisconsin State Electrical Code (WSEC). All work shall conform to standard spec 651, as supplemented or modified in this specification.

Provide cabinets designed for TS2 Type 2 operation. Pre-wire cabinets for a minimum of sixteen phases as specified herein.

Furnish and install at no extra cost any equipment and materials not specifically described but required in order to perform the intended functions in the cabinet.

Install the cabinet on the foundation and terminate all connections. Test for correct operation.

B.2 Definitions

Contractor or vendor – the firm under contract with the county or other entity for furnishing and installing the traffic signal cabinet

Construction contractor – the firm under contract with the county or another entity to construct a roadway facility. The construction contractor may designate a subcontractor, such as an electrical subcontractor, to represent them with regards to the signal cabinet installation.

County – Waukesha County

Manufacturer – the firm that builds or produces the traffic signal equipment other than the cabinet. For example, the “controller manufacturer”

C Cabinet

C.1 Design

Furnish a door-in-door ground mounted (without anchor bolts) aluminum cabinet of clean-cut design and appearance. Provide a cabinet of minimum size 44 inches wide, minimum 24 inches deep and minimum 52 inches to maximum 60 inches high. The size of the cabinet shall provide ample space for housing the controller, all of the associated devices which are to be furnished with the controller, all other auxiliary devices herein specified, and all equipment to be furnished and installed by others as listed in the Description section of this specification.

The cabinet shall comply with the environmental and operating standards outlined in the NEMA TS2 Standard. The cabinet shall provide reasonable vandalism protection. The cabinet shall have a NEMA 3R rating.

Construct the cabinet from type 5052-H32 aluminum with a minimum thickness of 0.125 inches. Furnish the cabinet with a natural, uncoated, aluminum finish inside and outside. Continuously weld all seams. The surface shall be smooth, free of marks and scratches. Use stainless steel for all external hardware.

On the top of the cabinet, incorporate a 1-inch slope toward the rear to prevent rain accumulation. Incorporate a rain channel into the design of the main door opening to prevent liquids from entering the enclosure.

Include an exhaust plenum with a vent screen into the roof of the cabinet. Perforations in the vent screen shall not exceed 0.125 inches in diameter.

Equip the lower section of the cabinet door with a louvered air entrance. The air inlet shall be large enough to allow sufficient air flow per the rated fan capacity. Louvers must satisfy the NEMA rod entry test for Type 3R ventilated enclosures. Secure a washable, fiberglass, removable air filter to the air entrance. The filter shall fit snugly against the cabinet door wall. Attach an aluminum, easily removable, gasketed cover over the air filter and louver.

C.2 Doors

The cabinet door opening shall be a minimum of 80 percent of the front surface of the cabinet. The main door and police door-in-door shall each close against a weatherproof and dust-proof, closed-cell neoprene gasket seal. The gasket material for the main door shall be a minimum of 0.188 inches thick by 1.00 inch wide. The gasket material for the police door shall be a minimum of 0.188 inches thick by 0.500 inches wide. Permanently bond the gaskets to the cabinet.

Equip the main door with a three-point latching mechanism. The upper and lower locking points of the latching mechanism shall each have a pair of nylon rollers. The handle on the main door shall utilize a shank of stainless steel 3/4 inches minimum diameter. The handle shall include a hasp for the attachment of an optional padlock. The cabinet door handle may turn either clockwise or counterclockwise to open, and shall not extend outwards past the edge of the door at any time. Position the lock assembly so the key will not cause any interference with the handle, or a person's hand on the handle, when opening the cabinet door.

Include on the main door a solid stainless steel rod stop and catch mechanism capable of rigidly holding the door open at approximately 90, 120, and 180 degrees under windy conditions. The operator must be able to engage and disengage the catch with a shoed or booted foot.

The main door hinge shall be a one-piece, continuous piano hinge with a minimum 0.25 inch stainless steel pin running the entire length of the right side of the door (right-handed). Attach the hinge in such a manner that no rivets or bolts are exposed.

Equip the main door with a brass Corbin tumbler lock No. 2, swing away dust cap, and provide two keys No. 2. Equip the police door-in-door with a standard police lock and provide one key.

Electrically bond the door to the rest of the cabinet with a braided copper grounding conductor. The length of the grounding conductor shall allow the door to swing fully open, without using the stop bar, without stretching or breaking the grounding conductor. The grounding conductor shall not interfere with normal door operation.

Provide a door switch for the main cabinet door. When the door is opened the switch shall send a signal to the controller sufficient for the controller to log an alarm.

C.3 Shelves and Mountings

Mount a minimum of three vertical "C" channels, compatible with Unistrut channel nuts, on each interior side wall of the cabinet for the purpose of mounting the cabinet components. The channels shall accommodate spring mounted nuts or studs. Install three vertical "C" channels or three slotted rails on the interior back wall of the cabinet. All mounting channels and rails shall extend to within 7 inches of the top and bottom of the cabinets and shall be of sufficient strength to rigidly hold specified shelves and equipment.

Provide two full-width, 11-inch deep, fully adjustable, aluminum shelves to support the controller and other equipment. Mount the lower shelf at a height above the bottom of the cabinet such that the shelf and attached drawer does not interfere with the ability to tilt the terminal facility forward on its hinges for maintenance purposes. Mount the top shelf at least 13 inches above the surface of the lower shelf.

Locate the controller and Malfunction Management Unit (MMU) on the top shelf. Locate the loop detector racks and other auxiliary equipment on the lower shelf. The power supply may be mounted on either shelf.

Provide an under-shelf drawer under the lower shelf. The drawer shall be approximately 20 inches wide and the full depth of the shelf. The drawer shall operate easily and smoothly, and shall have a stop to prevent inadvertently pulling the drawer out of its support. Design the stop to allow purposeful complete removal of the drawer without the use of tools.

C.4 Auxiliary Cabinet Equipment

Ventilate the cabinet by means of a 120 VAC, 60HZ, tube axial compact type fan located in the top of the cabinet plenum. The fan's free delivery airflow shall be equal to or greater than 100 cubic feet per minute. The magnetic field of the fan motor shall not affect the performance of control equipment. The fan bearings shall operate freely. The fan unit shall not crack, creep, warp, or have bearing failure within a seven year duty cycle. The maximum noise level shall be less than 40 decibels. The fan unit shall be corrosion resistant. The thermostat's turn on setting shall be adjustable from 90 to 120 degrees F. The fan shall run until the cabinet temperature decreases below the turn-on temperature setting by approximately 30 degrees F. The fan shall be fused.

Mount an incandescent lamp and socket in the cabinet to sufficiently illuminate the field terminals. Wire the lamp to a 15-amp ON/OFF toggle switch mounted on the rear cover of the police panel as specified in the Cabinet Switches section of this specification.

Provide a 250 watt element heater. Install the heater on the face of the aluminum, louvered air filter cover such that feed air is supplied through the cover. Provide a protective, ventilated cover over the heater. Provide a cord and twist-off plug to an

electrical receptacle on the cabinet door. Provide a thermostat with an adjustable setting from 0 to 100 degrees F. Install the thermostat on the interior ceiling of the cabinet well away from the cabinet light or any heat source. Provide a thermal limit switch to prevent the heater's protective cover from exceeding 170 degrees F.

D Terminals and Facilities

D.1 Terminal Facility

The terminal facility panel shall be constructed from 5052-H32 brushed aluminum of 0.125 inches minimum thickness and formed so as to eliminate any flexing when plug-in components are installed.

Mount the bottom of the terminal facility a minimum of nine inches from the bottom of the cabinet. Hinge the terminal facility at the bottom to allow easy access with simple tools to all wiring on the rear of the panel. It shall not be necessary to remove the lower shelf, the shelf drawer, or any shelf-mounted equipment to hinge down the terminal facility. Provide sufficient slack in the load bay wiring to allow for dropping the load bay.

Fully wire the terminal facility with sixteen load switch sockets: eight phases of vehicular, four phases of pedestrian, and four phases of overlap operation; eight flash transfer relay sockets; one flasher socket; and two terminal facility Bus Interface Unit (BIU) rack slots. The use of printed circuit boards is not acceptable on the terminal facility, except printed circuit boards are acceptable for the BIU interface with the load bay. Position the 16 load switch sockets in two horizontal rows of eight sockets each. Support the load switches and flasher by a bracket or shelf extending at least three inches from the terminal facility.

Label all terminals, load switches, and flash transfer relay sockets. Label reference designators by silk-screening on the front and rear of the terminal facility to match drawing designations.

Provide rack mounted BIU's. Provide a dual-row, 64-pin female DIN 41612 Type B connector for each BIU rack position. Provide card guides for both edges of the BIU. Terminal and facilities BIU mounting shall be an integral part of the terminal facility.

Provide two each 16-channel, 8-position, TS2 detector racks, each with an integrally mounted BIU mounting. Racks shall be addressable. Power each detector rack by the cabinet power supply. Fasten the loop detector racks towards the left side of the lower shelf.

For BIU rack connectors, provide pre-wired address pins or jumper plugs corresponding to the requirements of the NEMA TS2 Standard. The address pins or jumper plugs shall control the BIU mode of operation. BIUs shall be capable of being interchanged with no additional programming.

For the terminal facility, contain all field wires within one or two rows of horizontally-mounted Marathon heavy duty terminal blocks. Terminate all field output circuits on an unfused terminal block with a minimum rating of 10 amps. Use mechanical connector lugs rated for copper wire. Angle the lower section of the terminal block out from the back of the cabinet at approximately a 45 degree angle.

Identify all field input/output (I/O) terminals by permanent alphanumeric labels. All labels shall use standard nomenclature per the NEMA TS2 Standard.

All field flash sequence programming at the field terminals shall be able to be accomplished with the use of only a screwdriver.

Wire field terminal blocks to use three positions per vehicle or overlap phase (green, yellow, red).

Wire one RC network in parallel with each flash transfer relay coil.

Permanently label all logic-level, NEMA-controller and MMU input and output terminations on the terminal facility. Identify the function of each terminal position on the cabinet drawings.

Terminal blocks for DC signal interfacing shall have a number 6-32 x 7/32 inch screw as minimum. Functions to be terminated shall be as specified in the listing of Input/ Output Terminals in Section 5 of the NEMA TS2 Standard.

Conform all terminal facility and cabinet wiring to the Wisconsin State Electrical Code (WSEC). The green/ walk, yellow, and red/ don't walk load switch outputs shall be minimum 16 gauge wire. The MMU (other than AC power), controller I/O, and logic ground shall be minimum 22 gauge wire. All wire colors shall be consistent in all cabinets furnished in one order.

D.2 Auxiliary Panels

D.2.1 Vehicle Detection Interface Panel

Provide a 32-position interface panel or two 16-position panels. Each interface panel shall allow for the connection of 32 or 16 independent field loops, respectively. The panels shall have barrier strip type terminals using 8-32 screws and be rated for 20 inch pounds of torque. Provide a ground bus terminal between each loop pair terminal to provide a termination for the loop lead-in cable ground wire. Secure the interface panels to a mounting plate attached to the left interior side wall of the cabinet.

Provide a cable consisting of 20 AWG twisted pair wires to enable connection to and from the interface panel to a detector rack. The twisted pair wires shall be color-coded wires. Provide a cable of sufficient length to allow the detector rack to be placed on either shelf.

Identify all termination points by a unique number silk screened on the panel.

D.2.2 Intersection Lighting

Provide an intersection lighting control panel as described. The intersection lighting control panel shall consist of an aluminum panel 0.125 inches thick and approximately 5 inches by 10 inches. Determine the actual panel size by the cabinet's mounting rail placement. Attach to the panel a 2 pole-30 amp contactor-120vac coil (Square D #8910DPA32V02 or equal), and a heavy duty six position terminal block (Marathon DJ1606 or equal). Use wire sizes 10AWG for power and load wiring, and 16AWG for control wires. Wire the terminal strip as follows:

1. Control coil
2. L1 in
3. L2 in
4. Neutral in and control coil
5. L1 out
6. L2 out

Protect each output by a MOV (V150LA20A) wired between the output and neutral. Include a photo control (Intermatic #K4021C or equal). Mount the photo control just above the cabinet door and approximately 12 inches from the right side of the cabinet. Wire the photo control to a 3 position terminal strip using 16AWG wire color coded to match the photo control wiring connected to the intersection lighting control panel.

D.3 Conductors and Cabling

All conductors in the cabinet shall be copper 22 AWG or larger. All 14 AWG and smaller wire shall conform to MIL-W-16878/1, Type B, 600V, 19-strand tinned copper. The wire shall have a minimum of 0.010 inches thick PVC insulation without clear nylon jacket and rated to 105 degrees Celsius. All 12 AWG and larger wire shall be UL or NRTL listed THHN/THWN 90 degrees Celsius, 600V, 0.020 inches thick PVC insulation, and clear nylon jacketed.

Provide controller and MMU cables of sufficient length to allow the units to be placed on either cabinet shelf in the operating mode. Connecting cables shall be sleeved in a braided nylon mesh. Exposed tie-wraps and interwoven cables are unacceptable.

Provide the cabinet configuration with enough SDLC RS-485 Port 1 communication cables to allow full capabilities of that cabinet. Each communication cable connector shall be a 15-pin metal shell D subminiature type. The cable shall be a shielded cable suitable for RS-485 communications. Secure all connecting cables and wire runs by mechanical clamps. Stick-on type clamps are not acceptable.

Pre-wire the terminal facility for a Type 16 MMU.

All wiring shall be neat in appearance. Stow excess cable behind the terminal facility or below the shelves in order to allow easy access to the terminal facility and cabinet components. All cabinet wiring shall be continuous from its point of origin to its termination point. Butt type connections/splices are not acceptable.

Wire the grounding system in the cabinet into three separate circuits: AC Neutral, Earth Ground, and Logic Ground.

Optoisolate all pedestrian pushbutton inputs from the field to the controller through the BIU and operate at 12 VAC.

Hook or loop all wire, size 16 AWG or smaller, at solder joints around the eyelet or terminal block post prior to soldering to ensure circuit integrity. Lap joint soldering is not acceptable.

D.4 Cabinet Switches

Locate the following switches on a maintenance panel on the inside of the cabinet door:

- a. Controller On/Off
- b. Cabinet Light
- c. Stop Time (Three Position)
- d. Manual Detector Switches (Three Position)

Position	Switch Label	Function
Upper	Stop Time	Place stop time on the controller
Center	Run	Remove the stop time input to the controller
Lower	Normal	Connects the MMU to the controller stop time input

Locate the following switches behind the police access door:

- a. Signal/Off
- b. Flash/Normal
- c. Hand/ auto
- d. Coiled hand control and cable

The above switches shall function as follows:

Off: Signals Dark
Signal: Signals On and operating as follows:

Auto		Hand
Flash:	Signals Flash	Signals Flash
Normal:	Signals Normal	Signals Advance by use of hand control

Provide manual detector switches. Provide a minimum of 16 vehicle detector switches, and four pedestrian detector switches. The switches shall be spring loaded and automatically return to the center position. Wire the vehicle detector switches to detector BIU slot 1. Wire the pedestrian switches to the T&F BIU slot 1. The switches shall operate as follows:

Position	Function
Up	Detector Disabled
Center	Detector Enabled
Down	Detector Called

E Power Panel

E.1 Design

The power panel shall consist of a separate module, securely fastened to the interior right side wall of the cabinet. Wire the power panel to provide the necessary power to the cabinet, controller, MMU, cabinet power supply, and all auxiliary equipment. Manufacture the power panel from 0.090-inch, 5052-H32 aluminum. Panel layout shall facilitate field inspection and maintenance accessibility without excessive disassembly or special tools.

Provide a light, tough, transparent, weather-resistant, non-yellowing, thermoplastic cover, rigidly mounted over the full power panel, with access holes for circuit breakers and other equipment, and open on the sides for ventilation.

E.2 Bus Bar

Provide a minimum 20-position neutral bus bar capable of connecting three #12 AWG wires per position.

E.3 Circuit Breakers

House in the power panel the following vertically mounted, single pole, 120 volts AC, 60 Hertz, circuit breakers, with the ON position being up:

- One 30-amp signal breaker. This breaker shall supply power for all cabinet functions not powered through one of the other breakers or fuses listed below. Streetlights will be powered from outside the cabinet in the meter breaker pedestal. This breaker shall feed a signal bus supplied through a solid state bus relay and a radio interference line filter. The bus relay, in all cases, shall be a solid state contactor and shall not be jack mounted. Breakers shall be thermal magnetic type, UL or NRTL listed, with a minimum of 22,000 amp interrupting capacity.
- One 15-amp auxiliary breaker. This breaker shall supply power to the fan and heater.
- One 10-amp breaker. This breaker shall supply power for control equipment: controller, MMU, and cabinet power supply.

- One 20-amp circuit breaker for future use.

Power the cabinet light through the GFI fuse, not a circuit breaker.

E.4 Radio Interference Suppressor

Equip each control cabinet with a single radio interference suppressor (RIS) of sufficient ampere rating to handle the load requirements. Install the RIS at the input power point. The RIS shall minimize interference in both the broadcast and the aircraft frequencies, and shall provide a maximum attenuation of 50 DB over a frequency range from 200 KHZ to 75 MHZ, when used in connection with normal installations. The RIS shall be hermetically sealed in a substantial metal case filled with a suitable insulating compound. The terminals shall be nickel-plated brass studs of sufficient external length to provide space to connect two #8 AWG wires and shall be so mounted that they cannot be turned in the case. Ungrounded terminals shall be properly insulated from each other, and shall maintain a surface leakage distance of not less than 6.35 mm between any exposed current conductor and any other metallic parts. The terminals shall have an insulation factor of 100-200 megohms dependent upon external conditions. The RIS shall be rated at minimum 50 amperes. Design the RIS for operation on 115 VAC +/- 10%, 60HZ, single-phase circuits, and to meet the standards of UL or a NRTL and Radio Manufacturer's Association.

E.5 Bus Relay

Provide a normally-open, 60 amp, solid state relay.

E.6 Surge Protector

Install a plug-in type EDCO SHA-1250, or Atlantic/Pacific approved equal, surge protector across the load terminal of the 10-amp circuit breaker. Install a General Electric Varistor, catalog #V130PA20A, at the load terminals of the circuit breaker from the hot line to the grounded current carrying neutral conductor.

E.7 Power receptacles

Mount a 120 VAC 20 amp, NEMA 5-20R GFCI duplex convenience outlet at each of these two locations:

- On the interior right side wall above the power panel. The outlet shall be fully operational and fuse protected.
- Near the power panel where it will not interfere with power panel maintenance. This outlet is to be wired by field installation personnel.

E.8 Suppressors and RC Network

Provide a suppressor for each 120 VAC circuit that serves an inductive device, such as a fan motor or a mechanical relay, to protect the controller's solid state devices from excessive voltage surges. Such suppressors shall be in addition to the surge protector at the input power point. Wire one RC network in parallel with each inductive device.

F Auxiliary Devices

F.1 Load Switches

Provide 16 solid state load switches conforming to the requirements of section 6.2 of the NEMA TS2 Standard.

F.2 Flashers

Provide one solid state flasher conforming to the requirements of section 6.3 of the NEMA TS2 Standard.

F.3 Flash Transfer Relays

Provide four flash transfer relays conforming to the requirements of section 6.4 of the NEMA TS2 Standard.

F.4 Inductive Loop Detector Units

Provide the quantity of inductive loop detector units required by the plans and conforming to the requirements of section 6.5 of the NEMA TS2 Standard for 2-channel, rack mount detector units, type C. Install all required units in one detector rack.

F.5 Cabinet Power Supply

Provide one cabinet power supply with each cabinet conforming to the requirements of section 5.3.5 of the NEMA TS2 Standard. Provide LED indicators for the 12 VDC, 12 VAC, and 24 VDC outputs. Provide jack plugs on the front panel for access to the +24 VDC for test purposes.

G Bus Interface Units (BIU)

Provide three BIUs conforming to the requirements of section 8 of the NEMA TS2 Standard. Provide two BIUs with the main panel and one BIU with one of the detector racks.

H Malfunction Management Unit (MMU)

Provide one shelf-mountable, 16 channel, solid-state MMU with Ethernet capability. The MMU shall meet the requirements of Section 4 of the NEMA TS2 Standard.

The MMU shall be capable of the following:

- Detecting simultaneously active inputs of Green (Walk), Yellow, or Red (Don't Walk) on the same channel.
- Determining if the field signal input states detected as active or inactive by the MMU correspond with the data provided by the Controller Unit.
- Monitoring an optional external watchdog output from a Controller Unit or other external cabinet device.
- Monitoring an intersection with up to four approaches using the Flashing Yellow Arrow (for protected/permissive left and right turn movements).

- Event logging for the following; AC Line log, Prior/Previous Faults log, and Monitor Reset Log. All log entries shall include a date and time stamp.
- All monitor functions shall be capable of being programmed through the front panel, without the need for computers or special programs cards.
- 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 MMU shall have an LCD display that allows for viewing of log files and field indications, as well as the viewing and setting of date and time and configuration parameters.

I Traffic Signal Controller

The traffic signal controller provided shall be a Siemens m50 series model EPAC3108M52, compatible with the NEMA TS2 Type 2 specifications.

I.1 Firmware

Provide installed in the controller current, fully operational, controller firmware and software sufficient for the controller to perform all functions shown on the plans, sequence of operation plan sheet, specifications, and signal timing plan for the local intersection. Provide all software licenses.

The firmware and software shall be compatible with and able to fully communicate with:

- All phase sequences used by the county, including flashing yellow for both left and right turns.
- Communications, closed loop, and on-street control software designed for use with the provided controller and provided under separate bid items.
- Both the controller and the MMU.
- County PC laptop and desktop computers with Windows XP and Windows 7 operating systems.
- Backwards compatibility with older traffic signal controllers and software produced by the controller manufacturer and installed in county traffic signals since 2000.

- The supplier's multi-level central operation software programs for potential future application.

I.2 Features/ Functions

I.2.1 General

Provide shelf-mounted controller units.

Provide intersection controller units with up to 16-phase operation plus 16 programmable overlaps regardless of whether or not preemption, coordination, or other special programming is used.

Provide a four-ring, programmable for both single and dual entry concurrent timing, nine-phase frame or equivalent. Provide volume density timing for eight phases and pedestrian timing for all phases. Provide MUTCD flash capability. All controls shall be in accordance to the NEMA TS2 Standard.

All controller timing parameters shall be fully programmable from the front panel keyboard inputs, and memory storage features shall be non-volatile under power-off conditions for at least thirty days. A security code must be entered before any timing parameters can be changed. The locking, non-locking detection mode and per phase recall shall also be accessible on the front panel.

Provide a data key port on the controller to load and store intersection programming.

Internally buffer all logic circuit inputs to withstand transients and noise, such as might result from normal usage, without damage to any mechanism components.

I.2.2 Front Panel Display

Provide a display panel on the front panel consisting of a backlit alphanumeric LCD display. The face of the display shall be scratch, chemical, and solvent resistant. The operator shall access the controller through a menu system. By selecting various menu options, real time operational status or stored parameter tables shall be presented to the operator.

Show on the LCD display, in addition to information required elsewhere:

- (a) The status of each signal phase on.
- (b) The interval status.
- (c) Phase termination information.
- (d) The presence of vehicular and pedestrian calls for each phase.

I.2.3 Timing

The passage timer shall time concurrently with the minimum green timer, such that the duration of the minimum green time is directly adjustable and is independent of the passage time setting.

In the dual-ring application, no more than two phases shall be permitted to time concurrently, and no more than one phase per ring. 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. Service calls on a single entry basis. 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 timeout.
- (c) Phases timing concurrently shall terminate simultaneously if one has a gap-out and the other has 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.

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
- Standard minimum walk - 4.0 seconds
- Preemption minimum walk = 0.0 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.

I.2.4 Manual (Police) Control

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.

I.2.5 Coordination

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-Modes (per controller)
- External Start (per controller)

I.2.6 Diagnostic Program

Provide a diagnostic program prepared by the manufacturer of the controller unit which will demonstrate the proper operation of all of the inputs, outputs, controls and indicators in the controller, and have visual confirmation on the front panel. The diagnostic program shall be resident in each controller. The controller shall continuously run a diagnostic routine in the background to assure unit integrity.

I.2.7 Message Logging

Provide user programmable, data logging of local events or alarm events including, but not limited to: Conflict Flash, Remote Flash, Local Flash, Controller Voltage Monitor, Detector Failure, On Line and Data Change. The time and date shall be recorded as a part of the message logged. The logging function shall be resident in the controller unit. The logging function shall be viewed from the front panel LCD display. If the logging function cannot be viewed from the front panel LCD display, it shall be performed by supplemental auxiliary equipment supplied with this specification.

I.2.8 Closed Loop Operation

The controller shall be able to be used in a closed loop system using twisted pair copper, single mode fiber, multimode fiber, or wireless radio to connect to compatible equipment.

I.2.9 RS-232 Interface and Ethernet Port

Provide a RS-232C interface and connector for interconnecting to a conflict monitor, printer, another like controller unit, or a local personal computer, as well as a remote personal computer through an external modem. A modem is not required to be provided with this specification. Include Ethernet communications capability as a standard feature and provide an Ethernet port. Ports shall be on the front panel of the controller.

J Documentation

J.1 Cabinet Intersection Wiring Diagrams

For each individual cabinet ordered, within 10 calendar days after receipt of the procurement order, furnish to the county's traffic engineer two sets of 22X34-inch detailed printed cabinet intersection wiring diagrams for information only.

At the time of the cabinet delivery, furnish to the county's traffic engineer two sets of printed 22X34-inch cabinet intersection wiring diagrams per cabinet. Printing the 22X34-inch sheet in smaller sizes is not acceptable. Leave a third drawing in the under-shelf drawer in the signal cabinet. After cabinet acceptance is complete, if any cabinet wiring changes were made, revise the cabinet wiring diagrams, leave one drawing in the under-shelf drawer in the signal cabinet, and furnish to the county's traffic engineer two sets of as-built printed cabinet wiring diagrams per cabinet. If no changes were made from time of cabinet delivery, notify the county's traffic engineer in writing.

J.2 MMU and Controller Programming

At the time of cabinet delivery, furnish to the county's traffic engineer two printed copies of the MMU programming and two copies of the signal timing in the traffic signal controller. Leave a third copy in the under-shelf drawer in the signal cabinet. After cabinet acceptance is complete, if any MMU or controller timing changes were made, revise the documents, leave one copy in the under-shelf drawer in the signal cabinet, and furnish to the county's traffic engineer two copies per cabinet. If no changes were made from time of cabinet delivery, notify the county's traffic engineer in writing.

J.3 Manuals

At the time of the cabinet delivery, furnish to the county's traffic engineer one set of installation, operations, and maintenance manuals per cabinet including each type of equipment in the cabinet. The manuals shall as a minimum include the following information:

- a) Table of contents.
- b) Operating procedure.
- c) Step-by-step maintenance and trouble-shooting information for the entire assembly.
- d) Schematic diagrams.
- e) Pictorial diagrams of parts locations.
- f) Itemized parts lists with parts numbers.
- g) Theory of operation.
- h) Maintenance checklists.

The itemized parts lists shall include the manufacturer's name and parts number for all components (such as IC, diodes, switches, relays, etc.) used. The list shall include crossreferences to parts numbers of other manufacturers who make the same replacement parts.

For each of the traffic signal controller and MMU, in addition to the above manual requirements, furnish one reference manual for the processor and components proposed to perform the controller and MMU functions. Include a complete set of schematics for the controller, MMU, and any auxiliary circuit boards either in the reference manual or in a separate volume. In addition, furnish a written narrative describing the controller and MMU operation and front panel configuration, and a conceptual flow chart illustrating the control logic for comparison with these specifications. The narrative shall include a discussion of any limitation or exceptions to the performance described in these specifications, and a discussion of any control capabilities provided in addition to that required in these specifications.

K Cabinet Delivery

The construction contractor will provide the traffic signal specifications and plans, including the sequence of operation, to the contractor. The vendor shall determine the required cabinet equipment and assembly requirements from the plans and specifications and provide the county's traffic engineer a list of procurement items. The county's traffic engineer will approve or request resubmittal of the procurement items list prior to the cabinet being built.

Provide the list of procurement items to the county's traffic engineer a minimum of 30 days before the cabinet is scheduled to be installed in the field. The vendor is responsible for coordinating with the project construction contractor to determine the scheduled cabinet installation date. Cabinets shall be completed, delivered, and accepted within 50 calendar days after the county's traffic engineer approves the procurement item list.

If the county makes a modification to any cabinet order before the entire cabinet is completely built in the vendor's shop, the delivery time does not change. If the county accepts a vendor requested cabinet order or other modification at any time, the delivery time does not change. All cabinet modifications will be made without additional cost to the county, except if an additional equipment item is added at the county's request and the additional item is not to remedy any contractor or vendor error.

The contractor shall deliver the fully wired and equipped cabinets to the intersection where the cabinet will be installed, or other site as designated by the county or the project construction contractor. The contractor is responsible for arranging the unloading of the cabinet.

When the county exercises its right to test a cabinet in the county's shop as described in the Acceptance Testing section of this specification, deliver the cabinet to the location specified by the county's traffic engineer. When the testing is complete, pick up the cabinet from the shop within three business days of notification.

The contractor is notified that delivery times and schedules may be changed or delayed at any time for any reason. The contractor may be required to store completed cabinets at their facility for extended periods of time.

L Acceptance Testing

Complete on-site traffic signal acceptance testing in the presence of the county. The acceptance testing will occur after the signal cabinet is fully installed at the project intersection and before the traffic signal is turned on. The construction contractor and the county will determine the time for the acceptance testing. In addition to the cabinet as specified in this specification, add-on accessory items, traffic signal interconnect, system communication, and closed loop system operation are included in the acceptance testing.

Provide an IMSA certified Traffic Signal Bench Technician, Level II or an IMSA certified Traffic Signal Field Technician, Level II with a minimum of three years' experience in construction and operation of traffic signal cabinets similar to the cabinets specified in this specification. Alternatively, provide a technician or electrician with a minimum of three years' experience in construction and operation of traffic signal cabinets similar to the cabinets specified in this specification. The technician or electrician shall be on-site during the entire acceptance testing, and shall be capable and equipped to make in-field revisions / repairs to the signal cabinet and controller to conform to this specification.

Upon successful completion of the acceptance testing as determined by the county, a 30-day conditional acceptance of the signal cabinet will be provided to the contractor. Should the cabinet within the 30-day conditional acceptance period fail to perform in any way as determined by the county, the contractor shall repair the cabinet to bring it into conformance with this specification and the acceptance testing shall be repeated. Repair times shall conform to the warranty service response times in this specification. The acceptance testing shall be repeated. Upon successful completion of the retesting, a new 30-day conditional acceptance period shall begin. After the signal cabinet runs 30 days without failure, the cabinet will be fully accepted by the county. The contractor will be allowed up to two 30-day conditional acceptance periods. If the cabinet fails during the second 30-day period, an entirely new cabinet shall be furnished and installed in the field by the contractor at no cost to the county and a new acceptance testing procedure shall begin. Cabinet replacement times shall conform to the warranty service response times in this specification. The original cabinet becomes the property of the contractor.

The county reserves the right to perform its own tests on the traffic signal cabinet at any time using the county's control equipment. Should an individual traffic signal cabinet be found to not meet the requirements of these specifications, the contractor shall pick up the traffic signal cabinet from the county or from the field, perform at their shop repairs / revisions as necessary to bring the traffic signal cabinet into conformance with these specifications, and deliver the repaired / revised traffic signal cabinet back to the designated location, all at no additional cost to the county.

M Certification

Provide a written certification with the cabinet delivery that the equipment meets the requirements of the plans and specifications and will fully run the sequence of operation and the signal timing, including closed loop system operation if applicable. The certification shall be on the contractor's company letterhead, shall be addressed to both the department and the construction contractor, and shall be signed by a company officer authorized to legally obligate the company.

N Manufacturer's Warranty

Provide a manufacturer's warranty and guarantee statement which stipulates that the cabinet and all supplied equipment, including add-on accessory items, to be, individually and as a cabinet system, free from defects in materials and workmanship for a period of at least two years from the date of cabinet installation and acceptance in the field, or in the case of a cabinet that is not installed in the field, from the date of delivery of an accepted cabinet to the county. Delivery of a cabinet for testing does not constitute acceptance of the cabinet. Turn over to the county warranties and guarantees that are offered by the manufacturer as a customary trade practice. Name the county as the obligee on all manufacturers' warranties and guarantees. Shipping costs, both to the actory or an Authorized Repair Depot, and return, shall be paid by the contractor.

The manufacturer's warranty shall provide for full repair or replacement, as determined by the county, of the failed item or cabinet system, including removal and installation, at no cost to the county. Contractor warranty service response times after notification by the county:

- 4 hours to have qualified service personnel on site at the intersection.
- 12 hours to have the signal safely operational, including all phases and enough detection to run the intersection phasing (minimum 8 detectors).
- 48 hours on business days to restore the signal to full original operations.

If a malfunction in the controller unit, MMU, module, or any auxiliary equipment occurs during the warranty period, the contractor shall, within 24 hours after notification (excluding Saturday and Sunday), furnish and install an identical, programmed, controller unit, MMU, module, or auxiliary equipment, for use while the warranted unit is being repaired or replaced. The isolation of any malfunction during the warranty period shall be the responsibility of the contractor.

The county reserves the right to make repairs to malfunctioning cabinets and equipment that are under warranty, up to and including complete replacement of the cabinet, when in the county's determination the safety of the traveling public is best served. Such repair work will not in any way void or limit the contractor's warranty and guarantee specified above. The county will notify the contractor in writing of the repair. The contractor shall within five business days after notification replace all cabinets, equipment, and supplies

used by the county in making repairs, with new parts meeting the requirements of this specification.

If any cabinet has three or more equipment or cabinet system failures, resulting from poor workmanship, within the first six months of operation after county acceptance, an entirely new cabinet exactly matching the existing cabinet shall be furnished and installed in the field by the contractor at no additional cost to the county. Any traffic control, including but not limited to signing, channelizing devices, temporary signals, police control, and flaggers, that becomes necessary as determined by the county in order to safely replace the cabinet, is the full responsibility of the contractor. The original cabinet becomes the property of the contractor.

Provide, at no additional cost, firmware / software maintenance, problem resolution phone technical support, problem resolution technical support in the supplier's facility, firmware / software patches, and firmware / software upgrades for a minimum of three years. The lead for technical support and primary department contact for support shall be a qualified person employed by the contractor's local office who is personally familiar with the county's software and signal operations. Help desks and manufacturer's representatives may be utilized by the lead technical support person as resources, but are not acceptable for lead technical support.

Maintain an inventory of the firmware / software version on each controller provided. Notify the county's traffic engineer in writing when a firmware / software patch or upgrade is available. The county will direct the contractor when to install the patch or upgrade for each controller. Install the patch or upgrade and provide a usable copy of the patch or upgrade to the county. Alternatively, when requested by the county, provide the patch or upgrade to the county for installation by the county.

O Method of Measurement

The department will measure Traffic Signal Controller Fully Actuated 8-Phase as each individual traffic signal controller unit, acceptably completed.

P Basis of Payment. Traffic Signal Controller and Cabinet Fully Actuated 8-Phase, will be paid for measured quantities at the contract unit price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.15	Traffic Signal Controller Fully Actuated 8-Phase	Each

Payment is full compensation for furnishing and installing a complete traffic signal cabinet, including the signal controller and conflict monitor together with cabinet, all required control units, all necessary wiring, switches, and fittings to assure that the controller will perform the functions required in the plans.

- 41. Adjust Valve 0 to 1.0' Decrease, Item SPV.0060.16, 1.0' to 2.0' Decrease, Item SPV.0060.17, 0 to 1.0' Increase, Item SPV.0060.18, 1.0' to 2.0' Increase, Item SPV.0060.19, 2.0' to 3.0' Increase, Item SPV.0060.20, 3.0' to 4.0' Increase, Item SPV.0060.21, 4.0' to 5.0' Increase, Item SPV.0060.22.**

A Description

Adjust the valve box elevation to finished grade. Perform work in accordance to pertinent requirements of sections of the standard specifications for Sewer and Water Construction in Wisconsin.

B Materials

All materials necessary to adjust the valve box to the final grade.

All valve box extensions shall be compatible with Tyler "DD" three piece, with adapter by Adapter Inc or East Jordan "DD" three piece, with adapter by Adapter Inc. The Water utility will approve the extension prior to installation.

Materials not conforming to the requirements of the contract shall be considered defective and all defective materials, whether in place or not, shall be rejected. Rejected materials shall be removed immediately from the site of the work and replaced with acceptable material by the contractor without costs to the Village of Menomonee Falls.

The contractor shall be responsible for the protection of all pipe, fittings and materials until final acceptance for the work and any pipe, fittings and materials which are damaged, shall be replaced in kind at the contractor's expense.

Gravel Backfill - All backfill material shall be 3/4-inch crushed gravel.

C Construction

All construction shall comply with the Standard Specifications for Sewer and Water Construction in Wisconsin, 6th Edition and the following section.

Prior to construction, the water utility shall check all valves and valve box for damage. The contractor shall verify and agree in writing to the checklist prior to construction. Any damaged valve boxes noted on the checklist prior to construction will be fixed at the Village's expense. Once construction commences, it shall be the contractors responsible to protect valves and valve boxes from damage for the duration of the project. If any valve or valve boxes are damaged during construction, it shall be the contractor's responsibility to repair the damage at no cost to the Village. This shall include all cost for excavating down to remove the barrel sections, removing any debris within the valve box, replacing and damaged valve or valve box components, and backfilling. All work to fix or replace damaged parts shall be completed to the satisfaction of the Village of Menomonee Falls.

The contractor shall carefully excavate around the valve boxes as necessary to adjust the valve. The contractor shall determine how much adjustment is available to adjust the valve box to the finished grade. The contractor shall either turn up or down and remove or add extensions as required.

No paving rings will be allow unless approved by the Village of Menomonee Falls Engineering Department.

All valve boxes shall be encased in polyethylene wrap as specified in Section 6.21.0. All costs for furnishing and installing the polyethylene wrap shall be included in the unit price.

The contractor shall be responsible to supply and extend the tracer wire and boxes when adjusting the valve boxes. All costs for furnishing and installing the additional tracer wire shall be included in the unit price.

It is the intent of these Specifications to secure as dry a work as conditions warrant. The contractor, at his own expense, shall keep the excavation clear of water while the water main and appurtenances are constructed and under no condition, except by written permission of the Village, shall water be allowed to flow over the work.

The contractor shall backfill all trenches and excavations to the existing or proposed surface as soon as the conditions of construction will permit and shall immediately thereafter remove all surplus materials without extra compensation. Flooding shall not be permitted for consolidation of excavated material used for backfilling without full approval from the Village of Menomonee Falls.

Restore all surface features to preconstruction condition or better, including but not limited to sidewalks, curbs, gutters, mailboxes, culverts and other facilities disturbed by the construction.

During the project, valve boxes may be incrementally adjusted while the grade around the valve boxes change. The incremental elevation adjustments shall be at the discretion of the contractor. The cost of incremental adjustments shall be merged into the unit cost for the valve box adjustment and no additional compensation shall be allowed.

D Measurement

The department will measure Adjust Valve (Increase/Decrease) as each individual adjusted valve, acceptably completed. The contractor shall provide height adjustment documentation for each valve adjustment. This shall include whether the boxes were turned up or down and if extensions were installed or removed. The adjustments shall be verified by the inspector and the Village of Menomonee Falls prior to payment.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.16	Adjust Valve 0 to 1.0' Decrease	Each
SPV.0060.17	Adjust Valve 1.0' to 2.0' Decrease	Each
SPV.0060.18	Adjust Valve 0 to 1.0' Increase	Each
SPV.0060.19	Adjust Valve 1.0' to 2.0' Increase	Each
SPV.0060.20	Adjust Valve 2.0' to 3.0' Increase	Each
SPV.0060.21	Adjust Valve 3.0' to 4.0' Increase	Each
SPV.0060.22	Adjust Valve 4.0' to 5.0' Increase	Each

Payment is full compensation for furnishing all labor, materials, excavation, backfill, compaction, tools, equipment and incidentals required to complete work.

42. Adjust Curbstop, Item SPV.0060.23.

A Description

Adjust the curbstop service box and tracer wire elevation to finished grade. Perform work in accordance to pertinent requirements of sections of the standard specifications for Sewer and Water Construction in Wisconsin.

B Materials

All materials and equipment necessary to adjust the service box and tracer wire to the final grade.

All curb stop boxes extension shall be Cast iron and shall be Ford EM2-70-56 or Mueller H-10300 unless an alternate is specifically approved by the Menomonee Falls Water Department.

Tracer wire is required on all PVC and polyethylene water main and hydrant leads. All tracer wire shall be blue PVC coated 10 gauge solid copper wire.

Materials not conforming to the requirements of the contract shall be considered defective and all defective materials, whether in place or not, shall be rejected. Rejected materials shall be removed immediately from the site of the work and replaced with acceptable material by the contractor without costs to the Village of Menomonee Falls.

The contractor shall be responsible for the protection of all fittings and materials until final acceptance for the work and any fittings and materials which are damaged, shall be replaced in kind at the contractor's expense.

Gravel Backfill - All backfill material shall be 3/4-inch crushed gravel.

C Construction

All construction shall comply with the Standard Specifications for Sewer and Water Construction in Wisconsin, 6th Edition and the following section.

Prior to construction, the water utility shall check all service boxes and curbstops for damage. The contractor shall verify and agree in writing to the checklist prior to construction. Any damage noted on the checklist prior to construction will be fixed at the Village's expense. Once construction commences, it shall be the contractors responsible to protect buried services, curbstops, and service boxes from damage for the duration of the project. If any service, curbstop, or service box are damaged during construction, it shall be the contractor's responsibility to repair the damage at no cost to the Village. This shall include all cost for excavating down to remove the box sections, removing any debris within the service box, replacing any damaged curbstop, service, or service box components, and backfilling. All work to fix or replace damaged parts shall be completed to the satisfaction of the Village of Menomonee Falls.

The contractor shall carefully excavate around the box as necessary to raise or lower the box. The contractor shall determine how much adjustment is available to adjust the box to the finished grade. The contractor shall either remove or add extensions as required.

The service boxes shall be set to allow a minimum of six inches (6") of vertical adjustment in either direction from proposed finish grade.

All service boxes shall be encased in polyethylene wrap as specified in Section 6.21.0 of the Standard Specifications for Sewer and Water, 6th Edition. All costs for furnishing and installing the polyethylene wrap shall be included in the unit price.

Tracer wire shall be installed up to and terminating at the surface of the ground. The tracer wire shall be secured by splicing of the copper tracer wire using a splice kit approved by the Village Water Utility or by stripping the ends of each wire, twisting the wires together a minimum of ten turns, hot soldering the twisted wires together and wrapping the connection in approved electrical tape. The Village of Menomonee Falls Water Department will test the conductivity of the installed locator wire prior to acceptance of the new water system by the Village. All costs for material and labor to extend the tracer wire shall be included in the unit price.

It is the intent of these Specifications to secure as dry a work as conditions warrant. The contractor, at his own expense, shall keep the excavation clear of water while the water main and appurtenances are constructed and under no condition, except by written permission of the Village, shall water be allowed to flow over the work.

The contractor shall backfill all trenches and excavations to the existing or proposed surface as soon as the conditions of construction will permit and shall immediately thereafter remove all surplus materials without extra compensation. Flooding shall not be permitted for consolidation of excavated material used for backfilling without full approval from the Village of Menomonee Falls.

Restore all surface features to preconstruction condition or better, including but not limited to sidewalks, curbs, gutters, mailboxes, culverts and other facilities disturbed by the construction.

During the project, service boxes may be incrementally adjusted while the grade around the service boxes change. The incremental elevation adjustments shall be at the discretion of the contractor. The cost of incremental adjustments shall be merged into the unit cost for the service box adjustment and no additional compensation shall be allowed.

D Measurement

The department will measure Adjust Curbstop as each individual curbstop adjusted, 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.0060.23	Adjust Curbstop	Each

Payment is full compensation for furnishing all labor, materials, excavation, backfill, compaction, tools, equipment, construction staking, surveying and incidentals required to complete work.

43. Reconstruct Sanitary Sewer Manhole, Item SPV.0060.24.

A Description

This item of work consists of reconstructing precast sanitary sewer manholes along an existing sanitary sewer. The work shall be completed in accordance to the plans, these special provisions and the Standard Specifications for Sewer and Water Construction, Sixth Edition. This work shall include all construction staking and surveying as necessary to complete all work pertaining to this item.

B Materials

Adaptor Seal External rubber/chimney seal, precast concrete barrel sections, eccentric cones and grade rings for the reconstruction of manholes shall conform to the requirements identified in the Standard Specification for Sewer and Water, Sixth Edition and identified in the plans.

C Construction

Prior to construction, the water utility shall check all sanitary manholes for damage. The contractor shall verify and agree in writing to the checklist prior to construction. Any damaged sanitary manholes noted on the checklist prior to construction will be fixed at the Village's expense. Once construction commences, it shall be the contractors responsible to protect sanitary manholes from damage for the duration of the project. If any sanitary manholes are damaged during construction, it shall be the contractor's responsibility to repair the damage at no cost to the Village. This shall include all cost for excavating down to remove the barrel sections, removing any debris within sanitary manholes, replacing any damaged barrels, castings, rings, seals, or any components, and

backfilling. All work to fix or replace damaged parts shall be completed to the satisfaction of the Village of Menomonee Falls.

The contractor shall remove the existing manhole frame and cover and the existing brick or precast concrete cone section and the grade rings as applicable. The contractor shall conduct the removal operations in such a manner that no debris falls into the existing sewer. The existing frame and cover shall be salvaged for reinstallation. All other manhole debris shall be removed from the project site.

Reconstruction of the precast concrete manhole shall conform to the requirements in the Standard Specification for Sewer and Water, Sixth Edition and identified in the plans, including the installation of the Adaptor Seal external rubber chimney seal.

Reconstruct the existing sanitary manholes to the elevation and the location shown on the plans. This includes excavating around the sanitary manhole, adding or removing barrel sections, supplying and replacing and the cone section, and providing additional raising rings if necessary.

Prior to paving the contractor shall install the external seals.

Construct all manholes with a minimum of 4" of adjusting rings and a maximum of 18" of adjusting rings.

All manholes to be reconstructed under this item are 48-inches in diameter.

Sanitary manholes shall not be plated during the project unless approved by the Village of Menomonee Falls Engineering Department.

No paving rings will be allow unless approved by the Village of Menomonee Falls Engineering Department.

D Measurement

The department will measure Reconstruct Sanitary Sewer Manhole as each individual sanitary sewer manhole reconstructed, 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.0060.24	Reconstruct Sanitary Sewer Manhole	Each

Payment is full compensation for removing and disposing of portions of the existing manhole; for salvaging and reinstalling existing frame and cover; for furnishing and installing new precast barrel and/or cone sections, grade rings and external chimney seal; for furnishing all excavation and backfill and for furnishing all tools, labor, equipment and incidentals necessary to complete this item of work.

44. Utility Locate, Item SPV.0060.25.

A Description

This special provision describes excavating Utility Locate (ULO) to uncover utilities for the purpose of determining elevation and potential conflicts as shown on the plans or as directed by the engineer.

B (Vacant)

C Construction

Prior to excavation work near gas mains or other utilities ULO shall be dug to locate the exact height of the facilities. ULO shall be dug at points of potential conflict called out in the Utilities article of the special provisions. Additional ULO may be dug as directed by the engineer.

After completion of ULO, notify the engineer of the findings. Once notified, the engineer, in coordination with the utility representative, shall determine if utility relocation is required. If utility relocation is not required, backfill and compact the trench with care as to not disturb the facility.

If utility work is required, the engineer will coordinate with the utility representative to perform necessary relocations.

D Measurement

The department will measure Utility Locate as unit for each test pit or ULO, 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	Utility Locate	Each

Payment is full compensation for the excavation required to expose the utility line, backfilling with existing material removed from the excavation, compacting the backfill material, restoring the site, and for cleanup.

Existing pavement, concrete curb, gutter and sidewalk removals necessary to facilitate utility line openings shall not be considered part of or paid for under Utility Locate, but shall be considered separate and measured and paid for separately as removal items. Replacement pavement, concrete curb, gutter, and sidewalk items shall also be considered separate from Utility Locate and will be measured and paid for separately.

45. Drain Tile Connection, Item SPV.0060.26.

A Description

Work under this item consists of connecting existing drain/sump tile to a pipe underdrain and to the storm sewer or storm sewer structure.

B Materials

The underdrain, fittings, reducers, and backfill shall be in accordance to standard spec 612.

C Construction

Construct according to standard spec 612.

D Measurement

The department will measure Drain Tile Connection as each individual drain tile connection, 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	Drain Tile Connection	Each

Payment is full compensation for furnishing and installing all materials including fittings and reducers, and for making all connections. The pipe underdrain 6-inch will be paid for under Item 612.0106.

46. Relocate Hydrant and Adjust Hydrant Elevation, Item SPV.0090.01.

A Description

Remove, salvage, relocate, and adjust the fire hydrant elevation. Extend tracer wire and move and adjust locator boxes as required. Perform work in accordance to pertinent requirements of the standard specifications for Sewer and Water Construction in Wisconsin. This work shall include all construction staking and surveying as necessary to complete all work pertaining to this item.

B Materials

All hydrant extensions supply by the contractor shall be compatible with the existing hydrants and shall be approved by the Village Utility prior to installation.

All hydrant leads shall be 6-Inch PVC Pressure Pipe with cast-iron-pipe-equivalent outside diameters, B. & S., Elastomeric gasket couplings, pressure class 235, DR-18, and shall meet the requirements set forth in AWWA Specification C-900 for water main. All water main pipe installed under this project shall meet the requirements of the Standard Specification for Sewer and Water Construction in Wisconsin Sixth Edition.

Tracer wire is required on all PVC and polyethylene water main and hydrant leads. All tracer wire shall be blue PVC coated ten gauge solid copper wire.

Materials not conforming to the requirements of the contract shall be considered defective and all defective materials, whether in place or not, shall be rejected. Rejected materials shall be removed immediately from the site of the work and replaced with acceptable material by the contractor without costs to the Village of Menomonee Falls.

The contractor shall be responsible for the protection of all pipe, fittings and materials until final acceptance for the work and any pipe, fittings and materials which are damaged, shall be replaced in kind at the contractor's expense.

Certification of Pipe. The manufacturer shall make all the tests in full accordance with the latest edition of all applicable AWWA Specifications and addenda thereto and shall submit three certified copies of the results to the engineer for approval. These tests shall include:

1. Description
2. Hydrostatic Test
3. Physical Characteristics
4. Chemical Analysis
5. Coating and Lining Analysis

All pipe shall be furnished complete with rubber gaskets, lubricants and other materials necessary for the satisfactory installation of water main.

Bedding Material. Bedding material for water mains and appurtenances shall be 3/8 inch crushed limestone chips and shall meet the requirements set forth in Table 31 (Section 6.45.2).

Cover Material for Pipe. All cover material for water mains and appurtenances shall be crushed limestone chips which shall meet the grading requirements of Table 31 (Section 6.45.2).

Gravel Backfill. All backfill material for water mains and appurtenances shall be 3/4-inch crushed gravel.

C Construction

Remove, salvage, relocate, and adjust the fire hydrant elevation. Extend tracer wire and move and adjust locator boxes as required. Perform work in accordance to pertinent requirements of the standard specifications for Sewer and Water Construction in Wisconsin.

All construction shall comply with the Standard Specifications for Sewer and Water Construction in Wisconsin, 6th Edition and the following section. Prior to construction, the water utility shall check all hydrants, hydrant valves and locator boxes for damage.

The contractor shall verify and agree in writing to the checklist prior to construction. Any damaged hydrants and hydrant valves noted on the checklist prior to construction will be fixed at the Village's expense. Once construction commences, it shall be the contractors responsible to protect services and service boxes from damage for the duration of the project. If any hydrants and hydrant valves are damaged during construction, it shall be the contractor's responsibility to repair the damage at no cost to the Village. This shall include all cost for excavating, removing any debris within the valve, replacing hydrant and hydrant valve components, and backfilling. All work to fix or replace damaged parts shall be completed to the satisfaction of the Village of Menomonee Falls.

Contact the effected fire district at least 24 hours prior to removing or interrupting service to existing fire hydrants

Carefully remove the components of the existing fire hydrant assemblies and bulkhead the open end of the remaining hydrant branch and drain, if necessary. Engineer to determine damage to the fire hydrant, valve, valve box or barrel impairing re-use. Replace damaged components using factory-supplied parts from the same manufacturer.

The engineer will determine the usefulness of the removed fire hydrant assembly components. Deliver the useful components to the specified location. Dispose of the remaining components.

Hydrant lead excavation shall include the removal of any and all materials encountered in the performance of the work specified under these contract documents except for specific materials that have been classified and listed as separate bid items in the proposal. It shall also include the satisfactory disposal of all the excavated materials in accordance to the plan and specifications or as directed by the engineer.

It is the intent of these Specifications to secure as dry a work as conditions warrant. The contractor, at his own expense, shall keep the excavation clear of water while the water main and appurtenances are constructed and under no condition, except by written permission of the Village, shall water be allowed to flow over the work.

The contractor shall backfill all trenches and excavations to the existing or proposed surface as soon as the conditions of construction will permit and shall immediately thereafter remove all surplus materials without extra compensation. Flooding shall not be permitted for consolidation of excavated material used for backfilling without full approval from the Village of Menomonee Falls.

The contractor shall be responsible to supply and install hydrant extensions to raise the hydrant to the proposed nozzle elevation identified on the plans. It shall be the contractor's responsibility to verify that the nozzle elevations comply with File 38 of the Standard Specification for Sewer and Water Construction in Wisconsin 6th Edition prior to adjusting the hydrant. If the proposed nozzle elevation on the plan does not meet File 38 with the proposed field conditions, the contractor shall adjust the elevation to bring the hydrant into compliance with File 38.

All fittings shall be encased in polyethylene wrap as specified in Section 6.21.0. All costs for furnishing and installing the polyethylene wrap shall be included in the unit price for the installation of water mains and appurtenances.

Only North American made fittings shall be allowed. Suitable buttresses and bases are required for all tees, crosses, bends, offsets and other fittings. All costs for such buttresses and bases shall be included in the price for the installation of water mains and appurtenances.

All grade changes and/or directional changes shall be made using Megalug Mechanical Joint Restraints and shall be buttressed in accordance to Chapter 4.10 of Wisconsin Standard Specifications. The offset shall be rodded together and to the first joint of the existing main on either side of the offset. An anode bag shall be cad welded to the ductile iron water main on either side of the offset in accordance to the Wisconsin Standard Specifications.

Relocation of existing fire hydrant shall conform to the requirements of the standard specifications for Sewer and Water Construction in Wisconsin, Sixth Edition, except the fire hydrant piping shall be connected to the existing water valve or to the piping on the street side of the water valve. If the fire hydrant is connected to the existing valve this valve shall be fully opened with the existing valve box removed.

At locations where the hydrants are being extended across CTY VV, the hydrant heads must be rotated 180 degrees so they face Silver Spring.

The contractor shall be responsible to supply and extend the tracer wire and box extensions when relocating the hydrants. Tracer wire shall be installed and secured directly to the top of the pipe, and taped with duct tape or electrical tape at a maximum spacing of 5 feet. Splicing of the copper tracer wire shall be made using a splice kit approved by the Village Water Utility or by stripping the ends of each wire, twisting the wires together a minimum of 10 turns, hot soldering the twisted wires together and wrapping the connection in approved electrical tape. The tracer wire shall extend along the entire length of the pipe to a locator box, as specified, located 18" behind the hydrant. The wire shall be run up into the locator box and attached below the lid, then looped back down the locator box, along the hydrant lead to the main in order to continue along the water main as shown in the Detail Drawing at the end of this Section. All costs for material and labor to extend the tracer wire and tracer wire boxes shall be included in the unit price.

At the direction of the engineer, conduct a hydrostatic pressure test conforming to the standard specifications for Sewer and Water Construction in Wisconsin, latest edition, between isolating valves along the existing water main.

Restore all surface features to preconstruction condition or better, including but not limited to sidewalks, curbs, gutters, mailboxes, culverts and other facilities disturbed by the construction.

D Measurement and Payment

The department will measure Relocate Hydrant and Adjust Hydrant Elevation by the linear foot, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.01	Relocate Hydrant and Adjust Hydrant Elevation	LF

Payment is full compensation for furnishing all labor, materials, excavation, backfill, compaction, tools, equipment, construction staking, surveying, and incidentals required to complete work.

47. Remove and Relocate Curbstop, Item SPV.0090.02.

A Description

Remove, salvage, relocate, and adjust the curbstop elevation. Perform work in accordance to pertinent requirements of section 4.14.6 of the standard specifications for Sewer and Water Construction in Wisconsin. This work shall include all construction staking and surveying as necessary to complete all work pertaining to this item.

B Materials

All water service piping shall be polyethylene tubing conforming to the requirements of ASTM D-2737 SDR 9, AWWA C901, 200 psi pressure rated at 73⁰F, copper tube size (CTS).

All curb stop boxes extension shall be Cast iron and shall be Ford EM2-70-56 or Mueller H-10300 unless an alternate is specifically approved by the Menomonee Falls Water Department.

The name or trademark of the manufacturer, and a mark indicating the type of pipe along with the pressure rating shall be permanently and plainly marked on the tubing at intervals not greater than 1½ feet.

Water service piping supplied shall be free of kinks, defects, and abrasions. Any pipe not meeting these requirements will be rejected and shall be immediately removed from the site and replaced with pipe which conforms to these requirements.

The minimum diameter of a water service from the water main to the curb stop shall be one and a quarter (1-1/4) inches.

The water service piping shall be installed at a depth between 5.5' and 6.0' below proposed finish grade. All installation of service piping shall meet the requirements and specifications of the manufacturer.

Tracer wire is required on all PVC and polyethylene water main and services. All tracer wire shall be blue PVC coated 10 gauge solid copper wire.

Stainless steel insert stiffeners will be required on all flexible plastic tubing connections made. These stainless steel stiffeners shall be Ford 50 series for polyethylene tubing unless an alternate is specifically approved by the Menomonee Falls Water Utility.

Materials not conforming to the requirements of the contract shall be considered defective and all defective materials, whether in place or not, shall be rejected. Rejected materials shall be removed immediately from the site of the work and replaced with acceptable material by the contractor without costs to the Village of Menomonee Falls.

The contractor shall be responsible for the protection of all pipe, fittings and materials until final acceptance for the work and any pipe, fittings and materials which are damaged, shall be replaced in kind at the contractor's expense.

Certification of Pipe. The manufacturer shall make all the tests in full accordance with the latest edition of all applicable AWWA Specifications and addenda thereto and shall submit three certified copies of the results to the engineer for approval. These tests shall include:

1. Description
2. Hydrostatic Test
3. Physical Characteristics
4. Chemical Analysis
5. Coating and Lining Analysis

All pipe shall be furnished complete with rubber gaskets, lubricants and other materials necessary for the satisfactory installation of water main.

Bedding Material. Bedding material for water mains and appurtenances shall be 3/8 inch crushed limestone chips and shall meet the requirements set forth in Table 31 (Section 6.45.2).

Cover Material for Pipe. All cover material for water mains and appurtenances shall be crushed limestone chips which shall meet the grading requirements of Table 31 (Section 6.45.2).

Gravel Backfill. All backfill material shall be 3/4-inch crushed gravel.

C Construction

All construction shall comply with the Standard Specifications for Sewer and Water Construction in Wisconsin, 6th Edition and the following section.

Prior to construction, the water utility shall check all service boxes and curbstops for damage. The contractor shall verify and agree in writing to the checklist prior to construction. Any damage noted on the checklist prior to construction will be fixed at the Village's expense. Once construction commences, it shall be the contractors responsible to protect buried services, curbstops, and service boxes from damage for the duration of the project. If any service, curbstop, or service box are damaged during construction, it shall be the contractor's responsibility to repair the damage at no cost to the Village. This shall include all cost for excavating down to remove the box sections, removing any debris within the service box, replacing any damaged curbstop, service, or service box components, and backfilling. All work to fix or replace damaged parts shall be completed to the satisfaction of the Village of Menomonee.

Contact the effected residents at least 24 hours prior to interrupting service to existing laterals.

The contractor shall carefully cut off the water supply and remove the curbstop and service box.

The Village shall inspect any damaged curbstop, pipe, or service box which would impair re-use. The contractor shall replace damaged components using factory-supplied parts from the same manufacturer.

The contractor shall connect and extend the polyethylene tubing and reattach the curb stop at the new location. The inspector and Village shall inspect and approve the extension and curbstop connection prior to backfilling.

The contractor shall be responsible to set the curbstop and service box to the finished elevation. This shall include furnishing any extension required to raise the box or to remove any extension to bring the box elevation to the proposed grade.

The service boxes shall be set to allow a minimum of 6 inches of vertical adjustment in either direction from proposed finish grade.

It is the intent of these Specifications to secure as dry a work as conditions warrant. The contractor, at his own expense, shall keep the excavation clear of water while the water main and appurtenances are constructed and under no condition, except by written permission of the Village, shall water be allowed to flow over the work.

The contractor shall backfill all trenches and excavations to the existing or proposed surface as soon as the conditions of construction will permit and shall immediately thereafter remove all surplus materials without extra compensation. Flooding shall not be

permitted for consolidation of excavated material used for backfilling without full approval from the Village of Menomonee Falls.

All fittings shall be encased in polyethylene wrap as specified in Section 6.21.0. All costs for furnishing and installing the polyethylene wrap shall be included in the unit price for the installation of water mains and appurtenances.

Tracer wire shall be installed and secured directly to the top of the service pipe, and taped with duct tape or electrical tape at a maximum spacing of 5 feet. Splicing of the copper tracer wire shall be made using a splice kit approved by the Village Water Utility or by stripping the ends of each wire, twisting the wires together a minimum of 10 turns, hot soldering the twisted wires together and wrapping the connection in approved electrical tape. The tracer wire shall extend along the entire length of the polyethylene lateral to the outside of the stop box, then wrapped a minimum of six turns up to and terminating at the surface of the ground. At no time shall the tracer wire be placed below the polyethylene lateral or wrapped beneath the base of the stop box. The Village of Menomonee Falls Water Department will test the conductivity of the installed locator wire prior to acceptance. All costs for material and labor to extend the tracer wire shall be included in the unit price.

Restore all surface features to preconstruction condition or better, including but not limited to sidewalks, curbs, gutters, mailboxes, culverts and other facilities disturbed by the construction.

D Measurement

The department will measure Remove and Relocate Curbstop 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.0090.02	Remove and Relocate Curbstop	LF

Payment is full compensation for furnishing all labor, materials, excavation, backfill, compaction, tools, equipment, construction staking, surveying, and incidentals required to complete work.

48. Storm Sewer Pipe, Composite, 24-Inch, Item SPV.0090.03.

A Description

This special provision describes furnishing and installing storm sewer pipe composite in accordance to the standard spec 607, as shown on the plans, and as hereinafter provided.

B Materials

Provide composite pipe in accordance with standard spec 607.

C (Vacant)

D Measurement

The department will measure Storm Sewer Pipe Composite 24-Inch, as linear feet, acceptably completed. Linear footage to be measured vertically from bottom of tee to top of 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.0090.03	Storm Sewer Pipe, Composite, 24-Inch	LF

Payment is full compensation for furnishing and installing all materials and for furnishing all labor, tools, equipment and incidentals necessary to complete the contract work.

49. Remove Traffic Signals (Intersection of CTH VV and CTH Y), Item SPV.0105.01.

A Description

This special provision describes removing and salvaging traffic signal materials in accordance to the pertinent provisions of standard spec 204 and as hereinafter provided. This work will generally consist of removing, temporarily stockpiling and hauling the existing controller cabinet, traffic signal poles, trombone arms, pull box lids and rims, traffic signal faces, luminaires, and luminaire arms, at locations directed by the engineer.

B Materials

The contractor shall carefully remove the designate traffic signal equipment so as to avoid any damage to the items. No existing signal equipment shall be reused in any proposed signal installations.

The underground cable, wires, and conduits shall become the property of the contractor to be disposed of properly. Existing traffic signal conduit may be abandoned in place or removed and discarded as necessary if in conflict with proposed construction.

Existing signal materials listed above shall be salvaged and delivered to Waukesha County.

C Construction

Inventory the quantity and condition of the traffic signals prior to removal. Provide the Waukesha County traffic engineer with a copy of the inventory.

Notify Mr. Michael Grulke, (262) 548-7748 or Mr. Fred Patzer, (262) 424-9129 from Waukesha County at least three working days prior to the desired starting date for the removal of the traffic signals and lighting materials.

The existing traffic signal equipment shall be dismantled as soon as the contractor has verified that the system has been de-energized and the corresponding intersection roadways have been closed down or, if work is progressing under traffic, that the proper temporary regulatory signs have been erected to control traffic within the intersection.

Remove the traffic signal standards and poles from their concrete bases. Remove the attached transformer bases and trombone arms from the standards or poles. Access hand hold doors and hardware shall remain intact. Pull box lids and rims shall be removed and salvaged to Waukesha County. Pull box bodies, concrete bases, and all conductors and wire shall be removed and properly disposed of. Conduit shall be removed or abandoned in place. Conduit may be abandoned in place only if it does not interfere with new construction or present a risk of damage to newly constructed items.

Notify Waukesha County at least three working days prior, to make arrangements for delivering the salvaged traffic signals to the County Highway Operations shop located at 1641 Woodburn Road, Waukesha Wisconsin. No deliveries shall be made on Fridays.

The underground cable, wires, and conduits shall become the property of the contractor to be disposed of properly.

D Measurement

The department will measure Remove Traffic Signals (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.0105.01	Remove Traffic Signals (Intersection of CTH VV and CTH Y)	LS

Payment is full compensation for inventorying; disconnecting the wiring of the traffic signals and lights; removing and disassembling the traffic signals and lights; removing the pull box frames and covers; loading, transporting and unloading the salvaged traffic signal and lighting materials from the construction site to the designated location.

50. Video Detection System Intersection of CTH VV and CTH Y, Item SPV.0105.02.

A Description

This specification describes furnishing and installing a system that detects vehicles on a roadway using only video images of vehicle traffic. This item includes all materials and labor necessary to install a completely functional vehicle detection system including but not limited to cameras, processors, video monitor, mounting hardware, power cable, and coaxial cable.

B General Requirements

B.1 System Hardware

The video detection system (VDS) shall consist of up to four video cameras, a video detection processor (VDP) capable of processing from one to four video sources, either wired or wireless, wireless video transmission receiver, receiver antenna and a pointing device.

B.2 System Software

The system shall include software that detects vehicles in multiple lanes using only the video image. Detection zones shall be defined using only an on board video menu and a pointing device to place the zones on a video image. Up to 24 detection zones per camera view shall be available. A separate computer shall not be required to program the detection zones.

C Functional Capabilities

C.1 System Configuration

The VDS will be deployed at locations where site conditions and roadway geometry vary. The VDS system may also be deployed at locations where existing cabinets or equipment exist. Existing site configurations will dictate the availability of cabinet space and VDS usage.

The proposed VDS shall be available in various configurations to allow maximum deployment flexibility. Each configuration shall have identical user interface for system setup and configuration. The communications protocol to each configuration shall be identical and shall be hardware platform independent. The proposed VDS shall have multiple configurations available for deployment.

Table 1. VDS Configuration

Description	No. Video Inputs	No. Video Outputs	Mounting Configuration	Power Supply Requirements
Single-Channel Rack Mounted	1	1	Rack Mount (Type 170 or NEMA TS-1, TS-2 Racks)	12/24 VDC Power From Rack
Dual-Channel Rack Mounted	2	1	Rack Mount (Type 170 or NEMA TS-1, TS-2 Racks)	12/24 VDC Power From Rack
Quad-Channel Rack Mounted	4	1	Rack Mount (Type 170 or NEMA TS-1, TS-2 Racks)	12/24 VDC Power From Rack

- a. An option to have wireless video transmission between the camera sensor and VDP shall also be available from the VDS manufacturer.
- b. Wired camera systems shall be able to transmit NTSC or PAL video signals, with minimal degradation, up to 1000 feet under ideal conditions.
- c. Wireless camera systems shall be able to transmit an NTSC video signal, with minimal signal degradation, up to 500 feet under normal conditions and up to 900 feet under ideal electromagnetic interference conditions. Adjacent sources of electromagnetic radiation, or the absence of a direct line of sight between transmitter and receiver antennas, may result in video signal degradation.

C.2 System Interfaces

The following interfaces shall be provided for each of the configurations identified in Table 1:

- a. Video Input: Each video input shall accept RS170 (NTSC) or CCIR (PAL) signals from an external video source (camera sensor or VCR). The interface connector shall be BNC type and shall be located on the front of the video processing unit. The video input shall have the capability to select 75-ohm or high impedance (Hi-Z) termination.
- b. Video Lock LED: A LED indicator shall be provided to indicate the presence of the video signal. The LED shall illuminate upon valid video synchronization and turn off when the presence of a valid video signal is removed.
- c. Video Output: One video output shall be provided. The video output shall be RS170 or CCIR compliant and shall pass through the input video signal. For multi-channel video input configurations, a momentary push-button shall be provided on the front panel to toggle through each input video channel. In the absence of a valid video signal, the channel shall be skipped and the next valid video signal shall be switched. The video output shall have the capability to show text and graphical overlays to aid in system setup. The overlays shall display real-time actuation of detection zones upon vehicle detection or presence. Overlays shall be able to be turned off by the user. Control of the overlays and video switching shall also be provided through the serial communications port. The video output interface connector shall be BNC type.
- d. Serial Communications: A serial communications port shall be provided on the front panel. The serial port shall be compliant with EIA232 electrical interfaces and shall use a DB9 type connector. The serial communications interface shall allow the user to remotely configure the system and/or to extract calculated vehicle/roadway information. The interface protocol shall be documented or interface software shall be provided. The interface protocol shall support multi-drop or point-to-multipoint communications. Each VDS shall have the capability to be addressable.

- e. Contact Closure Output : Open collector contact closure outputs shall be provided. Four (4) open collector outputs shall be provided for the single, dual or quad channel rack-mount configuration. Additionally, the VDPs shall allow the use of extension modules to provide up to 24 open collector contact closures per camera input. Each open collector output shall be capable of sinking 30 mA at 24 VDC. The open collector output will be used for vehicle detection indicators as well as discrete outputs for alarm conditions.
- f. Detection LEDs: LEDs shall be provided on the front panel. The LEDs shall illuminate when a contact closure output occurs. Rack-mounted video processors shall have a minimum of four LEDs. Rack-mounted extension modules shall have two or four LEDs to indicate detection.
- g. Mouse Port: A USB mouse shall be provided on the front panel of the rack mount video processing unit. The mouse port shall not require special mouse software drivers. The mouse port shall be used as part of system setup and configuration. A mouse shall be provided with each video processor.

C.3 General System Functions

Detection zones shall be programmed via an on board menu displayed on a video monitor and a pointing device connected to the VDP. The menu shall facilitate placement of detection zones and setting of zone parameters or to view system parameters. A separate computer shall not be required for programming detection zones or to view system operation.

The VDP shall store up to three different detection zone patterns. The VDP can switch to any one of the three different detection patterns within 1 second of user request via menu selection with the pointing device.

The VDP shall detect vehicles in real time as they travel across each detection zone.

The VDP shall have an EIA232 port for communications with an external computer. The VDP EIA232 port shall be multi-drop capable.

The VDP shall accept new detection patterns from an external computer through the EIA232 port when the external computer uses the correct communications protocol for downloading detection patterns. A Microsoft Windows-based software designed for local or remote connection and providing video capture, real-time detection indication and detection zone modification capability shall be provided with the system.

The VDP system shall have the capability to automatically switch to any one of the stored configurations based on the time of day which shall be programmable by the user.

The VDP shall send its detection patterns to an external computer through the EIA232 port when requested when the external computer uses the correct communications protocol for uploading detection patterns.

The VDP shall default to a safe condition, such as a constant call on each active detection channel, in the event of unacceptable interference with the video signal.

The system shall be capable of automatically detecting a low-visibility condition such as fog and respond by placing all defined detection zones in a constant call mode. A user-selected output shall be active during the low-visibility condition that can be used to modify the controller operation if connected to the appropriate controller input modifier(s). The system shall automatically revert to normal detection mode when the low-visibility condition no longer exists.

C.4 Vehicle Detection

Up to 24 detection zones per camera input shall be supported and each detection zone can be sized to suit the site and the desired vehicle detection region.

The VDP shall provide up to 24 open collector output channels per camera input using one or more extension modules.

A single detection zone shall be able to replace multiple inductive loops and the detection zones shall be OR'ed as the default or may be AND'ed together to indicate vehicle presence on a single phase of traffic movement.

Placement of detection zones shall be done by using only a pointing device, and a graphical interface built into the VDP and displayed on a video monitor, to draw the detection zones on the video image from each video camera. No separate computer shall be required to program the detection zones.

Up to 3 detection zone patterns shall be saved for each camera within the VDP memory. The VDP's memory shall be non-volatile to prevent data loss during power outages.

The selection of the detection zone pattern for current use shall be done through a menu. It shall be possible to activate a detection zone pattern from VDP memory and have that detection zone pattern displayed within 1 second of activation.

The VDP system shall have the capability to automatically switch to any one of the stored configurations based on the time of day which shall be programmable by the user.

When a vehicle is detected within a detection zone, the corners of the detection zone shall activate on the video overlay display to confirm the detection of the vehicle.

Detection shall be at least 98% accurate in good weather conditions, with slight degradation possible under adverse weather conditions (e.g. rain, snow, or fog) which reduce visibility. Detection accuracy is dependent upon site geometry, camera placement, camera quality and detection zone location, and these accuracy levels do not include allowances for occlusion or poor video due to camera location or quality.

The VDP shall provide dynamic zone reconfiguration (DZR). DZR enables normal operation of existing detection zones when one zone is being added or modified during the setup process. The VDP shall output a constant call on any detector channel corresponding to a zone being modified.

Detection zone setup shall not require site specific information such as latitude and longitude to be entered into the system.

The VDP shall process the video input from each camera at 30 frames per second. Multiple camera processors shall process all video inputs simultaneously.

The VDP shall output a constant call for each enabled detector output channel if a loss of video signal occurs. The VDP shall output a constant call during the background learning period.

Detection zone outputs shall be configurable to allow the selection of presence, pulse, extend, and delay outputs. Timing parameters of pulse, extend, and delay outputs shall be user definable between 0.1 to 25.0 seconds.

Up to six detection zones per camera view shall have the capability to count the number of vehicles detected. The count value shall be internally stored for later retrieval through the EIA232 port. The zone shall also have the capability to calculate and store average speed and lane occupancy at bin intervals of 10 seconds, 20 seconds, 1 minute, 5 minutes, 15 minutes, 30 minutes and 60 minutes.

D Hardware

D.1 General

The VDP and extension module (EM) shall be specifically designed to mount in a standard detector rack, using the edge connector to obtain power and provide contact closure outputs. No adapters shall be required to mount the VDP or EM in a standard detector rack. Detector rack rewiring shall not be required.

The EM shall be available to avoid the need of rewiring the detector rack, by enabling the user to plug an extension module into the appropriate slot in the detector rack. The extension module shall be connected to the VDP by a 8 wire cable with modular connectors, and shall output contact closures in accordance to user selectable channel assignments. The EM is available in 2, 4, or 24 channel configurations.

D.2 Input Power

The VDP and EM shall be powered by 12/24 volts DC. VDP power consumption shall not exceed 7 watts. The EM power consumption shall not exceed 2.5 watts.

D.3 Detection Outputs

The VDP and EM shall include detector output pin out compatibility with industry standard detector racks. The 24-channel EM shall provide output through a 37-pin “D” connector on the front panel.

D.4 Video Inputs

VDPs shall include one, two or four BNC video input connections suitable for composite video inputs. The video input shall include a switch selectable 75-ohm or high impedance termination to allow camera video to be routed to other devices, as well as input to the VDP for vehicle detection.

D.5 Video Outputs

The front of the VDP shall include one BNC video output providing real time video output that can be routed to other devices.

D.6 Mechanical and Environmental

The VDP shall operate satisfactorily in a temperature range from -34 °C to +74 °C and a humidity range from 0%RH to 95%RH, non-condensing as set forth in NEMA specifications.

The front panel of the VDP shall have detector test switches to allow the user to place calls on each channel. The test switch shall be able to place either a constant call or a momentary call depending on the position of the switch.

The front face of the VDP shall contain indications, such as LED displays, to enable the user to view real time detections for each channel of detection when the system is operational.

The VDP shall include an EIA232 port for serial communications with a remote computer. This port shall be a 9-pin "D" subminiature connector on the front of the VDP.

The VDP shall utilize non-volatile memory technology to enable the loading of modified or enhanced software through the EIA232 port and without modifying the VDP hardware.

D.7 Video Detection Camera

Video detection cameras used for traffic detection shall be furnished by the video detection processor (VDP) supplier and shall be qualified by the supplier to ensure proper system operation.

The camera shall produce a useable video image of the bodies of vehicles under all roadway lighting conditions, regardless of time of day. The minimum range of scene luminance over which the camera shall produce a useable video image shall be the minimum range from nighttime to daytime, but not less than the range 1.0 lux to 10,000 lux.

The imager luminance signal to noise ratio (S/N) shall be more than 50 dB.

The camera shall be digital signal processor (DSP) based and shall use a CCD sensing element and shall output color video with resolution of not less than 470 TV lines. The CCD imager shall have a minimum effective area of 768(h) x 494(v) pixels.

The camera shall include an electronic shutter control based upon average scene luminance and shall be equipped with an auto-iris lens that operates in tandem with the electronic shutter.

The camera shall utilize automatic white balance.

The camera shall include a variable focal length lens with variable focus that can be adjusted, without opening up the camera housing, to suit the site geometry by means of a portable interface device designed for that purpose and manufactured by the detection system supplier.

The horizontal field of view shall be adjustable from 5.4 to 50.7 degrees. This camera configuration may be used for the majority of detection approaches in order to minimize the setup time and spares required by the user. The lens shall be a 10x zoom lens with a focal length of 3.8mm to 38.0 mm.

The lens shall also have an auto-focus feature with a manual override to facilitate ease of setup.

The camera shall incorporate the use of preset positioning that store zoom and focus positioning information. The camera shall have the capability to recall the previously stored preset upon application of power.

The camera electronics shall include automatic gain control (AGC) to produce a satisfactory image at night.

The camera shall be housed in a weather-tight sealed enclosure. The enclosure shall be made of 6061 anodized aluminum. The housing shall be field rotatable to allow proper alignment between the camera and the traveled road surface.

The camera enclosure shall be equipped with a sunshield. The sunshield shall include a provision for water diversion to prevent water from flowing in the camera's field of view. The camera enclosure with sunshield shall be less than 6" diameter, less than 18" long, and shall weigh less than 6 pounds when the camera and lens are mounted inside the enclosure.

The enclosure shall be design so that the pan, tilt and rotation of the camera assembly can be accomplished independently without affecting the other settings.

The camera enclosure shall include a proportionally controlled heater, where the output power of the heater varies with temperature, to assure proper operation of the lens functions at low temperatures and prevent moisture condensation on the optical faceplate of the enclosure.

The glass face on the front of the enclosure shall have an anti-reflective coating to minimize light and image reflections.

The glass face shall also employ a special coating to minimize the buildup of environmental debris such as dirt and water.

When mounted outdoors in the enclosure, the camera shall operate satisfactorily in a temperature range from -34 °C to +60 °C and a humidity range from 0% RH to 100% RH. Measurement of satisfactory video shall be based upon VDP system operation.

The camera shall be powered by 120-240 VAC 50/60 Hz. Power consumption shall be 45 watts or less under all conditions. An optional DC power configuration shall be available for 12 VDC operation.

Recommended camera placement height shall be 33 feet (or 10 meters) above the roadway, and over the traveled way on which vehicles are to be detected. For optimum detection the camera should be centered above the traveled roadway. The camera shall view approaching vehicles at a distance not to exceed 350 feet for reliable detection (height to distance ratio of 10:100). Camera placement and field of view (FOV) shall be unobstructed and as noted in the installation documentation provided by the supplier.

The camera enclosure shall be equipped with separate, weather-tight connections for power and video cables at the rear of the enclosure. These connections may also allow diagnostic testing and viewing of video at the camera while the camera is installed on a mast arm or pole using a lens adjustment module (LAM) supplied by the VDP supplier. Video and power shall not reside within the same connector.

The video signal shall be fully isolated from the camera enclosure and power cabling.

D.8 Video Monitor

The monitor shall be a flat screen color video monitor with a minimum 9" diagonal picture display. It shall support EIA standards RS-170 composite video signal (1.0 v p-p, 75 OHM).

It shall have a resolution of 900 lines at center. Video bandwidth shall be >11 MHz. Loop through connectors shall be provided, and both input and output connectors shall be BNCs.

The monitor power source shall be 120 VAC +/- 10%, 60 Hz. Power consumption shall not be greater than 18 W. Ambient operating temperature shall be +50 to +122 degrees Fahrenheit.

Located on the front panel, the controls shall be on/off, contrast, bright, vertical hold, and horizontal hold. Rear panel shall have controls for vertical size, vertical linearity and scan switch.

Dimensions shall not exceed 9" (W), 10" (H), and 7" (D). Weight shall not exceed 10 pounds.

D.9 Coaxial Cable

The coaxial cable to be used between the camera and the VDP in the traffic cabinet shall be Belden 8281. This cable shall be suitable for installation in conduit or overhead with appropriate span wire. BNC plug connectors should be used at both the camera and cabinet ends. The coaxial cable, BNC connector, and crimping tool shall be approved by the supplier of the video detection system, and the manufacturer's instructions must be followed to ensure proper connection.

D.10 Power Cable

The power cabling shall be 16 AWG three conductor cable with a minimum outside diameter of 0.325 inch and a maximum diameter of 0.490 inch. The cabling shall comply with the National Electric Code, as well as local electrical codes. Cameras may acquire power from the luminaire if necessary.

E Installation

The video detection camera shall be installed by factory-certified installers as recommended by the supplier and documented in installation materials provided by the supplier. Proof of factory certification shall be provided.

F Supplier Warranty

The supplier shall provide a three-year warranty on the video detection system.

During the warranty period, technical support shall be available from the supplier via telephone within 4 hours of the time a call is made by a user, and this support shall be available from factory-certified personnel or factory-certified installers.

During the warranty period, updates to VDP software shall be available from the supplier without charge.

G Maintenance and Support

The supplier shall maintain an adequate inventory of parts to support maintenance and repair of the video detection system. These parts shall be available for delivery within 30 days of placement of an acceptable order at the supplier's then current pricing and terms of sale for said parts.

The supplier shall maintain an ongoing program of technical support for the video detection system. This technical support shall be available via telephone, or via personnel sent to the installation site upon placement of an acceptable order at the supplier's then current pricing and terms of sale for on site technical support services.

Installation or training support shall be provided by a factory-authorized representative and shall be a minimum IMSA-Level II Traffic Signal Technician certified.

All product documentation shall be written in the English language.

H Measurement

The department will measure Video Detection System (Location) as a single lump sum unit of work, acceptably completed.

E Payment

Video Vehicle Detection System will be paid for measured quantities at the contract lump sum price under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.02	Video Detection System, Intersection of CTH VV and CTH Y	LS

Payment is full compensation for furnishing and installing control units, cameras, cabling, mounting brackets, and for testing and setting up the system.

51. Construction Staking Concrete Sidewalk, Item SPV.0105.03.

A Description

This special provision describes furnishing and setting construction stakes or control points, including all calculations required, necessary to establish the horizontal and vertical position of the concrete sidewalk as shown on the plans.

B (Vacant)

C Construction

C.1 General

Obtain or calculate benchmark data, grades, and alignment from data in the plan and verify with the engineer prior to beginning the work. This work includes reestablishing the plan horizontal roadway alignment, alignment ties, and control points. Obtain approval from the engineer for methods of survey and prior to beginning the work. The degree of accuracy used in the survey work must be consistent with third order, Class II. Establish additional benchmarks and control points as necessary or as directed by the engineer. Check plan dimensions, alignment, and elevations for accuracy with existing field conditions. Notify the engineer immediately of any errors and apparent discrepancies for correction or interpretation prior to proceeding with the work. Adjust elevations as necessary in order to match existing conditions and uphold positive drainage in compliance with the requirements of the American Disability Act (ADA) of 1990 and any subsequent revisions and amendments.

Maintain neat, orderly and complete survey notes and computations used in establishing the lines and grades. Make the survey notes and computations available to the engineer within 24 hours upon request as the work progresses.

C.2 Concrete Sidewalk

Place construction stakes for concrete sidewalk at intervals of 25 feet. A minimum of three stakes per cross section are required. Set and maintain additional stakes per cross section as necessary to achieve the required accuracy and to satisfy the contractors'

method of operations. Set additional stakes as necessary to establish location and grade along intersecting road radii; at all ADA accessible curb ramps, and for auxiliary lanes, vertical curves, horizontal curves, and curve transitions. Locate all concrete sidewalk construction stakes to within 0.25 feet of the true horizontal position and establish the grade elevation to within 0.01 feet of the true vertical position. Confirm that all sidewalk and curb ramps meet the requirements as set forth in the ADA of 1990 and notify the engineer of any discrepancies or changes in the field prior to the contractor placing concrete sidewalk.

D Measurement

The department will measure Construction Staking Concrete Sidewalk, as a single lump sum unit for all proposed layout, designs, calculations, verifications, and staking as part of the project, 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	Construction Staking Concrete Sidewalk	LS

Payment is full compensation for work necessary to stake all concrete sidewalk along the entire project length including new sidewalk, replacing existing walk, and replacing curb ramps in accordance to ADA requirements; for providing all calculations and documentation required to verify compliance; to locate and set all concrete sidewalk construction stakes including additional stakes per cross section set to achieve the required accuracy and to satisfy the contractors' method of operations including intersecting road radii, curb ramps, auxiliary lanes, vertical curves, horizontal curves, and curve transitions; for resetting damaged or missing concrete sidewalk construction stakes; and for furnishing all labor, tools, stakes, lath, flags, equipment and incidentals necessary to complete the work.

52. Remove and Reconstruct Lannon Stone Retaining Wall, Item SPV.0105.04.

A Description

This special provision describes removing, stockpiling, and reconstructing a Lannon stone retaining wall in accordance to the details shown in the plans and provided in the contract.

B Materials

B.1 Lannon Stone

The existing Lannon stone materials shall be salvaged and used.

B.2 Leveling Pad

Provide a wall leveling pad that consists of a compacted 6 inch deep by 2 foot wide leveling pad made from base aggregate dense 1 1/4-inch in conformance with standard spec 305.

B.3 Backfill Materials

Wall backfill shall comply with the requirements for Granular Backfill as contained in standard spec 209 or as approved by the engineer.

All other backfill materials required to finish the wall and restore the ground surface may be select material available on the project that meets the engineer's approval.

C Construction

Remove and stockpile existing Lannon stones.

Prepare the foundation, construct with stockpiled Lannon stone and backfill to the grade indicated on plans and verified in the field and as directed by the engineer. The top two courses of wall shall be mortared.

D Measurement

The department measure Remove and Reconstruct Lannon Stone Retaining Wall as a single lump sum unit of work for each remove and reconstruct lannon stone retaining wall, 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.0105.04	Remove and Reconstruct Lannon Stone Retaining Wall	LS

Payment is full compensation for removing and stockpiling Lannon Stone; for preparation, material and compaction of base; for placement of Lannon stone; and for providing and compacting the backfill.

**ADDITIONAL SPECIAL PROVISION 1 (ASP 1)
FOR TRANSPORTATION ALLIANCE FOR NEW SOLUTIONS (TrANS)
PROGRAM EMPLOYMENT PLACEMENTS AND APPRENTICESHIPS**

The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), Section 5204(e) – Surface Transportation Workforce Development Training and Education, provides for 100 percent Federal funding if the core program funds are used for training, education, or workforce development purposes, including “pipeline” activities. The core programs includes: Congestion Mitigation and Air Quality Improvement (CMAQ) Program, Highway Bridge Program (HBP), Interstate Maintenance (IM), National Highway System (NHS), and Surface Transportation Program (STP). These workforce development activities cover surface transportation workers, including OJT/SS programs for women and minorities as authorized in 23 U.S.C. §140(b).

TrANS is an employment program originally established in 1995 in Southeastern Wisconsin. Currently TrANS has expanded to include TrANS program locations to serve contractors in Southeast (Milwaukee and surrounding counties), Southcentral (Dane County and surrounding counties including Rock County), and most Northeastern Wisconsin counties from locations in Keshena, Rhinelander and surrounding far Northern areas. TrANS attempts to meet contractor’s needs in other geographic locations as possible. It is an industry driven plan of services to address the outreach, preparation, placement and retention of women, minorities and non-minorities as laborers and apprentices in the highway skilled trades. These candidate preparation and contractor coordination services are provided by community based organizations. For a list of the TrANS Coordinators contact the Disadvantaged Business Enterprise Office at (414) 438-4583 in Milwaukee or (608) 266-6961 in Madison. These services are provided to you at no cost.

I. BASIC CONCEPTS

Training reimbursements to employing contractors for new placements, rehires or promotions to apprentice of TrANS Program graduates will be made as follows:

- 1) **On-the-Job Training, Item ASP.1T0G, ASP 1 Graduate.** At the rate of \$5.00 per hour on federal aid projects when TrANS graduates are initially hired, or seasonally rehired, as unskilled laborers or the equivalent.

Eligibility and Duration: To the employing contractor, for up to 2000 hours from the point of initial hire as a TrANS program placement.

Contract Goal: To maintain the intent of the Equal Employment Opportunity program, it is a goal that 5 (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 4 (number) TrANS Apprentice(s) be utilized on this contract.

- 3) The maximum duration of reimbursement is two years as a TrANS graduate plus time in apprentice status.
- 4) If a TrANS program is not available in the contractor's area and another training program is utilized, payment of On-the-Job Training hours may be approved by the Wisconsin Department of Transportation (WisDOT) if the training program meets the established acceptance criteria. Only On-the-Job Training Hours accumulated after WisDOT approval will be reimbursed as specified under Items ASP.1T0G and ASP.1T0A. For more information, contact the Disadvantaged Business Enterprise Office at the phone numbers listed above.
- 5) WisDOT reserves the right to deny payments under items ASP.1T0G and ASP.1T0A if the contractor either fails to provide training or there is evidence of a lack of good faith in meeting the requirements of this training special provision.

I. RATIONALE AND SPECIAL NOTE

The \$5.00 per hour now being paid for TrANS placements is intended to cover the duration of two years to allow for reaching entry-level laborer status. An additional incentive, the \$5.00 rate, would promote movement into the underutilized skilled trades' apprenticeships and applies until the individual completes their apprenticeship. These incentives benefit TrANS candidates by giving them a better opportunity to enter a skilled trade; benefits contractors who will be assisted in meeting their EEO profiles and goals; and benefits the public who will see the program reinforce larger public-private employment reform in Wisconsin. The pool of TrANS graduates was created for the purpose of addressing underutilization in the skilled trades, an objective that is further reinforced by a parallel retention pilot program, known as the Companywide Reporting. *Whether or not reimbursement is involved, the WisDOT reassures contractors who are in the Companywide Program that TrANS placements still contribute toward fulfilling the new hire goal of 50% women and minorities.* Based on data administered by United States Department of Labor (US DOL), the highway skilled trades remain underutilized for women statewide (less than 6.9%); and for minorities in all counties (% varies by county).

NOTE: *Unless using other advancement strategies, contractors are encouraged to use some or all of this monetary incentive to offset the cut in hourly wages an individual may incur when entering an apprenticeship if the full general laborer hourly rate has been previously paid. No special accounting measures are required.*

II. IMPLEMENTATION

The implementation of ASP 1 is intended to cover only the amount of time it takes for underutilization to be resolved across the trades. This will be measured annually at the county and/or state levels using data administered by WisDWD in relation to goals set by the USDOL-

OFCCP. With appropriate state and federal approvals, we may also do some measurement at the company level.

It is the contractor's responsibility to note on their Certified Payrolls if their employee is a TrANS graduate or a TrANS apprentice. The District EEO Coordinators utilize the information on the Certified Payrolls to track the hours accumulated by TrANS Graduates and TrANS apprentices on WisDOT contracts. Payment under this ASP 1 is made based on the hours recorded off of the Certified Payrolls. Tracking may eventually include improved linkages with the WisDWD apprentice database, information from company and committee level sources.

TrANS is nondiscriminatory by regulation, and is a tool for optional use by contractors to address the underutilization of women and minorities as laborers and apprentices in our industry's skilled trades.

IV. TRANS TRAINING

As part of the contractor's equal employment opportunity affirmative action program, training shall be provided to employees enrolled in apprenticeship and on-the-job training programs as follows:

The contractor shall provide on-the-job training aimed at developing full journey workers in the type of trade or job classifications involved. In the event the contractor subcontracts a portion of the contract work, the contractor shall determine how many, if any, of the trainees are to be trained by the subcontractor provided, however, that the contractor shall retain the primary responsibility for meeting the training requirements imposed by this special provision. The contractor shall also insure that this training special provision is made applicable to such subcontract.

Training and upgrading of minorities and women toward journey workers status is a primary objective of this training special provision. Accordingly, the contractor shall make every effort to enroll minority trainees and women (e.g., by conducting systematic and direct recruitment through public and private sources likely to yield minority trainees and women trainees); to the extent such persons are available within a reasonable area of recruitment. The contractor will be given an opportunity and will be responsible for demonstrating the steps that they have taken in pursuance thereof, prior to determination as to whether the contractor is in compliance with this training special provision. This training commitment is not intended, and shall not be used, to discriminate against any applicant for training, whether a member of a minority group or not.

No employee shall be employed as a trainee in any classification in which they have successfully completed a training course leading to journey workers status or in which they have been employed as a journey worker. The contractor should satisfy this requirement by including appropriate questions in the employee application or by other suitable means. Regardless of the method used, the contractor's records should document the findings in each case.

V. APPRENTICESHIP TRAINING

The Federal Highway Administration's (FHWA) policy is to require full use of all available training and skill improvement opportunities to assure increased participation of minority groups, disadvantaged persons and women in all phases of the highway construction industry. The FHWA On-the-Job Training (OJT) Program requires the State transportation agencies (STAs) to establish apprenticeships and training programs targeted to move women, minorities, and disadvantaged individuals into journey-level positions to ensure that a competent workforce is available to meet highway construction hiring needs, and to address the historical under-representation of members of these groups in highway construction skilled crafts.

The OJT Supportive Services (OJT/SS) Program was established in Title 23 Code of Federal Regulations (CFR), Part 230) to supplement the OJT program and support STA training programs by providing services to highway construction contractors and assistance to highway construction apprentices and trainees. The primary objectives of OJT/SS are:

- (1) To increase the overall effectiveness of the State highway agencies' approved training programs.
- (2) To seek other ways to increase the training opportunities for women, minorities, and disadvantaged individuals.

The STAs are responsible for establishing procedures, subject to the availability of Surface Transportation and Bridge Funds under 23 U.S.C. §140(b) (Nondiscrimination), for the provision of supportive services with respect to training programs approved under 23 CFR, Part 230(a) (Equal Employment Opportunity on Federal and Federal-aid Construction Contracts – including Supportive Services).

The contractor and subcontractor shall maintain records to demonstrate compliance with these apprenticeship requirements. Reasonable exemptions and modifications to and from any or all of these requirements will be determined by the Wisconsin Department of Transportation-Civil Rights Office. A request for an exemption or modification, with justification, shall be made in writing, addressed to WisDOT Civil Rights Office, 4802 Sheboygan Avenue, P.O. Box 7965, Rm. 451, Madison, WI 53707.

ADDITIONAL SPECIAL PROVISION 3 DISADVANTAGED BUSINESS ENTERPRISE PROGRAM

1. Description

General

- a. The disadvantaged business enterprise (DBE) requirements of 49 CFR Part 26 apply to this contract. The department's DBE goal is shown on the cover of the bidding proposal. The contractor can meet the specified contract DBE goal by procuring services or materials from a DBE or by subcontracting work to a DBE. The department calculates the DBE participation as the dollar value of DBE participation included in the bid expressed as a percentage of the total contract bid amount.
- b. Under the contract, the contractor agrees to provide the assistance to participating DBE's in the following areas:
 - i. Produce accurate and complete quotes.
 - ii. Understand highway plans applicable to their work.
 - iii. Understand specifications and contract requirements applicable to their work.
 - iv. Understand contracting reporting requirements.
- c. The department encourages the contractor to assist and develop DBE firms to become fully knowledgeable contractors to successfully perform on its contracts.
- d. For information on the disadvantaged business program, visit the department's Civil Rights and Compliance Section website at:

<http://www.dot.wisconsin.gov/business/engrserv/dbe-main.htm>

2. Definitions

- a. Interpret these terms, used throughout this additional special provision, as follows:
 - i. **Bid Percentage:** The DBE percentage indicated in the bidding proposal at the time of bid.
 - ii. **DBE:** A disadvantaged business enterprise (DBE) certified as a DBE by the department and included on the department's list of certified DBE's who are determined to be ready, willing and able.
 - iii. **DBE goal:** The amount of DBE participation expected in the contract as shown on the cover of the Highway Work Proposal.
 - iv. **Discretionary Goal:** A contractor assigned DBE goal, typically abbreviated as "Disc" on the cover of the Highway Work Proposal, which is enforced as committed.
 - v. **Manufacturer:** A firm that operates or maintains a factory or establishment that produces, on the premises, the materials, supplies, articles, or equipment required under the contract.
 - vi. **Supplier:** A firm that owns, operates, or maintains a store, warehouse, or other establishment in which the materials, supplies, articles or equipment required under the contract are bought, kept in stock, and regularly sold or leased to the public.
 - vii. **Voluntary Achievement:** The amount of DBE participation achieved and reported in the contract in excess of the assigned goal.

3. DBE Percentage Required at Bid Submission

Indicate the bid percentage (i.e. 0% through 100%) of DBE participation on the completed bidding proposal, including projects with discretionary goals. For electronic submittals, show the percentage in the miscellaneous data folder, Item 3, DBE Percent. For paper submittals, show the percentage on the sheet included after the schedule of items. By submission of the bid, the bidder contractually commits to DBE participation at or above the bid percentage, or certifies that they have utilized

comprehensive good faith efforts to solicit and utilize DBE firms to meet the DBE participation requirements of this contract proposal, and that the bid percentage is reflective of these good faith efforts. If the bidder does not indicate the bid percentage of DBE participation on the completed bidding proposal, the department will consider the bid irregular and may reject the bid.

4. Department's DBE Evaluation Process

a. Documentation Submittal

Within 10 business days after the notification of contract award, the contractor is to identify, by name, the DBE firms whose utilization is intended to satisfy this provision, the items of work of the DBE subcontract or supply agreement and the dollar value of those items of work by completing the Commitment to Subcontract to DBE Form [DT1506] and all necessary attachment A forms, as well as, Good Faith Waiver Form [DT1202] and supporting documentation as necessary. If the contractor fails to furnish the required forms within the specified time, the department may cancel the award. Delay in fulfilling this requirement is not a cause for extension of the contract time and shall not be used as a tool to delay execution.

i. Bidder Meets DBE Goal

If the bidder indicates that the contract DBE goal is met, after award and before execution, the department will evaluate the Commitment to Subcontract to DBE Form DT1506 and attachment A(s) to verify the actual DBE percentage achieved. If the DBE commitment is verified, the contract is eligible for execution with respect to the DBE commitment.

ii. Bidder Does Not Meet DBE Goal

- (1) If the bidder indicates a bid percentage on the Commitment to Subcontract to DBE Form [DT1506] that does not meet the contract DBE goal, the bidder must submit a Good Faith Waiver Form [DT1202] and supporting documentation. After award and before execution, the department will evaluate the bidder's DBE commitment and consider the bidder's good faith waiver request.
- (2) The department will review the bidder's good faith waiver request and notify the bidder of one of the following:
 - a. If the department grants a good faith waiver, the bid is eligible for contract execution with respect to DBE commitment.
 - b. If the department rejects the good faith waiver request, the department may declare the bid ineligible for execution. The department will provide a written explanation of why the good faith waiver request was rejected. The bidder may appeal the department's rejection as allowed under 7 a. & b.

5. Department's Criteria for Good Faith Effort

The Code of Federal Regulations {CFR}, 49 CFR Part 26-Appendix A, is the guiding regulation concerning good faith efforts. However, the federal regulations do not define "good faith" but states that bidder must actively and aggressively attempt to meet the goal. The federal regulations are general and do not include every factor or effort that can be considered. As a result, each state must establish its own processes and consider the factors established in its own process when making a determination of good faith.

- a. The department will only grant a good faith waiver if the bidder has made the effort, given the relevant circumstances under the contract that a bidder actively and aggressively seeking to meet the goal would make. The department will evaluate the bidder's good faith effort to determine whether a good faith waiver will be granted. The bidder must demonstrate, on the DT1202 that they have aggressively solicited DBE participation in an attempt to meet the contract DBE goal and attaining the stated DBE goal is not feasible.

- b. The department, in conjunction with industry stakeholders, has developed the following guidance for contractor good faith effort. The guidance and the attached appendices provide a framework for the actions required by all parties in the processing and evaluation of bidder's total efforts to achieve the project specific DBE goal prior to the bid letting date.
- c. Prime Contractors should:
 - i. Document all efforts and decisions made toward achieving the DBE goal on the contract. The bidder should use the Civil Rights & Compliance System [CRCS] and related WisDOT-approved DBE outreach tools, including the Bid Express Small Business Network, to foster DBE participation on all applicable contracts.
 - ii. Request quotes by identifying potential items to subcontract and solicit. Prime contractors are strongly encouraged to include in their initial contacts a single page including a detailed list of items for which they are accepting quotes, by project, within a letting. *See attached sample entitled "Sample Contractor Solicitation Letter" in Appendix A.* Prime contractors should also indicate a willingness to accept quotes in areas they are planning to perform themselves, **as required by federal rules**. In some cases, it might be appropriate to use DBE's to do work in a prime contractor's area of specialization.
 - (1) Solicit quotes through all reasonable and available means from certified DBE firms who match 'possible items to subcontract' and send copies to DBESS office, highlighting areas in which you are seeking quotes. Email is acceptable.
 - (2) SBN is the preferred outreach tool. <https://www.bidx.com/wi/main>. Other acceptable means include postal mail, email, fax, phone call.
 - a. Primes must ask DBE firms for a response in their solicitations. See *Sample Contractors Solicitation Letter* in Appendix. This letter can be included as an attachment to the SBN sub-quote request.
 - b. Solicit quotes at least 10 calendar days prior to the letting date {ideally two Fridays before the letting} to allow DBE firms sufficient time to respond. Prime contractors should contact DBE firms early, asking them if they need help in putting together a quote, or helping to arrange for equipment needs, or solve other problems.
 - (3) Second solicitation should take place within 5 days
 - a. An email solicitation is highly recommended for this second solicitation
 - (4) Upon request, provide interested DBE firms with adequate information about plans, specifications and the requirements of the contract by letter, information session, email, phone call and/or referral.
 - (5) When potential exists, advise interested DBE firms on how to obtain bonding, line of credit or insurance as may be requested.
 - (6) Document DBE firm's interest in quoting by taking appropriate steps to follow up initial solicitation with:
 - a. Email to all prospective DBE firms in relevant work areas
 - b. Phone call log to DBE firms who express interest via written response or call.
 - c. Fax/letter confirmation
 - d. Copy of the DBE quotes
 - e. Signed copy of Bid Express SBN Record of Subcontractor Outreach Effort.
- d. Evaluate DBE quotes as documentation is critical if the prime does not utilize the DBE firm's quote for any reason.
 - i. Evaluate DBE firm's capability to perform 'possible items to subcontract' using legitimate reasons, including but not limited to, **a discussion with the DBE firm** regarding its

- capabilities prior to the bid letting. If lack of capacity is your reason for not utilizing the DBE quote, you are required to contact the DBE directly regarding their ability to perform the work indicated in the UCP directory as their work area [NAICS code]; only the work area and/or NAICS code listed in the UCP directory will be counted for DBE credit. Documentation of the conversation is required.
- ii. In striving to meet a DBE conscious contract goal, prime contractors are expected to use DBE quotes that are responsive and reasonable. This includes DBE quotes that are not the low quote.
 - iii. **Special Circumstance:** Evaluation of DBE quotes with tied bid items. "Tied quotes are the condition in which a subcontractor submits quotes including multiple areas of expertise across multiple work areas noting that the items and price are tied. Typically this type of quoting represents a cost saving to the prime but is not clearly stated as a discount; tied quotes are usually presented as 'all or none' quote to the prime." When non-DBE subcontractors submit tied bid items in their quotes to the prime, the DBE firms' quote may seem not competitive. In such a case, the following steps are taken in comparing the relevant quotes. These are qualitative examples.
 - (1) Compare bid items common to both quotes, noting the reasonableness in the price comparison.
 - (2) Review quotes from other firms for the bid items not quoted by the DBE firm to see if combining both can provide the same competitive advantage that the tied bid items offered.
- e. After notification of contract award, submit '**Commitment to Subcontract**' form within the time period specified in the contract.
 - i. Provide the following information along with department form DT1202:
 - (1) The names, addresses, e-mail addresses, telephone numbers of DBE's contacted. The dates of both initial and follow-up contact. A printed copy of SBN solicitation is acceptable.
 - (2) A description of information provided to the DBE's regarding the plans, specifications, and estimated quantities for portions of the work to be performed by that DBE.
 - (3) Photocopies or electronic copies of all written solicitations to DBE's.
 - (4) Documentation of each quote received from a DBE and, if rejected, the reason for that rejection.
 - (5) Bidder attendance at any pre-solicitation or pre-bid meetings the department held to inform DBE's of participation opportunities available on the project.
 - f. The department's DBE Support Services Office is available by phone, email or in writing to request assistance in meeting the DBE goal:

DBE Support Services Office
6150 Fond du Lac Ave.
Milwaukee, WI 53218
Phone: 414-438-4583 / 608-266-6961
Fax: 414-438-5392
E-mail: DOTDBESupportServices@dot.wi.gov

6. Bidder's Appeal Process

- a. A bidder can appeal the department's decision to deny the bidder's good faith waiver request. The bidder must provide written documentation refuting the specific reasons for rejection as stated in the department's rejection notice. The bidder may meet in person with the department if so

requested. Failure to appeal within 7 calendar days after receiving the department's written notice of rejection of a good faith waiver request under constitutes a forfeiture of the bidder's right of appeal. If the bidder does not appeal, the department may declare the bid ineligible for execution.

- b. The department will appoint a representative, who did not participate in the original determination, to assess the bidder's appeal. The department will issue a written decision within 7 calendar days after the bidder presents all written and oral testimony. In that written decision, the department will explain the basis for finding that the bidder did or did not meet the contract DBE goal or make an adequate good faith effort to meet the contract DBE goal. The department's decision is final. If the department finds that the bidder did not meet the contract DBE goal or did not make adequate efforts to meet the DBE goal, the department may declare the bid ineligible for execution.

7. Department's Criteria for DBE Participation

Department's DBE List

- a. The department maintains a DBE list on the department's website at <http://app.mylcm.com/wisdot/Reports/WisDotUCPDirectory.aspx>
- b. The DBE office is also available to assist at 414-438-4583 or 608-266-6961.

8. Counting DBE Participation

Assessing DBE Work

- a. The department will only count the DBE usage towards the contract DBE goal if the DBE firm is certified as a DBE by one of the unified certification program agencies. If a firm becomes DBE certified before entering into a subcontract, the department may consider that DBE usage towards the contract goal. The department only counts the value of the work a DBE actually performs towards the DBE goal. The department assesses the DBE work as follows:
- b. The department counts work performed by the DBE's own resources. The department includes the cost of materials and supplies the DBE obtains for the work. The department also includes the cost of equipment the DBE leases for the work. The department will not include the cost of materials, supplies, or equipment the DBE purchases or leases from the prime contractor or its affiliate, except the department will count non-project specific leases the DBE has in place before the work is advertised.
- c. The department counts fees and commissions the DBE charges for providing a bona fide professional, technical, consultant, or managerial services. The department also counts fees and commissions the DBE charges for providing bonds or insurance. The department will only count costs the engineer deems reasonable based on experience or prevailing market rates.
- d. If a DBE subcontracts work, the department counts the value of the subcontracted work only if the DBE's subcontractor is also a DBE.
- e. The contractor shall maintain records and may be required to furnish periodic reports documenting its performance under this item.
- f. It is the prime contractor's responsibility to determine the DBE's ability to perform the work with the use of the UCP directory.

9. Commercially Useful Function

- a. The department counts expenditures of a DBE toward the DBE goal only if the DBE is performing a commercially useful function on that contract.
- b. A DBE is performing a commercially useful function if the following conditions are met:
- c. For contract work, the DBE is responsible for executing a distinct portion of the contract work and it is carrying out its responsibilities by actually performing, managing, and supervising that work.
- d. For materials and supplies, the DBE is responsible for negotiating price, determining quality and quantity, ordering, and paying for those materials and supplies.

10. Trucking

All bidders are expected to adhere to the department's current trucking policy posted on the HCCI website at

<http://www.dot.wisconsin.gov/business/engrserv/docs/dbe-trucking-notice.pdf>

11. Manufacturers and Suppliers

The department counts material and supplies a DBE provides under the contract. The department will give full credit toward the DBE goal if the DBE is a manufacturer of those materials or supplies. The department will give 60 percent credit toward the DBE goal if the DBE is merely a supplier of those materials or supplies. It is the bidder's responsibility to find out if the DBE is considered a supplier or a manufacturer before listing them on Commitment to Subcontract to DBE form DT1506.

12. DBE Prime

If the prime contractor is a DBE, the department will only count the work the contractor performs with its own forces, the work DBE subcontractors perform, and the work DBE suppliers or manufacturers perform.

13. Joint Venture

If a DBE performs as a participant in a joint venture, the department will only count that portion of the total dollar value of the contract equal to that portion of the work that the DBE performs with its own forces.

14. Mentor Protégé

- a. If a DBE performs as a participant in a mentor protégé agreement, the department will credit the portion of the work performed by the DBE protégé firm
- b. On every other project that the mentor protégé team identifies itself on.
- c. For no more than one half of the total contracted DBE goal on any WisDOT project.

15. DBE Replacement

In the event a Prime Contractor needs to replace a DBE firm originally listed on the approved DBE Commitment Form DT1506, the Prime Contractor must comply with the department's DBE Replacement Policy located on the DBE page on the following web site:

<http://www.dot.wisconsin.gov/business/engrserv/docs/policyreplacingdbe.pdf>

16. Changes to the approved DBE Commitment Form DT1506

If there are any changes to the approved Commitment to Subcontract to DBE Form DT1506, the prime contractor must submit a revised DBE Commitment Form DT1506 and relevant attachment A(s) to the DBE Programs Office within 5 business days.

17. Contract Modifications

When additional opportunity is available by contract modifications, the Prime Contractor shall utilize DBE Subcontractors, that were committed to equal work items, in the original contract.

18. Payment

Costs for conforming to this Additional Special Provision (ASP) and any associated DBE requirements are incidental to the contract.

APPENDIX A
Sample Contractor Solicitation Letter Page 1
This sample is provided as a guide not a requirement

GFW SAMPLE MEMORANDUM

TO: DBE FIRMS
FROM: POTENTIAL PRIME CONTRACTOR OR MAJOR SUBCONTRACTOR
SUBJECT: REQUEST FOR DBE QUOTES
LET DATE & TIME
DATE: MONTH DAY YEAR
CC: DBE OFFICE ENGINEER

Our company is considering bidding on the projects indicated on the next page, as a prime and/or a subcontractor for the Wisconsin Department of Transportation Month- date -year Letting. Page 2 lists the projects and work items that we may subcontract for this letting. We are interested in obtaining subcontractor quotes for these projects and work categories. Also note that we are willing to accept quotes in areas we may be planning to perform ourselves as required by federal rules.

Please review page 2, respond whether you plan to quote, highlight the projects and work items you are interested in performing and return it via fax or email within 3 days. Plans, specifications and addenda are available through WisDOT at the DBE Support Services office or at the Highway Construction Contract Information (HCCI) site at <http://roadwaystandards.dot.wi.gov/hcci/>

Your quote should include all of the costs required to complete the items you propose to perform including labor, equipment, material, and related bonding or insurance. The quote should note items that you are DBE certified to perform, tied items, and any special terms. Page 2, with the indicated projects and items you plan to quote, should be used as a cover sheet for your quote.

Please make every effort to have your quotes into our office by time deadline the prior to the letting date. **Make sure the correct letting date, project ID and proposal number, unit price and extension are included in your quote.** We prefer quotes be sent via SBN but prime's alternative's are acceptable. Our office hours are include hours and days. Please call our office as soon as possible prior to the letting if you need information/clarification to prepare your quote at contact number.

If you wish to discuss or evaluate your quote in more detail, contact us after the contract is awarded. Status of the contract can be checked at WisDOT's HCCI site at <http://roadwaystandards.dot.wi.gov/hcci/>

All questions should be directed to:

Project Manager, John Doe,
Phone: (000) 123-4567
Email: Joe@joetheplumber.com
Fax: (000) 123- 4657

Sample Contractor Solicitation Letter Page 2

This sample is provided as a guide not a requirement

REQUEST FOR QUOTATION

Prime's Name: _____

Letting Date: _____

Project ID: _____

Please check all that apply

- ☐ Yes, we will be quoting on the projects and items listed below
- ☐ No, we are not interested in quoting on the letting or its items referenced below
- ☐ Please take our name off your monthly DBE contact list
- ☐ We have questions about quoting this letting. Please have some one contact me at this number

Prime Contractor 's Contact Person

Phone: _____
Fax: _____
Email: _____

DBE Contractor Contact Person

Phone _____
Fax _____
Email _____

Please circle the jobs and items you will be quoting below

Proposal No.	1	2	3	4	5	6	7
County							

WORK DESCRIPTION:

Clear and Grub	X		X	X		X	X
Dump Truck Hauling	X		X	X		X	X
Curb & Gutter/Sidewalk, Etc.	X		X	X		X	X
Erosion Control Items	X		X	X		X	X
Signs and Posts/Markers	X		X	X		X	X
Traffic Control		X	X	X		X	X
Electrical Work/Traffic Signals		X	X	X		X	
Pavement Marking		X	X	X	X	X	X
Sawing Pavement		X	X	X	X	X	X
QMP, Base	X	X		X	X	X	X
Pipe Underdrain	X			X			
Beam Guard				X	X	X	X
Concrete Staining							X
Trees/Shrubs	X						X

Again please make every effort to have your quotes into our office by time deadline prior to the letting date.

We prefer quotes be sent via SBN but prime's preferred alternative's are acceptable.

If there are further questions please direct them to the prime contractor's contact person at phone number.

APPENDIX B BEST PRACTICES FOR PRIME CONTRACTOR & DBE SUBCONTRACTOR GOOD FAITH EFFORT

This list is not a set of requirements; it is a list of potential strategies

Primes

- Prime contractor open houses inviting DBE firms to see the bid “war room” or providing technical assistance
- Participate in speed networking and mosaic exercises as arranged by DBE office
- Host information sessions not directly associated with a bid letting;
- Participate in a formal mentor protégé or joint venture with a DBE firm
- Participate in WisDOT advisory committees i.e. TRANSAC, or Mega Project committee meetings
- Facilitate a small group DBE ‘training session’ Clarifying how your firm prepares for bid letting, evaluates subcontractors, preferred qualifications and communication methods
- Encourage subcontractors to solicit and highlight DBE participation in their quotes to you
- Quality of communication, not quantity creates the best results. Contractors should do as thorough a job as possible in communicating with DBE firms before the bid and provide any assistance requested to assure best possible bid.

DBE

- DBE firms should contact primes as soon as possible with questions regarding their quotes or bid; seven days prior is optimal.
- Continually check for contract addendums on the HCCI website through the Thursday prior to letting to stay abreast of changes.
- Review the status of contracts on the HCCI website reviewing the ‘apparent low bidder’ list, and bid tabs at a minimum.
- Prepare a portfolio or list of related projects and prime and supplier references; be sure to note transportation-related projects of similar size and scope, firm expertise and staffing.
- Participate in DBE office assessment programs
- Participate on advisory and mega-project committees
- Sign up to receive the DBE Contracting Update
- Consider membership in relevant industry or contractor organizations
- Active participation is a must. Quote as many projects as you can reasonably work on; quoting the primes and bidding as a prime with the department are the only ways to get work.

APPENDIX C

Types of Efforts considered in determining GFE

This list represents concepts being assessed; analysis requires additional steps

1. Whether the contractor attended any pre-solicitation or pre-bid meetings that were scheduled by WisDOT to inform DBEs of contracting and subcontracting opportunities;
2. Whether the contractor provided written notice to a reasonable number of specific DBEs that their interest in the contract was being solicited, in sufficient time to allow the DBEs to participate effectively;
3. Whether the contractor followed up initial solicitations of interest by contacting DBEs to determine if the DBEs were interested; returned the phone calls of interested DBE firms.
4. Whether the contractor selected portions of the work to be performed by DBEs in order to increase the likelihood of meeting the DBE goal;
5. Whether the contractor provided interested DBEs with adequate information about the plans, specifications and requirements of the contract;
6. Whether the contractor negotiated in good faith with interested DBEs, not rejected DBEs as unqualified without sound reasons based on a thorough investigation of their capabilities;
7. Whether the contractor made efforts to assist interested DBEs in being more competitive.
8. Whether the contractor effectively used the services of available minority community organizations: minority contractors groups, local, state, and Federal minority business assistance offices, and other organizations that provide assistance to small businesses and DBE firms.
9. Whether Prime used CRCS to identify DBE who specialize in relevant work areas.
10. Whether the contractor used available resources including contacting the DBE office, using WisDOT's website
11. Whether the contractor returned calls of firms expressing interest in a timely manner.

APPENDIX D
Good Faith Effort Evaluation Guidance
Excerpt from Appendix A of 49 CFR Part 26

APPENDIX A TO PART 26 -- GUIDANCE CONCERNING GOOD FAITH EFFORTS

- I. When, as a recipient, you establish a contract goal on a DOT assisted contract, a bidder must, in order to be responsible and/or responsive, make good faith efforts to meet the goal. The bidder can meet this requirement in either of two ways. First, the bidder can meet the goal, documenting commitments for participation by DBE firms sufficient for this purpose. Second, even if it doesn't meet the goal, the bidder can document adequate good faith efforts. This means that the bidder must show that it took all necessary and reasonable steps to achieve a DBE goal or other requirement of this part which, by their scope, intensity, and appropriateness to the objective, could reasonably be expected to obtain sufficient DBE participation, even if they were not fully successful.
- II. In any situation in which you have established a contract goal, part 26 requires you to use the good faith efforts mechanism of this part. As a recipient, it is up to you to make a fair and reasonable judgment whether a bidder that did not meet the goal made adequate good faith efforts. It is important for you to consider the quality, quantity, and intensity of the different kinds of efforts that the bidder has made. The efforts employed by the bidder should be those that one could reasonably expect a bidder to take if the bidder were actively and aggressively trying to obtain DBE participation sufficient to meet the DBE contract goal. Mere pro forma efforts are not good faith efforts to meet the DBE contract requirements. We emphasize, however, that your determination concerning the sufficiency of the firm's good faith efforts is a judgment call: meeting quantitative formulas is not required.
- III. The Department also strongly cautions you against requiring that a bidder meet a contract goal (i.e., obtain a specified amount of DBE participation) in order to be awarded a contract, even though the bidder makes an adequate good faith efforts showing. This rule specifically prohibits you from ignoring bona fide good faith efforts.
- IV. The following is a list of types of actions which you should consider as part of the bidder's good faith efforts to obtain DBE participation. It is not intended to be a mandatory checklist, nor is it intended to be exclusive or exhaustive. Other factors or types of efforts may be relevant in appropriate cases.
 - A. Soliciting through all reasonable and available means (e.g. attendance at pre-bid meetings, advertising and/or written notices) the interest of all certified DBEs who have the capability to perform the work of the contract. The bidder must solicit this interest within sufficient time to allow the DBEs to respond to the solicitation. The bidder must determine with certainty if the DBEs are interested by taking appropriate steps to follow up initial solicitations.
 - B. Selecting portions of the work to be performed by DBEs in order to increase the likelihood that the DBE goals will be achieved. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate DBE participation, even when the prime contractor might otherwise prefer to perform these work items with its own forces.
 - C. Providing interested DBEs with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation.

- D.
 - (1) Negotiating in good faith with interested DBEs. It is the bidder's responsibility to make a portion of the work available to DBE subcontractors and suppliers and to select those portions of the work or material needs consistent with the available DBE subcontractors and suppliers, so as to facilitate DBE participation. Evidence of such negotiation includes the names, addresses, and telephone numbers of DBEs that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional agreements could not be reached for DBEs to perform the work.
 - (2) A bidder using good business judgment would consider a number of factors in negotiating with subcontractors, including DBE subcontractors, and would take a firm's price and capabilities as well as contract goals into consideration. However, the fact that there may be some additional costs involved in finding and using DBEs is not in itself sufficient reason for a bidder's failure to meet the contract DBE goal, as long as such costs are reasonable. Also, the ability or desire of a prime contractor to perform the work of a contract with its own organization does not relieve the bidder of the responsibility to make good faith efforts. Prime contractors are not, however, required to accept higher quotes from DBEs if the price difference is excessive or unreasonable.
 - E. Not rejecting DBEs as being unqualified without sound reasons based on a thorough investigation of their capabilities. The contractor's standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. non-union employee status) are not legitimate causes for the rejection or non solicitation of bids in the contractor's efforts to meet the project goal.
 - F. Making efforts to assist interested DBEs in obtaining bonding, lines of credit, or insurance as required by the recipient or contractor.
 - G. Making efforts to assist interested DBEs in obtaining necessary equipment, supplies, materials, or related assistance or services.
 - H. Effectively using the services of available minority/women community organizations; minority/women contractors' groups; local, state, and Federal minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBEs.
- V. In determining whether a bidder has made good faith efforts, you may take into account the performance of other bidders in meeting the contract. For example, when the apparent successful bidder fails to meet the contract goal, but others meet it, you may reasonably raise the question of whether, with additional reasonable efforts, the apparent successful bidder could have met the goal. If the apparent successful bidder fails to meet the goal, but meets or exceeds the average DBE participation obtained by other bidders, you may view this, in conjunction with other factors, as evidence of the apparent successful bidder having made good faith efforts.

Appendix E

Small Business Network [SBN] Overview

The Small Business Network is a part of the Bid Express® service that was created to ensure that prime bidders have a centralized online location to find subs - including small and disadvantaged business enterprises (DBEs). It is available for prime bidders to use as part of their Basic Service subscription. Within the Small Business Network, **Prime Contractors** can:

1. Easily select proposals, work types and items:
 - a. After adding applicable work types, select items that you wish to quote. Enter the sub-quote quantities and add comments, if desired. Adding or removing items and work types can be done quickly. If needed, you can save the sub-quote for completion at a later time.
2. Create sub-quotes for the subcontracting community:
 - a. Create sub-quotes with ease using the intuitive sub-quote creator. In seven short steps, you can rapidly create a custom sub-quote directed to all subcontractors that bid on the applicable work types. Steps include: provide contact information and sub-quote expiration date, select letting and proposal, add work types and items, specify terms and conditions, upload attachments, and select vendors.
 - b. Create a sub-quote to send to subcontractors or suppliers that lists the items in a proposal that you want quoted
 - c. Create an unlimited number of sub-quotes for items you want quoted, and optionally mark them as a DBE-preferred request
 - d. Add attachments to sub-quotes
3. View sub-quote requests & responses:
 - a. After logging into the Bid Express service, you can quickly review all of your sub-quote requests and all unsolicited sub-quote requests from subcontractors. To simplify the Small Business Network home screen, sub-quote requests can be hidden with one click if they are not applicable.
 - b. View or receive unsolicited sub-quotes that subcontractors have posted, complete with terms, conditions and pricing
4. View Record of Subcontractor Outreach Effort:
 - a. For each sub-quote produced, a *Record of Subcontractor Outreach Effort* is generated that shows the response statistics for a particular sub-quote. If accepted by the letting agency, this report may serve as proof of a “Good Faith” effort in reaching out to the DBE community.
 - b. Easily locate pre-qualified and certified small and disadvantaged businesses
 - c. Advertise to small and disadvantaged businesses more efficiently and cost effectively
 - d. Document your interactions with subs/DBEs by producing an Outreach Report (may be accepted as proof of DBE outreach at the discretion of each agency)

The Small Business Network is a part of the Bid Express® service that was created to ensure that small businesses have a centralized area to access information about upcoming projects. It can help small businesses learn more about opportunities, compete more effectively, network with other contractors and subcontractors, and win more jobs.

1. View and reply to sub-quote requests from primes:
 - a. After logging into the Bid Express service, you can quickly review all incoming sub-quote requests and all unsolicited sub-quotes created by your company. Receive notifications by selected work type. To simplify on the Small Business Network home screen, sub-quote requests can be filtered by work types relevant to your interests, or hidden with one click if they are not applicable.
2. Select items when responding to sub-quote requests from primes:
 - a. You have the freedom to choose and price any number of items when responding to a sub-quote request. Quantities can be modified, and per-item comments are also available.
 - b. View requests for sub-quotes for work that primes have posted for projects they are bidding, add your pricing, terms, and conditions, and submit completed sub-quotes to the requesting primes
 - c. Add attachments to a sub-quote
3. Create and send unsolicited sub-quotes to specific contractors:
 - a. Create unsolicited sub-quotes with ease using the intuitive sub-quote creator. In eight short steps, you can rapidly create a custom sub-quote directed at any number of specific vendors of your choosing. Steps include: provide contact information and sub-quote expiration date, select letting and proposal, add work types and items, specify terms and conditions, upload attachments, and select vendors.
4. Easily select and price items for unsolicited sub-quotes:
 - a. After adding applicable work types, select items that you wish to quote. The extended price calculates automatically, cutting out costly calculation errors. Comments can be provided on an per-item basis as well.
 - b. Create an unsolicited sub-quote that lists the items from a proposal that you want to quote, include pricing, terms and conditions, and send it to selected prime/plan holder
 - c. Add attachments to a sub-quote
 - d. Add unsolicited work items to sub-quotes that you are responding to
5. Easy Access to Valuable Information
 - a. Receive a confirmation that your sub-quote was opened by a prime
 - b. View Bid Tab Analysis data from past bids, including the high, average and low prices of items.
 - c. View important notices and publications from DOT targeted to small and disadvantaged businesses
6. Accessing Small Business Network for WisDOT contracting opportunities
 - a. If you are a contractor not yet subscribing to the Bid Express service, go to **www.bidx.com** and select “Order Bid Express.” The Small Business Network is a part of the Bid Express Basic Service.
 - b. DBE firms can request a Bid Express Small Business Network Account at no cost by calling 414-438-4588

ADDITIONAL SPECIAL PROVISION 4

Payment to 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 PROVISION 6
ASP 6 - Modifications to the standard specifications

Make the following revisions to the 2013 edition of the standard specifications:

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.

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

501.2.1 Portland Cement

Replace paragraph one with the following effective with the March 2013 letting:

- (1) Use cement conforming to ASTM specifications as follows:
- Type I portland cement; ASTM C150.
 - Type II portland cement; ASTM C150.
 - Type III portland cement; ASTM C50, for high early strength.
 - Type IP portland-pozzolan cement; ASTM C595, except maximum loss on ignition is 2.0 percent.
 - Type IS portland blast-furnace slag cement; ASTM C595.
 - Type IL portland-limestone cement; ASTM C595, except maximum nominal limestone content is 10 percent with no individual test result exceeding 12.0 percent.

501.2.5.5 Sampling and Testing

Replace the entire text with the following effective with the January 2013 letting:

- (1) Sample and test aggregates for concrete according to the following:
- | | |
|--|---------------------------|
| Sampling aggregates | AASHTO T2 |
| Lightweight pieces in aggregate | AASHTO T113 |
| Material finer than No. 200 sieve | AASHTO T11 |
| Unit weight of aggregate | AASHTO T19 |
| Organic impurities in sands | AASHTO T21 |
| Sieve analysis of aggregates | AASHTO T27 |
| Effect of organic impurities in fine aggregate | AASHTO T71 |
| Los Angeles abrasion of coarse aggregate | AASHTO T96 |
| Freeze-thaw soundness of coarse aggregate..... | AASHTO T103 |
| Sodium sulfate soundness of aggregates | AASHTO T104 |
| Specific gravity and absorption of fine aggregate | AASHTO T84 |
| Specific gravity and absorption of coarse aggregate | AASHTO T85 |
| Flat & elongated pieces based on a 3:1 ratio..... | ASTM D4791 ^[1] |
| Sampling fresh concrete | AASHTO R60 |
| Making and curing concrete compressive strength test specimens | AASHTO T23 |
| Compressive strength of molded concrete cylinders | AASHTO T22 |

^[1] As modified in CMM 8-60.

501.2.6 Fly Ash

Replace paragraph three with the following effective with the March 2013 letting:

- (3) Test fly ash using a recognized laboratory, as defined in 501.2.2(1), starting at least 30 days before its proposed use, and continuing at ASTM-required frequencies as the work progresses. The manufacturer shall test the chemical and physical properties listed in tables 1 and 2 of ASTM C618 at the frequencies and by the test methods prescribed in ASTM C311.

501.3.1.1.1 Air-Entrained Concrete

Replace paragraph one with the following effective with the March 2013 letting:

- (1) Prepare air-entrained concrete with type I, IL, II, IS, or IP portland cement and sufficient air-entraining admixture to produce concrete with the air content specified in 501.3.2.4.

503.2.2 Concrete

Replace paragraph five with the following effective with the March 2013 letting:

- (5) Furnish prestressed concrete members cast from air-entrained concrete, except I-type girders may use non-air-entrained concrete. Use type I, IL, IS, , IP, II, or III portland cement. The contractor may replace up to 30 percent of type I, IL, II, or III portland cement with an equal weight of fly ash, slag, or a combination of fly ash and slag, except for prestressed box girders and slabs, the contractor shall replace 20-30 percent of the cement with fly ash, slag, or a combination of fly ash and slag. Ensure that fly ash conforms to 501.2.6 and slag conforms to 501.2.7. Use only one source and replacement rate for work under a single bid item. Use a department-approved air-entraining admixture conforming to 501.2.2 for air-entrained concrete. Use only size No. 1 coarse aggregate conforming to 501.2.5.4.

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.

518.2.1 General

Replace paragraph one with the following effective with the March 2013 letting:

- (1) Furnish portland cement and water as specified in 501.2. Unless the engineer allows an alternate, use either type I, IL, IS, , or IP portland cement.

526.3.3 Temporary Structures

Replace paragraphs two through four with the following effective with the January 2013 letting:

- (2) Inspect temporary structures conforming to the National Bridge Inspection Standards (NBIS) and the department's structure inspection manual before opening to traffic. Perform additional inspections, as the department's structure inspection manual requires, based on structure type and time in service. Submit inspection reports on department form DT2007 to the engineer and electronic copies to the department's bureau of structures maintenance section. Ensure that a department-certified active team leader, listed online in the department's highway structures information system (HSIS), performs the inspections.
- (3) Maintain temporary structures and approaches in place until no longer needed. Unless the engineer directs otherwise, completely remove and dispose of as specified in 203.3.4. Contractor-furnished materials remain the contractor's property upon removal.

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 ^[1]	2 3/4"	3 1/4"	4 1/4"	4 3/4"
		SUM IN MIDDLE 1/2 OF LENGTH ^[2]	11"	13"	17"	19
	WIDE FACE	EDGE KNOT N MIDDLE 1/3 OF LENGTH	1 3/8"	1 5/8"		
		EDGE KNOT AT END ^[1]	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"

^[1] But do not exceed the maximum allowable knot on the centerline of the wide face of the same piece.

^[2] 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)

639.2.1 General

Replace paragraph two with the following effective with the March 2013 letting:

- (2) For grout use fine aggregate conforming to 501.2.5.3 and type I, IL, IS, or IP portland cement.

649.3.1 General

Replace paragraphs three and four with the following effective with the March 2013 letting:

- (3) For pavements open to all traffic, apply centerline and no-passing barrier line markings as follows:
- On intermediate pavement layers, including milled surfaces, on the same day the pavement is placed or milled.
 - On the upper layer of pavement, on the same day the pavement is placed unless the contractor applies permanent marking on the same day the pavement is placed.

If weather conditions preclude same-day application, apply as soon as weather allows. Do not resume next-day construction operations until these markings are completed unless the engineer allows otherwise.

- (4) If required to apply no passing zone temporary pavement marking, reference the beginning and end of all existing no-passing barrier lines. Apply temporary no-passing barrier lines at those existing locations. If the contract contains the Locating No-Passing Zones bid item, relocate the no-passing zones as specified in section 648 for permanent marking.

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.

715.2.3.1 Pavements

Replace paragraph two with the following effective with the March 2013 letting:

- (2) Provide a minimum cement content of 565 pounds per cubic yard, except if using type I, IL, or III portland cement in a mix where the geologic composition of the coarse aggregate is primarily igneous or metamorphic materials, provide a minimum cement content of 660 pounds per cubic yard.

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 2013 edition of the standard specifications:

102.12 Public Opening of Proposals

Correct 102.12(1) errata by changing htm to shtm in the web link.

- (1) The department will publicly open proposals at the time and place indicated in the notice to contractors. The department will post the total bid for each proposal on the Bid Express web site beginning at 9:30 AM except as specified in 102.8. If a proposal has no total bid shown, the department will not post the bid. After verification for accuracy under 103.1, the department will post bid totals on the department's HCCI web site.

<http://roadwaystandards.dot.wi.gov/hcci/bid-letting/index.shtm>

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).
-

204.3.2.2 Removing Items

Correct errata by changing the reference from 490.3.2 to 490.3.

- (5) Under the Removing Asphaltic Surface Milling bid item, remove and dispose of existing asphaltic pavement or surfacing by milling at the location and to the depth the plans show. Mill the asphaltic pavement or surfacing as specified for milling salvaged asphaltic pavement in 490.3.
-

501.2.9 Concrete Curing Materials.

Correct errata by changing AASHTO M171 to ASTM C171.

- (4) Furnish polyethylene-coated burlap conforming to ASTM C171 for white burlap-polyethylene sheets.
-

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 BoltsCorrect errata by changing 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 GeneralCorrect 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 FoundationsCorrect errata by changing section 511 to 550.

- (1) Drive piles as specified in for steel piling in section 550.

701.3 Contractor TestingCorrect errata by updating AASHTO T141 to AASHTO R60 and changing AASHTO T309 to ASTM C1064.

- (1) Perform contract required QC tests for samples randomly located according to CMM 8-30. Also perform other tests as necessary to control production and construction processes, and additional testing enumerated in the contractor's quality control plan or that the engineer directs. Use test methods as follows:

TABLE 701-2 TESTING STANDARDS

TEST	TEST STANDARD
Washed P 200 analysis	AASHTO T11 ^[1]
Sieve analysis of fine and coarse aggregate	AASHTO T27 ^[1]
Aggregate moisture	AASHTO T255 ^[1]
Sampling freshly mixed concrete	AASHTO R60
Air content of fresh concrete	AASHTO T152 ^[2]
Concrete slump	AASHTO T119 ^[2]
Concrete temperature	ASTM C1064
Concrete compressive strength	AASHTO T22
Making and curing concrete cylinders	AASHTO T23
Standard moist curing for concrete cylinders	AASHTO M201

^[1] As modified in CMM 8-60.

^[2] As modified in CMM 8-70.

ADDITIONAL SPECIAL PROVISION 7

- A. Reporting 1st Tier and DBE Payments During Construction
1. Comply with reporting requirements specified in the department's Civil Rights Compliance, Contractor's User Manual, Sublets and Payments.
 2. Report payments to all DBE firms within 10 calendar days of receipt of a progress payment by the department or a contractor for work performed, materials furnished, or materials stockpiled by a DBE firm. Report the payment as specified in A(1) for all work satisfactorily performed and for all materials furnished or stockpiled.
 3. Report payments to all first tier subcontractor relationships within 10 calendar days of receipt of a progress payment by the department for work performed. Report the payment as specified in A(1) for all work satisfactorily performed.
 4. All tiers shall report payments as necessary to comply with the DBE payment requirement as specified in A(2).
 5. Require all first tier relationships, DBE firms and all other tier relationships necessary to comply with the DBE payment requirement in receipt of a progress payment by contractor to acknowledge receipt of payment as specified in A(1), (2), (3) and (4).
 6. All agreements made by a contractor shall include the provisions in A(1), (2), (3), (4) and (5), and shall be binding on all first tier subcontractor relationships and all contractors and subcontractors utilizing DBE firms on the project.
- B. Costs for conforming to this special provision are incidental to the contract.

**ADDITIONAL SPECIAL PROVISION 9
Electronic Certified Payroll Submittal**

(1) Use the department's Civil Rights Compliance System (CRCS) to submit certified payrolls electronically. Details are available online through the department's highway construction contractor information (HCCI) site on the Labor, Wages, and EEO Information page at:

<http://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
WAUKESHA 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	31.68	18.59	50.27
Cement Finisher	29.33	17.03	46.36
Future Increase(s): Add \$1.86 on 6/1/12; Add \$1.87 on 6/1/13; Add \$1.87 on 6/1/14; Add \$1.87 on 6/1/15; Add \$1.75 on 6/ 1/ 16.			
Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.40/hr when the Wisconsin Department of Transportation or responsible governing agency requires that work be performed at night under artificial illumination with traffic control and the work is completed after sunset and before sunrise.			
Electrician	31.14	24.60	55.74
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	27.87	14.39	42.26
Pavement Marking Operator	27.87	14.39	42.26
Piledriver	28.11	23.94	52.05
Roofer or Waterproofer	28.85	14.60	43.45
Teledata Technician or Installer	24.50	15.17	39.67
Tuckpointer, Caulker or Cleaner	34.30	15.47	49.77
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	14.42	43.20
Heavy Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	26.98	13.21	40.19
Light Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	23.38	12.48	35.86

<u>TRADE OR OCCUPATION</u>	<u>HOURLY BASIC RATE OF PAY</u>	<u>HOURLY FRINGE BENEFITS</u>	<u>TOTAL</u>
	\$	\$	\$
Groundman - ELECTRICAL LINE CONSTRUCTION ONLY	21.30	10.97	32.27

TRUCK DRIVERS

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	22.50	16.19	38.69
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.			
Articulated, Euclid, Dumptor, Off Road Material Hauler	22.50	16.19	38.69
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.			
Pavement Marking Vehicle	23.84	14.70	38.54
Shadow or Pilot Vehicle	24.76	15.35	40.11
Truck Mechanic	24.91	15.35	40.26

LABORERS

General Laborer	24.34	17.85	42.19
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 \$.15/hr for air tool operator, joint sawer and filler (pavement), vibrator or tamper operator (mechanical hand operated), chain saw operator and demolition burning torch laborer; Add \$.35/hr for bituminous worker (raker and luteman), formsetter (curb, sidewalk and pavement) and strike off man; Add \$.50/hr for line and grade specialist; Add \$.65/hr for blaster and powderman; Add \$2.01/hr for topman; Add \$2.46/hr for bottomman; Add \$3.23/hr for pipelayer. / DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add \$1.25/hr for work on projects involving temporary traffic control setup, for lane and shoulder closures, when work under artificial illumination conditions is necessary as required by the project provisions (including prep time prior to and/or cleanup after such time period).			
Asbestos Abatement Worker	22.00	16.86	38.86
Landscaper	23.71	15.03	38.74
Flagperson or Traffic Control Person	20.83	17.85	38.68
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)	17.09	14.40	31.49
Railroad Track Laborer	17.00	1.71	18.71

HEAVY EQUIPMENT OPERATORS

Crane, Tower Crane, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 176 Ft or Over; Crane, Tower Crane, Pedestal Tower or	34.22	18.90	53.12
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<u>TRADE OR OCCUPATION</u>	<u>HOURLY BASIC RATE OF PAY</u>	<u>HOURLY FRINGE BENEFITS</u>	<u>TOTAL</u>
	<u>\$</u>	<u>\$</u>	<u>\$</u>
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).			
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 & 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).	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>
	\$	\$	\$
such time period).			
Belting, Burlap, Texturing Machine; Broom or Sweeper; Compactor (Self-Propelled or Tractor Mounted, Towed & Light Equipment); Concrete Finishing Machine (Road Type); Environmental Burner; Farm or Industrial Type Tractor; Fireman (Asphalt Plant, Pile Driver & Derrick NOT Performing Work on the Great Lakes); Forklift; Greaser; Hoist (Tugger, Automatic); Jeep Digger; Joint Sawyer (Multiple Blade); Launch (NOT Performing Work on the Great Lakes); Lift Slab Machine; Mechanical Float; Mulcher; Power Subgrader; Robotic Tool Carrier (With or Without Attachments); Roller (Rubber Tire, 5 Ton or Under); Self Propelled Chip Spreader; Shouldering Machine; Skid Steer Loader (With or Without Attachments); Telehandler; Tining or Curing Machine. Future Increase(s): Add \$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).	32.96	18.90	51.86
Air Compressor (&/or 400 CFM or Over); Air, Electric or Hydraulic Jacking System; Augers (Vertical & Horizontal); Automatic Belt Conveyor & Surge Bin; Boiler (Temporary Heat); Concrete Proportioning Plant; Crusher, Screening or Wash Plant; Generator (&/or 150 KW or Over); Heaters (Mechanical); High Pressure Utility Locating Machine (Daylighting Machine); Mudjack; 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 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).	32.67	18.90	51.57
Fiber Optic Cable Equipment.	24.39	15.45	39.84

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: December 21, 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	\$24.34	16.74	1 & 2 Axles	23.16	17.13
Group 2: Air Tool Operator; Joint Sawyer and Filler (Pavement); Vibrator or Tamper Operator (Mechanical Hand Operated); Chain Saw Operator; Demolition Burning Torch Laborer.....	24.49	16.74	Three or More Axles; Euclids, Dumptr & Articulated, Truck Mechanic.....	23.31	17.13
Group 3: Bituminous Worker (Raker and Luteman); Formsetter (Curb, Sidewalk, and Pavement); Strike Off man.....	24.69	16.74			
Group 4: Line and Grade Specialist	24.84	16.74			
Group 5: Blaster and Powderman	24.99	16.74			
Group 6: Flagperson traffic control person	20.83	16.74			

CLASSES OF LABORER AND MECHANICS

Bricklayer	35.58	16.07
Carpenter	30.52	14.41
Piledriverman	27.25	19.46
Ironworker	30.51	22.72
Cement Mason/Concrete Finisher	30.69	17.53
Electrician	See Page 3	
Line Construction		
Lineman.....	38.25	18.00
Heavy Equipment Operator	34.43	16.71
Equipment Operator.....	30.60	15.41
Heavy Groundman Driver.....	26.78	14.11
Light Groundman Driver	24.86	13.45
Groundsman.....	21.04	12.16
Millwrights.....	26.32	13.98
Painter, Brush.....	29.52	18.79
Painter, Spray and Sandblaster	30.27	18.79
Painter, Bridge.....	29.87	18.79
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; Modification #13 dated December 7, 2012; Modification #14 dated December 14, 2012; Modification #15 dated December 21, 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: December 21, 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); endloader hydraulic backhoe (tractor-type); trenching machine; skid rigs; tractor, side boom (heavy); drilling or boring machine (mechanical heavy); roller (over 5 tons); percussion or rotary drilling machine; air track; blaster; loading machine (conveyor); tugger; boatmen; winches and A-frames; post driver; material hoist operator.	\$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, endloader (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: December 21, 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	19.23		
Area 13	32.20	21.64	Area 10 -	CALUMET (Township of New Holstein), DODGE (East of Hwy. 26 including Chester Township), FOND DU LAC, MANITOWOC (Schleswig), and SHEBOYGAN COUNTIES
Teledata System Installer				
Area 14			Area 11 -	DOUGLAS COUNTY
Installer/Technician	21.89	11.83		
Sound & Communications			Area 12 -	RACINE (except Burlington township) COUNTY
Area 15				
Installer	16.47	14.84	Area 13 -	MILWAUKEE, OZAUKEE, WASHINGTON and WAUKESHA COUNTIES
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)				

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

REVISED:

CONTRACT:
20130312014PROJECT(S):
2753-06-71FEDERAL ID(S):
WISC 2013078

CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS

SECTION 0001 ROADWAY

0010	201.0105 CLEARING	41.000 STA	.		.	
0020	201.0120 CLEARING	1,902.000 ID	.		.	
0030	201.0205 GRUBBING	41.000 STA	.		.	
0040	201.0220 GRUBBING	1,902.000 ID	.		.	
0050	203.0100 REMOVING SMALL PIPE CULVERTS	36.000 EACH	.		.	
0060	203.0600.S REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS (STATION) 01. 12+61	LUMP	LUMP		.	
0070	203.0600.S REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS (STATION) 02. 173+28	LUMP	LUMP		.	
0080	204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS	994.000 SY	.		.	
0090	204.0150 REMOVING CURB & GUTTER	662.000 LF	.		.	

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			DOLLARS	CTS	DOLLARS	CTS
0100	204.0170 REMOVING FENCE	2,537.000 LF	.		.	
0110	204.0195 REMOVING CONCRETE BASES	6.000 EACH	.		.	
0120	205.0100 EXCAVATION COMMON	69,386.000 CY	.		.	
0130	206.1000 EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 01. B-67-336	LUMP	LUMP		.	
0140	206.1000 EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 02. B-67-335	LUMP	LUMP		.	
0150	209.0100 BACKFILL GRANULAR	794.000 CY	.		.	
0160	210.0100 BACKFILL STRUCTURE	695.000 CY	.		.	
0170	213.0100 FINISHING ROADWAY (PROJECT) 01. 2753-06-71	1.000 EACH	.		.	
0180	305.0110 BASE AGGREGATE DENSE 3/4-INCH	4,128.000 TON	.		.	
0190	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH	60,765.000 TON	.		.	

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			DOLLARS	CTS	DOLLARS	CTS
0200	305.0125 BASE AGGREGATE DENSE 1 1/4-INCH	43.000 CY	.		.	
0210	310.0110 BASE AGGREGATE OPEN GRADED	15,261.000 TON	.		.	
0220	311.0110 BREAKER RUN	68,790.000 TON	.		.	
0230	415.0410 CONCRETE PAVEMENT APPROACH SLAB	778.000 SY	.		.	
0240	416.0160 CONCRETE DRIVEWAY 6-INCH	463.000 SY	.		.	
0250	416.1010 CONCRETE SURFACE DRAINS	34.300 CY	.		.	
0260	440.4410.S INCENTIVE IRI RIDE	14,500.000 DOL	1.00000		14500.00	
0270	455.0115 ASPHALTIC MATERIAL PG64-22	1,468.000 TON	.		.	
0280	455.0120 ASPHALTIC MATERIAL PG64-28	144.000 TON	.		.	
0290	455.0605 TACK COAT	3,580.000 GAL	.		.	
0300	460.1100 HMA PAVEMENT TYPE E-0.3	2,310.000 TON	.		.	

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			DOLLARS	CTS	DOLLARS	CTS
0310	460.1110 HMA PAVEMENT TYPE E-10	24,472.000 TON	.		.	
0320	460.2000 INCENTIVE DENSITY HMA PAVEMENT	18,343.000 DOL	1.00000		18343.00	
0330	465.0125 ASPHALTIC SURFACE TEMPORARY	500.000 TON	.		.	
0340	465.0315 ASPHALTIC FLUMES	40.000 SY	.		.	
0350	502.0100 CONCRETE MASONRY BRIDGES	1,639.000 CY	.		.	
0360	502.3200 PROTECTIVE SURFACE TREATMENT	1,870.000 SY	.		.	
0370	505.0605 BAR STEEL REINFORCEMENT HS COATED BRIDGES	258,050.000 LB	.		.	
0380	513.7015 RAILING STEEL TYPE C3 (STRUCTURE) 02. B-67-335	LUMP	LUMP		.	
0390	516.0500 RUBBERIZED MEMBRANE WATERPROOFING	74.000 SY	.		.	
0400	520.8000 CONCRETE COLLARS FOR PIPE	1.000 EACH	.		.	
0410	522.0118 CULVERT PIPE REINFORCED CONCRETE CLASS III 18-INCH	120.000 LF	.		.	

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			DOLLARS	CTS	DOLLARS	CTS
0420	522.0136 CULVERT PIPE REINFORCED CONCRETE CLASS III 36-INCH	60.000 LF	.		.	
0430	522.1015 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 15-INCH	4.000 EACH	.		.	
0440	522.1018 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 18-INCH	10.000 EACH	.		.	
0450	522.1024 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH	4.000 EACH	.		.	
0460	522.1036 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 36-INCH	5.000 EACH	.		.	
0470	550.0020 PRE-BORING ROCK OR CONSOLIDATED MATERIALS	444.000 LF	.		.	
0480	550.1100 PILING STEEL HP 10-INCH X 42 LB	2,470.000 LF	.		.	
0490	601.0411 CONCRETE CURB & GUTTER 30-INCH TYPE D	183.000 LF	.		.	
0500	601.0557 CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE D	27,543.000 LF	.		.	
0510	601.0600 CONCRETE CURB PEDESTRIAN	56.000 LF	.		.	

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			DOLLARS	CTS	DOLLARS	CTS
0520	602.0410 CONCRETE SIDEWALK 5-INCH	270.000 SF	.		.	
0530	602.0505 CURB RAMP DETECTABLE WARNING FIELD YELLOW	302.000 SF	.		.	
0540	606.0200 RIPRAP MEDIUM	43.000 CY	.		.	
0550	606.0300 RIPRAP HEAVY	730.000 CY	.		.	
0560	608.0318 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 18-INCH	450.000 LF	.		.	
0570	608.0324 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 24-INCH	4,970.000 LF	.		.	
0580	608.0336 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 36-INCH	342.000 LF	.		.	
0590	608.0415 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 15-INCH	2,275.000 LF	.		.	
0600	608.0512 STORM SEWER PIPE REINFORCED CONCRETE CLASS V 12-INCH	473.000 LF	.		.	
0610	611.0530 MANHOLE COVERS TYPE J	29.000 EACH	.		.	
0620	611.0615 INLET COVERS TYPE F	120.000 EACH	.		.	

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			DOLLARS	CTS	DOLLARS	CTS
0630	611.0642 INLET COVERS TYPE MS	4.000 EACH	.		.	
0640	611.2004 MANHOLES 4-FT DIAMETER	25.000 EACH	.		.	
0650	611.2006 MANHOLES 6-FT DIAMETER	4.000 EACH	.		.	
0660	611.2044 MANHOLES 4X4-FT	6.000 EACH	.		.	
0670	611.2066 MANHOLES 6X6-FT	1.000 EACH	.		.	
0680	611.3253 INLETS 2.5X3-FT	113.000 EACH	.		.	
0690	611.3901 INLETS MEDIAN 1 GRATE	4.000 EACH	.		.	
0700	611.8110 ADJUSTING MANHOLE COVERS	36.000 EACH	.		.	
0710	611.8120.S COVER PLATES TEMPORARY	36.000 EACH	.		.	
0720	612.0106 PIPE UNDERDRAIN 6-INCH	33,044.000 LF	.		.	
0730	612.0406 PIPE UNDERDRAIN WRAPPED 6-INCH	909.000 LF	.		.	

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			DOLLARS	CTS	DOLLARS	CTS
0740	612.0700 DRAIN TILE EXPLORATION	500.000 LF	.		.	
0750	612.0806 APRON ENDWALLS FOR UNDERDRAIN REINFORCED CONCRETE 6-INCH	6.000 EACH	.		.	
0760	614.0150 ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	4.000 EACH	.		.	
0770	614.2300 MGS GUARDRAIL 3	50.000 LF	.		.	
0780	614.2500 MGS THRIE BEAM TRANSITION	160.000 LF	.		.	
0790	614.2610 MGS GUARDRAIL TERMINAL EAT	4.000 EACH	.		.	
0800	616.0700.S FENCE SAFETY	500.000 LF	.		.	
0810	619.1000 MOBILIZATION	1.000 EACH	.		.	
0820	620.0300 CONCRETE MEDIAN SLOPED NOSE	357.000 SF	.		.	
0830	621.0100 LANDMARK REFERENCE MONUMENTS	5.000 EACH	.		.	
0840	625.0100 TOPSOIL	10,000.000 SY	.		.	

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0850	625.0105 TOPSOIL	68.000 CY	.		.	
0860	625.0500 SALVAGED TOPSOIL	53,618.000 SY	.		.	
0870	627.0200 MULCHING	32,724.000 SY	.		.	
0880	628.1104 EROSION BALES	633.000 EACH	.		.	
0890	628.1504 SILT FENCE	14,141.000 LF	.		.	
0900	628.1520 SILT FENCE MAINTENANCE	14,141.000 LF	.		.	
0910	628.1905 MOBILIZATIONS EROSION CONTROL	1.000 EACH	.		.	
0920	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL	5.000 EACH	.		.	
0930	628.2008 EROSION MAT URBAN CLASS I TYPE B	28,023.000 SY	.		.	
0940	628.2027 EROSION MAT CLASS II TYPE C	4,730.000 SY	.		.	
0950	628.6005 TURBIDITY BARRIERS	540.000 SY	.		.	

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0960	628.7005 INLET PROTECTION TYPE A	4.000 EACH	.		.	
0970	628.7010 INLET PROTECTION TYPE B	95.000 EACH	.		.	
0980	628.7020 INLET PROTECTION TYPE D	20.000 EACH	.		.	
0990	628.7504 TEMPORARY DITCH CHECKS	240.000 LF	.		.	
1000	628.7555 CULVERT PIPE CHECKS	9.000 EACH	.		.	
1010	628.7560.S STONE OR ROCK DITCH CHECKS	10.000 CY	.		.	
1020	629.0205 FERTILIZER TYPE A	22.000 CWT	.		.	
1030	630.0130 SEEDING MIXTURE NO. 30	475.000 LB	.		.	
1040	630.0200 SEEDING TEMPORARY	297.000 LB	.		.	
1050	631.0300 SOD WATER	185.000 MGAL	.		.	
1060	631.1000 SOD LAWN	8,125.000 SY	.		.	

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
1070	632.9101 LANDSCAPE PLANTING SURVEILLANCE AND CARE CYCLES	20.000 EACH	.		.	
1080	633.5200 MARKERS CULVERT END	4.000 EACH	.		.	
1090	642.5201 FIELD OFFICE TYPE C	1.000 EACH	.		.	
1100	643.0100 TRAFFIC CONTROL (PROJECT) 01. 2753-06-71	1.000 EACH	.		.	
1110	643.0300 TRAFFIC CONTROL DRUMS	42,928.000 DAY	.		.	
1120	643.0420 TRAFFIC CONTROL BARRICADES TYPE III	15,528.000 DAY	.		.	
1130	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A	11,176.000 DAY	.		.	
1140	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C	11,244.000 DAY	.		.	
1150	643.0900 TRAFFIC CONTROL SIGNS	9,644.000 DAY	.		.	
1160	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II	50.000 EACH	.		.	
1170	643.1050 TRAFFIC CONTROL SIGNS PCMS	980.000 DAY	.		.	

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			DOLLARS	CTS	DOLLARS	CTS
1180	643.2000 TRAFFIC CONTROL DETOUR (PROJECT) 01. 2753-06-71	1.000 EACH	.		.	
1190	643.3000 TRAFFIC CONTROL DETOUR SIGNS	38,080.000 DAY	.		.	
1200	645.0111 GEOTEXTILE FABRIC TYPE DF SCHEDULE A	4,847.000 SY	.		.	
1210	645.0112 GEOTEXTILE FABRIC TYPE DF SCHEDULE B	34,587.000 SY	.		.	
1220	645.0120 GEOTEXTILE FABRIC TYPE HR	1,115.000 SY	.		.	
1230	645.0130 GEOTEXTILE FABRIC TYPE R	43.000 SY	.		.	
1240	645.0135 GEOTEXTILE FABRIC TYPE SR	8,202.000 SY	.		.	
1250	646.0106 PAVEMENT MARKING EPOXY 4-INCH	38,622.000 LF	.		.	
1260	646.0126 PAVEMENT MARKING EPOXY 8-INCH	1,836.000 LF	.		.	
1270	646.0136 PAVEMENT MARKING EPOXY 12-INCH	198.000 LF	.		.	
1280	646.0600 REMOVING PAVEMENT MARKINGS	2,000.000 LF	.		.	

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			DOLLARS	CTS	DOLLARS	CTS
1290	647.0166 PAVEMENT MARKING ARROWS EPOXY TYPE 2	13.000 EACH	.		.	
1300	647.0356 PAVEMENT MARKING WORDS EPOXY	13.000 EACH	.		.	
1310	647.0456 PAVEMENT MARKING CURB EPOXY	1,162.000 LF	.		.	
1320	647.0566 PAVEMENT MARKING STOP LINE EPOXY 18-INCH	277.000 LF	.		.	
1330	647.0606 PAVEMENT MARKING ISLAND NOSE EPOXY	18.000 EACH	.		.	
1340	647.0766 PAVEMENT MARKING CROSSWALK EPOXY 6-INCH	1,528.000 LF	.		.	
1350	647.0856 PAVEMENT MARKING CONCRETE CORRUGATED MEDIAN EPOXY	3,493.000 SF	.		.	
1360	649.0200 TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH	4,000.000 LF	.		.	
1370	650.4000 CONSTRUCTION STAKING STORM SEWER	133.000 EACH	.		.	
1380	650.4500 CONSTRUCTION STAKING SUBGRADE	9,875.000 LF	.		.	

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			DOLLARS	CTS	DOLLARS	CTS
1390	650.5000 CONSTRUCTION STAKING BASE	9,875.000 LF	.		.	
1400	650.5500 CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER	27,726.000 LF	.		.	
1410	650.6500 CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 01. B-67-336	LUMP	LUMP		.	
1420	650.6500 CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 02. B-67-335	LUMP	LUMP		.	
1430	650.8500 CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS (PROJECT) 01. 2753-06-71	LUMP	LUMP		.	
1440	650.9910 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) 01. 2753-06-71	LUMP	LUMP		.	
1450	650.9920 CONSTRUCTION STAKING SLOPE STAKES	9,875.000 LF	.		.	
1460	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	713.000 LF	.		.	
1470	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH	1,243.000 LF	.		.	
1480	653.0140 PULL BOXES STEEL 24X42-INCH	11.000 EACH	.		.	

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			DOLLARS	CTS	DOLLARS	CTS
1490	654.0101 CONCRETE BASES TYPE 1	6.000 EACH	.		.	
1500	654.0102 CONCRETE BASES TYPE 2	6.000 EACH	.		.	
1510	654.0105 CONCRETE BASES TYPE 5	3.000 EACH	.		.	
1520	654.0217 CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL	1.000 EACH	.		.	
1530	655.0220 CABLE TRAFFIC SIGNAL 4-14 AWG	168.000 LF	.		.	
1540	655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG	376.000 LF	.		.	
1550	655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG	406.000 LF	.		.	
1560	655.0260 CABLE TRAFFIC SIGNAL 12-14 AWG	1,946.000 LF	.		.	
1570	655.0270 CABLE TRAFFIC SIGNAL 15-14 AWG	122.000 LF	.		.	
1580	655.0320 CABLE TYPE UF 2-10 AWG GROUNDED	1,263.000 LF	.		.	
1590	655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG	1,310.000 LF	.		.	

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			DOLLARS	CTS	DOLLARS	CTS
1600	655.0610 ELECTRICAL WIRE LIGHTING 12 AWG	1,101.000 LF	.		.	
1610	656.0200 ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 01. STA 178+35, 79FT RT	LUMP	LUMP		.	
1620	657.0100 PEDESTAL BASES	6.000 EACH	.		.	
1630	657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE	9.000 EACH	.		.	
1640	657.0305 POLES TYPE 2	2.000 EACH	.		.	
1650	657.0310 POLES TYPE 3	2.000 EACH	.		.	
1660	657.0315 POLES TYPE 4	2.000 EACH	.		.	
1670	657.0322 POLES TYPE 5-ALUMINUM	3.000 EACH	.		.	
1680	657.0410 TRAFFIC SIGNAL STANDARDS ALUMINUM 9-FT	2.000 EACH	.		.	
1690	657.0420 TRAFFIC SIGNAL STANDARDS ALUMINUM 13-FT	4.000 EACH	.		.	
1700	657.0590 TROMBONE ARMS 20-FT	1.000 EACH	.		.	

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			DOLLARS	CTS	DOLLARS	CTS
1710	657.0595 TROMBONE ARMS 25-FT	3.000 EACH	.		.	
1720	657.0614 LUMINAIRE ARMS SINGLE MEMBER 4-INCH CLAMP 8-FT	6.000 EACH	.		.	
1730	657.0615 LUMINAIRE ARMS SINGLE MEMBER 4 1/2-INCH CLAMP 8-FT	3.000 EACH	.		.	
1740	658.0110 TRAFFIC SIGNAL FACE 3-12 INCH VERTICAL	8.000 EACH	.		.	
1750	658.0120 TRAFFIC SIGNAL FACE 5-12 INCH VERTICAL	2.000 EACH	.		.	
1760	658.0155 TRAFFIC SIGNAL FACE 3-12 INCH HORIZONTAL	3.000 EACH	.		.	
1770	658.0215 BACKPLATES SIGNAL FACE 3 SECTION 12-INCH	11.000 EACH	.		.	
1780	658.0225 BACKPLATES SIGNAL FACE 5 SECTION 12-INCH	2.000 EACH	.		.	
1790	658.0416 PEDESTRIAN SIGNAL FACE 16-INCH	12.000 EACH	.		.	
1800	658.0500 PEDESTRIAN PUSH BUTTONS	10.000 EACH	.		.	
1810	658.0600 LED MODULES 12-INCH RED BALL	13.000 EACH	.		.	

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			DOLLARS	CTS	DOLLARS	CTS
1820	658.0605 LED MODULES 12-INCH YELLOW BALL	13.000 EACH	.		.	
1830	658.0610 LED MODULES 12-INCH GREEN BALL	13.000 EACH	.		.	
1840	658.0620 LED MODULES 12-INCH YELLOW ARROW	2.000 EACH	.		.	
1850	658.0625 LED MODULES 12-INCH GREEN ARROW	2.000 EACH	.		.	
1860	658.0635 LED MODULES PEDESTRIAN COUNTDOWN TIMER 16-INCH	12.000 EACH	.		.	
1870	658.5069 SIGNAL MOUNTING HARDWARE (LOCATION) 01. CTH VV & CTH Y	LUMP	LUMP		.	
1880	659.0115 LUMINAIRES UTILITY HPS 150 WATTS	3.000 EACH	.		.	
1890	659.0125 LUMINAIRES UTILITY HPS 250 WATTS	6.000 EACH	.		.	
1900	690.0150 SAWING ASPHALT	566.000 LF	.		.	
1910	690.0250 SAWING CONCRETE	70.000 LF	.		.	
1920	715.0502 INCENTIVE STRENGTH CONCRETE STRUCTURES	9,834.000 DOL	1.00000		9834.00	

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			DOLLARS	CTS	DOLLARS	CTS
1930	ASP.1T0A ON-THE-JOB TRAINING APPRENTICE AT \$5.00/HR	4,400.000 HRS	5.00000		22000.00	
1940	ASP.1T0G ON-THE-JOB TRAINING GRADUATE AT \$5. 00/HR	3,600.000 HRS	5.00000		18000.00	
1950	SPV.0035 SPECIAL 01. FILTER AGGREGATE LAYER	509.000 CY	.		.	
1960	SPV.0035 SPECIAL 02. ENGINEERED SOIL	3,356.000 CY	.		.	
1970	SPV.0035 SPECIAL 03. SURFACE MULCH	311.000 CY	.		.	
1980	SPV.0035 SPECIAL 04. STORAGE LAYER	1,160.000 CY	.		.	
1990	SPV.0060 SPECIAL 01. PERENNIALS ASCLEPIA TUBEROSA PLUG 1"	173.000 EACH	.		.	
2000	SPV.0060 SPECIAL 02. PERENNIALS ACHILLEA MOONSHINE PLUG 1	519.000 EACH	.		.	
2010	SPV.0060 SPECIAL 03. PERENNIALS RUDBECKIA HIRTA PLUG 1"	692.000 EACH	.		.	
2020	SPV.0060 SPECIAL 04. PERENNIALS ASCELPIAS INCARNATA PLUG 1"	346.000 EACH	.		.	
2030	SPV.0060 SPECIAL 05. PERENNIALS ACHILLEA MILLEFOLIUM FIRE KING PLUG 1"	692.000 EACH	.		.	

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			DOLLARS	CTS	DOLLARS	CTS
2040	SPV.0060 SPECIAL 06. PERRENIALS LIATRIS SPICATA PLUG 1"	346.000 EACH	.		.	
2050	SPV.0060 SPECIAL 07. PERRENIALS EUPATORIUM MACULATUM PLUG 1"	173.000 EACH	.		.	
2060	SPV.0060 SPECIAL 08. PERRENIALS MONARDA FISTULOSA PLUG 1"	173.000 EACH	.		.	
2070	SPV.0060 SPECIAL 09. PERRENIALS ASTERMOVAE-ANGLIAE PLUG 1"	346.000 EACH	.		.	
2080	SPV.0060 SPECIAL 10. PERRENIALS HEMERPCALLIS "PARDON ME" CG #1	800.000 EACH	.		.	
2090	SPV.0060 SPECIAL 11. PERRENIALS HEMERPCALLIS STELLA DE ORO CG #1	800.000 EACH	.		.	
2100	SPV.0060 SPECIAL 12. PERRENIALS HEMERPCALLIS LITTLE WINE CUP CG #1	800.000 EACH	.		.	
2110	SPV.0060 SPECIAL 13. PERRENIALS HEMERPCALLIS STRAWBERRY CANDY CG #1	800.000 EACH	.		.	
2120	SPV.0060 SPECIAL 14. INLET COVER BIORETENTION STANDPIPE	15.000 EACH	.		.	
2130	SPV.0060 SPECIAL 15. TRAFFIC SIGNAL CONTROLLER FULLY ACTUATED 8-PHASE	1.000 EACH	.		.	

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			DOLLARS	CTS	DOLLARS	CTS
2140	SPV.0060 SPECIAL 16. ADJUST VALVE 0 TO 1.0' DECREASE	5.000 EACH	.		.	
2150	SPV.0060 SPECIAL 17. ADJUST VALVE 1.0' TO 2. 0' DECREASE	4.000 EACH	.		.	
2160	SPV.0060 SPECIAL 18. ADJUST VALVE 0 TO 1.0' INCREASE	6.000 EACH	.		.	
2170	SPV.0060 SPECIAL 19. ADJUST VALVE 1.0' TO 2. 0' INCREASE	6.000 EACH	.		.	
2180	SPV.0060 SPECIAL 20. ADJUST VALVE 2.0' TO 3. 0' INCREASE	15.000 EACH	.		.	
2190	SPV.0060 SPECIAL 21. ADJUST VALVE 3.0' TO 4. 0' INCREASE	9.000 EACH	.		.	
2200	SPV.0060 SPECIAL 22. ADJUST VALVE 4.0' TO 5. 0' INCREASE	1.000 EACH	.		.	
2210	SPV.0060 SPECIAL 23. ADJUST CURBSTOP	6.000 EACH	.		.	
2220	SPV.0060 SPECIAL 24. RECONSTRUCT SANITARY SEWER MANHOLE	8.000 EACH	.		.	
2230	SPV.0060 SPECIAL 25. UTILITY LOCATE	20.000 EACH	.		.	
2240	SPV.0060 SPECIAL 26. DRAIN TILE CONNECTION	10.000 EACH	.		.	

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			DOLLARS	CTS	DOLLARS	CTS
2250	SPV.0090 SPECIAL 01. RELOCATE AND ADJUST HYDRANT ELEVATION	328.300 LF	.		.	
2260	SPV.0090 SPECIAL 02. REMOVE AND RELOCATE CURBSTOP	79.300 LF	.		.	
2270	SPV.0090 SPECIAL 03. STORM SEWER PIPE COMPOSITE 24-INCH	499.000 LF	.		.	
2280	SPV.0105 SPECIAL 01. REMOVE TRAFFIC SIGNALS INTERSECTION CTH VV & CTH Y	LUMP	LUMP		.	
2290	SPV.0105 SPECIAL 02. VIDEO DETECTION SYSTEM INTERSECTION CTH VV & CTH Y	LUMP	LUMP		.	
2300	SPV.0105 SPECIAL 03. CONSTRUCTION STAKING CONCRETE SIDEWALK	LUMP	LUMP		.	
2310	SPV.0105 SPECIAL 04. REMOVE & RECONSTRUCT LANNON STONE RETAINING WALL	LUMP	LUMP		.	
	SECTION 0001 TOTAL				.	
	TOTAL BID				.	

PLEASE ATTACH SCHEDULE OF ITEMS HERE