HIGHWAY WORK PROPOSAL

Proposal Number: 3 9

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

COUNTY	STATE PROJECT ID	FEDERAL PROJECT ID	PROJECT DESCRIPTION	HIGHWAY
Brown	9200-04-71	WISC 2013 281	Shawano - Green Bay STH 29 & County FF Intersection	STH 29

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, $ 380,000.00 Payable to: Wisconsin Department of Transportation	Attach Proposal Guaranty on back of this PAGE.
Bid Submittal Due Date: May 14, 2013 Time (Local Time): 9:00 AM	Firm Name, Address, City, State, Zip Code **SAMPLE** **NOT FOR BIDDING PURPOSES**
Contract Completion Time July 31, 2014	
Assigned Disadvantaged Business Enterprise Goal 4%	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

Clearing and grubbing; common excavation; borrow; removing pavement; obliterating old road; base aggregate dense; construction of Structures B-5-402, B-5-403, R-5-105, R-5-106, R-5-107, R-5-108, and R-5-109; culvert extensions on Structure B-5-29; HMA pavement; concrete pavement; storm sewer; culverts; erosion control; permanent signing; pavement marking; traffic control; lighting; and all incidental items.

Notice of Award Dated	Date Guaranty Returned

PLEASE ATTACH
PROPOSAL GUARANTY HERE

Effective with November 2007 Letting

PROPOSAL REQUIREMENTS AND CONDITIONS

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

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

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

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

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

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

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

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

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

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

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

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

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

Effective with August 2007 Letting

BID PREPARATION

Preparing the Proposal Schedule of Items

A General

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

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

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

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

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

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

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

(6) Contractors are responsible for checking on the issuance of addenda and for obtaining the addenda. Notice of issuance of addenda is posted on the department's web site at http://www.dot.wisconsin.gov/business/engrserv/bid-letting-information.htm or by calling the department at (608) 266-1631. Addenda can ONLY be obtained from the departments web site listed above or by picking up the addenda at the Bureau of Highway Construction, Room 601, 4802 Sheboygan Avenue, Madison, WI, during regular business hours.

B Submitting Electronic Bids

B.1 On the Internet

(1) Do the following before submitting the bid:

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

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

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

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

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

(1) Download the latest schedule of items from the Wisconsin pages of the Bid Express™ web site reflecting the latest addenda posted on the department's web site at **http://www.dot.wisconsin.gov/business/engrserv/bid-letting-information.htm**. Use Expedite ™ software to prepare and print the schedule of items. Provide a valid amount for all price fields. Follow instructions and review the help screens provided on the Bid Express™ web site to assure that the schedule of items is prepared properly.

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

Bidder Name

BN00

Proposals: 1, 12, 14, & 22

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

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

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

1. The check code printed on the bottom of the printout of the Expedite™ generated schedule of items is not the same on each page.
2. The check code printed on the printout of the Expedite™ generated schedule of items is not the same as the check code for that proposal provided on the diskette or CD ROM.

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

C Waiver of Electronic Submittal

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

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

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

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

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

PROPOSAL BID BOND

Wisconsin Department of Transportation

DT1303 1/2006

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

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

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

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

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

PRINCIPAL

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

(Signature and Title)

(Company Name)

(Signature and Title)

(Company Name)

(Signature and Title)

(Company Name)

(Signature and Title)

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

(Signature of Attorney-in-Fact)

NOTARY FOR PRINCIPAL

(Date)

State of Wisconsin)
) ss.
_____ County)

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

(Signature, Notary Public, State of Wisconsin)

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

(Date Commission Expires)

Notary Seal

NOTARY FOR SURETY

(Date)

State of Wisconsin)
) ss.
_____ County)

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

(Signature, Notary Public, State of Wisconsin)

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

(Date Commission Expires)

Notary Seal

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

CERTIFICATE OF ANNUAL BID BOND

Wisconsin Department of Transportation

DT1305 8/2003

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

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

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

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

(Signature of Authorized Contractor Representative) (Date)

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.

Special Provisions

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SPECIAL PROVISIONS

1. General.

Perform the work under this construction contract for Project 9200-04-71, Shawano – Green Bay, STH 29 and CTH FF Intersection, STH 29 located in Brown County, Wisconsin as the plans show and execute the work as specified in the State of Wisconsin, Department of Transportation, Standard Specifications for Highway and Structure Construction, 2013 Edition, as published by the department, and these special provisions.

If all or a portion of the plans and special provisions are developed in the SI metric system and the schedule of prices is developed in the US standard measure system, the department will pay for the work as bid in the US standard system.
100-005 (20120615)

2. Scope of Work.

The work under this contract shall consist of clearing and grubbing; common excavation; borrow; removing pavement; obliterating old road; base aggregate dense; construction of Structures B-5-402, B-5-403, R-5-105, R-5-106, R-5-107, R-5-108, and R-5-109; culvert extensions on Structure B-5-29; HMA pavement; concrete pavement; storm sewer; culverts; erosion control; permanent signing; pavement marking; traffic control; lighting; 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. Mandatory Pre-Bid Meeting.

Supplement standard spec 102.3, Furnishing of Proposal Forms to Prospective Bidders, with the following:

Prospective bidders are required to attend a mandatory pre-bid meeting at 10:00 AM Thursday, April 25, 2013 at WisDOT NE Region offices, 944 Vanderperren Way, Green Bay, WI 54304.

Contractors will be able to obtain a bidding proposal form and submit a bid on this proposal only if they have been documented as attending the mandatory pre-bid meeting.

4. Prosecution and Progress.

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

Provide the start date to the engineer in writing within a month after executing the contract but at least 14 calendar days before the preconstruction conference. Upon

approval, the engineer will issue the notice to proceed within ten calendar days before the approved start date.

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

Prior to beginning operations under this contract submit in writing a proposed schedule of operations and method of coordination and handling traffic to the engineer for approval.

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

Indicate on the proposed schedule of operations that a large force and adequate equipment will be needed to assure that the work will be complete within the established contract time.

Twenty-four hours prior to weekly construction meetings, submit a detailed proposed two-week look-ahead traffic closure schedule to the engineer. Enter information into a spreadsheet (or other approved format) such as closure dates, duration, work causing the closure and detours to be used. Also enter information such as ongoing long-term closures, emergency contacts and general two-month look-ahead closure information.

Winter weather work, excavation of frozen ground, high ground water, dewatering during winter months, and mitigation efforts for high water table elevations shall not be considered adverse weather delays to construction. Cost for dewatering is considered incidental to construction.

Anticipate cold weather and early spring concrete paving and ancillary concrete work. Plan to heat aggregates and water for mixes, and that the heating of the aggregate and water is considered incidental to those concrete items. There will be no adverse weather delay for cold weather construction.

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

Comply with all local ordinances that apply to construction operations. Furnish any ordinate variance issued by the municipalities or any other required permits to the engineer, in writing before performing such work.

Do not begin or continue any work that closes the freeway. Work may be performed, provided such work operations do not include ingress and egress of vehicles and equipment which would obstruct the flow of traffic on the freeway, during peak traffic periods. Do not ingress to or egress from STH 29/32 unless approved by the department. Submit proposed ingress/egress procedure to the engineer at least two weeks prior to use.

Northeast Region Traffic Section (primary contact: (920) 492-5641; secondary contact: (920) 492-7719) must approve the procedure prior to use. Payment for coordinating and construction ingress/egress points is considered incidental to the contract.

Definitions
The following definitions apply to this contract:

Peak Hours
Westbound STH 29/32 – Noon to 10:00 PM Friday
Eastbound STH 29/32 – Noon to 10:00 PM Sunday

Off-Peak and Nighttime Hours
All other times not listed above.

Golden Pond Park Court and Centennial Centre Boulevard
The completed frontage road from CTH FF (Hillcrest Drive) to Wedgestone Court (including portions of existing Golden Pond Park Court and Sunlite Drive) will be designated as Centennial Centre Boulevard.

Perform the work in accordance to the following stages as shown in the plans:

Stage 1
Stage 1 consists of three sub-stages. Stages 1A, 1B and 1C begin upon the completion of specific scopes of work, described herein, and run concurrently with Stage 2 until June 30, 2014.

Stage 1A
Stage 1A begins at Notice to Proceed.

Construct the temporary access road between existing Sunlite Drive/Forest Road and STH 29/32. Complete realignment of Forest Road. Complete reconstruction of Centennial Centre Boulevard (existing Sunlite Drive) between Station 20+02.33 to Station 30+00.00. Complete prior to Stage 1B.

Begin constructing Centennial Centre Boulevard frontage road eastward from Station 30+00.00.

Begin construction of box culvert B-5-29 extensions and proposed retaining wall R-05-105 construction adjacent to STH 29/32 interchange ramps. Refer to "Fish Spawning" subsection for in-stream restrictions.

Close north leg of the existing intersection of STH 29/32 and CTH FF (Sherwood Street) to the intersection of CTH FF and Woodland Road. Remove turn lanes and intersection pavement. Sawcut along shoulder and turn lanes at the existing intersection STH 29/32 and CTH FF to allow placement of temporary concrete barrier. Begin reconstructing

CTH FF (Sherwood Street) from Station 251+63.67 to approximately Station 266+50 including westbound interchange ramps and roundabout.

Construct temporary right turn lane (westbound STH 29/32 to northbound Woodland Road) prior to closing the north leg of the CTH FF (Sherwood Street) and STH 29/32 intersection.

Begin constructing of Centennial Centre Boulevard realignment from existing Golden Pond Park Court to Navajo Trail (Station 60+35.10 to Station 75+00.00). Begin constructing Structures B-5-403, R-5-108 and R-5-109 over Thornberry Creek along the realigned Centennial Centre Boulevard. Refer to "Fish Spawning" subsection for in-stream restrictions.

Remove existing pavement at west end of Catherine Drive and construct cul de sac.

Begin constructing Structure R-5-106.

Begin constructing the northern substructure of B-5-402.

Stage 1B

Stage 1B begins upon completion of the temporary connection from Centennial Centre Boulevard (existing Sunlite Drive) to STH 29/32.

Close existing intersection of STH 29/32 and CTH FF (median and south of STH 29). Place temporary concrete barrier along outside shoulders of STH 29/32 at the existing intersection with CTH FF (Sherwood Street/Hillcrest Drive). Remove turn lanes and intersection pavement.

Begin reconstructing CTH FF (Hillcrest Drive) from approximately Station 242+00 to Station 249+21.61 including eastbound interchange ramps and roundabout.

Begin constructing Structure R-5-107 and continue construction of B-5-402, including pier in the STH 29/32 median. Construction will not be limited to substructure work.

Continue reconstruction of CTH FF (Sherwood Street) from Stage 1A between Station 251+63.67 and approximately Station 266+50 including westbound interchange ramps and roundabout.

If not completed in previous stage, continue construction of box culvert B-5-29 extensions and proposed retaining wall R-05-105 construction adjacent to STH 29/32 interchange ramps. Refer to "Fish Spawning" subsection for in-stream restrictions.

Continue construction of Centennial Centre Boulevard realignment from existing Golden Pond Park Court to Navajo Trail (Station 60+35.10 to Station 75+00.00). Continue construction of Structures B-5-403, R-5-108 and R-5-109 over Thornberry Creek along

the realigned Centennial Centre Boulevard. Refer to "Fish Spawning" subsection for in-stream restrictions.

If not completed in previous stage, continue construction of Structure R-5-106.

Finish construction of Centennial Centre Boulevard frontage road between Station 30+00 to Station 55+10.71 prior to beginning Stage 1C.

Stage 1C
Stage 1C begins upon the completion of the Centennial Centre Boulevard frontage road between Station 30+00 and Station 55+10.71.

Open the Centennial Centre Boulevard frontage road to traffic from Forest Road to CTH FF (Hillcrest Drive) (approximately Station 30+00 to Station 55+10.71).

Begin reconstruction of CTH FF (Hillcrest Drive) from southern construction limit through existing Golden Pond Park Court (Station 219+78.31 to approximately Station 242+00) including the roundabout intersection of CTH FF (Hillcrest Drive), Centennial Centre Boulevard and Navajo Trail.

Do not begin construction between the south project limits through Navajo Trail (Station 219+78.31 to approximately Station 232+00) if the roadway and sidewalk construction cannot be completed by winter shutdown. Temporary surfaces will not be permitted on this segment. If work cannot be completed by winter shutdown, do not begin work on that segment until Spring 2014.

Remove existing Golden Pond Park Court access at CTH FF (Hillcrest Drive). Begin grading and installing sidewalk.

Continue reconstruction of CTH FF (Sherwood Street/Hillcrest Drive) from Stages 1A and 1B between approximately Station 242+00 and approximately Station 266+50 including interchange ramps, roundabouts and Structures B-5-402 and R-5-107.

Continue construction along Centennial Centre Boulevard from Station 60+35.10 through the roundabout at CTH FF (Hillcrest Drive) and Navajo Trail (approximately Station 80+00).

If not completed in a previous stage, continue construction of box culvert B-5-29 extensions and proposed retaining wall R-05-105 construction adjacent to STH 29/32 interchange ramps. Refer to "Fish Spawning" subsection for in-stream restrictions.

If not completed in a previous stage, continue construction of Structure R-5-106.

Stage 2
Do not begin Stage 2 construction until April 1, 2014 or later.

Reconstruct CTH FF (Sherwood Street) from approximately Station 266+50 to 272+70, including the intersection at Woodland Road and roundabout at CTH C (Shawano Avenue). Coordinate construction of this segment with Brown County CTH C (Shawano Avenue) reconstruction project.

Remove the existing pavement at the east end of Woodland Drive and construct cul de sac.

Close and remove maintenance crossover at Station 709+23.

Finish remaining reconstruction of STH 29/32 shoulders and median.

Finish remaining structural construction from Stage 1.

Finish remaining reconstruction of CTH FF (Sherwood Street/Hillcrest Drive) from Stage 1, including all interchange ramps and roundabouts. Finish remaining construction along Centennial Centre Boulevard from Station 60+35.10 through the roundabout at CTH FF (Hillcrest Drive) and Navajo Trail (approximately Station 80+00). Finish remaining construction of Navajo Trail from Station 80+00 to Station 85+95.05.

Stage 3
Simultaneously close the existing intersection of STH 29/32 and Sunlite Drive/Woodland Road, open the STH 29/32 and CTH FF interchange, and close and obliterate existing intersections of Greenfield Avenue/Woodland Road and temporary connection between Centennial Centre Boulevard and STH 29/32. The interchange of STH 29/32 and CTH FF and the intersection of STH 29/32 and Greenfield Avenue/Woodland Road cannot be open to traffic at the same time.

Remove temporary right turn lane (westbound STH 29/32 to northbound Woodland Road).

Construct proposed realignment of Greenfield Avenue and Woodland Road.

Interim Liquidated Damages

Stage 1 – STH 29/32 and Sunlite Drive Intersection Calendar Days
Upon notice to proceed, the existing intersection of STH 29/32 and existing Sunlite Drive including Forest Road, can be closed to vehicular traffic for a period of up to 14 consecutive calendar days. Complete all work and coordination measures necessary to open the temporary access road between Sunlite Drive/Forest Road and STH 29/32, the realigned Forest Road (Station 344+19.59 to 350+00), and the reconstructed Centennial Centre Boulevard (existing Sunlite Drive) (Station 20+02.33 to Station 30+00.00), to vehicular traffic under this contract within 14 consecutive calendar days of initial closure. Work includes all grading; installing base aggregate, HMA pavement, signing, and pavement marking; and all incidentals necessary for opening the roadways to vehicular traffic within 14 consecutive calendar days of initial closure.

Supplement standard spec 108.11 as follows:

If the contractor fails to complete the above work within 14 consecutive calendar days, the department will assess the contractor of $1,605 in interim liquidated damages for each calendar day that the work remains incomplete beyond 14 consecutive 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.

Stage 2 – STH 29/32 and CTH FF Interchange Completion Date
Complete all work including any remaining structural work, lighting, pavement markings, signing, and all incidentals necessary for opening the interchange for vehicular traffic under this contract prior to 12:01 AM July 1, 2014. Open the interchange of STH 29/32 and CTH FF including all ramps, roundabouts and roadways, including STH 29/32, CTH FF (Sherwood Street/Hillcrest Drive), CTH C (Shawano Avenue), Woodland Road between Station 87+94.69 and approximately Station 98+00), Forest Road, Navajo Trail and Centennial Centre Boulevard prior to 12:01 AM July 1, 2014. Work includes grading; installing base aggregate, HMA pavement, beam guard, lighting, signing, and pavement marking; and all incidentals necessary for opening the roadways to vehicular traffic prior to 12:01 AM July 1, 2014.

Supplement standard spec 108.11 as follows:

If the contractor fails to complete the above work and open all lanes to traffic prior to 12:01 AM, July 1, 2014, the department will assess the contractor $10,000 in interim liquidated damages for each calendar day that the work remains incomplete after 12:01 AM, July 1, 2014. An entire calendar day will be charged for any period of time within a calendar day that the work remains incomplete beyond 12:01 AM.

Fish Spawning
There shall be no in-stream disturbance of an unnamed tributary to Duck Creek as a result of construction activity under or for this contract, from October 1 to February 1 both dates inclusive, in order to avoid adverse impacts upon fish spawning. The waterway is transected by CTH C, approximately 0.5 miles north of STH 29/32.

There shall be no in-stream disturbance of an unnamed tributary to Duck Creek as a result of construction activity under or for this contract, from March 1 to June 15 both dates inclusive, in order to avoid adverse impacts upon the spawning of northern pike. The waterway is transected by CTH FF, approximately 0.2 mile north of STH 29/32, and again by STH 29/32, approximately 0.2 mile northwest of CTH FF.

There shall be no in-stream disturbance of Lancaster Brook and Thornberry Creek as a result of construction activity under or for this contract, from October 15 to March 1 both dates inclusive, in order to avoid adverse impacts upon the spawning of trout. Thornberry Creek is transected by CTH FF, approximately 0.45 mile south of STH 29/32, and is designated a Class I Trout stream. Lancaster Brook is approximately 0.3 mile southeast

of the existing STH 29/32 and CTH FF intersection, and is designated as a Class II Trout stream.

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.

5. Traffic.

Complete the construction sequence and the associated traffic control and detours as detailed on the plans and as follows:

Stage 1
General
Maintain two lanes of traffic in each direction along STH 29/32 during peak hours.

Maintain a minimum of one lane of traffic in each direction to complete shoulder work along STH 29/32 during off-peak and night time hours. Do not close lanes if work is not being performed on the shoulders.

Employ Rolling Closures along STH 29/32, as described herein, when placing girders and formwork over the highway.

All crossroads within the project vicinity are to remain open at all times except as noted herein and as shown in the plans. CTH FF (Sherwood Street/Hillcrest Drive) between the existing Golden Pond Park Court intersection and Catherine Drive. Access to Centennial Centre Boulevard is to remain open and Catherine Drive is to be closed for cul de sac construction.

Stage 1A
Close/Open:

- Close the existing Sunlite Drive connection to STH 29/32 to construct the temporary connection. See “Prosecution and Progress” article for liquidated damages details.
- Open temporary connection between Centennial Centre Boulevard (existing Sunlite Drive) and STH 29/32.
- Open reconstructed Centennial Centre Boulevard (existing Sunlite Drive) between Station 20+02.33 and approximately Station 29+00.
- Open realigned Forest Road.
- Close the incomplete eastward extension of Centennial Centre Boulevard (at approximately Station 29+00) to traffic until completion of the frontage road in Stage 1B.
- Close CTH FF (Sherwood Street) to through traffic between STH 29/32 and Woodland Road while Structure B-5-402 and the interchange ramps are being constructed.

- Close the existing Catherine Drive connection to CTH FF (Sherwood Street).
- Do not open any portions of interchange ramps prior to completion of work described under the Interim Liquidated Damages subsection of "Prosecution and Progress".

Access:

- While the temporary connection between Centennial Centre Boulevard and Forest Road realignment are being constructed in 14 calendar days, maintain access for Forest Road traffic via CTH FF (Hillcrest Drive) and Hill Drive.
- Do not allow public access to CTH FF (Sherwood Street) from STH 29/32.
- Maintain access for CTH FF (Sherwood Street) traffic via the existing intersection of STH 29/32 and Greenfield Avenue/Woodland Road.
- Maintain access for Catherine Drive traffic via Woodland Road and CTH C (Shawano Avenue).
- Maintain access for segments of CTH FF (Sherwood Street) under construction for local traffic only.

Stage 1B

Close/Open:

- Continue closure of CTH FF (Sherwood Street) to through traffic between STH 29/32 and Woodland Road while Structure B-5-402 and the interchange ramps are being constructed.
- Continue closure of the existing Catherine Drive connection to CTH FF (Sherwood Street).
- Open temporary connection between Centennial Centre Boulevard (existing Sunlite Drive) and STH 29/32.
- Open realigned Centennial Centre Boulevard (between Station 20+02.33 to approximately Station 29+00.00) and Forest Road.
- Close CTH FF (Hillcrest Drive) to traffic between STH 29/32 and existing Golden Pond Park Court while Structure B-5-402 and the interchange ramps are being constructed. Do not close the south leg of this intersection until the temporary connection between existing Sunlite Drive and STH 29/32 is complete.
- Do not open any portions of interchange ramps prior to completion of work described under the Interim Liquidated Damages subsection of "Prosecution and Progress".

Access:

- Upon completion of the temporary connection and Forest Road/Centennial Centre Boulevard realignment, maintain access to CTH FF (Hillcrest Drive) via Forest Road and Hill Drive and Navajo Trail.
- Do not allow public access to CTH FF (Hillcrest Drive) from STH 29/32.
- Maintain access for CTH FF (Sherwood Street) traffic via the existing intersection of STH 29/32 and Greenfield Avenue/Woodland Road.
- Maintain access for Catherine Drive traffic via Woodland Road and CTH C (Shawano Avenue).

- Maintain access for segments of CTH FF (Sherwood Street/Hillcrest Drive) under construction for local traffic only.

Stage 1C

Open/Close:

- Continue closure of CTH FF between approximately 242+00 and approximately 262+50. Do not close CTH FF (Hillcrest Drive) south of existing Golden Pond Park Court without previously opening the Centennial Centre Boulevard frontage road.
- Continue closure of the existing Catherine Drive connection to CTH FF (Sherwood Street).
- Open Centennial Centre Boulevard frontage road to traffic from Forest Road to CTH FF (Hillcrest Drive) (approximately Station 30+00 to Station 55+10.71). Do not open to traffic until all HMA layers, curb and gutter, shoulders, permanent signing, and pavement marking has been completed, unless otherwise directed by the engineer. If directed to open on unfinished surfaces and/or lanes are impeded by unfinished work, the contractor shall be responsible for installing and maintaining proper signing, traffic control, flagging, etc. until the required items have been installed.
- Close existing Golden Pond Park Court Access to CTH FF (Hillcrest Drive) once the Centennial Centre Boulevard frontage road is open to traffic.
- Close CTH FF (Hillcrest Drive) from southern construction limit through existing Golden Pond Park Court (Station 219+78.31 to approximately Station 242+00).
- Do not open any portions of interchange ramps prior to completion of work described under the Interim Liquidated Damages subsection of "Prosecution and Progress".

Access:

- Maintain access to CTH FF (Hillcrest Drive), between Station 219+78.31 and approximately Station 242+00, via Forest Road and Hill Drive and Navajo Trail.
- Maintain access to the Galleria at Golden business park via the temporary connection with STH 29/32 and the Centennial Centre Boulevard frontage Road. Access between Centennial Centre Boulevard (existing Sunlite Drive) and CTH FF (Hillcrest Drive) via the frontage road is not required.
- Do not allow public access to CTH FF (Sherwood Street/Hillcrest Drive) from STH 29/32.
- Maintain access for CTH FF (Sherwood Street) traffic via the existing intersection of STH 29/32 and Greenfield Avenue/Woodland Road.
- Maintain access for Catherine Drive traffic via Woodland Road and CTH C (Shawano Avenue).
- Maintain access for segments of CTH FF (Sherwood Street/Hillcrest Drive) under construction for local traffic only.

Stage 2

General

Maintain two lanes of traffic in each direction along STH 29/32 during peak hours.

Maintain a minimum of one lane of traffic in each direction to complete shoulder work along STH 29/32 during off-peak and night time hours. Do not close lanes if work is not being performed on the shoulders.

Employ Rolling Closures along STH 29/32, as described herein, when placing girders and formwork.

Open/Close:

- Continue closure of CTH FF (Sherwood Street/Hillcrest Drive) between 219+78.31 and approximately 262+50.
- Continue closure of the existing Catherine Drive connection to CTH FF (Sherwood Street).
- Continue closure of existing Golden Pond Park Court Access to CTH FF (Hillcrest Drive).
- Close CTH FF (Sherwood Street) between approximately Station 266+50 and 272+70 and Woodland Road at CTH FF (Sherwood Street) to complete intersection reconstruction and construction of cul de sac at existing intersection of CTH C (Shawano Avenue) and Woodland Road. Provide access to local traffic within work zone.
- Close CTH C (Shawano Avenue) to construct roundabout intersection with CTH FF (Sherwood). Coordinate traffic control with Brown County Shawano Avenue reconstruction project.
- Do not open any portions of interchange ramps prior to completion of work described under the Interim Liquidated Damages subsection of "Prosecution and Progress".

Access:

- Maintain access to CTH FF (Hillcrest Drive), between Station 219+78.31 and approximately Station 242+00, via Forest Road and Hill Drive and Navajo Trail.
- Maintain access to the Galleria at Golden business park via the temporary connection with STH 29/32 and the Centennial Centre Boulevard frontage Road. Access between Centennial Centre Boulevard (existing Sunlite Drive) and CTH FF (Hillcrest Drive) via the frontage road is not required.
- Do not allow public access to CTH FF (Sherwood Street/Hillcrest Drive) from STH 29/32.
- Maintain access for CTH FF (Sherwood Street) traffic via the existing intersection of STH 29/32 and Greenfield Avenue/Woodland Road.
- Maintain access for Catherine Drive traffic via Woodland Road and CTH C (Shawano Avenue).
- Maintain access for segments of CTH FF (Sherwood Street/Hillcrest Drive) under construction for local traffic only.
- Maintain access at intersection of CTH FF (Sherwood Street) and Woodland Road for local traffic only.

Stage 3

General

Maintain two lanes of traffic in each direction along STH 29/32, including interchange ramps, during peak hours. Nighttime and off-peak hour lane closures will be permitted along STH 29/32, and hours of closures shall be coordinated with the engineer and Northeast Region Traffic Section.

Close/Open:

- Simultaneously open STH 29/32 interchange with CTH FF (Sherwood Street/Hillcrest Drive) to traffic, including all ramps; permanently close temporary connection from Centennial Centre Boulevard (existing Sunlite Drive) to STH 29/32; and close existing Woodland Road intersection with STH 29/32.
- Open remaining segment of Centennial Centre Boulevard (from Station 60+35.10 through the roundabout at CTH FF (Hillcrest Drive) and Navajo Trail (approximately Station 80+00). Open Navajo Trail from Station 80+00 to Station 85+95.05.
- Permanently close Woodland Road/Greenfield Avenue at respective intersections with CTH C (Shawano Avenue) for reconstruction.

Access:

- Divert through Woodland Road/Greenfield Avenue traffic to CTH C (Shawano Avenue).
- Maintain access for local Woodland Road/Greenfield Avenue traffic only.

Opening Roundabouts

Do not open a roundabout to through traffic until the roundabout is completed including lighting, signing, pavement marking and all finishing items.

Rolling Closures

For setting the girders of Structure B-5-402, STH 29/32 may be closed for periods not to exceed 20 minutes, between the hours of 8:00 PM to the following morning at 5:00 AM. Allow all vehicle backups to clear the project area prior to setting up the next road closure during the above timeframe. Coordinate with the engineer at least two weeks prior to a planned closure and confirm the closure with the engineer 72 hours prior to the closure.

Construction Access

Restrict work on STH 29/32 within closed shoulders or closed lanes as allowed by the plans or engineer. Temporary lane closures along STH 29/32 will only be permitted during off-peak and nighttime hours as described herein and directed by the engineer. All construction access is subject to approval of the engineer.

General Access

See article “Coordinate with property owners”.

No contractor vehicles shall be allowed to make U-turns at existing maintenance crossovers between STH 29/32 eastbound and westbound, unless approved by the engineer. No contractor vehicles shall cross STH 29/32 at temporary crossings. Change direction of travel at nearest "forward" side road intersection or interchange.

Construction operations affecting the traveling public's safety on STH 29/32 will not be allowed at any time, including during snow and ice conditions or other adverse weather conditions, unless approved by the engineer.

Portable Changeable Message Signs (PCMS) – Message Prior Approval
After coordinating with department construction field staff, notify the Northeast Region Traffic Section at (920) 492-5641 (secondary contact number is (920) 492-7719) three business days prior to deploying or changing a message on a PCMS to obtain approval of the proposed message. The Northeast Region Traffic Unit will review the proposed message and either approve the message or make necessary changes.

PCMSs are to be placed as shown in the plans and as directed by the engineer in the field. The PCMSs shall be placed seven days in advance of the respective closure.

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

Lane closures (without width, height or weight restriction)	3 business days
Service Ramp closures	3 business days
Extended closure hours	3 business days
System Ramp closures	7 calendar days
Lane closures (with width, height or weight restriction)	14 calendar days
Project Start	14 calendar days
Full Freeway closures	14 calendar days
Construction stage changes	14 calendar days
Detours	14 calendar days

Notify the engineer if there are any changes in the schedule, early completions, or cancellations for scheduled work.

Protection of Bridge Pier Columns
The piers for Structure B-5-402 are inside of clear zone and are to remain protected at all times throughout construction. Keep all stationary construction vehicles, equipment, falsework, etc. used to construct the structure outside of the clear zone and/or separate such items from traffic with temporary concrete barrier. Placement of new beam guard shall be completed to a point to provide protection for the pier columns before temporary concrete barrier is removed.

Snowplowing
The staging shown in the plans, and described herein, accounts for segments of local roads to be closed to through traffic during winter months. The Village of Howard will perform snow removal operations along segments of CTH FF (Sherwood Street) during construction provided that a temporary (or permanent) surface is suitable for traffic and properly delineated with traffic control devices. Provide for snow removal in all areas closed to through traffic as required to facilitate safe construction activities and to provide access to properties within the work area. Maintain all traffic control devices and adjust as needed. Excess snow may not be piled up within the clear zone of the adjacent roadway.

Winter Maintenance
During winter months park equipment at a safe distance (at a minimum of 30 feet from the edge of the travel lane, equipment may be parked in the median if it meets the minimum 30 feet from both traveled ways or if it is protected by concrete barrier) from the active travel lanes to prevent damage to equipment from snow plowing operations. Do not store equipment or materials within the work zone which may interfere with horizontal sight distances along STH 29/32.

Snow may be plowed from the traveled roadway into the work site by the maintaining authority. The contractor is responsible for any snow removal from the work site that may be required to continue work operations.

The contractor is responsible for plowing any areas which may need to be cleared of snow or ice to accommodate changes in traffic control and to facilitate construction staging during winter months. Costs associated with such work is considered incidental to the contract. Brown County or the local maintaining authority will not provide snow plowing operations in areas outside of the active traveled lanes.

Re-install or adjust any traffic control devices that may be damaged, removed, or shifted as part of normal winter maintenance operations. Clean and maintain traffic control devices as necessary or as directed by the engineer.

Snow plowing, ice removal including any road salt which may be required, maintenance and cleaning of traffic control devices, and other winter maintenance activities are incidental other items of work under this contract.

Temporary Regulatory Speed Limit Reduction-Extended Length Shoulder Closure
A reduction of the posted regulatory speed limit from 65 mph to 55 mph is required when any of the following conditions are created within the project limits:

1. Lane(s) closed and workers are present and active in close proximity to an open lane.
2. Lane(s) narrowed to less than 12 feet and adjacent shoulder width is reduced.
3. Traffic is shifted partly or completely onto a shoulder and/or temporary pavement and shoulder width is reduced. At all other times the posted regulatory speed limit shall be 65 mph.

During periods when traffic conditions do not require a Temporary Regulatory Speed Reduction, speed limit signs shall be changed to the permanent posted speed limit. This may require posted speed and sign changes twice a day or more. Changing temporary and existing/permanent signs between 65 mph and 55 mph shall be considered incidental to the item Traffic Control.

During approved temporary regulatory speed limit reductions, install regulatory speed limit signs on the inside and outside shoulders of the roadway at the beginning of the reduced regulatory speed zone, after all locations where traffic may enter the highway segment or every ½ mile within the reduced regulatory speed zone. Signs shall be installed at the end of the temporary regulatory speed zone to designate the end of the temporary regulatory speed zone and inform drivers the posted regulatory speed limit reverts back to 65 mph. To minimize possible confusion to the traveling public and to ensure appropriate speed enforcement, enhanced attention to placement and changing of speed limit signs is required.

Coordinate with department construction field staff to notify the Northeast Region Traffic Section with field location(s) of the temporary regulatory speed zone. Primary contact phone number: (920) 492-5652 (secondary contact number is (920) 492-5641). Contact the Northeast Region Traffic Section at least 14-calendar days prior to installation of the temporary regulatory speed zone. After notification, Northeast Region Traffic will create a "Temporary Speed Zone Declaration" to meet statutory requirements, allowing enforcement of this temporary regulatory speed limit.

When construction activities impede the location of a post mounted regulatory speed limit sign, mount the regulatory speed limit sign on portable supports that meet the "crashworthy" definition and height criteria in the Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD). (20100927)

6. Holiday and Other Work Restrictions.

STH 29/32 shall be restored to 4-lane counter-directional traffic during the following periods. Do not perform work on, nor haul materials of any kind along or across any portion of the highway carrying STH 29/32 traffic, and entirely clear the traveled 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:

- Green Bay Packers home games and Packer Family Scrimmage: From five hours prior to kickoff of the game until five hours after the end of the game;
- From noon Friday to 12:00 AM (midnight) of deer gun opening; each year;
- From noon Friday to 12:00 AM (midnight) of fishing opening; each year;
- From noon Friday, May 24, 2013 to 5:00 AM Tuesday, May 28, 2013 for Memorial Day;
- From noon Wednesday, July 3, 2013 to 5:00 AM Monday, July 8, 2013 for Independence Day;

- From noon Friday, August 30, 2013 to 5:00 AM Tuesday, September 3, 2013 for Labor Day;
- From noon Wednesday, November 27, 2013, to 5:00 AM Monday, December 2, 2013 for Thanksgiving;
- From noon Friday, May 23, 2014 to 5:00 AM Tuesday, May 27, 2014 for Memorial Day;
- From noon Thursday, July 3, 2014 to 5:00 AM Monday, July 7, 2014 for Independence Day;
- From noon Friday, August 29, 2014 to 5:00 AM Tuesday, September 2, 2014 for Labor Day.

Prior to preparing bids, verify the dates of each festival, game, or event listed to obtain current dates for work restrictions.

7. Utilities.

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

There are utility facilities within the construction limits of this project. Additional detailed information regarding the location of discontinued, relocated, and/or removed utility facilities is available in the work plan provided by each utility company or on the permits issued to them. View these documents at the Regional Office during normal working hours.

Work around or remove and dispose of any discontinued utility conduits, cables, and pipes encountered during excavation. Any removal and disposal shall be incidental to common excavation, unless specified otherwise in this contract as a separate bid item.

When interpreting the term "working days" within the "Utilities" article of these special provisions (and only within this article), use the definition provided in Trans 220.03(20) of the Wisconsin Administrative Code rather than the definition provided in standard spec 101.3.

Some of the utility work described below is dependent on prior work being performed by the contractor at a specific site. In such situations, provide a good faith notice to both the engineer and the affected utility of when the utility is to start work at the site. Unless specified otherwise in this article, provide this notice 14 to 16 calendar days in advance of when you anticipate the prior work being completed and provide a confirmation notice to the engineer and the utility 3 to 5 working days before the site will be ready for the utility to begin its work.

AT&T Midwest has facilities within the construction limits. AT&T Midwest will be abandoning existing telephone and fiber optic facilities throughout the project area. AT&T Midwest will be jointly relocating with WPS Electric and WPS Gas along CTH FF (Hillcrest Drive) from Station 222+25 to Station 249+17 (crossing from the west

side of CTH FF to the east side at approximately Station 227+00), along CTH FF (Sherwood Street) from Station 256+17 to 260+46, and along CTH C (Shawano Avenue) from Station 393+00 to Station 398+58.

AT&T Midwest will also be boring new facilities in the following locations:

- Along the southwest side of the realigned Greenfield Avenue/Woodland Road curve (approximately Station 50+50 to approximately Station 56+00).
- Along the south side of the new Centennial Centre Boulevard frontage road from approximately Station 20+00 to Station 44+36.
- Along the east side of existing Forest Road.
- Along the east side of the existing Sunlite Drive connection to STH 29/32 from the south side of the new Centennial Centre Boulevard frontage road, across STH 29/32 at approximately Station 635+00, to the east side of the existing Woodland Road connection to STH 29/32.
- Along the south side of Woodland Road from east of the existing Woodland Road connection to STH 29/32 to approximately Station 62+25 (crossing to the north side of Woodland Road).
- Across CTH FF (Hillcrest Drive) at approximately Station 246+00 and continuing eastward along the south side of the STH 29/32 eastbound entrance ramp to approximately Station 681+75.
- Across CTH FF (Sherwood Street) at approximately Station 256+00 and continuing eastward along the south side of existing Catherine Drive to approximately Station 13+00.

Coordinate with Eric Adair at (920) 433-4155 or az9216@att.com, during construct.

The **Central Brown County Water Authority (CBWA)** has facilities within the construction limits. An existing 24-inch DIP water main and fiber optic facility runs under CTH FF (Sherwood Street/Hillcrest Drive) and continues northwest under CTH C (Shawano Avenue).

The CBCWA will relocate a 24-inch DIP water main and fiber optic facility along the west side of CTH FF (Sherwood Street/Hillcrest Drive) from Station 228+30 to 259+88. Primary facilities will be relocated prior to work on this contract. Final grade adjustments of manholes, valves and appurtenances will need to be conducted after Wisconsin Department of Transportation (DOT) grading is complete.

Coordinate with Rob Michaelson at (920) 686-4354 or rmichaelson@mpu.org during construction.

The **Green Bay Metropolitan Sewerage District (GBMSD)** has active sanitary sewer facilities under the northbound lanes of CTH FF (Hillcrest Drive) and across all lanes of STH 29/32. The sanitary sewer facilities cross the proposed NE ramp and STH 29/32 at Station 671+64 and run along north side of STH 29/32 between Station 671+70 and 678+20.

The GBMSD will relocate portions of 15-inch and 24-inch diameter sanitary sewer inceptor. The GBMSD will also reconstruct or adjust two manholes along CTH FF. Relocations for portions of the 15-inch sanitary sewer for the Village of Howard north of STH 29/32 and portions of the 18-inch sanitary sewer for the Village of Hobart west of CTH FF are included in the GBMSD relocation work. Portions of the existing sewer lines will be abandoned in place and filled with cement. The proposed relocations will be completed by July 1, 2013.

The 24-inch sanitary sewer relocation will extend northeastward from an existing manhole at approximately Station 236+30, 15' RT to a manhole at approximately Station 240+80, 100' RT. The 15-inch sanitary sewer relocation continues northeastward from the manhole at approximately Station 240+80, 100' RT to a manhole at approximately Station 242+20, 120' RT (where it intercepts the existing 15-inch sewer. The 15-inch sanitary sewer will also be relocated south of the STH 29/32 eastbound entrance ramp from an extension onto Parcel 7 to a manhole located within the entrance ramp at approximately Station 671+56, 13' RT. The 15-inch sanitary sewer will also be extended 25 feet northward at approximately Station 671+50 along the STH 29/32 westbound exit ramp.

The GBMSD will relocate 220 feet of the Village of Hobart 18-inch sanitary sewer crossing CTH FF (Hillcrest Drive) from an existing manhole at approximately Station 240+80, 65' LT to the manhole at approximately Station 240+80, 100' RT. The GBMSD will relocate 200 feet of the Village of Howard 15-inch sanitary sewer northeast of the STH 29/32 westbound exit ramp from the manhole at approximately Station 671+50 to a manhole at approximately 673+50.

Some manholes will need to be set to existing grade and adjusted to final grade during roadway construction. Final grade adjustments of manholes, valves and appurtenances will need to be conducted as Wisconsin Department of Transportation (DOT) grading is nearing completion. Coordinate with Paul Welter at (920) 544-4522 or pwelter@releeinc.com during construction.

Time Warner Cable has aerial and underground facilities within the construction limits. Time Warner Cable will be jointly relocating with AT&T, WPS Electric and WPS Gas. TWC facilities are currently located on WPS poles which will be removed according to the WPS work plan. Time Warner Cable will follow WPS work plan to relocate prior to construction.

Coordinate with Vince Albin at (920) 831-9249 or vince.albin@twcable.com during construction.

The **Village of Hobart** has facilities within the construction limits.

The Village of Hobart will relocate portions of its water distribution system and sanitary sewer system. The water distribution system exists from Golden Pond Park Court to an area extending south along CTH FF just south of Navajo Trail. Approximately 450 feet

of 12-inch water main will be relocated and approximately 1,450 feet of 8-inch water main will be relocated.

Areas of the sanitary sewer system include providing service to the property at the southwest corner of Golden Pond Park Court and CTH FF (service currently exists to that property), as well as adjusting manholes and extending laterals along the proposed frontage road connecting to Sunlite Drive. Approximately 700 feet of 8-inch sanitary sewer will be relocated and approximately 220 feet of 18-inch sanitary sewer will be relocated. Portions of the existing water main will be abandoned-in-place and filled with cement.

A majority of the proposed relocations will be completed by July 1, 2013. Valves and hydrants will be set to proposed roadway grades wherever possible. Sanitary and water services will be installed to properties along the project. Some manholes and hydrants will need to be set to existing grade and adjusted to final grade during roadway construction. The Village of Hobart relocations will be completed prior to work on this contract. Final grade adjustments of manholes, valves and appurtenances will need to be conducted as Wisconsin Department of Transportation (DOT) grading is nearing completion.

Coordinate with Jared Schmidt, (920) 544-4487 or jschmidt@releeinc.com during construction.

The **Village of Howard** has facilities within the construction limits.

The Village of Howard will relocate portions of its water distribution system and sanitary sewer system. The relocations include relaying 12-Inch watermain from Station 395+05 to Station 405+80 +/- on CTH C. The existing watermain along CTH C between Station 395+05 and Station 405+80 will be filled with slurry. Two (2) hydrants at Station 397+92 and 403+16 +/- will be removed and replaced at Station 397+80 and Station 403+16 +/-. Two (2) new valves will be place at Station 397+79 and Station 405+75 +/-. Valve boxes at Station 395+32 and Station 403+31 will be abandoned. Sanitary sewer from Station 393+69 will be laid and connected to existing sewer at Station 413+52 +/-. A 159-foot sanitary line will be branched north from a structure at Station 401+70 +/- for future expansion.

The Village of Howard will also lay new 8-inch watermain from Station 256+70 to Station 267+09 +/- and 10-inch watermain from Station 267+09 to Station 273+90 +/- along Sherwood Street. Four (4) hydrants will be placed at Station 256+68, Station 256+73, Station 261+82, and Station 267+73 along Sherwood Street. An 8-inch valve will be installed at Station 263+89 +/-. Sanitary sewer will be laid from Station 259+00 to Station 267.47 +/-.

The Village of Howard will also lay new 8-inch and 10-inch watermain from Station 88+97 to 98+40 +/- along Woodland Road. two hydrants will be placed at Station 88+97

and 93+81 +/-. Two (2) valves will be placed at Station 90+69 and 98+39 +/-. Sanitary sewer will be laid from Station 88+86 to Station 98+06 +/-.

Valves and hydrants will be set to proposed roadway grades wherever possible. Sanitary and water services will be installed to properties along the project. Some manholes and hydrants will need to be set to existing grade and adjusted to final grade during roadway construction. The Village of Howard relocations will be completed prior to work on this contract. Final grade adjustments of manholes, valves and appurtenances will need to be conducted as Wisconsin Department of Transportation (DOT) grading is nearing completion.

Coordinate with Geoff Farr at (920) 434-4060 or gfarr@villageofhoward.com during construction.

Wisconsin Public Service Corporation (WPS) Gas has facilities within the construction limits. WPS Gas plans the following relocations:

Install 6-inch PE gas main from the outlet of the regulator station at Station 256+50 along the west right-of-way line of Sherwood Street going north to Station 266+60 on the south side of Woodland Avenue. At that point there will be a tie-in made to an existing 2-inch AA gas main running west on Woodland Avenue. Also, at that point the 6-inch PE will cross Sherwood Street to the east and extend from Station 89+50 on the south side of Woodland Avenue to Station 98+20 at the intersection with CTH C (Shawano Avenue). This 6-inch PE will then go south to a point just north of the intersection with Catherine Drive.

The installation of the new 6-inch PE on the west side of Sherwood will allow for the retirement of the following facilities:

- Existing 2-inch AA gas main on the east side of Sherwood Street from Station 256+25 to Station 267+20,
- Existing gas main on Woodland Road from Sta 90+30 to the intersection with Shawano Ave, and
- Existing gas main on Shawano Ave between Woodland Road and Catherine Drive.

Install 8-inch WS gas main on the west side of Sherwood Street from the outlet of the regulator station at Station 256+50 along the west right-of-way line of Sherwood Street going north and crossing Woodland Road at Station 89+50 and proceeding north to Station 271+00. This gas main will then follow the south right-of-way line along CTH C (Shawano Avenue) going to the northwest and proceed to Station 393+00 past the construction limits of the project. At this point there will be a tie-in to the existing 6-inch WS gas main.

The installation of the new 8-inch WS gas main on the west side of Sherwood will allow for the retirement of the existing 8-inch WS gas main on the west side of Sherwood Street from Station 256+50 to the intersection of Sherwood Street and Shawano Avenue. A

section of 6-inch WS gas main on Shawano Avenue will be retired from Sherwood Street to just west of Station 393+00.

The existing 2-inch PE gas main and valve crossing Sherwood Street at Station 256+25 will be retired. Approximately 180 feet of new 2-inch PE gas main will be installed on Catherine Drive to maintain service to existing customers.

There is an existing 2-inch PE on the north side old Golden Pond Park Court. WPS needs the ability to maintain and operate this gas main between the west right-of-way line of CTH FF and the point where the new Golden Pond Park Court meets the old road.

The tie-in point for this 2-inch PE gas main on the old section of Golden Pond Park Court will be approximately Station 241+60 near the slope intercept on the west side of CTH FF. With this tie-in, WPS will not be required to install any gas main on the new Golden Pond Park Court at this time.

Install new 8-inch PE gas main joint with underground electric from approximately Station 221+50 north to Station 227+00. The gas main will cross to the east side of CTH FF at Station 227+00 and continue north crossing Navajo Trail at Station 80+40. The gas main will go north to Station 236+75 and cross to the west side of CTH FF at this point. The 8-inch PE gas main will follow the route of the underground electric north on CTH FF crossing STH 29 at Station 663+65 and ending at the Sherwood Street gas regulator station at approximately Station 256+70.

The installation of this new 8-inch PE gas main will allow for the retirement of the existing 8-inch WS gas main on CTH FF from Station 221+50 north to Station 256+70 at the outlet side of the Sherwood Street gas regulator station.

A section of 12-inch high pressure gas transmission line will be relocated from Station 661+00 to approximately Station 677+75. From the west tie-in point at Station 661+00, the new pipe will extend north approximately 110 feet across the NW ramp. At this point, the pipe will run east crossing Sherwood Street at approximately Station 252+60 and continue east. At some point, this new gas line will cross a large water main located on the east side of Sherwood Street. The gas main will continue east across the NE ramp at approximately Station 671+00 to reach a point close to the north right-of-way line near Station 673+00. The 12-inch gas main will follow along the new right-of-way line from Station 673+00 to Station 677+75. This will place the new gas main north of the end of the box culvert at Station 674+30 and between the sanitary sewer and the north right-of-way line. At Station 677+75 the gas main will make a 90 degree bend to run south to a tie-in point on the existing gas main.

This 12-inch high-pressure gas facility is in conflict with the construction of the north abutment of B-5-402. Do not use more than 75,450 foot pounds per blow in the construction of the B-5-402 substructure without notifying WPS 14 calendar days prior to construction in that location.

A new 6-inch WS gas inlet line will be installed to the Sherwood gas regulator station at approximately Station 661+20. An inlet valve will be located on the new 6-inch station inlet at a location between the slope intercept line and the new north right-of-way line. WPS will need access to this valve as this is the emergency shut off valve for this station. There will be a tie-in point where the new 6-inch inlet line meets the existing inlet.

The completion of the relocation on the 12-inch WS gas transmission line and the 6-inch inlet to the Sherwood Street gas regulator station will allow the existing main in direct conflict with the structure for the bridge to be retired. The tie-in work for the new gas main cannot be completed until weather will allow this transmission line to be taken out of service.

There is a ditch shown on the north side of STH 29 from Station 676+00 to Station 678+00 with approximately a 3 feet ditch cut.

WPS has a 3-inch PE gas main on Sunlite Drive and Forest Road. This gas main will be cut and capped at two spots to allow for the road construction. After the road construction has been completed, WPS will install approximately 1200 feet of new 4-inch PE gas main to connect these two points. A temporary 1-inch PE gas service will be routed to feed gas to a single customer near the bend where Sunlite Drive meets Forest Road. This customer is at 4758 Forest Road.

The gas main will be cut and capped on Sunlite Drive near Station 21+50. The gas main will also be cut and capped on Forest Road near Station 344+00. WPS will work with the contractor on this project to coordinate the cut off work.

Coordinate with Terry Luttenegger at (920) 617-5129 or tbluttenegger@wisconsinpublicservice.com and Phil Mauermann at (920) 617-5092 or pgmauermann@wisconsinpublicservice.com during construction.

Wisconsin Public Service Corporation (WPS) Electric has facilities within the construction limits. WPS Electric plans the following relocations:
Sunlite Drive:

- Station 21+75, 30’ LT set new pole 1.5 feet deeper.
- Station 25+80, 180’ LT remove street light pole when requested by Village of Hobart.
- Station 26+20, 70’ LT remove pole and overhead to pole Station 30+25, 90’ RT. Also remove pole at Station 29+10, 60’ RT.

Greenfield Avenue:

- Station 51+65, 27’ RT remove pole.
- Approx. 51+75, 27’ RT set new pole 2 feet deeper.
- Station 53+45, 29’ RT remove pole.
- Approx. Station 53+29’ RT set new pole 1 foot deeper.
- Station 55+15 remove pole.
- Approx. Station 55+40, 50’ LT install new pole within existing overhead line.

NE Ramp:

- Station 672+00 remove pedestal mount transformer and abandon service to WisDOT sign at Station 672+55.
- Abandon underground primary west from pedestal mount to pole at CTH FF Station 252+10 30’ LT.

SW Ramp:

- Station 657+40 to 658+70 abandon underground service to sign and remove pedestal mount transformer.
- Abandon underground primary east from pedestal mount to pole at CTH FF Station 247+75, 65’ LT.

CTH FF:

- Station 221 +30 40’ LT install new pole with anchors north 15 feet and 20 feet.
- Install underground from new pole to a ground transformer at Station 221+50 75’ LT.
- Install underground from ground transformer north to Station 222+00, 80’ LT then to Station 224+00, 70’ LT, then to Station 224+35, 53’ LT, then to Station 226+50, 53’ LT to a ground junction.
- Install underground north from junction to ground transformer Station 227+15, 60’ LT.
- Install underground from the west side of CTH FF to the east side crossing at Station 227+00.
- Install of underground conductors within 5 feet of the new CTH FF east right-of-way from Station 227+00 north to a ground transformer at Station 229+35 56’ LT then continuing north 15 feet before turning east for another 50ft within 5 feet of the new Navajo Trail South right-of-way.
- Install underground conductors from the south right-of-way of Navajo Trail, at approximately Station 80+40 to within 5 feet of the north right-of-way.
- Install underground north within 5 feet of the new CTH FF east right-of-way to two ground junctions at Station 236+45, 52’ RT and 236+60, 52’ RT.
- Install underground road crossing at approximately Station 236+60, 52’ RT west to approximately Station 236+60, 85’ LT.
- Install underground from approximately Station 236+60, 85’ LT north within 5 feet west of the slope intercept to install junction at approximately Station 241+75, 130’ LT.
- From install junction install underground #1 west within 5 feet of the new Golden Pond Court to an existing pedestal mount transformer at approximately Station 62+10, 37’ LT, #2 north to approximately Station 243+40, 97’ LT, continuing north within 5 feet of the right-of-way to install junction at approximately 245+50, 117’ LT.

- Then continue underground install to approximately Station 246+30, 135’ LT, then north to approximately Station 249+00, 150’ LT, then NW to approximately Station 250+00, 185’ LT, then north to approximately Station 251+00, 193’ LT, then to Station 252+50, 90’ LT, then to approximately Station 254+95, 130’ LT, then to approximately Station 255+07, 93’ LT, then to install junction approximately Station 256+30, 94’ LT.
- Install underground conductors from install junction to approximately Station 256+95, 94’ LT, then to approximately Station 257+00, 88’ LT then continue within 5 feet of the right-of-way to install pedestal mount transformer at approximately Station 259+45, 77’ LT.
- Install underground road crossing from install transformer to an install pole at approximately Station 260+00, 70’ RT. From install transformer continue underground install north within 5 feet of the west right-of-way to an install pedestal mount transformer at approximately Station 263+80, 71’ LT.
- From install pedestal mount install underground north within 5 feet of west right-of-way, with an underground road crossing at approximately Station 264+20 to an install pedestal at approximately Station 264+20, 65’ RT, then from install pedestal install underground south 25’ to an install pole at approximately Station 263+95, 65’ RT and north 60 feet to an install pole at approximately Station 264+78, 65’ RT.
- From install pedestal transformer approximately Station 263+80, 71’ LT install underground north within 5 feet of the west right-of-way to an install pedestal mount transformer at approximately Station 266+00, 56’ LT.
- From install pedestal mount transformer approximately Station 266+00, 56’ LT install underground north within 5 feet of the west right-of-way to approximately Station 266+60 then turning west to Station 89+00, 38’ RT Woodland Rd. then crossing Woodland Rd to an install pole at approximately Station 89+05, 26’ LT.
- Remove overhead between Station 221+30 to Station 267+20.
- Abandon underground along the north side of Golden Pond Court from approx Station 241 +40, 45’ LT CTH FF to existing pedestal mount approximately Station 62+10, 37’ LT Golden Pond Court.
- Remove or relocate light pole approximately Station 62+10, 25’ LT Golden Pond Court according to request from The Village of Hobart.

Shawano Ave:

- Install a new pole at Station 393+00, 24’ RT with anchors 15 feet and 20 feet SE.
- Install underground SE from Station 393+00 within 5 feet of the right-of-way to an install pedestal mount transformer at Station 394+50.
- Install underground from pedestal mount transformer Station 394+50 RT crossing Shawano Avenue toward AT&T pole at Station 394+50, 32’ LT and splicing to existing underground conductors approximately 10 feet NE of AT&T pole.
- From install pedestal mount Station 394+50 RT install of underground SE within 5 feet of the right-of-way to an install pedestal mount transformer at approximately Station 397+70 RT.

- Install underground from install pedestal mount Station 397+70 RT crossing Shawano Avenue to approximately Station 397+70, 33' LT, then E within 5 feet of the right-of-way to an install pedestal at approximately Station 398+10, 45' LT.
- From install pedestal mount Station 397+70 RT install underground SE within 5 feet of the right-of-way to approximately Station 398+50, 103' RT, then turn SW and continue within 5 feet of the right-of-way for approximately 25 feet to approximately Station 272+35 LT CTH FF.
- Install underground from CTH FF Station 272+35 LT crossing CTH FF to approximately Station 272+35 RT, then SE within 5 feet of the right-of-way to approximately Station 406 +50 RT, then continue to install pole at approximately Station 407+00, 24' RT with anchors 15 feet and 20 feet SW of install pole. Remove overhead between Station 393+00 SE to Station 407+00.

Woodland Rd:

- Approx. Station 89+05, 26' LT install pole.
- Install underground from install pole east within 5 feet of the right-of-way to install junction approximately Station 89+30, 33' LT.
- Install pole approximately Station 95+30, 22' LT.
- Remove pole Station 89+70, 25' LT, and remove pole Station 95+72, 22' LT.

WPS Electric will jointly relocate with WPS Gas, AT&T and TWC. Coordinate with Randy Steier at (920) 617-5167 or rdsteier@wisconsinpublicservice.com during construction.

The following utilities have facilities within the vicinity of the project, however, no adjustments are anticipated:

- ATC Management, Inc.
- Nsight Telservices/Northeast Telephone Co.
- Oneida Tribe of Indians Utility Department – Communications
- Qwest Communications

8. Other Contracts.

The following projects will be under construction concurrently with the work under this contract:

Department project consisting of removing buildings and razing recently acquired properties within the project and construction limits. Most of the contract is expected to be complete by June 30, 2013. However, the razing and removing of the buildings on Parcel 7 are not anticipated to be completed until after July 25, 2013.

STH 29 – US 41 Interchange and US 41 Central Mainline
Project 1133-03-71 and 1133-03-73, De Pere – Suamico, Morris Avenue to Memorial Drive, Larsen Road to Memorial Drive Mainline, Brown County, Wisconsin under a

department contract. The work under these contracts is anticipated to be complete in September 2015.

Project 9202-07-71, STH 29 Relocation, USH 41 to CTH J, STH 29 Mainline, Duck Creek to CTH EB, Brown County, Wisconsin under a department contract. The work under these contracts is anticipated to be complete in September 2015.

Project 9202-08-72, De Pere – Suamico, WIS 29 Relocation US 41 – CTH J, Dousman Street Obliteration, Brown County Wisconsin. Work under this contract is anticipated to be complete begin in April 2013 and be complete in August 2013. The work under this contract has schedule and workzone overlap if Dousman Street is used for material storage. The work under these contracts is anticipated to be complete in August 2013.

Project 9202-07-82, De Pere – Suamico, Shawano Avenue – STH 29, Brown County, Wisconsin under a department contract. Work under this contract is anticipated to begin in July 2014.

US 41 North Mainline
Beaver Dam Creek Box Culvert and Creek Realignment
Project 1133-11-75, De Pere – Suamico, Memorial Drive to CTH M, Brown County, Wisconsin under a department contract. Work under this contract is anticipated to begin in September 2012.

Brown County
Brown County CTH C (Shawano Avenue) reconstruction project. Brown County plans to reconstruct CTH C (Shawano Avenue) immediately eastward of the construction limits under WisDOT Project 9200-04-71. Work under the County project contract is anticipated to begin on or around April 1, 2014. This date is subject to change; coordinate staging with Brown County and the Village of Howard in advance of and during construction. Brown County will be responsible for any additional traffic control and maintenance of work required to complete the County contract.

Additional projects may be under construction concurrently with the work items under this contract. Inquire with Brown County, Village of Howard, Village of Hobart, the Oneida Nation and the department for any additional projects anticipated to be under construction in the project area or along proposed hauls routes.

9. Work by Others.

At the interchange of STH 29 and CTH FF, the Wisconsin Department of Transportation Northeast Region Electrical Unit will perform the following work:

- Remove existing yellow flashing beacons and flasher units.
- Request termination of both flasher electric services.
- Provide and install the lighting control cabinet.
- Terminate all electrical wire in the lighting control cabinet.

10. Environmental Protection.

Supplement standard spec 107.18 as follows:

Wetlands
Do not disturb nor store materials or topsoil within the nearby wetlands as shown on the wetland overview sheet unless areas are designated to be filled or impacted as permitted in the project's U.S. Army Corps of Engineers Section 404 Permit. The work area shall be separated from the wetlands by silt fence, as shown on the plans, to avoid siltation and inadvertent fill into the wetland areas. Place stockpiled spoil material on an upland site an adequate distance from wetland and any open water areas, as approved by the engineer.

Dewatering
Supplement standard spec 107.18 as follows:

If dewatering is required, treat the water to remove suspended sediments by filtration, settlement or other appropriate best management practice prior to discharge. The means and methods proposed to be used during construction shall be submitted for approval as part of the Erosion Control Implementation Plan for dewatering at each location it is required. The submittal shall also include the details of how the intake will be managed to not cause an increase in the background level turbidity prior to treatment and any additional erosion controls necessary to prevent sediments from reaching the project limits or wetlands and waterways. Guidance on dewatering can be found on the Wisconsin department of Natural Resources website located in the Storm Water Construction Technical Standards, Dewatering Code #1061, "Dewatering". This document can be found at the WisDNR website:

http://dnr.wi.gov/topic/stormwater/standards/const_standards.html

The cost of all work and materials associated with water treatment and/or dewatering is incidental to the bid items the work is associated.

11. Environmental Protection, Phragmites.

Phragmites, an invasive species plant, is known to exist within the project limits and in areas that ground disturbance or excavation work is shown in the plans. All soils containing plant or root fragments that will be excavated or salvaged as part of the work within the contract shall be salvaged and used as topsoil within the immediate area of the work or deposited at an engineer approved waste site within the existing right-of-way within the project limits. All waste sites are subject to review and approval by the department and shall be suitable for the waste of material containing Phragmites. Waste material shall be placed in upland locations in the general area where the plan currently exists. For all equipment that comes into contact with Phragmites infested areas, use the following guidelines for inspection and cleaning of equipment prior to leaving the project site.

See plans for known Phragmites locations. Locations to be verified by engineer in the field.

Ensure that all equipment that has been in contact with Phragmites infested areas or potentially infested areas has been decontaminated. Use the following inspection and removal procedures (guidelines from the Wisconsin Department of Natural Resources) for disinfection:

- Prior to leaving the contaminated site, wash machinery and ensure that the machinery is free of all soil and other substances that could possible contain exotic invasive species;
- Clean all equipment with hot water of 105°F to 110°F for a period of 30 minutes or hot water of 140°F for a period of five minutes. After cleaning, dry all equipment in a sunny location for at least three days.

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

12. Environmental Protection, Aquatic Exotic Species Control.

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

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

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

1. Prior to leaving the contaminated site, wash machinery and ensure that the machinery is free of all soil and other substances that could possibly contain exotic invasive species;
2. Drain all water from boats, trailers, bilges, live wells, coolers, bait buckets, engine compartments, and any other area where water may be trapped;
3. Inspect boat hulls, propellers, trailers and other surfaces. Scrape off any attached mussels, remove any aquatic plant materials (fragments, stems, leaves, seeds, or roots), and dispose of removed mussels and plant materials in a garbage can prior to leaving the area or invested waters; and

4. Disinfect your boat, equipment and gear by either:
    a. Washing with ~212º F water (steam clean), or
    b. Drying thoroughly for five days after cleaning with soap and water and/or high pressure water, or
    c. Disinfecting with either 200 ppm (0.5 oz per gallon or 1 Tablespoon per gallon) Chlorine for 10-minute contact time or 1:100 solution (38 grams per gallon) of Virkon Aquatic for 20- to 30-minute contact time. Note: Virkon is not registered to kill zebra mussel veligers nor invertebrates like spiny water flea. Therefore this disinfect should be used in conjunction with a hot water (>104º F) application.

Complete the inspection and removal procedure before equipment is brought to the project site and before the equipment leaves the project site.
107-055 (20110615)

13. Endangered Resources.

There are State Threatened wood turtle within the project area. Provide 10 day business notice to the department (Mike Helmrick, WisDOT, (920) 492-7738) prior to start of any construction activity. The department will field review and remove any turtle, if found within the project area. The department will monitor and remove turtle if necessary throughout the construction period.

The State Threatened Wood Turtle (Glyptemys insculpta) is a known inhabitant to the waterways and riparian corridors throughout the project area. Wood turtles may be present at the site, or near the site, therefore;

The project construction must protect the perimeter of the area to be disturbed with properly trenched-in silt fence prior to March 15th to discourage the turtles from entering the area. The silt fence installation must meet both the department's specifications and the approval of the Department of Natural Resources.

If the project construction area cannot be silt fenced prior to March 15, the trenched-in silt fence must be installed prior to construction activities and the area behind the silt fence must be surveyed to ensure no turtles have ventured into the construction site.

Contact Mike Helmrick for additional measures if any Wood Turtles are in the construction limits.

Any turtles that are found in the project site, during construction season, must be removed prior to any site disturbance and shall continue throughout the construction period to ensure no turtles are harmed during construction.

14. 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 Jeremy Ashauer, DOT Project Manager, at (920) 492-4165.
107-054 (20080901)

15. Construction Over or Adjacent to Navigable Waters.

Supplement standard spec 107.19 with the following:

The unnamed tributary of Duck Creek, Thornberry Creek, and Lancaster Brook are classified as navigable waterways.
107-060 (20040415)

16. Erosion Control.

Perform the work under this item in accordance to the requirements of standard spec 107.20 and supplemented as follows:

The contractor shall coordinate a pre-erosion control implementation plan (ECIP) meeting with representatives of WisDOT and DNR. The contractor shall schedule this meeting as soon as the project is awarded and prior to submitting the ECIP. The contractor will discuss matters related to schedule of operations, construction staging, protection of resources, and other matters related to the project's erosion control measures. In the ECIP, the contractor shall stage the project in a manner to minimize the area of exposed area during grading operations.

Take adequate precautions to install and maintain necessary erosion and sediment control during grading and construction operations at curbs and gutters, and at other locations as determined by the engineer. Protect storm drain inlets and manholes at locations determined by the engineer with a filter fabric meeting accepted design criteria, standards, and specifications. For newly constructed inlets, install inlet protection measures on the same day that the inlet is completed. Install permanent erosion control measures whenever fill heights exceed 10 feet high. The contractor shall provide tracking pads as necessary for access to businesses and residences during construction. The erosion control items shown on the plans are at suggested locations. The engineer may modify locations as needed. Maintain all erosion control measures until such time as the engineer determines the measures are no longer necessary.

Temporary/rough graded areas must not be left undisturbed for more than 3 days. After this time the contractor must provide some type of temporary cover (temporary seed, erosion matting, etc.).

All final graded areas will be mulch, topsoiled, seeded, and/or erosion mattedas designated by the engineer, within 24 hours immediately after grading has been completed within those areas. Fertilize all topsoiled areas within 7 business days after placement of topsoil. Contractor must provide adequate watering of seeded areas.

Silt fence must be checked on a weekly basis throughout the project. In addition, the contractor must check erosion control measures within 24 hours after every precipitation event that produces 0.5 inches of rain or more during a 24 hour period.

Environmentally Sensitive Areas

Due to the environmentally sensitive areas within the project, a pre-ECIP meeting will be held for this project. At this pre-ECIP meeting all the parties will discuss the erosion control plan and in particular the environmentally sensitive areas. Thornberry and Lancaster Creeks are trout streams and considered to be environmentally sensitive areas.

Thornberry and Lancaster Creeks will have silt fence installed adjacently on each side of creek per the erosion control plans. All erosion control measures adjacent to the creek will be installed before any grading work is to be done on the project. Once this silt fence is installed the contractor will place a section of erosion matting and then another row of silt fence with erosion bales as support per the erosion control plans. This barrier of silt fence, erosion bales, erosion matting and silt fence should provide an extra level of protection necessary for these environmentally sensitive areas. In addition, the silt fence can be staked with metal stakes instead of wood stakes to provide some additional strength. All disturbed ground adjacent to the Thornberry and Lancaster Creek must be covered within 24 hours of disturbance. The erosion control measures around the environmentally sensitive areas must be checked by the contractor on a weekly basis. In addition, the contractor must check erosion control measures within 24 hours after every precipitation event that produces 0.5 inches of rain or more during a 24 hour period.

B-05-403, R-05-109, and R-05-108 will be constructed around or adjacent to Thornberry Creek for Centennial Centre Boulevard from approximately Station 68+00 to 71+00. The contractor will construct all three structures around Thornberry Creek without any disturbance to the creek. All erosion control measures must be in place before work to be done. B-05-403 will be constructed first followed by the retaining walls. The retaining walls north of the structure or south of the structure will be built at the same time. While the retaining walls are built fill for Centennial Centre Boulevard will be place as well.

B-05-0029 extensions and R-05-105 will be constructed around or adjacent to Lancaster Creek for the NE Ramp and SE Ramp. The contractor will construct the two structures with minimal disturbance to the creek. B-05-0029 extensions will be constructed first followed by the construction of the retaining wall.

The existing CTH FF culvert pipe at Station 238+25 will be removed and replaced with an oversize concrete pipe arch. This concrete pipe arch will be considered a fish passage way. Once the concrete arch pipe has been placed, the contractor will place the native streambed and fish rocks inside the pipe.

The contractor will evaluate the streambed at a natural stream reference reach away from the culvert, and then have DOT engineers calculate a similar mix for the culvert bottom. When selecting a stream reference area, it is important to get beyond the influence of the culvert, either upstream or downstream, or both. DNR will assist in conducting in stream surveys this spring, in order to better characterize the natural stream widths, flow rates, and bed material. DNR will also reserve the opportunity to inspect and approve the streambed mixture prior to, or during construction. It is important that the bed of the culvert is not filled with just rip rap or stone.

Fish rocks will be placed throughout culvert pipe alternating each side to provide rest areas for fish.

A fish light will be provided in the median of CTH FF. The fish light will be raised and graded away from the structure. This will reduce the amount of direct stormwater runoff.

Refer to plan set for additionally erosion control measures and construction staging for B-05-0029, B-05-403, and CTH FF.

Natural Spring

A natural spring exists near the existing CTH FF culvert pipe at Station 238+25 and outfalls into Thornberry Creek at the west side of CTH FF. The natural spring is outfall into Thornberry Creek via a 6" plastic corrugate pipe. During construction, the contractor must locate the source of the natural spring and divert this into the Thornberry Creek at the west side of CTH FF. The contractor will slowly remove existing CTH FF roadway and base to locate the beginning of the 6" plastic corrugate pipe, the source of the spring, without damaging the pipe. The contractor will check weekly to make sure the spring is flowing properly into Thornberry Creek.

The contractor will place a new pipe at the source of the spring and route directly to the west side of CTH FF into Thornberry Creek. This new pipe will be larger enough to handle the flow of the spring and strong enough to handle the weight of a minimum of 30 feet of fill place on top of it. The natural spring must not undermine CTH FF. The contractor will be compensated for locating spring, diverting spring properly into Thornberry, and the final construction of the pipe.

Winter Shutdown Measures

A winter ECIP meeting will be required for this project. This meeting will be held a month before October 15, 2013. At this meeting the contractor will discuss his plan to seed, install erosion matting per the plans, or water soluble anionic polyacrylamide (PAM) to all disturbed ground prior to construction winter shutdown. If there are areas of land disturbed by construction activities which have prevented the establishment or maintenance of grass cover, apply PAM or additional matting to reduce erosion. PAM needs to be applied directly to the disturbed ground. It does not work being applied to snow. No exposed ground will be allowed during winter shutdown.

Maintenance will consist of reapplying anionic PAM mixtures to disturbed areas, including high use traffic areas, which interfere in the performance of this practice. Anionic PAM mixture may lose its effectiveness in as little as two months due to weather conditions. Anionic PAM mixtures should be reapplied in areas where wind or rill erosion is apparent and whenever an area has been graded, driven upon, or otherwise disturbed since the anionic PAM mixture was last applied.

Check silt fence and inlet protection after each snowfall. The contractor must make sure and fix any damage to erosion control measures due to snowfall. Inlet protection and silt fences shall at a minimum be inspected weekly and within 24 hours after every precipitation event that produces 0.5 inches of rain or more during a 24 hour period. Damaged or decomposed fences, undercutting, or flow channels around the end of barriers shall be repaired or corrected due to winter precipitation.

Sediment deposits shall be removed and the inlet protection device restored to its original dimensions when the sediment has accumulated between 1/3 to 1/2 the design depth of the device, or when the device is no longer functioning as designed. Removed sediment shall be deposited in a suitable area and stabilized.

During spring, contractor must weekly check all erosion control measures. Spring conditions bring fluctuating temperatures which can result in heavy snow melt and ice buildups. In addition to weekly checks, if it is anticipated/forecast that spring rains are predicated the contractor is responsible to check all erosion control measures within 24 hours before and within 24 hours after the weather event. Spring rains with snow still covering the ground can cause major flood problems and failures to erosion control measures.

17. Erosion Control, Winterization.

Submit an erosion control implementation plan (ECIP) to the WISDOT Northeast Region Environmental Section and the WDNR at least 14 days prior to the pre-construction meeting. In addition to the normal permanent erosion control items, the ECIP shall contain a detailed staged plan for placing temporary and permanent landscaping items to provide for winterization of the project extending into 2014 construction.

Immediately after the grading operations, complete permanent landscaping unless the engineer authorizes temporary erosion control measures. Seed and/or temporarily seed exposed and topsoiled areas not to be graded until the spring of 2014 prior to October 15, 2013. In all areas where seeding occurs after October 15, 2013, apply Soil Stabilizer, Type B, and all other erosion control measures as determined necessary by the engineer.

18. Hauling Restrictions.

Do not haul materials of any kind on any local roads without approval of the local Maintaining Authority and the department. Provide any proposals to haul on local roads with a written agreement between the contractor and the respective Maintaining Authority. Submit a letter to the department (Project Leader) from the Maintaining

Authority in agreement to the hauling prior to hauling. Contact the respective Maintaining Authority prior to bidding for approval of haul routes.

At all times, conduct operations in a manner that will cause a minimum of disruption to traffic on existing roadways.

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

19. Coordination with Businesses.

The contractor shall arrange and conduct meetings between the department, local officials and business people to discuss the project schedule of operations including vehicular and pedestrian access during construction operations. The first meeting shall be held prior to the start of work under this contract and as needed or directed by the engineer.

20. Coordination with Property Owners.

Private Driveways
Maintain access to all business driveways and private residence driveways on a minimum of crushed aggregate base course surface at all times except as follows. Close driveways for a maximum of seven calendar days for grading and placement of base aggregate and concrete paving for each driveway. Notify and coordinate each business and/or each residence on the property a minimum of seven days prior to any driveway closures. Temporary access using aggregate to traverse curb and gutter may be provided, as approved by the engineer.

Parcel 3
Remove existing decorative lighting and landscaping masonry within the proposed right-of-way. Coordinate with the property owner at least two weeks prior to removal to ensure that electrical service to these items has been disconnected.

Parcel 4
Coordinate and schedule final landscaping details with the property owner at least two weeks prior to work on the property. The contractor is responsible for preparing and placing topsoil. The property owner will plant a prairie grass mixture of his or her choice. Do not seed, fertilize or place erosion control measures on areas that the property owner plans is maintaining.

Parcel 28
An existing fence will be removed and replaced by the property owner. Coordinate with the property owner at least two (2) weeks prior to work within the TLE.

Parcel 29
Coordinate with the property owner to ensure access from the residence and buildings on the north side of CTH C (Shawano Avenue) to areas south on Sherwood Street, east on

CTH C, and off of Woodland Avenue. The property owner requires access through the construction zone for agricultural operations.

21. Removing Guardrail.

Remove guardrail in accordance to the pertinent requirements of standard spec 204 and as hereinafter provided.

Carefully remove, disassemble at all joints, and stockpile at a location on the right-of-way, outside the construction limits, all salvageable posts, guardrail and hardware for pickup by Brown County Forces. Cutting of rail panels is not permitted.

Give two days advance notice to Brown County before starting the beam guard removal work to coordinate pickup arrangements. Contact Brown County at (920) 662-2166.

Remove and properly dispose of all other material from the right-of-way.

22. Removing Apron Endwalls, Item 204.9060.S.01.

A Description
Remove apron endwalls in accordance to the pertinent provisions of standard spec 204 and as hereinafter provided.

B (Vacant)

C (Vacant)

D Measurement
The department will measure Removing Apron Endwall in length by each endwall, acceptably completed.

E Payment
Supplement standard spec 204.5 to include the following:

ITEM NUMBER	DESCRIPTION	UNIT
204.9060.S.01	Removing Apron Endwalls	Each

Payment is full compensation for removing, hauling and disposing of apron endwall, and foundation; and for furnishing all labor, tools, equipment, and incidentals necessary to complete the contract work.
204-025 (20041005)

23. Removing Landscaping Masonry and Lighting, Item 204.9060.S.02.

A Description
Remove private landscaping masonry and lighting in accordance to the pertinent provisions of standard spec 204 and as hereinafter provided.

B (Vacant)

C Construction
Remove existing decorative lighting and landscaping masonry within the proposed right-of-way. Coordinate with the property owner at least two weeks prior to removal to ensure that electrical service to these items has been disconnected.

D Measurement
The department will measure Removing Landscaping Masonry and Lighting in length by each unit, acceptably completed.

E Payment
Supplement standard spec 204.5 to include the following:

ITEM NUMBER	DESCRIPTION	UNIT
204.9060.S.02	Removing Landscaping Masonry and Lighting	Each

Payment is full compensation for removing, hauling and disposing of landscaping masonry and lighting; foundation; electrical equipment; and for furnishing all labor, tools, equipment, and incidentals necessary to complete the contract work.
204-025 (20041005)

24. Removing Modular Wall, Item 204.9090.S.01.

A Description
Remove modular wall in accordance to the pertinent provisions of standard spec 204 and as hereinafter provided.

B (Vacant)

C (Vacant)

D Measurement
The department will measure Removing Modular Wall in length by the linear foot, acceptably completed.

E Payment
Supplement standard spec 204.5 to include the following:

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

Payment is full compensation for removing, hauling and disposing of modular wall, and foundation; and for furnishing all labor, tools, equipment, and incidentals necessary to complete the contract work.
204-025 (20041005)

25. Removing Footbridge, Item 204.9105.S.01.

A Description
Removing footbridge in accordance to the pertinent provisions of standard spec 204 and as hereinafter provided.

B (Vacant)

C Construction
Coordinate with the engineer, adjacent property owner, and Sno Birds snowmobile club (Dave DeMille, (920) 639-2986) two weeks prior to removing the footbridge. Do not remove the footbridge prior to obtaining the engineer's approval of the coordination.

D Measurement
The department will measure Removing Footbridge as a single lump sum unit, acceptably completed.

E Payment
Supplement standard spec 204.5 to include the following:

ITEM NUMBER	DESCRIPTION	UNIT
204.9105.S.01	Removing Footbridge	LS

Payment is full compensation for removing, hauling and disposing of existing footbridge; and for furnishing all labor, tools, equipment, and incidentals necessary to complete the contract work.
204-025 (20041005)

26. Temporary Shoring, Item 206.6000.S.

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

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

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

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

D Measurement

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

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
206.6000.S	Temporary Shoring	SF

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

The department will not pay for temporary shoring, installed for contractor convenience, that is not required in the plans.

206-005 (20110615)

27. Select Borrow.

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

Material

Furnish and use material that consists of granular material meeting the following requirements: Conformance to materials specified in standard spec 313.2 with not more than 25% of that portion passing the No. 200 sieve.

208-005 (20031103)

28. QMP Base Aggregate.

A Description

A.1 General

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

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

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

(4) Provide and maintain a quality control program, defined as all activities related to and documentation of the following:
1. Production and placement control and inspection.
2. Material sampling and testing.

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

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

A.2 Contractor Testing for Small Quantities

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

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

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

[1] If using production tests for acceptance, submit test results to the engineer for review prior to incorporating the material into the work. Production test results are valid for a period of 3 years.

[2] For 3-inch material, obtain samples at load-out.

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

3. No control charts are required. Submit aggregate load-out and placement test results to the engineer within one business day of obtaining the sample. Assure that all properties are within the limits specified for each test.
4. Department verification testing is optional for quantities of 6000 tons or less.

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

B Materials

B.1 Quality Control Plan

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

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

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

B.2 Personnel

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

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

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

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

B.3 Laboratory

(1) Perform QC testing at a department-qualified laboratory. Obtain information on the Wisconsin laboratory qualification program from:

Materials Management Section
3502 Kinsman Blvd.
Madison, WI 53704
Telephone: (608) 246-5388
http://www.dot.state.wi.us/business/engrserv/lab-qualification.htm

B.4 Quality Control Documentation

B.4.1 General

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

B.4.2 Records

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

B.4.3 Control Charts

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

(2) Provide control charts to the engineer within 6 hours after obtaining a sample. For 3-inch base, extend this 6-hour limit to 24 hours. Post or distribute charts using a method mutually agreeable to the engineer and contractor. Update control charts daily to include the following:
   1. Contractor individual QC tests.
   2. Department QV tests.
   3. Department IA tests.
   4. Four-point running average of the QC tests.

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

B.5 Contractor Testing

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

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

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

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

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

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

B.6 Test Methods

B.6.1 Gradation

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

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

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

(3) Maintain a separate control chart for each sieve size specified in standard spec 305 or standard spec 310 for each base aggregate size, source or classification, and type. Set control and warning limits based on the standard specification gradation limits as follows:

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

B.6.2 Fracture

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

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

B.6.3 Liquid Limit and Plasticity

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

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

B.7 Corrective Action

B.7.1 General

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

B.7.2 Placement Corrective Action

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

(2) Notify the engineer whenever the running average exceeds a warning limit. When 2 consecutive running averages exceed a warning limit, the engineer and contractor will discuss appropriate corrective action. Perform the engineer's recommended corrective action and increase the testing frequency as follows:

1. For gradation, increase the QC testing frequency to at least one randomly sampled test per 1000 tons placed.
2. For fracture, increase the QC testing frequency to at least one test per gradation test.

(3) If corrective action improves the property in question such that the running average after 4 additional tests is within the warning limits, the contractor may return to the testing frequency specified in B.5.3. If corrective action does not improve the property in question such that the running average after 4 additional individual tests is still in the warning band, repeat the steps outlined above starting with engineer notification.

(4) If the running average exceeds a control limit, material starting from the first running average exceeding the control limit and ending at the first subsequent running average inside the control limit is nonconforming and subject to pay reduction.

(5) For individual test results significantly outside the control limits, notify the engineer, stop placing base, and suspend other activities that may affect the area in question. The engineer and contractor will jointly review data, data reduction, and data analysis; evaluate sampling and testing procedures; and perform additional testing as required to determine the extent of potentially unacceptable material. The engineer may direct the contractor to remove and replace that material. Individual test results are significantly outside the control limits if meeting one or more of the following criteria:

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

B.8 Department Testing

B.8.1 General

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

B.8.2 Verification Testing

B.8.2.1 General

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

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

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

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

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

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

B.8.3 Independent Assurance

(1) Independence assurance is unbiased testing the department performs to evaluate the department's QV and the contractor's QC sampling and testing including personnel qualifications, procedures, and equipment. The department will perform an IA review according to the department's independent assurance program. That review may include one or more of the following:

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

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

B.9 Dispute Resolution

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

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

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

C (Vacant)

D (Vacant)

E Payment

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

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

301-010 (20100709)

29. Coloring Concrete Red, Item 405.0100.

Supplement standard spec 405.2.4.1, Colored Concrete Mix Approval General, with the following:

Test slab color will be evaluated for approval no earlier than 5 days after the test panel was poured and sealed.

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

A Description

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

(2) Profile the final riding surface of all mainline pavements, bridges, approaches, and railroad crossings. Roundabouts, and pavements within 150 feet of the points of curvature of roundabout intersections, are excluded from the testing requirements of this provision.

(3) Pavements that are excluded from localized roughness according to C.5.2(1), bridges, and roundabout intersections are subject to engineer-directed straightedging according to the standard specifications. All other surfaces being tested under this provision are exempt from straightedging requirements.

B (Vacant)

C Construction

C.1 Quality Control Plan

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

1. An organizational chart with names, telephone numbers, current certifications and/or titles, and roles and responsibilities of all quality control personnel.
2. The process by which quality control information and corrective action efforts will be disseminated to the appropriate persons. Include a list of recipients, the communication means that will be used, and action time frames.
3. The methods and timing used for monitoring and/or testing ride quality throughout the paving process.
4. The evaluation process that will be used to make improvements to the construction operations if poor ride quality is found during the process control testing.
5. The methods that will be used to ensure a smooth pavement transition when matching into existing surfaces such as bridges, bridge approaches, or railroad crossings.
6. The segment locations of each profile run used for acceptance testing.
7. The approximate timing of acceptance testing in relation to the paving operations.

C.2 Personnel

(1) Have a profiler operator, certified under the department's highway technician certification program (HTCP), operate the equipment, collect the required data, and document the results using the methods taught in the HTCP profiling course.

C.3 Equipment

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

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

(2) Unless the engineer and contractor mutually agree otherwise, arrange to have a calibrated profiler available when paving the final riding surface. Calibrate the profiler according to the manufacturer's recommendations. Provide the engineer with a copy of the most recent calibration results, signed by the certified profiler operator.

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

C.4 Testing

C.4.1 Run and Reduction Parameters

(1) Enter the equipment-specific department-approved filter settings and parameters listed on the department's ride web site.

C.4.2 Contractor Testing

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

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

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

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

(4) Treat partial segments as independent segments.

(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.

440-010 (20100709)

31. Reheating HMA Pavement Longitudinal Joints, Item 460.4110.S.

A Description

This special provision describes reheating the abutting edge of the previously compacted layer in the adjacent lane while paving mainline asphalt pavements.

B (Vacant)

C Construction

C.1 Equipment

Provide a self-contained heating unit that heats by convection only. Do not use forced air to enhance the flame. Provide a fireproof barrier between the flame and the heater's fuel source. The heater must produce a uniform distribution of heat within the heat box. Provide automatic controls to regulate the heater output and shutoff the heater when the paver stops or the heater control system loses power.

Mount the heater on the paver inside the paver's automatic leveling device.

C.2 Reheating Joints

Evenly reheat at least an 8 inch (200 mm) wide strip of the previously compacted layer in the adjacent lane as follows:

1. Ambient air temperature at or above 60 degrees F (15 degrees C), reheat to 290 to 340 degrees F (143-171 degrees C).
2. Ambient air temperature below 60 degrees F (15 degrees C), reheat to 240 to 290 degrees F (115-143 degrees C).

The engineer may modify the required joint reheat temperatures to adjust for weather, wind, and other field conditions. Coordinate the heater output and paver speed to achieve the required joint reheat temperature without visible smoke emission.

D Measurement

The department will measure Reheating HMA Pavement Longitudinal Joints by the linear foot, acceptably completed, as measured along each joint for each layer of asphalt placed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
460.4110.S	Reheating HMA Pavement Longitudinal Joints	LF

Payment is full compensation for furnishing all the work required under this bid item.

460-015 (20120615)

32. QMP HMA Pavement Nuclear Density.

A Description

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

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

(2) Provide and maintain a quality control program defined as all activities and documentation of the following:

1. Selection of test sites.
2. Testing.
3. Necessary adjustments in the process.
4. Process control inspection.

(3) Chapter 8 of the department's construction and materials manual (CMM) provides additional detailed guidance for QMP work and describes required procedures. Obtain the CMM from the department's web site at:

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

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

http://www.atwoodsystems.com/mrs

B Materials

B.1 Personnel

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

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

B.2 Testing

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

B.3 Equipment

B.3.1 General

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

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

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

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

B.3.2 Correlation of Nuclear Gauges

B.3.2.1 Correlation of QC and QV Nuclear Gauges

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

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

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

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

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

B.3.2.2 Correlation Monitoring

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

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

(3) Check each gauge on the project reference site a minimum of one test per day if paving on the project. Calculate the difference between the gauge's daily test result and its reference value. Investigate if a daily test result is not within 1.5 lb/ft^3 of its reference value. Conduct 5 additional tests at the reference site once the cause of deviation is corrected. Calculate and record the average of the 5 additional tests. Remove the gauge from the project if the 5-test average is not within 1.5 lb/ft^3 of its reference value established in B.3.2.2(2).

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

B.4 Quality Control Testing and Documentation

B.4.1 Lot and Sublot Requirements

B.4.1.1 Mainline Traffic Lanes, Shoulders, and Appurtenances

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

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

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

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

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

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

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

Table 1

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

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

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

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

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

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

Table 2

B.4.2 Pavement Density Determination

B.4.2.1 Mainline Traffic Lanes and Appurtenances

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

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

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

B.4.2.2 Mainline Shoulders

B.4.2.2.1 Width Greater Than 5 Feet

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

B.4.2.2.2 Width of 5 Feet or Less

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

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

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

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

B.4.2.4 Documentation

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

B.4.3 Corrective Action

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

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

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

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

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

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

B.5 Department Testing

B.5.1 Verification Testing

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

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

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

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

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

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

B.5.2 Independent Assurance Testing

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

B.6 Dispute Resolution

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

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

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

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

B.7 Acceptance

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

C (Vacant)

D (Vacant)

E Payment

E.1 QMP Testing

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

E.2 Disincentive for HMA Pavement Density

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

E.3 Incentive for HMA Pavement Density

(1) Delete standard spec 460.5.2.3.

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

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

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

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

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

460-020 (20100709)

33. Sheet Membrane Waterproofing for Top Slab B-5-403, Item 516.0610.S.02.

A Description

Furnish and install a primer, waterproofing membrane, hot rubberized sealer or mastic, or both, on the concrete top slab as shown on the plans and as hereinafter provided.

B Materials

B.1 Waterproofing System

Provide a material in the waterproofing system that is specifically designed for use with an asphaltic concrete overlay. The membrane shall consist of a cold-applied, self-adhering membrane incorporating a heat resistant woven or non-woven fabric or fiberglass reinforcing laminated in between layers of polymer modified bitumen or SBS modified rubberized asphalt. The membrane shall have a release film, polyester or polyethylene on the down side and may have a thin spun bonded open weave polyester fabric on the up side that will bond with the asphaltic concrete overlay; yet will permit driving rubber-tired trucks, pavers and other construction vehicles on the membrane covered deck slab.

Provide a composite sheet membrane with the following properties:

Property	Test Method	Specific Value
Width		36 inch min.
Tensile Strength	ASTM D412	50 lb/inch or 700 psi min.
Thickness		60 mils to 80 mils
Puncture Resistance	ASTM E154	40 lb min.
Permeance	ASTM E96, Method B	0.05 US Perms max.
Low Temperature Pliability	ASTM D146, 1-inch Mandrel @ -25º F	No cracks or splits at 180º bend
Water Absorption	ASTM D570, 72 hours	0.25% max.
Peel Adhesion	ASTM D903	5 lb/in width min.
Crack Cycling @ -15º F, 10 cycles	ASTM C836	No cracks or splits
Compound Softening Point	ASTM D36	210º F ±20º F
Viscosity of Membrane Rubberized Asphalt, @329º F	ASTM D4402	3500 centipoise

Provide rubberized asphalt compound containing not more than 15% inorganic residue or filler material.

Provide primer, mastic and/or hot rubberized asphalt sealer conforming to the specified properties required by the manufacturer of the waterproofing membrane.

B.2 Materials Certification

Prior to membrane approval for initial submittals and/or upon reformulation of membrane material compounds, submit to the engineer a notarized certification by an independent test laboratory stating that the materials conform to the requirements of these specifications.

The certification shall include or have attached specific results of tests performed on the material supplied. The engineer may at his option require samples of any material for testing. Previously approved membranes will be provisionally accepted by manufacturer's certification on their company letterhead, but may be subject to control or approval, or both by subsequent testing.

C Construction

C.1 Application Methods

Apply materials in strict accordance to the manufacturer's instructions. In order to install the waterproofing membrane, the slab temperature shall be a minimum of 45º F and rising. Before applying the system, become acquainted with the materials specified and their handling characteristics and become thoroughly familiar with the construction procedures recommended by the manufacturer. Furnish a copy of the recommended procedures to the engineer. To establish procedures for maintaining optimum working conditions and to coordinate work related to adjacent construction, hold a pre-installation conference with a manufacturer's representative, the engineer, and other affected

contractors prior to starting construction. To provide quality assurance that the membrane has been properly installed, a manufacturer's representative familiar with membrane installation procedures shall be present during placement of the membrane.

Finish all concrete surfaces that will be in contact with the membrane with a magnesium float finish. Provide a minimum concrete cure time of seven days before placing the primer.

The slab shall be clean, dry, and free from mud, dirt, sand, oil, or grease, and any other contaminants prior to application of the primer. No vehicles or equipment will be permitted on the concrete slab after surface preparation except those necessary for the installation of the waterproofing membrane. The engineer will inspect the concrete slab prior to the application of the primer. Do not begin application of either the primer or membrane until after the engineer grants approval.

To coat all surfaces that will be covered with the membrane, apply primer uniformly as recommended by the manufacturer. Use roller, brush, or spray to apply primer to the surfaces. If spraying is used, an approved method of protecting the environment is required.

Allow the primer to dry until tack free, approximately 45 minutes, before applying the membrane. Apply primer only to an area that will be covered with the membrane within the same calendar day. If the surface of the concrete slab becomes contaminated, clean and re-prime the area.

Apply primer to the inside face of any header to the top of the header. Take care to ensure that all inside corners are coated with primer.

After the primer has dried to a tack free condition, apply one layer of membrane to the slab starting on the low side edge.

To form a bond with the primed slab, remove the release film from the membrane on the tacky side while the membrane is rolled face down. Apply the membrane using hand methods or by using mechanical applicators. Overlap a minimum of 2.5 inches at the edges of each strip and overlap the membrane in such a manner to provide a shingling effect toward the low side of the slab cross section. Overlap a minimum of 5 inches at the ends of each strip of membrane and overlap the membrane in such a manner to provide a shingling effect toward the lower side of the slab profile. Roll the entire membrane surface with a rubber tire roller to ensure firm and uniform contact with the primed surface. Use special care to ensure that the membrane is uniformly adhered to the concrete and that the entire membrane is free of wrinkles, air bubbles, and other placement defects. In the event bubbles or blisters do form under the membrane, puncture the bubbles or blisters with a sharp pointed instrument such as an awl and press the membrane firmly into contact with the deck. Repair any membrane punctures, tears, holes, and misaligned or inadequate seams with a patch of waterproofing membrane sized as required to ensure that the membrane is watertight.

Cover the inside corners of any concrete header and all other perimeter edges with narrow strips (flashing strips of approximately 12 inches), hot rubberized sealer, or mastic in accordance to the manufacturer's guidelines. As an additional method of ensuring a watertight bond, all terminating edges, transverse overlaps and longitudinal overlaps may be heated with a propane torch to soften the top mat and fuse the surfaces together.

The applicator foreman or leadworker shall be certified by the manufacturer of the waterproofing membrane as approved applicators, and shall be present during all applications.

C.2 Where Overlaying the Membrane Directly with Asphaltic Concrete

Construct the asphaltic concrete overlay according to scheduling requirements elsewhere in the contract. Cover all of the exposed membrane with the specified asphaltic concrete mix within five days after installation. Only rubber-tired construction vehicles shall be permitted on the membrane. Use caution not to turn the tires when a vehicle is stationary. To prevent tearing the membrane, avoid sudden starts, stops, accelerations, or decelerations. Chemical solvents, gasoline, diesel fuel, mineral spirits, etc. or other deleterious substances shall not be spilled or leaked onto the membrane. Prior to covering the membrane with asphaltic concrete overlay, clean the membrane of mud, dirt, sand, oil, grease, or any other contaminants, and dry the membrane. Patch contaminated areas as required by the engineer. When required to accommodate traffic control staging, the construction of the asphalt concrete overlay shall stay at least 6 inches away from the terminating edge of the membrane to provide for overlap.

The placement temperature of the asphaltic concrete shall be between 300º F and 350º F. Do not place asphaltic concrete on the membrane outside of this temperature range. The temperature of the uncompacted mat of asphaltic concrete shall not fall below 280º F prior to rolling. The thickness of the asphaltic concrete layers shall be as shown on the plans; the initial layer shall have a minimum compacted thickness of 1½-inches. The membrane applicator contractor shall have a minimum of one employee present during all asphaltic concrete paving operations to ensure that all necessary membrane repairs are accomplished.

C.3 Where Not Overlaying the Membrane Directly with Asphaltic Concrete

Place a 6-inch thick layer of clean granular fill material (sand), free of any aggregate, stones or other angular materials that may puncture the membrane, over the membrane covered slab. Cover all exposed membrane with the clean granular fill within five days after installation. Only rubber-tired construction vehicles shall be permitted on the membrane. Use caution not to turn the tires when a vehicle is stationary. To prevent tearing the membrane, avoid sudden starts, stops, accelerations, or decelerations. Chemical solvents, gasoline, diesel fuel, mineral spirits, or other deleterious substances shall not be spilled or leaked onto the membrane. When required to accommodate traffic control staging, the placement of fill material shall stay at least 12 inches away from the terminating edge of the membrane to provide for overlap. The membrane applicator

contractor shall have a minimum of one employee present during the placement of the clean granular fill material to ensure that all necessary membrane repairs are accomplished.

D Measurement

The department will measure Sheet Membrane Waterproofing for Top Slab (Structure), installed in accordance to the contract and accepted, in area by the square yard. Measurement shall be based on the horizontal distance between the faces of any concrete headers and the horizontal length of membrane installed. Any material specified to be applied up vertical faces of any header or vertically down at the ends of the slab shall be included in the measured quantity.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
516.0610.S.01	Sheet Membrane Waterproofing for Top Slab B-5-29	SY
516.0610.S.02	Sheet Membrane Waterproofing for Top Slab B-5-403	SY

Payment is full compensation for furnishing and placing the primer, membrane, mastic, and hot rubberized asphalt sealer; and preparing the surface. Clean granular fill material (sand), where required, will be paid for using the bid item Backfill Structure.

516-061 (20110930)

34. Concrete Staining B-5-402, Item 517.1010.S.01; R-5-107, Item 517.1010.S.02.

A Description

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

B Materials

B.1 Mortar

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

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

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

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

B.2 Concrete Stain

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

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

C Construction

C.1 General

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

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

C.2 Preparation of Concrete Surfaces

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

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

C.3 Staining Concrete Surfaces

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

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

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

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

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

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

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

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

ITEM NUMBER	DESCRIPTION	UNIT
517.1010.S.01	Concrete Staining B-5-402	SF
517.1010.S.02	Concrete Staining R-5-107	SF

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

35. Concrete Staining Multi-Color B-5-402, Item 517.1015.S.01; R-5-107, Item 517.1015.S.02.

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

B Materials
B.1 Mortar
Use mortar for sack rubbing the concrete surfaces as given in standard spec 502.3.7.5 or use one of the following products:

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

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

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

B.2 Concrete Stain

Use concrete stain manufactured for use on exterior concrete surfaces. Use the following products, or equal as approved by the department:

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

C Construction

C.1 General

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

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

C.2 Preparation of Concrete Surfaces

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

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

C.3 Staining Concrete Surfaces

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

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

The color of the staining shall produce a multi-color effect that consists of multiple colors replicating varying natural stone coloration. Stain the joints between stones produced by the form liner to create the appearance of grouted joints.

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

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

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

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

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

ITEM NUMBER	DESCRIPTION	UNIT
517.1015.S.01	Concrete Staining Multi-Color B-5-402	SF
517.1015.S.02	Concrete Staining Multi-Color R-5-107	SF

Payment is full compensation for furnishing and applying the coloring system; for preparing the concrete surface; and for constructing and staining the sample panels.
517-115 (20100709)

36. Architectural Surface Treatment B-5-402, Item 517.1050.S.01; R-5-107, Item 517.1050.S.04; R-5-108, Item 517.1050.S.05; R-5-109, Item 517.1050.S.06.

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

B Materials

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

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

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

C Construction

C.1 Equipment

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

C.2 Form Liner Preparation

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

Apply form release per manufacturer's recommendations.

C.3 Form Liner Attachment

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

C.4 Surface Finishing

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

Grind or fill pouring blemishes.

D Measurement

The department will measure Architectural Surface Treatment (Structure) in area by the square foot of architectural surface, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
517.1050.S.01	Architectural Surface Treatment B-5-402	SF
517.1050.S.04	Architectural Surface Treatment R-5-107	SF
517.1050.S.05	Architectural Surface Treatment R-5-108	SF
517.1050.S.06	Architectural Surface Treatment R-5-109	SF

Payment is full compensation for producing the proposed architectural surface treatment including: preparing the foundation; finishing and protecting the surface treatment; and for properly disposing of surplus material.
517-150 (20110615)

37. Wall Modular Block Gravity, Item 532.0200.S.

A Description

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

B Materials

B.1 Proprietary Modular Block Gravity Wall Systems

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

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

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

B.2 Design Requirements

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

The design/shop plans shall be prepared on reproducible sheets 11 inch x 17 inch, including borders. Each sheet shall have a title block in the lower right corner. The title block shall include the project identification number and structure number. Design calculations and notes shall be on 8½ inch x 11 inch sheets, and shall contain the project identification number, name or designation of the wall, date of preparation, initials of designer and checker, and page number at the top of the page. All plans and calculations shall be signed, sealed, and dated by a professional engineer licensed in the State of

Wisconsin. Four copies of the shop drawings and two copies of the design calculations and supporting materials shall be submitted.

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

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

B.3 Wall System Components

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

B.3.1 Backfill

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

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

B.3.2 Wall Facing

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

The top course of facing units shall be a solid precast concrete unit designed to be compatible with the remainder of the wall. The finishing course shall be bonded to the underlying facing units with a durable, high strength, flexible adhesive compound compatible with the block material. A formed cast-in-place concrete cap may also be used to finish the wall. A cap of this type shall be designed to have texture, color, and an appearance that complements the remainder of the wall. The vertical dimension of the cap shall not be less than 3½ inches. Expansion joints shall be placed in the cap to correspond with each 24-inch change in vertical wall height or at a maximum spacing of

10 feet. Concrete for all cast-in-place caps shall be Grade A and shall conform to the requirements of standard spec 501.3.

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

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

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

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

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

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

A department-approved independent testing laboratory shall control and conduct all modular block sampling and testing for certification. Prior to sampling, the manufacturer's representative shall identify all pallets of modular blocks contained in each lot. All pallets of blocks within the lot shall be numbered and marked to facilitate random sample selection. The representative of the independent testing laboratory shall identify five pallets of blocks by random numbers and shall then select one block from each of these pallets. Solid blocks used as a finishing or top course shall not be selected. The selected blocks shall remain under the control of the person who conducted the

sampling until shipped or delivered to the testing laboratory. All pallets of blocks within a lot shall be strapped or wrapped to secure the contents and tagged or marked for identification. The engineer will reject any pallet of blocks delivered to the project without intact security measures. The contractor shall remove all rejected blocks from the project at no expense to the department.

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

B.3.3 Leveling Pad

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

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

C Construction

C.1 General

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

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

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

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

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

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

C.2 Geotechnical Information

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

D Measurement

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

E Payment

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

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

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

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

38. Pipe Grates, Item 611.9800.S.

A Description

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

B Materials

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

Furnish pipe grates galvanized according to ASTM A123.

Furnish angles and brackets galvanized according to ASTM A123.

Furnish required hardware galvanized according to ASTM A153.

C Construction

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

D Measurement

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

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
611.9800.S	Pipe Grates	Each

Payment is full compensation for furnishing and installing all materials; and for drilling and connecting grates to pipes.
611-010 (20030820)

39. 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)

40. 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 $1,000 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)

41. Furnishing and Planting Plant Materials.

The work under this item shall be in accordance to the plans, standard spec 632, as shown on the plans, and as hereinafter provided.

Modify standard spec 632.2.1 to include the following:
All plants shall be grown within the states of Wisconsin, Minnesota, Michigan, or parts of northern Illinois, Indiana or Ohio located within Zone 5 of the "Plant Hardiness Zone Map" produced by the United States Department of Agriculture, Miscellaneous Publication No. 1475, issued January, 1990, unless otherwise approved by the engineer.

Modify standard spec 632.2.2.8 as follows:

A list of sources for plants shall be furnished in accordance to standard spec 632.2.2.8 before planting begins for fall-planted plants and before March 15 for spring-planted plants. All sources will be subject to verification by the engineer.

Modify standard spec 632.2.3.4 to include the following:

Planting mixture blend shall be reviewed and approved by the engineer or construction representative before use on project. The engineer reserves the right to reject planting mixture that does not conform to the specifications and/or does not come with the appropriate material certificates. The engineer may require the contractor to take samples (for USDA soil texture classification, pH, % organic matter, nutrient content, cation exchange capacity, soluble salts, and the presence of any materials deleterious to plant growth) and provide testing through a qualified testing laboratory approved by the State of Wisconsin to confirm that topsoil meets the requirements outlined in Section 625.

Modify standard spec 632.2.7 as follows:

Do not use wrapping on plant material.

Modify standard spec 632.2.9 as follows:

Rodent protection shall be rigid plastic mesh made of recycled HDPE with an open mesh matrix ¾" by ¾" with each strand approximately 1/8" x 1/8" x 1/8". Product shall be UV treated and shall have a life expectancy of up to five years. Protection shall be 48 inches high. Contractor shall supply source of rodent protection to the engineer. All sources will be subject to verification and approval by the engineer.

Contractor shall use granular or similar rodent bait for shrub beds as needed and only as approved by engineer.

Modify standard spec 632.2.10 to include the following:

Contractor shall use 18" long soft polymer webbing strap with grommets at end of the two ends to secure wire or twine to tree. Contractor shall supply source of webbing straps to the engineer. All sources will be subject to verification and approval by the engineer.

Modify standard spec 632.3.1 as follows:

The normal spring planting season for all plants shall extend to June 15. The normal fall planting season begins September 15 and shall be completed by November 15 or up until the ground is frozen. Planting of evergreen trees and shrubs, and perennials in the fall shall be completed by October 15. If the overall construction schedule dictates that planting will occur between June 15 and September 15, the landscape contractor must first obtain approval from the engineer to begin installation outside of the normal planting seasons. If the engineer grants approval of the request, the contractor will also be held fully responsible for any and all additional maintenance associated with planting outside of the normal planting seasons including, but not limited to, supplemental watering above and beyond the typical, specified landscape maintenance and care cycle schedule.

Revise standard spec 632.3.1 to include the following:

Contractor shall take care not to damage or disturb adjacent finished landscape and will be responsible for seeding or sodding to repair any and all damage caused to adjacent seeded and/or sodded areas.

Revise standard spec 632.3.3 to include the following:

Landscape contractor shall stake out locations of all plant holes and obtain approval of staked location from construction representative or engineer before planting.

Revise standard spec 632.3.4 to include the following:

Ensure that the bottom of the hole is adequately compacted to guard against settling. Tamp or water in as necessary to create a condition by which plants will not settle in the planting beds. The bottom of the rootball shall be in direct contact with the bottom of the hole.

Revise standard spec 632.3.4 as follows:

The minimum horizontal measurement of the plant hole shall be no less than 24 inches greater than the diameter of the ball, container, or root mass for the full depth of the planting hole.

Standard spec 632.3.7 shall include the following:

Remove the burlap and other wrapping materials including, but not limited to, twine, wire baskets, and plastic ribbon, from the entire root ball of B&B plants.

Revise standard spec 632.3.18.1.1 and standard spec 632.3.18.1.2 as follows:

The plant establishment period shall be two years and shall begin and end on the date of substantial landscape completion as determined by the engineer.

Standard spec 632.3.19.1 shall include the following:

The contractor shall remove all staking, bracing wire material, and other plant stabilization material at the end of the required two year establishment period.

The contractor shall leave in place all rodent protection measures at the end of the required establishment period.

The contractor shall perform a complete and thorough spring clean-out of all completed, or partially completed, planting beds that will contain trees, shrubs, perennials, ornamental grasses and/or bulbs. Spring clean-out shall be performed during the first care cycle of the year or as soon as weather and growing season conditions permit. Contractor shall not perform spring clean-out until the ground is no longer saturated from the spring thaw; walking on saturated soil will result in compaction. Spring clean-out shall include removal of trash or other debris that has accumulated in planting beds, removal of leaves or other plant debris that has accumulated, weeding, and any and all other clean-out and maintenance operations as directed by the engineer or as required to produce an aesthetically pleasing, healthy environment for plant growth.

The contractor shall perform a complete and thorough fall clean-out of all planting beds that contain trees, shrubs, perennials, ornamental grasses and/or bulbs. Fall clean-out shall be performed during the last care cycle of the year. Contractor shall not perform fall clean-out if the soil is saturated from rain events and shall wait until the soil moisture levels have gone down before performing the final bed clean-out. Fall clean-out shall include coordination with the individual municipality's Forester or Parks Manager to determine which herbaceous perennial and ornamental grass material to leave standing through the winter and which to cut back to the ground, removing any material damaged during the growing season by pruning according to the language outlined in standard spec 632, removal of trash or other debris that has accumulated in planting beds, removal of leaves or other plant debris that has accumulated on the top of the mulched surface, replenishing mulch, weeding, and any and all other clean-out and maintenance operations as directed by the engineer or as required to produce an aesthetically pleasing, healthy environment for plant growth.

The contractor shall provide supplemental water maintenance period as often as necessary to ensure healthy, thriving, and established plant material. The contractor may need to provide supplemental water even if irrigation is installed as part of the project and shall coordinate directly with the municipality to ensure that the plant material is not being overwatered or under-watered. The contractor will remain solely responsible for plant health and watering maintenance even in the event of irrigation system installation.

42. Traffic Control.

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

Submit to engineer for approval a detailed traffic control plan for any changes to the proposed traffic control detail as shown on the plans. Submit this plan 10 days prior to the preconstruction conference.

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

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

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

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

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

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

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

a. Do not park or store any vehicle, piece of equipment, or construction materials on the right-of-way without approval of the engineer.
b. All construction vehicles and equipment entering or leaving live traffic lanes shall yield to through traffic.
c. Equip all vehicles and equipment entering or leaving the live traffic lanes with a hazard identification beam (flashing yellow signal) capable of being visible on a sunny day when viewed without the sun directly on or behind the device from a distance of 1,000 feet. Activate the beam when merging into or exiting a live traffic lane.

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

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

43. Portable Changeable Message Signs – Message Prior Approval.

After coordinating with department construction field staff, notify the Northeast Region Traffic Section at (920) 492-5641 (secondary contact number is (920) 492-7719) three business days prior to deploying or changing a message on a PCMS to obtain approval of the proposed message. The Northeast Region Traffic Unit will review the proposed message and either approve the message or make necessary changes.

44. Electrical Service.

A Description
Work under this item shall be in accordance to standard spec 656 with the following addition.

C Construction
Under this item, the department will perform preliminary coordination with the utility to arrange for installation of the Service Lateral(s). The Utility will provide the department with a utility routing number for each lateral.

The contractor is responsible to arrange for the actual installation of the Service Lateral with the utility. The contractor is also responsible for payment of the Service Lateral installation in accordance to standard spec 656. The contractor shall contact the department at (920) 492-5628 to obtain the utility routing number established during preliminary utility coordination.

45. Anchor Assemblies Light Poles on Structures, Item 657.6005.S.

A Description
This special provision describes furnishing and installing anchor bolt assemblies for light poles as shown on the plans, and as hereinafter provided.

B Materials
Furnish anchors of the size and spacing as given on the plans, and that conform to ASTM A449 or AASHTO M314 GR 55. The upper 8 inches of the bolts, nuts, and washers shall be hot-dipped galvanized in accordance to ASTM A153, Class C. Provide enlarged threads on nuts for proper fit after galvanizing.

C Construction
Provide two nuts and two washers per anchor bolt, and install per light standard manufacturer's recommendations.

D Measurement
The department will measure Anchor Assemblies Light Poles on Structures as a unit for each individual anchor bolt assembly, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
657.6005.S	Anchor Assemblies Light Poles on Structures	Each

Payment is full compensation for furnishing and installing the anchorages.
657-060 (20100709)

46. Intelligent Transportation Systems (ITS) Control of Materials.

Section 106.2 – Supply Source and Quality
Is modified by the addition of the following:

A portion of equipment to be installed by the contractor will be furnished by the department. This state-furnished equipment includes the following:

State-furnished Items
Ethernet Switch
Video Encoder
Dome Camera Assembly
50-Foot Camera Pole
Pole-Mounted Cabinet
5.8 GHz Wireless Ethernet Radio

Pick-up small state-furnished equipment, such as communications devices, cameras, and controllers from the department Statewide Traffic Operations Center (STOC), 433 W. St. Paul Ave., Milwaukee, WI 53203 at a mutually agreed upon time during normal State office hours. Contact Dean Beekman at (414) 227-2154 to coordinate pick-up of equipment.

Large state-furnished equipment, such as camera poles will be delivered by the supplier to a contractor controlled site within Brown County. Delivery will not necessarily be in a "just in time" manner and the contractor shall store the equipment until field installation. Provide location details and a contact for delivery coordination upon contract Notice to Proceed.

47. Intelligent Transportation System – General.

A Description

The work herein is included in the contract items for furnishing and installing elements for an Intelligent Transportation System (ITS) in or along the existing roadway as shown on the plans.

Unusual aspects of this project include:

- Some of the equipment to be installed will be furnished by the department. Make a reasonable effort to discover defects in that equipment prior to installing it.

A.1 Surge Protection

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

B Materials

B.1 General

All equipment and component parts furnished shall be new and have high quality workmanship. All controls, indicators, and connectors shall be clearly and permanently labeled in a manner approved by the engineer. All equipment of each type shall be identical.

All electrical equipment shall conform to the standards and requirements of the Wisconsin Electrical Code, the National Electrical Manufacturers Association (NEMA), National Electric Safety Council (NESC), Underwriter's Laboratory Inc. (UL) or the Electronic Industries Association (EIA), when applicable. All materials and workmanship shall conform to the requirements of the National Electrical Code (NEC), Rural Electrification Administration (REA), Standards of the American Society for Testing and Materials (ASTM), American Association of State Highway and Transportation Officials (AASHTO), requirements of the plans, these Technical Special Provisions, the Standard Specifications, and to any other codes, standards, or ordinances that may apply. All system wiring, conduit, grounding hardware and circuit breakers shall be in conformance with the National Electrical Code. Whenever reference is made to any of the standards mentioned, the reference shall be considered to mean the code, ordinance, or standard that is in effect at the time of the bid advertisement.

B.2 Outdoor Equipment

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

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

B.3 Custom Equipment

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

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

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

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

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

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

B.4 Environmental Conditions

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

1. **Vibration and Shock:** Camera assemblies, vehicle detectors, detection classification sensors, and any other equipment mounted atop poles or on structures shall not be impaired by the continuous vibration caused by winds (up to 90 mph with a 30 percent gust factor) and traffic.
2. **Duty Cycle:** Continuous.

3. **Electromagnetic Radiation:** The equipment shall not be impaired by ambient electrical or magnetic fields, such as those caused by power lines, transformers, and motors. The equipment shall not radiate signals that adversely affect other equipment.
4. **Electrical Power:**
    a. Operating power: The equipment shall operate on 120 volts, 60 Hz, single-phase unless otherwise specified. It shall conform to its specified performance requirements when the input voltage varies from 89 to 135 volts and the frequency varies + 3 Hz.
    b. High frequency interference: The equipment operation shall be unaffected by power supply voltage spikes of up to 150 volts in amplitude and ten microseconds duration.
    c. Line voltage transients: The equipment operation shall be unaffected by voltage transients of plus or minus 20 percent of nominal line voltage for a maximum duration of 50 milliseconds. Equipment in the field shall meet the power service transient requirements of NEMA Standard TS-2 when connected to the surge protectors in the cabinets.

5. **Temperature and Humidity:**
    a. Field equipment: Equipment in the field shall meet the temperature and humidity requirements of NEMA Standard TS-2. Liquid crystal displays shall be undamaged by temperatures as high as 165 degrees F, and shall produce a usable display at temperatures up to 120 degrees F.
    b. Equipment in Controlled Environments shall operate normally at any combination of temperatures between 50 degrees F and 100 degrees F, and humidity's between 5 percent and 90 percent, non-condensing, and with a temperature gradient of 9 degrees F per hour.

B.5 Patch Cables and Wiring

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

B.6 Surge Protection

Low-voltage signal pairs shall be protected by two-stage, plug-in surge protectors and shall be installed on both ends of camera control cables. The protectors shall meet or exceed the following minimum requirements:

1. The protectors shall suppress a peak surge current of up to 10K amps.
2. The protectors shall have a response time less than one nanosecond.
3. The protector shall clamp the voltage between the two wires at a voltage that is no more than twice the peak signal voltage, and clamp the voltage between each wire and ground at 50 volts.

4. The first stage of protection shall be a three-element gas discharge tube, and the second stage shall consist of silicon clamping devices.
5. The protector shall also contain a resettable fuse (PTC) to protect against excessive current.
6. There shall be no more than two pairs per protector.
7. It shall be possible to replace the protector without using tools.

Loop detector cables and cables carrying power to camera assemblies shall be protected at the cabinet by grounded metal oxide varistors of appropriate voltages. The varistors must be at least 0.8 inch in diameter.

Coaxial cables carrying video signals shall be protected at each end by suppressors designed for baseband CCTV signals. The suppressors shall conform to the following:

1. Surge: 18,000 amps with an 8 x 20 microsecond waveform
2. Turn-on time: 4ns for 2 kV/ns
3. VSWR: 1.1:1 or less
4. Insertion loss: 0.3 dB or less
5. Frequency range: DC to 30 MHz
6. BNC connectors
7. Operating voltage: 1.5 volts
8. Impedance: 75 ohms

C Construction

C.1 Thread Protection

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

C.2 System Operations

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

C.3 Surge Protection

Arrange the equipment and cabinet wiring to minimize the distance between each conductor's point of entry and its protector. Locate the protector as far as possible from electronic equipment. All wiring between the surge protectors and the point of entry shall be free from sharp bends.

D Measurement

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

E Payment
No separate payment will be made for the work described in this article. All work described in this article shall be included under the ITS items in the contract.

48. Install Pole Mounted Cabinet, Item 673.0225.S.

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

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

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

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

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

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

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

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

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

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

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

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

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

49. Install Ethernet Switch, Item 675.0400.S.

A Description
This special provision describes installing an Ethernet switch, and providing all necessary associated wiring.

B Materials
The department will furnish the Ethernet switch. Provide all necessary cables between the Ethernet switch and terminal server or other device.

C Construction
Install the Ethernet switch in a new or existing field cabinet. Connect it to devices as shown on the plans, or as directed by the engineer.

D Measurement
The department will measure Install Ethernet Switch by the unit, installed according to the contract, tested, and accepted.

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

ITEM NUMBER	DESCRIPTION	UNIT
675.0400.S	Install Ethernet Switch	Each

Payment is full compensation for installing an Ethernet switch; furnishing all necessary incidental hardware; and making all necessary connections.
675-040 (20100630)

50. Install Video Encoder, Item 677.0300.S.

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

B Materials
Provide Category 5 or better Ethernet cable to connect the Ethernet video encoder to the Ethernet switch. The department will furnish the video encoder or it will be an existing and salvaged encoder.

C Construction
Make the necessary electrical and communication network connections to the video encoder. Mount the video encoder in the pole mounted cabinet or field cabinet. Program the video encoder according to the manufacturer's instructions.

D Measurement
The department will measure Install Video Encoder by each individual assembly, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
677.0300.S	Install Video Encoder	Each

Payment is full compensation for installing the video encoder in a pole mounted cabinet or field cabinet; for making all connections; and for furnishing all programming.
677-030 (20100630)

51. Planting Mixture, Item SPV.0035.01.

A Description
This special provision describes furnishing and installing Planting Mixture at the locations shown on the plans and in accordance to the requirements of standard spec 632 of the standard specifications, the plans, and as hereinafter provided.

B Materials
The landscape contractor who is responsible for furnishing and installing plant material shall also be solely responsible for obtaining planting mixture components, blending the mixture to the specified proportions, and for furnishing and installing the planting mixture.

B.1 Planting Mixture

The planting mixture consists of the following blend by volume:

- 2 parts topsoil. Topsoil shall conform to standard spec 625.
- 1 part sand. Obtain the engineer's approval for the sand.
- 1 part compost. Compost shall be either well-rotted shredded leaf mulch, free of disease; or well-rotted, unleached, stable or cattle manure containing no more than 25 percent by volume of straw, sawdust, or other bedding materials and free of toxic substances. Either shall be free of stones, sticks, soil, weed seeds, debris, and other material harmful to plant growth.
- 1 part peat moss. Peat moss shall conform to standard spec 632.

C Construction

C.1 Coordination

Planting Mixture shall be delivered to project site and installed no more than seven days before the start of planting operations for areas receiving Planting Mixture. It is the sole responsibility of the landscape contractor to fully coordinate and schedule the delivery and installation of the Planting Mixture with the delivery and installation of all landscape plant materials.

C.2 Planting Mixture Preparation and Placement

Contractor shall provide, in writing to the supervising engineer, a list of all materials used in Planting Mixture including manufacturers and quantities and shall ensure that all materials meet the standards set forth in standard spec 625 and standard spec 632 and produce a planting mixture that provides a stable, healthy soil for plant growth.

Ensure proper excavation of planting area for all areas to receive Planting Mixture. Prepare areas by removing any construction materials, stone, or other debris larger than 2" in length or diameter for all areas. The planting area shall be free from subsoil, noxious weed, stones, lime, concrete, ashes, slag, or other deleterious matter. The area shall be well drained in its original conditions and free of toxic quantities of acid or alkaline elements. Submit a sample of planting mixture from the proposed source along with certified test results verifying compliance with requirements to the engineer. No planting mixture shall be hauled to the site without prior approval by the engineer.

Provide Planting Mixture for the central islands of roundabouts and for specialized perennial beds as indicated in the plans.

Provide Planting Mixture over entire planting bed area and fine grade to match grades as indicated on plans or to adjacent back of curb or other hardscape surface as indicated on plans and account for settling. Place Planting Mixture in 6-inch to 8-inch lifts, watering in or tamping to reduce settling potential. A minimum of 24" depth shall be provided in the central islands of roundabouts and for specialized perennial beds as indicated in the plans.

Obtain approval of Planting Mixture depths, locations, and elevations by supervising engineer prior to planting.

D Measurement
The department will measure Planting Mixture 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	Planting Mixture	CY

Payment is full compensation for furnishing and installing all materials.

52. Excavation of Phragmites Soil, Item SPV.0035.02.

A Description
This item includes excavation of soils designated in the plans as containing Phragmites as directed by the engineer, hauling, placing, and shaping excavated material to the designated waste site, backfilling the excavated area, and decontamination of equipment.

B (Vacant)

C Construction
Excavate soils in accordance to the lines and grades shown on the plan or in areas as directed by the engineer. Some EBS may be required to remove plant material. Backfill excavated area. Haul excavated material to the waste site and place and shape material where designated as shown in the plans or directed by the engineer. Multiple contractors may be accessing the waste site at one time. Coordinate with other contracts to accomplish proper material placement and the desired shape of the waste site shown in the plans.

Per department guidance, dispose excavated topsoil containing phragmites within the interchange area. The department prefers to dispose the material between the ramps and mainline and under fill. If placed under fill, the material cannot impact the structural integrity of any pavement, slope, or structure. Coordinate with Mike Helmrick, WisDOT, (920) 492-7738, and the engineer to verify a disposal location

Decontaminate equipment per Environmental Protection, Aquatic Exotic Species Control article of these special provisions.

Maintain the tracking pad at the access points of the waste site per the special provisions. Maintain silt fence and erosion control on the site in accordance to applicable sections of the standard specifications as directed by the engineer. Install traffic control as shown on the plans and as directed by the engineer while accessing the site

D Measurement
The department will measure Excavation of Phragmites Soil by the cubic yard acceptably completed. The quantity measured for payment shall equal the actual number of cubic yards of excavated as measured by the engineer.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0035.02	Excavation of Phragmites Soil	CY

Payment is full compensation for excavating, loading, hauling, wasting, and shaping material, providing and placing backfill material, maintenance of access and hauling routes within the site, and decontamination of equipment.

Any seed, fertilizer, silt fence maintenance, tracking pad maintenance, and traffic control will be paid for under the pertinent items provided in the contract.

53. Transformer Bases Breakaway 11 ½-Inch Bolt Circle Black, Item SPV.0060.01.

A Description
This work shall be in accordance to the requirements of standard spec 657, the plans, standard detail drawings, and as hereinafter provided.

B Materials
Amend standard spec 657.2.2.5, paragraph (1) to read as follows:

Furnish cast aluminum alloy pedestal and transformer bases from the department's approved products list and meeting the design criteria specified in standard spec 657.2.2.1.2. Ensure that castings are true to pattern in form and dimensions and free from defects affecting strength or service life. Furnish all base with a manufacturer applied black anodized finish. After purchase paint finishes will not be accepted.

C Construction
In accordance to the requirements of standard spec 657.3.

D Measurement
The department will measure Transformer Bases Breakaway 11 ½-Inch Bolt Circle Black 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	Transformer Bases Breakaway 11 ½-Inch Bolt Circle Black	Each

Payment is full compensation for providing and installing the transformer base including grounding lugs and related mounting hardware, for leveling shims, for corrosion prevention.

54. Poles Type 5 Aluminum Black, Item SPV.0060.02.

A Description

This work shall be in accordance to the requirements of standard spec 657, the plans, standard detail drawings, and as hereinafter provided.

B Materials

Amend standard spec 657.2.2.1.1, paragraph (2) to read as follows:

Furnish poles from a department-approved manufacturer. Submit a materials list and accompanying certificate of compliance certifying that the poles incorporated into the work conform to the specified design criteria and other contract requirements. Ensure that the certificate of compliance is on the manufacturer's letterhead, signed by an authorized company officer, and is notarized. Also send a copy of the certificate and a copy of the pole shop drawings to the department electrical engineer. Furnish all poles with a manufacturer applied black anodized finish. After purchase painting finishes will not be accepted.

C Construction

In accordance to the requirements of standard spec 657.3.

D Measurement

The department will measure Poles Type 5 Aluminum Black as each individual unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.02	Poles Type 5 Aluminum Black	Each

Payment is full compensation for providing and installing the Type 5 poles including grounding lugs and related mounting hardware, for leveling shims, for corrosion prevention, for identification plaques.

55. Luminaire Arms Truss Type 4 ½-Inch Clamp 12-FT Black, Item SPV.0060.03.

A Description

This work shall be in accordance to the requirements of standard spec 657, the plans, standard detail drawings, and as hereinafter provided.

B Materials
Amend standard spec 657.2.2.3, paragraph (2) to read as follows:

Furnish luminaire arms from a department-approved manufacturer. Submit a materials list and accompanying certificate of compliance certifying that the luminaire arms incorporated into the work conform to the specified design criteria and other contract requirements. Ensure that the certificate of compliance is on the manufacturer's letterhead, signed by an authorized company officer, and is notarized. Also send a copy of the certificate and a copy of the pole shop drawings to the department electrical engineer. Furnish all luminaire arms with a manufacturer applied black anodized finish. After purchase paint finishes will not be accepted.

C Construction
In accordance to the requirements of standard spec 657.3.

D Measurement
The department will measure Luminaire Arms Truss Type 4 ½-Inch Clamp 12-FT Black 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.0060.03	Luminaire Arms Truss Type 4 ½-Inch Clamp 12-FT Black	Each

Payment is full compensation for providing and installing the 12-FT luminaire arms and related mounting hardware, for leveling shims.

56. LED Luminaire, LED-A Black, Item SPV.0060.04.

A Description
The special provision describes furnishing and installing LED luminaires. Work under this item shall be in accordance to standard spec 659 and this special provision.

B Materials
Furnish Luminaires Utility LED from the department qualified product list. Furnish luminaires that are factory finish color black. After purchase paint finishes will not be accepted.

C Construction
Under the bid item LED Luminaire, furnish and install luminaires and all necessary miscellaneous accessories and hardware to complete the installation of the luminaires.

The contractor shall follow manufacturer's instructions regarding luminaire installation.

All exposed threaded equipment mounting hardware shall be stainless steel.

All threaded stainless steel hardware and dissimilar metal threaded hardware shall be coated with an approved zinc-based anti-seize compound.

D Measurement
The department will measure LED Luminaire, LED-A Black as each individual lighting 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.0060.04	LED Luminaire, LED-A Black	Each

Payment is full compensation for providing and installing all materials, including luminaire, accessories, hardware and fittings necessary to install the luminaire.

57. Install Wireless Ethernet Radio, Item SPV.0060.05.

A Description
This special provision describes installing a state-furnished wireless Ethernet radio access point or subscriber unit at a new or existing cabinet or new or existing pole.

B Materials
Materials will included state-furnished materials and contractor furnished materials.

State-furnished materials include the following:
- One wireless Ethernet radio with integral antenna.
- One wireless Ethernet radio power converter.
- One wireless Ethernet radio mounting bracket.

Contractor-furnished materials include the following:
- Mounting hardware.
- Outdoor rated Category 6 communications cable.
- Inline network cable surge suppressor.

C Construction
Bond the surge suppressor to the cabinet grounding system.

Install the wireless Ethernet radio in a point-to-point or point-to-multipoint configuration as shown on the plans and as directed by the engineer.

Use the manufacturer's set-up software to configure the Ethernet radio for its intended use. Use the signal strength indicator on the radio to find the optimum position. Also perform a frequency analysis to determine the optimal hop pattern of the radios and test the continuity of the link by polling the radios using the software provided. The position of the radio and the hop pattern shall be adjusted until the polls show at least 200

consecutive polling intervals have been successfully transmitted and received. Demonstrate to the engineer that the hop pattern selected corresponds to the optimal noise free frequencies identified in the frequency analysis. Deliver 3 copies of the final test results for signal strength, frequency analysis, and test polling.

D Measurement
The department will measure Install Wireless Ethernet Radio as each individual unit, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.05	Install Wireless Ethernet Radio	Each

Payment is full compensation for installing, setting up, configuring, and testing the wireless Ethernet radio, surge suppressor, cables, and connections; and for furnishing all transportation.

58. In Culvert Boulder Assembly, Item SPV.0060.06.

A Description
This special provision describes furnishing and installing all materials for the in culvert boulder assemblies as shown on the plans and as directed by the engineer.

B Materials
Furnish all boulders, rebar, and eye bolt assemblies necessary to construct the in culvert boulder assemblies.

C Construction
Eye bolt assemblies shall be placed in the box culvert interior wall at the locations shown in the plan or as directed by the engineer. Place No. 4 epoxy coated rebar through anchor bolts manually bend to secure in place. Fill rebar cage with 6-inch to 12-inch stone to the level shown in the plans.

D Measurement
The department will measure In Culvert Boulder Assembly by each individual unit, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.06	In Culvert Boulder Assembly	Each

Payment for In Culvert Boulder Assembly is full compensation for furnishing and installing each unit.

59. Section Survey Monuments, Reconstruction Project, Item SPV.0060.07.

A Description

This work shall consist of restoring existing section survey monuments for reconstruct projects.

B Materials

Brown County will supply a stainless steel survey nail with washer for section survey monumentation on pavements. The contact from Brown County is Paul Fontecchio, (920) 662-2170.

C Construction

Perform all section survey monument work under the direction of a land surveyor registered under s.443.06 Wisconsin Statues and in accordance to the details in the plan. The surveyor shall follow all rules in accordance to the Wisconsin Administrative Code A-E-7.

Locate the section survey monument and verify the distance to the existing landmark reference monuments using existing tie sheets obtained from Brown County prior to beginning construction operations.

Reestablish the section survey monuments from the tie information. Set the section survey nail 0.05 foot below the finished road surface. For survey nails set in concrete pavements, bore a hole as needed and set the survey nail in epoxy or mastic at depth stated above.

Produce an updated tie sheet of the reference monuments and section survey monument. Provide a copy of the updated tie sheet stamped by a registered land surveyor and accepted by: Brown County, the engineer, and WisDOT NE Region Survey Department.

Conduct construction operations as to not disturb any section survey monument or landmark reference monuments that are to remain. Landmark reference monument maintenance to replace missing reference monuments shall be considered extra work.

D Measurement

The department will measure Section Survey Monuments, Reconstruct Project 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.0060.07	Section Survey Monuments, Reconstruct Project	Each

Payment for Section Survey Monuments, Reconstruct Project is full compensation for initial verification, restoring monuments to its initial location, generating new tie sheets, and providing new tie sheets.

60. Reconnect Storm Sewer Laterals, Item SPV.0060.08.

A Description

This special provision describes reconnecting existing storm sewer laterals to new Storm Sewer Structures or new pipe.

B (Vacant)

C Construction

Identify all private laterals in existing Storm Sewer Structures prior to that Storm Sewer Structure's removal. Remove existing lateral pipes to the next good joint and replace in-kind. Verify that positive drainage is achieved when connecting to the new inlet or curb outlet Storm Sewer Structure. The contractor will be allowed to salvage any structurally sound pipe that was removed with prior approval by the engineer. Connect the existing pipes to the new pipes with the appropriate coupling, concrete collar or by means approved by the engineer. Concrete masonry for concrete collar shall be in accordance to standard spec 501. Any additional pipe or materials required to reconnect the storm sewer laterals shall be considered incidental to this bid item.

D Measurement

The department will measure Reconnect Storm Sewer Laterals by each individual lateral, 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.0060.08	Reconnect Storm Sewer Laterals	Each

Payment is full compensation for performing all work; furnishing and installing all materials, couplings, concrete collars, and pipe; and for furnishing all labor, tools, equipment, and incidentals required to complete the work.

61. Luminaire LED Village of Howard BetaLED LEDway Black, Item SPV.0060.09.

A Description

This special provision describes furnishing and installing Light Emitting Diode (LED) roadway luminaires for the Village of Howard new lighting system at the CTH C (Shawano Avenue) and Sherwood Street Roundabout. This work shall be in accordance to the requirements of standard spec 659, the plans, standard detail drawings, and as hereinafter provided.

B Materials

Furnish Luminaires LED Village of Howard BetaLED LEDway Black conforming to the Village of Howard approved catalog numbers provided herein and as shown in the plans. Luminaires shall conform to applicable portions of standard spec 659.2.2 and the WisDOT Specifications for LED Roadway Luminaires. The luminaire housing shall be all aluminum with factory finished durable corrosion and UV resistant black powder-coated finish. Housing access shall be tool-free. The luminaire/arm mounting configuration shall fit the specified pole fitter being used per the plan. The luminaire shall be UL listed, IP 66 rated.

LED lamps shall be in the 4000K color temperature range with a minimum of 70 CRI. A NEMA sized "Category Label" label shall be fixed to the bottom of the luminaire and be visible from a passing vehicle.

The luminaire shall be equipped with a voltage-sensing LED driver, to accommodate 120-277V with 90% power factor and THD 20% max at full load. Provide surge protection and test in accordance to the manufacturer recommendations and specifications. The luminaire shall also be equipped with a quick-disconnect plug for connecting the pole riser wires to the terminal block. A strain relief shall retain the pole riser wires within the luminaire.

The acceptable luminaires are as follows:

- BetaLED STR-LWY-2M-HT-07-D-UL-BK-525-43K

Furnish shop drawings as specified in standard spec 506.3.2. Ensure the drawings contain sufficient detail to allow satisfactory review and show the dimensions of all equipment shown in the plans.

C Construction

Furnish and install luminaires and all necessary miscellaneous accessories and hardware to complete the installation of the luminaires.

The contractor shall follow manufacturer's instructions regarding luminaire installation.

Three single-conductor No. 10 stranded wires shall be used to connect the luminaires to their respective branch conductors in the pole base. Each luminaire feeder wire shall be protected by one 5-amp fuse. Fuses and fuse holders shall be as per the details in the Plan.

All exposed threaded equipment mounting hardware shall be stainless steel.

Coat all threaded stainless steel hardware and dissimilar metal, threaded hardware with an approved zinc-based anti-seize compound (Loctite or Jet-Lube) prior to assembly.

D Measurement
The department will measure Luminaire LED Village of Howard BetaLED LEDway Black as each individual lighting 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.0060.09	Luminaire LED Village of Howard BetaLED LEDway Black	Each

Payment is full compensation for furnishing and installing all materials, including luminaire, accessories, hardware and fittings necessary to install the luminaire workable first class condition.

62. Lighting Control and Electrical Distribution Cabinet Village of Howard, Item SPV.0060.10.

A Description
This special provision describes furnishing and installing an aluminum lighting control and electrical distribution cabinet as shown on plans and as directed by the engineer.

B Materials
B.1 Enclosure
Lighting control and electrical distribution cabinet enclosure shall meet or exceed the requirements of a NEMA 3R rating and shall be U.L. Listed. The cabinet and door shall be constructed from 5052-H32 sheet aluminum alloy which has a thickness of 0.125 inches.

Cabinet enclosure shall be 50”X36”X17”, or as required by the Village of Howard. Enclosure shall be as manufactured by APX Enclosures, Inc. Catalog No. TC503617.

B.2 Switches
The lighting control and electrical distribution cabinet shall have an electric time switch for automatic control of highway lighting circuits operating on a daily schedule. Time switch shall be as manufactured by Intermatic, Inc. Catalog No. ET8215C.

B.3 Subpanel
The cabinet shall have subpanel to cover the back of the cabinet on which to mount control components. Panel shall be ARBORON material, ½” thick as manufactured by Western Slate Company.

B.4 Circuit Breakers

All feeders, branch circuits, and auxiliary and control circuits shall have overcurrent protection. The overcurrent protection shall be by means of circuit breakers. Circuit breakers shall be standard UL listed molded case, thermal-magnetic bolt-on type circuit breakers with trip free indicating handles.

120 V and 240 V circuit breakers shall have a UL listed interrupting rating of not less than 22,000 rms symmetrical amperes at rated circuit voltage for which the breaker is applied. Multi-pole circuit breakers larger than 100 A size shall have adjustable magnetic trip settings.

The number of branch circuit breakers shall be four 2-pole breakers for lighting circuits plus two spare 2-pole circuit breakers, and four 1-pole circuit breakers for the receptacle circuits plus two spare 1-pole circuit breakers for irrigation system.

B.5 Contactors

Contactors shall be electrically operated, electrically or mechanically held, as specified, with the number of poles required for the service and with operating coil voltage as indicated. Ampere rating of contactors shall be not less than required for the duty shown and shall otherwise be rated as indicated. Contactors shall be complete with a subpanel for mounting.

Electrically held contactors shall be used. Electrically held contactors shall be NEMA, size 3, 2 pole, 60 Hz, 600 V, open panel mount type, normally open and electrically held and UL labeled.

The main contactor contacts shall be the double break, silver to silver type. They shall be spring loaded and provide a wiping action when opening and closing. The contacts shall be renewable from the front panel, self-aligning, and protected by auxiliary arcing contacts. The line and load terminals shall be pressure type terminals of copper construction and of the proper size for the ampere rating of the contactor.

The contactor operating coil shall operate at phase to neutral voltage. Single phase contactors shall be two pole devices with continuous rating for the amperage selected per pole.

The selector switch for Electrically Held Contactors shall have a glove-hand operating handle and industrial duty rotating mechanism. Contacts shall be rated 10 A make/break and continuous at 60 Hz, 600 V. The switch position shall be designated by a permanent name plate of metal or rigid laminated plastic. Switch shall be UL listed. The control circuit shall have overcurrent protection as indicated and as required by NEC requirements.

B.6 Bar Connectors
Separate ground and neutral bus bars shall be provided. The ground bus bar shall be copper, mounted on the equipment panel, fitted with 22 connectors of the type shown on the plans, as a minimum. The neutral bar shall be similar. The heads of connector screws shall be painted white for neutral bar connectors and green for ground bar connectors.

B.7 Auxiliary Circuit
The cabinet shall have an auxiliary device circuit at 120 V single phase to supply a convenience receptacle and cabinet light. The auxiliary circuit shall have overcurrent protection according to NEC requirements. The interior, 100 W incandescent lighting fixture with die cast guard shall meet the requirements of UL 1598 and be of the vaporproof enclosed-and-gasketed type. The light fixture shall be switched from a single pole, single throw, 20 A switch. The switch shall be premium specification grade in a suitable 4 in. box with a cover. A 20 A duplex receptacle, ground fault interrupting, premium specification grade shall be furnished in a 4 in. square box with cover, for 120 V auxiliary use.

B.8 Surge Arrester
The lighting control and electrical distribution cabinet shall be protected by a surge arrester.

B.9 Wiring
Power wiring within the cabinet shall be of the size specified for the corresponding service conductors and branch circuits and shall be rated RHW-2, 600 V. Control and auxiliary circuit wiring shall be rated RHW-2 or MTW with jacket, 600 V. All power and control wiring shall be stranded copper. All wiring devices, such as bus bar, terminal blocks, lugs, etc. shall be copper. All wiring shall be tagged with self-sticking cable markers. When the contract drawings do not specifically indicate assigned wire designations, the manufacturer shall assign wire designations and indicate them on the shop drawings. All switches, controls and the like shall be identified both as to function and position (as applicable) by means of engraved two color nameplates attached with screws, or where nameplate are not possible in the judgment of the engineer, by the use of cloth-backed adhesive labels as approved by the engineer.

B.10 Miscellaneous
Concrete cabinet base, paid separately, shall be in accordance to the pertinent requirements of standard spec 654.2.

Furnish shop drawings as specified in standard spec 506.3.2. Ensure the drawings contain sufficient detail to allow satisfactory review and show the dimensions of all equipment shown in the plans.

C Construction
The lighting control and electrical distribution cabinet installation shall be according to the details, location, and orientation shown on the plans. The completed controller shall be an Industrial Control Panel under UL 508.

Assemble the cabinet with all of its electrical components and parts in a neat, orderly fashion. All of the electrical cables shall be installed in a trim, neat, professional manner. The cables shall be trained in straight horizontal and vertical directions and be parallel, next to, and adjacent to other cables whenever possible.

All conduit entrances into the lighting controller shall be sealed with a pliable waterproof material.

Construct a concrete foundation, paid separately, to the details shown on the plans, and in accordance to the pertinent requirements of standard spec 654.3.

D Measurement

The department will measure Lighting Control and Electrical Distribution Cabinet Village of Howard by each individual unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.10	Lighting Control and Electrical Distribution Cabinet Village of Howard	Each

Payment is full compensation for furnishing and installing all materials, including conduits, wiring, accessories, hardware and fittings necessary to install the lighting control and electrical distribution cabinet in a workable first class condition.

63. Concrete Bases Village of Howard, Item SPV.0060.11; WPS Lighting for Hobart Roundabout, Item SPV.0060.24.

A Description

This section describes furnishing and installing concrete bases for Village of Howard roadway lighting at CTH C Roundabout and for WPS lighting for the Village of Hobart at CTH FF and GPP/Navajo Trail Roundabout and other underground installations as shown on the plans and as directed by the engineer. The work shall be in accordance to the requirements of standard spec 654, the plans, standard detail drawings, and as hereinafter provided.

B Materials

Concrete Bases shall be in accordance to the pertinent requirements of standard spec 654.2.

Furnish shop drawings as specified in standard spec 506.3.2. Ensure the drawings contain sufficient detail to allow satisfactory review and show the dimensions of all equipment shown in the plans.

C Construction
Install Concrete Bases per special details shown on the plans and shall conform to pertinent requirements of standard spec 654.3. Verify that light poles to be installed on the concrete bases are the proper match before constructing the foundations.

D Measurement
The department will measure Concrete Bases as each individual base, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.11	Concrete Bases Village of Howard	Each
SPV.0060.24	Concrete Bases WPS Lighting for Hobart Roundabout	Each

Payment is full compensation according to standard spec 654.5. Payment is full compensation for furnishing and installing all materials, including wiring, conduits, accessories, hardware and fittings necessary to install the bases in a workable first class condition.

64. Light Pole Composite Village of Howard Nominal Height 30-FT Black, Item SPV.0060.12.

A Description
This special provision describes furnishing and installing composite light poles as shown on plans and as directed by the engineer. The work shall be in accordance to the requirements of standard spec 657, the plans, standard detail drawings, and as hereinafter provided.

B Materials
Light pole shall be as manufactured by Marathon (CMT-Poles) Catalog No. TA30-F-30-0–3–H–3–T–399–GFI, black in color to match luminaires. Pole must be manufactured to accept a tenon mounted lighting mast arm. Light pole shall be in accordance to the pertinent requirements of standard spec 657.2.

Furnish shop drawings as specified in standard spec 506.3.2. Ensure the drawings contain sufficient detail to allow satisfactory review and show the dimensions of all equipment shown in the plans.

C Construction
Conform to standard spec 657.3.1.

D Measurement
The department will measure Light Pole Composite Village of Howard Nominal Height 30-FT Black by each complete 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.0060.12	Light Pole Composite Village of Howard Nominal Height 30-FT Black	Each

Payment is full compensation according to standard spec 657.5(4). Payment is full compensation for furnishing and installing all materials, including wiring, conduits, fuses, accessories, hardware and fittings necessary to install the pole in a workable first class condition.

65. Luminaire Arms Single Member Tenon Mount 10-FT Black, Item SPV.0060.13.

A Description
The work shall be in accordance to the requirements of standard spec 657, the plans, standard detail drawings, and as hereinafter provided.

B Materials
Luminaire arms shall be 10 feet tenon mount aluminum lighting mast arms black in color. Luminaire arms shall be as manufactured by CMT-Poles Catalog No. S10–T–03.

Amend standard spec 657.2.3.2, Aluminum Arms, paragraph (5) to read as follows:

(5) Furnish a clean luminaire arm with a manufacturer applied black anodized finish. Arms anodized after purchase from the manufacturer will not be accepted without approval from the engineer. Brackets, fitters and associated materials shall have a matching anodized finish.

C Construction
In accordance to the plans, per manufacturer requirement and installation guides and shall conform to pertinent requirements of standard spec 657.3.

D Measurement
The department will measure Luminaire Arms Single Member Tenon Mount 10-FT Black 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.0060.13	Luminaire Arms Single Member Tenon Mount 10-FT Black	Each

Payment is full compensation according to standard spec 657.5(2). Payment is full compensation for furnishing and installing all materials, including all hardware, fittings, mounting clamps, shims if required; for providing an anodized finish, and all attachments necessary to completely install the luminaire arm in a workable first class condition.

66. Perennials, Aster Novae-Angliae, CG, #1 Pot, Item SPV.0060.14; Perennials, Asclepias Tuberosa, CG, #1 Pot, Item SPV.0060.15; Perennials, Echinacea Purpurea 'Bravado', CG, #1 Pot, Item SPV.0060.16; Perennials, Hemrocalis 'Stella D' Oro', CG, #1 Pot, Item SPV.0060.17; Perennials, Dicatmnus Albus 'Purpureus', CG, #1 Pot, Item SPV.0060.18; Perennials, Monarda Didyma 'Fireball', CG, #1 Pot, Item SPV.0060.19; Perennials, Perovskia Atriplicifolia, CG, #1 Pot, Item SPV.0060.20; Perennials, Sedum X 'Autumn Fire', CG, #1 Pot, Item SPV.0060.21; Grasses, Schizachyrium Scoparium, CG, #4 Pot, Item SPV.0060.22.

A Description

This special provision describes furnishing and installing Perennial Plants at the locations shown on the plans and in accordance to the requirements of standard spec 632, the plans, and as hereinafter provided.

B Materials

(1) Provide Perennial Plants, as shown on plan, and complying with American Standard for Nursery Stock (ANSI Z60.1-2004) for type, shape, and height.

(2) Plant Materials. All plants shall be grown within the states of Wisconsin, Minnesota, Michigan, or parts of northern Illinois, Indiana or Ohio located within Zone 5 of the "Plant Hardiness Zone Map" produced by the United States Department of Agriculture, Miscellaneous Publication No. 1475, issued January, 1990, unless otherwise approved by the engineer.

(3) A list of sources for plants shall be furnished in accordance to standard spec 632.2.2.8 before planting begins for fall-planted plants and before March 15 for spring-planted plants. All sources will be subject to verification by the engineer.

(4) Provide type B fertilizer.

C Construction

(1) Ensure that Planting Mixture has been placed according to specifications.

(2) Stake out location of plantings for approval by supervising engineer.

(3) Ensure that the bottom of the hole is adequately compacted to guard against settling. Tamp or water in as necessary to create a condition by which plants will not settle in the planting beds. The bottom of the rootball shall be in direct contact with the bottom of the hole.

(4) Install Perennial Plants and mulching as shown on the plan and as per the Standard Specifications.

D Measurement

The department will measure Perennials, (Type), (Size) and Grasses, (Type), (Size) by each individual unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.14	Perennials, Aster Novae-Angliae, CG, #1 Pot	Each
SPV.0060.15	Perennials, Asclepias Tuberosa, CG, #1 Pot	Each
SPV.0060.16	Perennials, Echinacea Purpurea 'Bravado', CG, #1 Pot	Each
SPV.0060.17	Perennials, Hemrocalis 'Stella D' Oro', CG, #1 Pot	Each
SPV.0060.18	Perennials, Dicatmnus Albus 'Purpureus', CG, #1 Pot	Each
SPV.0060.19	Perennials, Monarda Didyma 'Fireball', CG, #1 Pot	Each
SPV.0060.20	Perennials, Perovskia Atriplicifolia, CG, #1 Pot	Each
SPV.0060.21	Perennials, Sedum X 'Autumn Fire', CG, #1 Pot	Each
SPV.0060.22	Grasses, Schizachyrium Scoparium, CG, #4 Pot	Each

Payment for Perennials is full compensation for providing, transporting, handling, storing, pruning, placing, and replacing plant materials; for excavating all plant holes, salvaging topsoil, mixing, and backfilling; for providing and applying all required fertilizer, mulch, water, rodent protection, herbicides and anti-desiccant spray; and for disposing of all excess and waste materials. Payment for Topsoil bid item used in planting will be as specified in standard spec 625 and SPV.0035.01, Planting Mixture.

67. Tracking Pad Maintenance, Item SPV.0060.23.

A Description

This item includes maintenance of existing tracking pads installed by others at the designated Phragmites waste site.

B Materials

Furnish tracking pad aggregate conforming to standard spec 312.2 for select crushed material except the material shall be substantially free of particles passing the No. 10 sieve.

C Construction
Replace or rework material on the surface of the pad to ensure that the amount of material tracked onto public roads is minimized. Maintain the driving surface in a clean and safe operating condition.

D Measurement
The department will measure Tracking Pad Maintenance each time a tracking pad requires rework or replacement of aggregate material, acceptably completed. Payment will not be made for removing spillage on the highway and clean up shall be completed in accordance to standard spec 107.8(3).

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	Tracking Pad Maintenance	Each

Payment is full compensation for rework or replacement of aggregate material on existing tracking pads and for furnishing all incidentals to complete the work.

68. Removing Median Crossover, Item SPV.0060.25.

A Description
This special provision describes removing the median crossover at the location shown on the plans, in accordance to the plans and as hereinafter provided.

B (Vacant)

C Construction
Remove all asphaltic pavement, base course, and culvert pipe on the crossover and excavate the roadbed and grade to blend in with the adjoining slopes and ditches. Properly dispose of all materials removed on slopes of adjoining STH 29/32, if approved by the engineer. Landscape the area resulting from the crossover removal; provide a vegetation similar to the adjoining area.

D Measurement
The department will measure Removing Median Crossover by each individual unit, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.25	Removing Median Crossover	Each

Payment is full compensation for removing and disposing asphaltic pavement, base course, and culvert pipe; excavating and disposing the crossover road bed earth material; grading and landscaping, including furnishing and placing salvaged topsoil, seed, fertilizer, and mulch on the area disturbed from the crossover removal.

69. Street Sweeping, Item SPV.0075.01.

A Description
Remove small dirt and dust particles from the roadway using a street sweeper periodically during the project as directed by the engineer.

B (Vacant)

C Construction
Provide a self-contained mechanical or air conveyance street sweeper and dispose of the material collected.

D Measurement
The department will measure Street Sweeping by the hour that the street sweeper is on the project picking up and removing debris from the roadway, 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.0075.01	Street Sweeping	HRS

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

70. Storm Sewer Lateral, Item SPV.0090.01.

A Description
This special provision describes furnishing and installing PVC lateral connections to the storm sewer system in accordance to standard spec 607, as shown on the plans and as hereinafter provided.

B Materials
Supplement standard spec 607.2 with the following:

B.1 Branches for Concrete Pipe
Storm sewer service branches for use with concrete pipe shall be an acceptable flexible watertight tee connector which is compression fit into a core drilled opening. Branches for concrete pipe shall be “Kor-N-Tee”.

B.2 Branches for PVC Pipe

Storm sewer branches for use Polyvinyl Chloride (PVC) pipe shall be saddle wyes molded or extruded of PVC with the same class and physical properties as the pipe. PVC saddles shall be banded to storm sewer main with stainless steel bands.

Pipe and fittings furnished shall meet the requirements for PVC sewer pipe, Schedule 40, as set forth in ASTM D1784, D1785 and subsequent revisions thereof.

Solvent weld joints shall conform with ASTM D2855.

B.3 Tracer Wire and Box

Tracer wire shall be solid copper, 14 AWG, 600 volt, type TW magnetic detectable conductor wire with a brightly colored plastic covering, white for storm sewer.

Provide tracer wire box with a metal cover to aid in locating. Box shall be manufactured by Bingham & Taylor, Valvco, Copperhead or approved equal.

Extension shall be 2-inch PVC pipe, Schedule 40.

C Construction

Construct laterals as shown on the plans in accordance to the pertinent requirements of standard spec 607.

At locations where the adjoining property has an existing lateral, connect to the existing lateral with the same size pipe. Laterals which are not connected to existing laterals shall be capped.

D Measurement

The department will measure Storm Sewer Lateral by the linear foot, measured along the centerline of the pipe, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.01	Storm Sewer Lateral	LF

Payment is full compensation for furnishing all excavation; disposing of excess material; furnishing and placing backfill; compacting the backfill; coring the storm sewer and inlets; providing and installing the flexible watertight connectors; sealing at inlets with Portland cement masonry; furnishing and installing PVC pipe, bends, fittings, caps, tracer wire, tracer wire box, and extension; verifying sizes of existing laterals; for furnishing all connections.

71. Culvert Pipe Reinforced Concrete Arch Class A-IV 122x77.5-Inch, Item SPV.0090.02.

A Description

This special provision describes furnishing and installing reinforced concrete pipe arch culverts in accordance to the plan details, the pertinent requirements of standard spec 523, and as hereinafter provided.

B Materials

Furnish reinforced concrete pipe arch class A-IV according to the pertinent requirements of standard spec 523.2 and conform to AASHTO M206 for the class of pipe specified. Reinforcement requirements shall be as specified in the structure drawings.

C Construction

Construct pipe according to the pertinent requirements of standard spec 523.3. The contractor may use sealers conforming to standard spec 607.2 instead of the geotextile fabric joint wrap. Construction methods for sealing joints with these sealers shall conform to standard spec 607.3.4.

D Measurement

The department will measure Culvert Pipe Reinforced Concrete Arch Class A-IV 122x77.5-Inch 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	Culvert Pipe Reinforced Concrete Pipe Arch Class A-IV 122x77.5-Inch	LF

Payment is full compensation for providing, hauling, and placing the pipe, including bands, geotextile joint wrap if required, and joint ties; for furnishing all excavating, including foundation or bed, and any associated dewatering; for providing and placing granular backfill or graded aggregate for granular foundation or cushion; for backfilling unless granular backfill is specified; for maintaining temporary drainage; and for replacing damaged installations; for furnishing a fish light structure and connection to culvert pipe reinforced concrete arch.

The department will make no additional compensation to the contractor for using sealers instead of geotextile fabric as allowed under standard spec 520.3.3.

72. Meter Breaker Pedestal Black, Item SPV.0105.01.

A Description

This work shall be in accordance to the requirements of standard spec 656, the plans, standard detail drawings, and as hereinafter provided.

B Materials
Amend standard spec 656.2.3, paragraph (1) to read as follows:

Furnish an approved service having a meter breaker pedestal, 22,000-AIC circuit breakers unless the local utility requires otherwise, grounding electrodes and connections, conduit and fittings, and all necessary conductors and equipment required by the WSEC and the utility for a service connection. Use circuit breakers with an amperage capacity of 50A, unless specified otherwise in the contract. When the meter breaker pedestal is energized, install an approved meter seal at all access points on the meter trough. Furnish the meter breaker pedestal with a manufacturer applied black anodized finish. After purchase paint finishes will not be accepted.

C Construction
In accordance to the requirements of standard spec 656.3.

D Measurement
The department will measure Meter Breaker Pedestal Black as a single lump sum unit of work for each meter breaker pedestal, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.01	Meter Breaker Pedestal Black	LS

Payment is full compensation for providing and installing the pedestal, manual bypass meter socket if required, conduit and fittings, circuit breakers, grounding electrodes, connections.

73. Railing Tubular Special B-5-402, Item SPV.0105.02.

A Description
This special provision describes furnishing and installing a tubular railing system as shown on the plans, and in accordance to the applicable provisions of standard spec 513 and as hereinafter provided.

B (Vacant)

C (Vacant)

D Measurement
The department will measure Railing Tubular Special (Structure) as a single lump sum unit of work for each structure, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.02	Railing Tubular Special B-5-402	LS

Payment is full compensation for furnishing all materials; installing all materials; and for painting.

74. Meter Breaker Pedestal (Hobart Roundabout) Underground Work Only, Item SPV.0105.03.

A Description

This work shall be in accordance to the requirements of standard spec 656, the plans, standard detail drawings, and as hereinafter provided.

B Materials

Materials shall be in accordance to the requirements of standard spec 656 as it relates to underground work only, the plans, standard detail drawings, and as hereinafter provided.

C Construction

In accordance to the requirements of standard spec 656.3.

Coordinate all underground lighting related work with Wisconsin Public Service (WPS) before beginning any work. Verify type of meter or service pedestal with WPS.

D Measurement

The department will measure Meter Breaker Pedestal (Hobart Roundabout) Underground Work Only as a single lump sum unit of work, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.03	Meter Breaker Pedestal (Hobart Roundabout) Underground Work Only	LS

Payment is full compensation for providing and installing the conduit and fittings, grounding electrodes, connections and all other underground materials to allow for the future installation of the aboveground pedestal and manual bypass meter socket (if required), and for full and timely coordination with Wisconsin Public Service (WPS).

75. Concrete Pavement Joint Layout, Item SPV.0105.04.

A Description

(1) This special provision describes providing a concrete pavement joint layout design for intersections and marking the location of all joints in the field.

B Materials (Vacant)

C Construction

(1) Plan and locate all points necessary to establish the horizontal position of the transverse and longitudinal joints in the concrete pavement to prevent uncontrolled cracking. Submit a joint layout design to the engineer before paving each intersection. Mark the location of all concrete pavement joints in the field. Follow the plan details for joints in concrete pavements making adjustments as required to fit field conditions.

D Measurement

(1) The department will measure Concrete Pavement Joint Layout as a single lump sum unit of work for furnishing all joint layout designs and marking acceptably completed under the contract.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.04	Concrete Pavement Joint Layout	LS

(2) Payment is full compensation for providing the intersection joint layout designs and marking all joints in the field.

(3) The department will adjust pay for crack repairs as specified in standard spec 415.5.3.

76. Railing Tubular Steel Type H Galvanized, R-05-108, Item SPV.0105.05; R-05-109, Item SPV.0105.06.

A Description

This special provision describes fabricating, galvanizing, painting and installing railing in accordance to standard spec 506, 513 and 517 and the plan details, as directed by the engineer, and as hereinafter provided.

B Materials

All materials for railing shall be new stock, free from defects impairing strength, durability and appearance. Railing assemblies shall be galvanized and receive a two-coat paint system. Bubbles, blisters and flaking in the coating will be a basis for rejection.

B1 Coating System

B1.1 Galvanizing

After fabrication, blast clean steel railing assemblies per SSPC-SP6 and galvanize according to ASTM A123. Vent holes shall be drilled in members as required to facilitate galvanizing and drainage. Location and size of vent holes are to be shown on the shop drawings. All burrs at component edges, corners and at holes shall be removed and sharp edges chamfered before galvanizing. Condition any thermal cut edges before blast cleaning by shallow grinding or other cleaning to remove any hardened surface layer. Remove all evident steel defects exposed in accordance to AASHTO M 160 prior to blast cleaning. Lumps, projections, globules, or heavy deposits of galvanizing, which will provide surface conditions that when painted, will produce unacceptable aesthetic and/or visual qualities, will not be permitted.

B1.2 Two-Coat Paint System

After galvanizing, paint all exterior surfaces of steel railing assemblies and inside of rail elements at field erection and expansion joints as hereinafter provided. All galvanized surfaces to be painted shall be cleaned per SSPC-SP1 to remove chlorides, sulfates, zinc salts, oil, dirt, organic matter and other contaminants. The cleaned surface shall then be brush blast cleaned per SSPC-SP16 to create a slight angular surface profile per manufacturer's recommendation for adhesion of the tie coat. Blasting shall not fracture the galvanized finish or remove any dry film thickness. After cleaning, apply a tie coat from an approved coating system that is specifically intended to be used on a galvanized surface, per manufacturer's recommendations. The tie coat shall etch the galvanized rail and prepare the surface for the top coat. Apply a top coat per manufacturer's recommendations, matching the specified color shown on the plans. Use a preapproved top coat that is resistant to the effects of the sun and is suitable for a marine environment. The tie and top coats should be of contrasting colors, and come from the same manufacturer.

Ensure that the paint manufacturer reviews the process to be used for surface preparation and application of the paint coating system with the paint applier. The review shall include a visit to the facility performing the work if requested by the paint manufacturer. Provide written confirmation, from the paint manufacturer to the engineer, that the review has taken place and that issues raised have been addressed before beginning coating work under the contract.

Use one of the qualified paint manufacturers and products given below. An equivalent system may be used with the written approval of the engineer.

Manufacturer	Coat	Products	Dry Film Minimum Thickness (mils)	Min. Time[1] Between Coats (hours)
Sherwin Williams 1051 Perimeter Drive Suite 710 Schaumburg, IL 60173 (847) 330-1562	Tie	Recoatable Epoxy Primer B67-5 Series / B67V5	2.0 to 4.0	6
	Top	Acrolon 218 HS Polyurethane, B65-650	2.0 to 4.0	NA
Carboline 350 Hanley Industrial St. Louis, MO 63144 (314) 644-1000	Tie	Rustbond Penetrating Sealer FC	1	36
	Tie	Carboguard 60	4.0 to 6.0	10
	Tie	Carboguard 635	4.0 to 6.0	1
	Top	Carbothane 133 LH(satin)	4	NA
Wasser Corporation 4118 B Place NW Suite B Auburn, WA 98001 (253) 850-2967	Tie	MC-Ferrox B 100	3.0 to 5.0	8
	Top	MC-Luster 100	2.0 to 4.0	NA
PPG Protective and Marine Coatings P.O. Box 192610 Little Rock, AR 72219-2610 (414) 339-5084	Tie	Amercoat 399	3.0 to 5.0	3
	Top	Amercoat 450H	2.0 to 4.0	NA

[1] Time is dependent on temperature and humidity. Contact manufacturer for more specific information.

B2 Shop Drawings

Submit shop drawings showing the details of railing construction. Show the railing height post spacing, rail location, weld sizes and locations and all dimensions necessary for the construction of the railing. Show location of shop rail splices, field erection joints and expansion joints. State the name of the paint manufacturer and the product name of the tie coat and top coat used along with the color. State the size and material type used for all components. Also show the size and location of any vent or drainage holes provided.

C Construction

C1 Delivery, Storage and Handling

Deliver material to the site in an undamaged condition. Upon receipt at the job site, all materials shall be thoroughly inspected to ensure that no damage occurred during shipping or handling and conditions of materials is in conformance with these specifications. If coating is damaged, contractor shall repair or replace railing assemblies to the approval of the engineer at no additional cost to the Owner. Carefully store the material off the ground to ensure proper ventilation and drainage. Exercise care so as not to damage the coated surface during railing installation. No field welding, field cutting or drilling will be permitted without the approval of the engineer.

C2 Touch-up and Repair

For minor damage caused by shipping, handling or installation to coated surfaces, touch-up the surface in conformance with the manufacturer's recommendations. If damage is excessive, the railing assembly shall be replaced at no additional cost to the Owner. The contractor shall provide the engineer with a copy of the manufacturer's recommended repair procedure and materials before repairing damaged coatings.

D Measurement

The department will measure Railing Tubular Steel Type H Galvanized R-05-108 and R-05-109 as a single lump sum unit of work for each structure where railing is satisfactorily furnished and installed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.05	Railing Tubular Steel Type H Galvanized R-05-108	LS
SPV.0105.06	Railing Tubular Steel Type H Galvanized R-05-109	LS

Payment is full compensation for fabricating, galvanizing, painting, transporting, and installing the railing, including any touch-up and repairs.

77. Water for Seeded Areas, Item SPV.0120.01.

A Description

This special provision describes furnishing, hauling and applying water to seeded areas as directed by the engineer, and as hereinafter provided.

B Materials

When watering seeded areas, use clean water, free of impurities or substances that might injure the seed.

C Construction

If rainfall is not sufficient, keep all seeded areas thoroughly moist by watering or sprinkling. Water for 30 days after seed placement or as the engineer directs. Apply water in a manner to preclude washing or erosion. The topsoil shall not be left un-watered for

more than 3 days during this 30-day period unless the engineer determines that it is excessively wet and does not require watering. The equivalent of one inch of rainfall per week shall be considered the minimum.

D Measurement

The department will measure Water for Seeded Areas by volume by the thousand gallon units (MGAL), acceptably completed. The department will determine volume by engineer-approved meters or from tanks of known capacity.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0120.01	Water for Seeded Areas	MGAL

Payment is full compensation for furnishing, hauling, and applying the water.

78. Wall Concrete Panel Mechanically Stabilized Earth LRFD/QMP Pilot, Item SPV.0165.01.

A Description

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

This special provision describes the quality management program (QMP) for MSE walls. A quality management program is defined as all activities, including process control, inspection, sampling and testing, and necessary adjustments in the process that are related to the construction of the MSE wall, which meets all the requirements of this provision.

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

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

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

B Materials

B.1 Proprietary Mechanically Stabilized Earth Concrete Panel Wall Systems

The supplied wall system must be from the department's approved list of concrete panel mechanically stabilized earth wall systems.

Proprietary wall systems may be used for this work, but must conform to the requirements of this specification and be pre-approved for use by the department's Bureau of Structures, Structures Design Section. The department maintains a list of pre-approved systems of retaining walls. To be eligible for use on this project, a system must have been pre-approved and added to that list prior to the bid opening date. The name of the pre-approved proprietary wall system selected shall be furnished to the engineer within 25 days after the award of contract. The location of the plant manufacturing the concrete panels shall be furnished to the engineer at least 14 days prior to the start of panel production.

To receive pre-approval, the retaining wall system must comply with all pertinent requirements of this provision. Applications for pre-approval may be submitted at any time. Applications must be prepared in accordance to the requirements of Chapter 14 of the department's LRFD Bridge Manual. Information and assistance with the pre-approval process can be obtained by contacting the Structures Design Section in Room 601 of the Hill Farms State Transportation Building in Madison or by calling (608) 266-8494.

B.2 Design Requirements

It is the responsibility of the contractor to supply a design and supporting documentation as required by this special provision, for review by the department, to show the proposed wall design is in compliance with the design specifications. Four copies of the following shall be submitted to the engineer for review and acceptance no later than 60 days from the date of notification to proceed with the project.

The plans and shop drawings shall be prepared on reproducible sheets 11 inch x 17 inch, including borders. Each sheet shall have a title block in the lower right corner. The title block shall include the project identification number and structure number. Design calculations and notes shall be on 8 ½ inch x 11 inch sheets, and shall contain the project identification number, name or designation of the wall, date of preparation, initials of designer and checker, and page number at the top of the page. All plans, shop drawings, and calculations shall be signed, sealed and dated by a professional engineer licensed in the State of Wisconsin.

The design shall be in compliance with the *AASHTO LRFD Bridge Design Specifications 5th Edition 2010*, (AASHTO LRFD) with latest interim specifications for Mechanically Stabilized Earth Walls, WisDOT's current *Standard Specifications for Highway and Structure Construction* (Standard Specifications), Chapter 14 of the WisDOT LRFD Bridge Manual and standard engineering design procedures as determined by the department. Loads, load combinations, load and resistance factors shall be as specified in AASHTO LRFD Section 11. The associated resistance factors shall be defined in accordance to Table11.5.6-1 LRFD.

Design and construct the walls in accordance to the lines, grades, heights and dimensions shown on the plans, as herein specified, and as directed by the engineer. Where walls or wall sections intersect with an included angle of 130 degrees or less, a vertical corner element separate from the standard panel face shall abut and interact with the opposing

standard panels. The corner element shall have ground reinforcement connected specifically to that panel and shall be designed to preclude lateral spread of the intersecting panels. If the wall is installed in front of a bridge abutment or wing, it shall also be designed to resist the applied abutment/bridge lateral forces specified on the contract plans.

Walls parallel to supporting highway traffic shall be designed for the effects of highway surcharge loading equivalent of 2 feet soil surcharge weight or 240 psf. The design shall also consider the traffic barrier impact where applicable. Walls that do not carry highway traffic shall be designed for a live load surcharge of 100 psf in accordance to Chapter 14 of the WisDOT LRFD Bridge Manual or as stated on the plans.

A maximum value of the angle of internal friction of the wall backfill material used for design shall be assumed to be 30 degrees without a certified report of tests. If a certified report of tests yields an angle of internal friction greater than 30 degrees, the larger test value may be used for design, up to a maximum value of 36 degrees.

An external stability check at critical wall stations showing Capacity Demand Ratios (CDR) for sliding, eccentricity, and bearing checks is performed by the department and are provided on the wall plans.

The design of the Wall Concrete Panel Mechanically Stabilized Earth by the contractor shall consider the internal and compound stability of the wall mass in accordance to AASHTO LRFD 11.10.6. The internal stability shall include soil reinforcement pullout, soil reinforcement rupture, and panel-reinforcement connection failure at each soil reinforcement level. The design shall be performed using the Simplified Method or Coherent Gravity Method. Calculations for factored stresses and resistances shall be based upon assumed conditions at the end of the design life. Compound stability shall be computed for the applicable strength limits.

Facing panels shall meet the design requirements of AASHTO LRFD 11.10.2.3. The Facing panels shall also be designed to resist compaction stresses that occur during the wall erection. The minimum thickness of the Facing panel shall be 5.5 inches. The surface area of a standard single panel cannot exceed 60 square feet. The maximum height of a standard panel shall be 5 feet. The top and bottom panels may exceed 5 foot in height based on site topography subject to the approval by the Structures Design Section. The design of the steel reinforcement within the panels shall be based on one-way bending action. Design the wall panels and joints between panels to accommodate a maximum differential settlement of 1 foot over a 100-foot length, unless the plans indicate other.

The minimum length of soil reinforcement measured from the back face of the wall shall be equal to 0.7 the wall height or as shown on the plan. In no case shall this length be less than 8 feet. The soil reinforcement length shall be the same from the bottom to the top of the wall. The soil reinforcement shall extend a minimum of 3.0 feet beyond the theoretical failure plane in all cases. The maximum vertical spacing of soil reinforcement

layers shall be 31 inches. The uppermost layer of the reinforcement shall be located a minimum of six inches below the bottom of an overlying slab, footing or top of the wall. The upper layers of the soil reinforcement shall also be checked to verify that they have sufficient tensile resistance against traffic barrier impact where applicable.

All soil reinforcement steel required for the reinforced soil zone shall be connected to the face panels. The reinforcement and the reinforcement/facing connection strength shall be designed to resist maximum factored reinforcement loads in accordance to AASHTO LRFD Section 11.10.6. Facing connection strength shall be defined as the resistance factor times the failure load, or the load at 0.5 inch deformation times 0.9, whichever is less. The nominal long term design strength in steel reinforcement and connections shall be based upon assumed conditions at the end of the design life.

Soil reinforcement shall be prefabricated into single or multiple elements before galvanizing. Soil reinforcement shall be fabricated or designed to avoid piling, drainage structures or other obstacles in the fill without field modifications. Cutting or altering of the basic structural section of either the strip or grid at the site is prohibited unless approved by the Structures Design Section. A minimum clearance of 3" shall be maintained between any obstruction and reinforcement unless otherwise approved by the Structures Design Section. Splicing steel reinforcement is not allowed, unless approved by the Structures Design.

MSE facing panels shall be installed on concrete leveling pads. The minimum cross section of the leveling pad shall be 6-inches deep by 1-foot wide. Potential depth of frost penetration at the wall location shall not be considered in designing the wall for depth of leveling pad.

Submit the following to the engineer for review: complete design calculations, explanatory notes, supporting materials, specifications, and detailed plans and shop drawings for the proposed wall system. Sample analyses and hand output shall be submitted to verify the output by the software. The design calculations and notes shall clearly indicate the Capacity to Demand Ratios (CDR) for all internal stabilities as defined in AASHTO LRFD.

The wall submittal package shall be submitted electronically to the engineer and Structures Design Section. Submit all required information no later than 30 days prior to beginning construction of the wall. The detailed plans and shop drawings shall include all details, dimensions, quantities and cross-sections necessary to construct the walls.

B.3 Wall System Components

Materials furnished for wall system components under this contract shall conform to the requirements of this specification. All certifications related to material and components of the wall systems specified in this subsection shall be submitted to the engineer.

B.3.1 General

The walls shall have modular precast concrete face panels produced by a wet cast process, and have cast-in-place concrete pads or footings. The concrete panels shall have a minimum strength of 4000 psi at 28 days. The concrete for the panels shall be air entrained, with an air content of 6% +/- 1.5%. All materials for the concrete mixture for the panels shall meet the requirements of standard spec 501. The panel edges shall be configured so as to conceal the joints. The detail shall be a shiplap, tongue and groove or other detail adequate to prevent vandalism or ultraviolet light damage to the backside of the wall joint covering. Joints between panels shall be no more than 0.75 inch. Use full wall height slip joints at points of differential settlement when detailed on the plan. Horizontal joints must be provided with a compressible bearing material to prevent concrete to concrete contact.

A minimum of two bearing pads shall be used per panel. The allowable bearing stress shall not exceed 900 psi. The bearing pads shall be preformed EPDM rubber conforming to ASTM D-2000, Grade 2, Type A, Class A with a minimum Durometer Hardness of 80, or high- density polyethylene pads with a minimum density of 0.034 lb/in^3 in accordance to ASTM 1505.

An 18-inch wide geotextile shall be used on the backface of the wall panels to cover all panel joints. The geotextile shall meet the physical requirements stated in standard spec 645.2.4 for Geotextile Fabric, Type DF, Schedule B, except that the grab tensile strength shall be a minimum of 180 pounds in both the machine and cross-machine directions. The geotextile shall be attached with a standard construction adhesive suitable for use on concrete surfaces and cold temperatures. The adhesive shall be applied to the panels, not to the geotextile.

All steel portions of the wall system exposed to earth shall be galvanized. All soil reinforcement and attachment devices shall be carefully inspected to ensure they are true size and free from defects that may impair the strength and durability.

For cast in place sections of cap and coping, use poured concrete masonry Grade A, A-FA, A-S, A-T, A-IS or A-IP concrete conforming to standard specification section 501 as modified in standard spec 716. Provide QMP for cast in place cap and coping concrete as specified in standard spec 716, Class II Concrete.

Use a wall leveling pad that consists of poured concrete masonry, Grade A, A-FA, A-S, A-T, A-IS or A-IP concrete conforming to standard spec 501 as modified in standard spec 716. Provide QMP for leveling pad concrete as specified in standard spec 716, Class II Concrete.

The minimum embedment to the top of the leveling pad shall be 1 foot 6 inches or as given on the plan or given in AASHTO LRFD 11.10.2.2 whichever is greater. Step the leveling pad to follow the general slope of the ground line. The leveling pad's steps shall keep the bottom of the wall within one half the panel heights of the minimum embedment

i.e. the minimum embedment plus up to one half the height of one panel. Additional embedment may be detailed by the contractor, but will not be measured for payment.

B.3.2 Backfill

Furnish and place backfill for mechanically stabilized earth concrete panel walls as shown on the plans and as hereinafter provided.

Provide and use backfill that consists of natural sand or a mixture of sand with gravel, crushed gravel or crushed stone. It shall not contain recycled or milled asphalt, recycled concrete, foundry sand, bottom ash, blast furnace slag or other potentially corrosive material.

Provide material conforming to the following gradation requirements as per AASHTO T27.

Sieve Size	Percentage by Weight Passing
1 inch	100
No. 40	0 - 60
No. 200	0 - 15

The material shall have a liquid limit not greater than 25, as per AASHTO T89, and a plasticity index not greater than 6, as per AASHTO T90. In addition, backfill material shall meet the following requirements:

Test	Method	Value
pH	AASHTO T-289	5 – 10.0
Sulfate content	AASHTO T-290	200 ppm max.
Chloride content	AASHTO T-291	100 ppm max.
Electrical Resistivity	AASHTO T-288	3000 ohm/cm min.
Organic Content	AASHTO T-267	1.0% max.
Angle of Internal Friction	AASHTO T-236	30 degrees min. (At 95.0% of maximum density and optimum moisture, per AASHTO T99)

Prior to placement of the backfill, obtain and furnish to the engineer a certified report of test results that the backfill material complies with the requirements of this specification. This certified report of test shall be less than 6 months old. Tests will be performed by a certified independent laboratory. Additional certified report of tests (except Angle of Internal Friction test), are required for every 2000 cubic yards of backfill used per wall. In addition, when backfill characteristics and/or sources change, a certified report of all tests will be provided for the new backfill material.

C Construction

C.1 Excavation and Backfill

Excavation will encompass preparing the leveling pad foundation and the area below the reinforcing strips in accordance to section 206 of the standard specifications. The volume of excavation covered is limited to the width of the reinforced mass and to the depth of the leveling pad unless shown or noted otherwise on the plan. At the end of each working day, provide good temporary drainage such that the backfill shall not become contaminated with run-off soil or water if it should rain. Do not stockpile or store materials or large equipment within 10 feet of the back of the wall.

C.2 Compaction

Compact all backfill behind the wall as specified in standard spec 207.3.6. Compact the backfill to 95.0% of maximum density as determined by AASHTO T-99, Method C. Ensure that adequate moisture is present in the backfill during placement and compaction to prevent segregation and to help achieve compaction.

Compaction of backfill within 3 feet of the back face of the wall should be accomplished using lightweight compaction devices. Use of heavy compaction equipment or vehicles should be avoided within 3 feet of the panels.

Place and compact the MSE backfill to the level of the next higher layer of MSE reinforcement before placing the MSE reinforcement or connecting it to the wall facing. The MSE reinforcement shall lay horizontally on the top of the most recently placed and compacted layer of MSE backfill. Bending of MSE reinforcement that result in a kink in the reinforcement shall not be allowed. If skewing of the reinforcement is required due to obstructions in the reinforced fill, the maximum skew angle shall not exceed 15 degrees from the normal position unless a greater angle is shown on the plans. The adequacy of the skewed reinforcement in such a case shall be addressed by supporting calculations.

C.3 Panel Tolerances

As backfill material is placed behind a panel, maintain the panel in its proper inclined position according to the supplier specifications and as approved by the engineer. The supplier shall specify the back batter so that the final position of the wall is vertical. Vertical tolerances and horizontal alignment tolerances shall not exceed ¾-inch when measured along a 10-foot straight edge. The maximum allowable offset in any panel joint shall be ¾-inch. The overall vertical tolerance of the wall (plumbness from top to bottom) shall not exceed ½-inch per 10 feet of wall height. Erect the precast face panels to ensure that they are located within 1 inch from the contract plan offset at any location to ensure proper wall location at the top of the wall. Provide a ¾-inch joint separation between all adjacent face panels to prevent direct concrete-to-concrete contact. Maintain this gap by the use of bearing pads and/or alignment pins. Failure to meet this tolerance shall cause the engineer to require the contractor to disassemble and re-erect the affected portions of the wall. In addition, imperfect molding, honeycombing, cracking or severe chipping of panels shall be cause of panel rejection.

C4 Quality Management Program

C.4.1 Quality Control Plan

Submit a comprehensive written quality control plan to the engineer at or before the pre-construction meeting. Do not perform MSE wall construction work before the engineer reviews and accepts the plan. Construct the project as the plan provides.

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

1. An organizational chart with names, telephone numbers, current certifications and/or titles, and roles and responsibilities of QC personnel.
2. The process used to disseminate QC information and corrective action efforts to the appropriate persons. Include a list of recipients, the communication process that will be used, and action time frames.
3. A list of source locations, section and quarter descriptions, for all aggregate materials requiring QC testing.
4. Descriptions of stockpiling and hauling methods.
5. An outline for resolving a process control problem. Include responsible personnel, required documentation, and appropriate communication steps.
6. Location of the QC laboratory, retained sample storage, and other documentation.
7. A summary of the locations and calculated quantities to be tested under this provision.

C.4.2 Quality Control Personnel

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

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

C.4.3 Equipment

Furnish the necessary equipment and supplies for performing quality control testing. Ensure that all testing equipment conforms to the equipment specifications applicable to the required testing methods. The engineer may inspect the measuring and testing devices to confirm both calibration and condition. Calibrate all testing equipment according to the CMM and maintain a calibration record at the laboratory.

Furnish nuclear gauges from the department's approved product list at http://www.atwoodsystems.com/materials. Ensure that the gauge manufacturer or an approved calibration service calibrates the gauge the same calendar year it is used on the project. Retain a copy of the calibration certificate with the gauge.

Conform to ASTM D 6938 and CMM 8.15 for density testing and gauge monitoring methods. Perform nuclear gauge measurements using gamma radiation in the backscatter or direct transmission position. Perform each test for 4 minutes of nuclear gauge count time.

Split each Proctor sample and identify so as to provide comparison with the department's test results. Unless the engineer directs otherwise, retain the QC split samples for 14 calendar days and promptly deliver the department's split samples to the department.

C.4.4 Quality Control (QC) Testing

Perform compaction testing on the backfill. Perform the quality control sampling, testing, and documentation required under this provision using HTCP certified technicians. Have a grading technician certified under HTCP at level I present at the site during all wall backfill operations, compaction, and nuclear testing activities. Have a nuclear density technician certified under HTCP at level I, or ACT certified technician, perform field density and field moisture content testing. Conform to CMM 8.15 for testing and gauge monitoring methods. The QC technician must retain a split sample for the region and deliver it to the region laboratory within 72 hours. Conduct testing at a minimum frequency of 1 test per 50 cubic yards of backfill, or major portion thereof. A minimum of one test for every lift is required. Deliver documentation of all compaction testing results to the engineer at the time of testing.

Perform 1 gradation and 5-point Proctor test every 750 cubic yards of fill and provide the region a split sample within 72 hours at the region laboratory. Test sites shall be selected using ASTM Method D3665. Provide Proctor test results to the engineer within 48 hours of sampling. Provide gradation test results to the engineer within 24 hours of sampling.

C.4.5 Department Testing

C.4.5.1 General

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

C.4.5.2 Quality Verification (QV) Testing

(1) The department will have an HTCP technician, or ACT working under a certified technician, perform QV sampling and testing. Department verification testing personnel must meet the same certification level requirements specified in C.4 for contractor testing personnel for each test result being verified. The department will notify the contractor before sampling so the contractor can observe QV sampling.

(2) The department will conduct QV tests at the minimum frequency of 30% of the required contractor density and gradation tests.

(3) The department will sample randomly, at locations independent of the contractor's QC work, collecting one sample at each QV location. The department will split each QV sample, testing half for QV, and retaining the remaining half for 10 business days.

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

(5) The department will assess QV results by comparing to the appropriate specification limits. If QV test results conform to this special provision, the department will take no further action. If density QV test results are nonconforming, the area shall be reworked until the density requirements of this special provision are met. If the gradation test results are nonconforming, standard spec 106.5 will apply.

C.4.5.3 Independent Assurance (IA)

(1) Independence assurance is unbiased testing the department performs to evaluate the department's QV and the contractor's QC sampling and testing, including personnel qualifications, procedures, and equipment. The department will perform an IA review according to the department's independent assurance program. That review may include one or more of the following:
1. Split sample testing.
2. Proficiency sample testing.
3. Witnessing sampling and testing.
4. Test equipment calibration checks.
5. Reviewing required worksheets and control charts.
6. Requesting that testing personnel perform additional sampling and testing.

(2) If the department identifies a deficiency, and after further investigation confirms it, correct that deficiency. If the contractor does not correct or fails to cooperate in resolving identified deficiencies, the engineer may suspend placement until action is taken. Resolve disputes as specified in C.4.5.4.

C.4.5.4 Dispute Resolution

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

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

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

C.5 Geotechnical Information

Geotechnical data to be used in the design of the wall is given on the wall plan. After completing wall excavation of the entire reinforced soil zone, notify the department and allow the Regional Soils Engineer two working days to review the foundation.

D Measurement

The department will measure Wall Concrete Panel Mechanically Stabilized Earth LRFD/QMP Pilot in area by the square foot acceptably completed, measured as the vertical area within the pay limits the contract plans show. No other measurement of quantities shall be made in the field. Unless the engineer directs in writing, a change to the limits indicated on the contract plan, wall area constructed above or below these limits will not be measured for payment.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0165.01	Wall Concrete Panel Mechanically Stabilized Earth LRFD/QMP Pilot	SF

Payment is full compensation for supplying a design and shop drawings; preparing the site, including all necessary excavation and disposal of materials; supplying all necessary wall components to produce a functional system including cap and copings; constructing the retaining system and drainage system; providing backfill, backfilling, compacting, developing/completing/documenting the quality management program, performing compaction testing. Parapets, railings, abutment bodies and other items above the wall cap or coping will be paid for separately. Vehicle barrier and its support will be paid separately.

Any required topsoil, fertilizer, seeding or sodding and mulch will be paid for at the contract unit price of topsoil, fertilizer, seeding or sodding and mulch, respectively.

79. Wall Concrete Panel Mechanically Stabilized Earth LRFD/QMP Pilot R-5-108, Item SPV.0165.02; R-5-109, Item SPV.0165.03.

A Description

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

This special provision describes the quality management program (QMP) for MSE walls. A quality management program is defined as all activities, including process control, inspection, sampling and testing, and necessary adjustments in the process that are related to the construction of the MSE wall, which meets all the requirements of this provision.

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

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

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

B Materials

B.1 Proprietary Mechanically Stabilized Earth Concrete Panel Wall Systems

The supplied wall system must be from the department's approved list of concrete panel mechanically stabilized earth wall systems.

Proprietary wall systems may be used for this work, but must conform to the requirements of this specification and be pre-approved for use by the department's Bureau of Structures, Structures Design Section. The department maintains a list of pre-approved systems of retaining walls. To be eligible for use on this project, a system must have been pre-approved and added to that list prior to the bid opening date. The name of the pre-approved proprietary wall system selected shall be furnished to the engineer within 25 days after the award of contract. The location of the plant manufacturing the concrete panels shall be furnished to the engineer at least 14 days prior to the start of panel production.

To receive pre-approval, the retaining wall system must comply with all pertinent requirements of this provision. Applications for pre-approval may be submitted at any time. Applications must be prepared in accordance to the requirements of Chapter 14 of the department's LRFD Bridge Manual. Information and assistance with the pre-approval process can be obtained by contacting the Structures Design Section in Room 601 of the Hill Farms State Transportation Building in Madison or by calling (608) 266-8494.

B.2 Design Requirements

It is the responsibility of the contractor to supply a design and supporting documentation as required by this special provision, for review by the department, to show the proposed wall design is in compliance with the design specifications. Four copies of the following shall be submitted to the engineer for review and acceptance no later than 60 days from the date of notification to proceed with the project.

The plans and shop drawings shall be prepared on reproducible sheets 11 inch x 17 inch, including borders. Each sheet shall have a title block in the lower right corner. The title block shall include the project identification number and structure number. Design calculations and notes shall be on 8 ½ inch x 11 inch sheets, and shall contain the project identification number, name or designation of the wall, date of preparation, initials of designer and checker, and page number at the top of the page. All plans, shop drawings, and calculations shall be signed, sealed and dated by a professional engineer licensed in the State of Wisconsin.

The design shall be in compliance with the *AASHTO LRFD Bridge Design Specifications 5th Edition 2010*, (AASHTO LRFD) with latest interim specifications for Mechanically Stabilized Earth Walls, WisDOT's current *Standard Specifications for Highway and Structure Construction* (Standard Specifications), Chapter 14 of the WisDOT LRFD Bridge Manual and standard engineering design procedures as determined by the department. Loads, load combinations, load and resistance factors shall be as specified in AASHTO LRFD Section 11. The associated resistance factors shall be defined in accordance to Table11.5.6-1 LRFD.

Design and construct the walls in accordance to the lines, grades, heights and dimensions shown on the plans, as herein specified, and as directed by the engineer. Where walls or wall sections intersect with an included angle of 130 degrees or less, a vertical corner element separate from the standard panel face shall abut and interact with the opposing standard panels. The corner element shall have ground reinforcement connected specifically to that panel and shall be designed to preclude lateral spread of the intersecting panels. If the wall is installed in front of a bridge abutment or wing, it shall also be designed to resist the applied abutment/bridge lateral forces specified on the contract plans.

Walls parallel to supporting highway traffic shall be designed for the effects of highway surcharge loading equivalent of 2 feet soil surcharge weight or 240 psf. The design shall also consider the traffic barrier impact where applicable. Walls that do not carry highway traffic shall be designed for a live load surcharge of 100 psf in accordance to Chapter 14 of the WisDOT LRFD Bridge Manual or as stated on the plans.

A maximum value of the angle of internal friction of the wall backfill material used for design shall be assumed to be 30 degrees without a certified report of tests. If a certified report of tests yields an angle of internal friction greater than 30 degrees, the larger test value may be used for design, up to a maximum value of 36 degrees.

An external stability check at critical wall stations showing Capacity Demand Ratios (CDR) for sliding, eccentricity, and bearing checks is performed by the department and are provided on the wall plans.

The design of the Wall Concrete Panel Mechanically Stabilized Earth by the contractor shall consider the internal and compound stability of the wall mass in accordance to AASHTO LRFD 11.10.6. The internal stability shall include soil reinforcement pullout, soil reinforcement rupture, and panel-reinforcement connection failure at each soil reinforcement level. The design shall be performed using the Simplified Method or Coherent Gravity Method. Calculations for factored stresses and resistances shall be based upon assumed conditions at the end of the design life. Compound stability shall be computed for the applicable strength limits.

Facing panels shall meet the design requirements of AASHTO LRFD 11.10.2.3. The Facing panels shall also be designed to resist compaction stresses that occur during the wall erection. The minimum thickness of the Facing panel shall be 5.5 inches. The surface area of a standard single panel cannot exceed 60 square feet. The maximum height of a standard panel shall be 5 feet. The top and bottom panels may exceed 5 foot in height based on site topography subject to the approval by the Structures Design Section. The design of the steel reinforcement within the panels shall be based on one-way bending action. Design the wall panels and joints between panels to accommodate a maximum differential settlement of 1 foot over a 100-foot length, unless the plans indicate other.

The minimum length of soil reinforcement measured from the back face of the wall shall be equal to 0.7 the wall height or as shown on the plan. In no case shall this length be less than 8 feet. The soil reinforcement length shall be the same from the bottom to the top of the wall. The soil reinforcement shall extend a minimum of 3.0 feet beyond the theoretical failure plane in all cases. The maximum vertical spacing of soil reinforcement layers shall be 31 inches. The uppermost layer of the reinforcement shall be located a minimum of six inches below the bottom of an overlying slab, footing or top of the wall. The upper layers of the soil reinforcement shall also be checked to verify that they have sufficient tensile resistance against traffic barrier impact where applicable.

All soil reinforcement steel required for the reinforced soil zone shall be connected to the face panels. The reinforcement and the reinforcement/facing connection strength shall be designed to resist maximum factored reinforcement loads in accordance to AASHTO LRFD Section 11.10.6. Facing connection strength shall be defined as the resistance factor times the failure load, or the load at 0.5 inch deformation times 0.9, whichever is less. The nominal long term design strength in steel reinforcement and connections shall be based upon assumed conditions at the end of the design life.

Soil reinforcement shall be prefabricated into single or multiple elements before galvanizing. Soil reinforcement shall be fabricated or designed to avoid piling, drainage structures or other obstacles in the fill without field modifications. Cutting or altering of the basic structural section of either the strip or grid at the site is prohibited unless

approved by the Structures Design Section. A minimum clearance of 3" shall be maintained between any obstruction and reinforcement unless otherwise approved by the Structures Design Section. Splicing steel reinforcement is not allowed, unless approved by the Structures Design.

MSE facing panels shall be installed on concrete leveling pads. The minimum cross section of the leveling pad shall be 6-inches deep by 1-foot wide. Potential depth of frost penetration at the wall location shall not be considered in designing the wall for depth of leveling pad.

Submit the following to the engineer for review: complete design calculations, explanatory notes, supporting materials, specifications, and detailed plans and shop drawings for the proposed wall system. Sample analyses and hand output shall be submitted to verify the output by the software. The design calculations and notes shall clearly indicate the Capacity to Demand Ratios (CDR) for all internal stabilities as defined in AASHTO LRFD.

The wall submittal package shall be submitted electronically to the engineer and Structures Design Section. Submit all required information no later than 30 days prior to beginning construction of the wall. The detailed plans and shop drawings shall include all details, dimensions, quantities and cross-sections necessary to construct the walls.

B.3 Wall System Components

Materials furnished for wall system components under this contract shall conform to the requirements of this specification. All certifications related to material and components of the wall systems specified in this subsection shall be submitted to the engineer.

B.3.1 General

The walls shall have modular precast concrete face panels produced by a wet cast process, and have cast-in-place concrete pads or footings. The concrete panels shall have a minimum strength of 4000 psi at 28 days. The concrete for the panels shall be air entrained, with an air content of 6% +/- 1.5%. All materials for the concrete mixture for the panels shall meet the requirements of standard spec 501. The panel edges shall be configured so as to conceal the joints. The detail shall be a shiplap, tongue and groove or other detail adequate to prevent vandalism or ultraviolet light damage to the backside of the wall joint covering. Joints between panels shall be no more than 0.75 inch. Use full wall height slip joints at points of differential settlement when detailed on the plan. Horizontal joints must be provided with a compressible bearing material to prevent concrete to concrete contact.

A minimum of two bearing pads shall be used per panel. The allowable bearing stress shall not exceed 900 psi. The bearing pads shall be preformed EPDM rubber conforming to ASTM D-2000, Grade 2, Type A, Class A with a minimum Durometer Hardness of 80, or high- density polyethylene pads with a minimum density of 0.034 lb/in^3 in accordance to ASTM 1505.

An 18-inch wide geotextile shall be used on the backface of the wall panels to cover all panel joints. The geotextile shall meet the physical requirements stated in standard spec 645.2.4 for Geotextile Fabric, Type DF, Schedule B, except that the grab tensile strength shall be a minimum of 180 pounds in both the machine and cross-machine directions. The geotextile shall be attached with a standard construction adhesive suitable for use on concrete surfaces and cold temperatures. The adhesive shall be applied to the panels, not to the geotextile.

All steel portions of the wall system exposed to earth shall be galvanized. All soil reinforcement and attachment devices shall be carefully inspected to ensure they are true size and free from defects that may impair the strength and durability.

For cast in place sections of cap and coping, use poured concrete masonry Grade A, A-FA, A-S, A-T, A-IS or A-IP concrete conforming to standard spec 501 as modified in standard spec 716. Provide QMP for cast in place cap and coping concrete as specified in standard spec 716, Class II Concrete.

Use a wall leveling pad that consists of poured concrete masonry, Grade A, A-FA, A-S, A-T, A-IS or A-IP concrete conforming to standard spec 501 as modified in standard spec 716. Provide QMP for leveling pad concrete as specified in standard spec 716, Class II Concrete.

The minimum embedment to the top of the leveling pad shall be 1 foot 6 inches or as given on the plan or given in AASHTO LRFD 11.10.2.2 whichever is greater. Step the leveling pad to follow the general slope of the ground line. The leveling pad's steps shall keep the bottom of the wall within one half the panel heights of the minimum embedment i.e. the minimum embedment plus up to one half the height of one panel. Additional embedment may be detailed by the contractor, but will not be measured for payment.

B.3.2 Backfill

Furnish and place backfill for mechanically stabilized earth concrete panel walls as shown on the plans and as hereinafter provided.

Provide and use backfill that consists of natural sand or a mixture of sand with gravel, crushed gravel or crushed stone. It shall not contain recycled or milled asphalt, recycled concrete, foundry sand, bottom ash, blast furnace slag or other potentially corrosive material.

Provide material conforming to the following gradation requirements as per AASHTO T27.

Sieve Size	Percentage by Weight Passing
1 inch	100
No. 40	0 - 60
No. 200	0 - 15

The material shall have a liquid limit not greater than 25, as per AASHTO T89, and a plasticity index not greater than 6, as per AASHTO T90. In addition, backfill material shall meet the following requirements.

Test	Method	Value
pH	AASHTO T-289	5 – 10.0
Sulfate content	AASHTO T-290	200 ppm max.
Chloride content	AASHTO T-291	100 ppm max.
Electrical Resistivity	AASHTO T-288	3000 ohm/cm min.
Organic Content	AASHTO T-267	1.0% max.
Angle of Internal Friction	AASHTO T-236	30 degrees min. (At 95.0% of maximum density and optimum moisture, per AASHTO T99)

Where shown on the plan, provide and use open graded base that conforms to standard spec 310.2. Provide crushed stone or crushed gravel material conforming to the following gradation requirements.

Sieve Size	Percentage by Weight Passing
1 inch	90 - 100
3/8-inch	45 - 65
No. 4	15 - 45
No. 10	0 - 20
No. 40	0 - 10
No. 200	0 – 5.0

The material shall have a liquid limit not greater than 25, as per AASHTO T89, and a plasticity index not greater than 6, as per AASHTO T90.

In addition, backfill material shall meet the following requirements.

pH	AASHTO T-289	5 – 10.0
Sulfate content	AASHTO T-290	200 ppm max.
Chloride content	AASHTO T-291	100 ppm max.
Organic Content	AASHTO T-267	1.0% max.
Angle of Internal Friction	AASHTO T-236	30 degrees min. (At 95.0% of maximum density and optimum moisture, per AASHTO T99)

Prior to placement of the backfill, obtain and furnish to the engineer a certified report of test results that the backfill material complies with the requirements of this specification. This certified report of test shall be less than 6 months old. Tests will be performed by a certified independent laboratory. Additional certified report of tests (except Angle of Internal Friction test), are required for every 2000 cubic yards of backfill used per wall.

In addition, when backfill characteristics and/or sources change, a certified report of all tests will be provided for the new backfill material.

C Construction

C.1 Excavation and Backfill

Excavation will encompass preparing the leveling pad foundation and the area below the reinforcing strips in accordance to standard spec 206. The volume of excavation covered is limited to the width of the reinforced mass and to the depth of the leveling pad unless shown or noted otherwise on the plan. At the end of each working day, provide good temporary drainage such that the backfill shall not become contaminated with run-off soil or water if it should rain. Do not stockpile or store materials or large equipment within 10 feet of the back of the wall.

C.2 Compaction

Compact all backfill behind the wall as specified in standard spec 207.3.6. Compact the backfill to 95.0% of maximum density as determined by AASHTO T-99, Method C. Ensure that adequate moisture is present in the backfill during placement and compaction to prevent segregation and to help achieve compaction.

Compaction of backfill within 3 feet of the back face of the wall should be accomplished using lightweight compaction devices. Use of heavy compaction equipment or vehicles should be avoided within 3 feet of the panels.

Place and compact the MSE backfill to the level of the next higher layer of MSE reinforcement before placing the MSE reinforcement or connecting it to the wall facing. The MSE reinforcement shall lay horizontally on the top of the most recently placed and compacted layer of MSE backfill. Bending of MSE reinforcement that result in a kink in the reinforcement shall not be allowed. If skewing of the reinforcement is required due to obstructions in the reinforced fill, the maximum skew angle shall not exceed 15 degrees from the normal position unless a greater angle is shown on the plans. The adequacy of the skewed reinforcement in such a case shall be addressed by supporting calculations.

C.3 Panel Tolerances

As backfill material is placed behind a panel, maintain the panel in its proper inclined position according to the supplier specifications and as approved by the engineer. The supplier shall specify the back batter so that the final position of the wall is vertical. Vertical tolerances and horizontal alignment tolerances shall not exceed ¾-inch when measured along a 10-foot straight edge. The maximum allowable offset in any panel joint shall be ¾-inch. The overall vertical tolerance of the wall (plumbness from top to bottom) shall not exceed ½-inch per 10 feet of wall height. Erect the precast face panels to ensure that they are located within 1 inch from the contract plan offset at any location to ensure proper wall location at the top of the wall. Provide a ¾-inch joint separation between all adjacent face panels to prevent direct concrete-to-concrete contact. Maintain this gap by the use of bearing pads and/or alignment pins. Failure to meet this tolerance shall cause the engineer to require the contractor to disassemble and re-erect the affected portions of

the wall. In addition, imperfect molding, honeycombing, cracking or severe chipping of panels shall be cause of panel rejection.

C4 Quality Management Program

C.4.1 Quality Control Plan

Submit a comprehensive written quality control plan to the engineer at or before the pre-construction meeting. Do not perform MSE wall construction work before the engineer reviews and accepts the plan. Construct the project as the plan provides.

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

1. An organizational chart with names, telephone numbers, current certifications and/or titles, and roles and responsibilities of QC personnel.
2. The process used to disseminate QC information and corrective action efforts to the appropriate persons. Include a list of recipients, the communication process that will be used, and action time frames.
3. A list of source locations, section and quarter descriptions, for all aggregate materials requiring QC testing.
4. Descriptions of stockpiling and hauling methods.
5. An outline for resolving a process control problem. Include responsible personnel, required documentation, and appropriate communication steps.
6. Location of the QC laboratory, retained sample storage, and other documentation.
7. A summary of the locations and calculated quantities to be tested under this provision.

C.4.2 Quality Control Personnel

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

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

C.4.3 Equipment

Furnish the necessary equipment and supplies for performing quality control testing. Ensure that all testing equipment conforms to the equipment specifications applicable to the required testing methods. The engineer may inspect the measuring and testing devices to confirm both calibration and condition. Calibrate all testing equipment according to the CMM and maintain a calibration record at the laboratory.

Furnish nuclear gauges from the department's approved product list at http://www.atwoodsystems.com/materials. Ensure that the gauge manufacturer or an approved calibration service calibrates the gauge the same calendar year it is used on the project. Retain a copy of the calibration certificate with the gauge.

Conform to ASTM D 6938 and CMM 8.15 for density testing and gauge monitoring methods. Perform nuclear gauge measurements using gamma radiation in the backscatter or direct transmission position. Perform each test for 4 minutes of nuclear gauge count time.

Split each Proctor sample and identify so as to provide comparison with the department's test results. Unless the engineer directs otherwise, retain the QC split samples for 14 calendar days and promptly deliver the department's split samples to the department.

C.4.4 Quality Control (QC) Testing

Perform compaction testing on the backfill. Perform the quality control sampling, testing, and documentation required under this provision using HTCP certified technicians. Have a grading technician certified under HTCP at level I present at the site during all wall backfill operations, compaction, and nuclear testing activities. Have a nuclear density technician certified under HTCP at level I, or ACT certified technician, perform field density and field moisture content testing. Conform to CMM 8.15 for testing and gauge monitoring methods. The QC technician must retain a split sample for the region and deliver it to the region laboratory within 72 hours. Conduct testing at a minimum frequency of 1 test per 50 cubic yards of backfill, or major portion thereof. A minimum of one test for every lift is required. Deliver documentation of all compaction testing results to the engineer at the time of testing.

Perform 1 gradation and 5-point Proctor test every 750 cubic yards of fill and provide the region a split sample within 72 hours at the region laboratory. Test sites shall be selected using ASTM Method D3665. Provide Proctor test results to the engineer within 48 hours of sampling. Provide gradation test results to the engineer within 24 hours of sampling.

C.4.5 Department Testing

C.4.5.1 General

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

C.4.5.2 Quality Verification (QV) Testing

(1) The department will have an HTCP technician, or ACT working under a certified technician, perform QV sampling and testing. Department verification testing personnel must meet the same certification level requirements specified in C.4 for contractor testing personnel for each test result being verified. The department will notify the contractor before sampling so the contractor can observe QV sampling.

(2) The department will conduct QV tests at the minimum frequency of 30% of the required contractor density and gradation tests.

(3) The department will sample randomly, at locations independent of the contractor's QC work, collecting one sample at each QV location. The department will split each QV sample, testing half for QV, and retaining the remaining half for 10 business days.

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

(5) The department will assess QV results by comparing to the appropriate specification limits. If QV test results conform to this special provision, the department will take no further action. If density QV test results are nonconforming, the area shall be reworked until the density requirements of this special provision are met. If the gradation test results are nonconforming, section 106.5 of the standard specifications will apply.

C.4.5.3 Independent Assurance (IA)

(1) Independence assurance is unbiased testing the department performs to evaluate the department's QV and the contractor's QC sampling and testing, including personnel qualifications, procedures, and equipment. The department will perform an IA review according to the department's independent assurance program. That review may include one or more of the following:
1. Split sample testing.
2. Proficiency sample testing.
3. Witnessing sampling and testing.
4. Test equipment calibration checks.
5. Reviewing required worksheets and control charts.
6. Requesting that testing personnel perform additional sampling and testing.

(2) If the department identifies a deficiency, and after further investigation confirms it, correct that deficiency. If the contractor does not correct or fails to cooperate in resolving identified deficiencies, the engineer may suspend placement until action is taken. Resolve disputes as specified in C.4.5.4.

C.4.5.4 Dispute Resolution

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

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

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

C.5 Geotechnical Information

Geotechnical data to be used in the design of the wall is given on the wall plan. After completing wall excavation of the entire reinforced soil zone, notify the department and allow the Regional Soils Engineer two working days to review the foundation.

D Measurement

The department will measure Wall Concrete Panel Mechanically Stabilized Earth LRFD/ QMP Pilot (Structure) in area by the square foot acceptably completed, measured as the vertical area within the pay limits the contract plans show. No other measurement of quantities shall be made in the field. Unless the engineer directs in writing, a change to the limits indicated on the contract plan, wall area constructed above or below these limits will not be measured for payment.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0165.02	Wall Concrete Panel Mechanically Stabilized Earth LRFD/QMP Pilot R-5-108	SF
SPV.0165.03	Wall Concrete Panel Mechanically Stabilized Earth LRFD/QMP Pilot R-5-109	SF

Payment is full compensation for supplying a design and shop drawings; preparing the site, including all necessary excavation and disposal of materials; supplying all necessary wall components to produce a functional system including cap and copings; constructing the retaining system and drainage system; providing backfill, backfilling, compacting, developing/completing/documenting the quality management program, performing compaction testing. Parapets, railings, abutment bodies and other items above the wall cap or coping will be paid for separately. Vehicle barrier and its support will be paid separately.

Any required topsoil, fertilizer, seeding or sodding and mulch will be paid for at the contract unit price of topsoil, fertilizer, seeding or sodding and mulch, respectively.

80. Landscape Boulder Wall, Item SPV.0165.04.

A Description

The work under this item shall consist of furnishing materials and erecting a permanent earth retention system in accordance to the lines, dimension, elevations and details as shown on the plans and provided in the contract.

B Materials

Materials furnished under this contract shall conform to the following requirements.

B.1 Backfill

All backfill material placed between the boulder face and existing embankment shall be Granular Backfill, Grade 1. It shall satisfy the size requirements of standard spec 209.2, except that 100 percent shall pass a 3-inch sieve.

B.2 Wall Facing

Boulders used for wall facing shall be durable field or quarry stone of approved quality. They shall be sound, hard, dense, resistant to the action of air and water, and free from seams, cracks, or other structural defects. Boulders shall be of a size and shape approved by the engineer and shall be well graded. They shall have a minimum diameter of 2 feet, measured in the smallest direction.

C Construction

The Landscape Boulder Wall shall be constructed at the locations and to the dimensions shown on the plan and as directed by the engineer. Materials will be placed in the areas as indicated on the plans and as detailed in this specification.

All existing topsoil shall be excavated from the wall fill zone. Any unsuitable material at the wall base shall be excavated to a depth which provides a stable foundation. A leveling pad of Granular Backfill shall then be constructed and compacted to bottom of wall elevation. The minimum thickness of the leveling pad shall be 6 inches. Geotextile Fabric, Type HR shall be placed beneath and behind the boulder facing units. Pipe Underdrain shall be constructed as detailed on the plan.

Backfill lifts shall be no more than 8 inches in thickness, and shall be benched into the existing embankment. Backfilling and compaction shall closely follow erection of each course of boulder facing units. At the end of each working day, the contractor shall provide good temporary drainage such that the backfill shall not become contaminated with runoff soil or water if it should rain. No materials or large equipment shall be stockpiled or stored on top of the wall within 10 feet of the front face of the wall.

Backfill operations shall be conducted in such a manner as to prevent damage or misalignment shall be corrected at the contractor’s expense as directed by the engineer.

The surrounding area located above and below the retaining wall site shall be restored to its original condition and to the finished details on the plans after construction of the wall.

D Measurement

The department will measure Landscape Boulder Wall by the square foot of face on a vertical plane between the top of the leveling pad and a line indicating the top of wall as shown on the plans, acceptably completed. Unless directed by the engineer, wall area constructed above or below these limits will not be measured for payment.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0165.04	Landscape Boulder Wall	SF

Payment is full compensation for site preparation, including all necessary excavation and disposal of surplus materials; supplying and placing boulders to produce a functional system; supplying and installing granular backfill, geotextile fabric Type HR, and pipe underdrain; backfilling and compaction.

81. Colored and Stamped Concrete, 5-Inch, SPV.0180.01.

A Description

Construct colored and stamped concrete pavement in accordance to standard spec 405, 415, 416 and 716, as shown on the plans, and as hereinafter provided.

Concrete contractor must have experience successfully installing stamped and colored concrete and shall provide, upon engineer's request, a written list of references specific to stamped and colored concrete projects in the upper Midwest.

B Materials

B.1 Concrete

Conform to standard spec 405 and standard spec 415 except that provide QMP for class II ancillary concrete as specified in standard spec 716 and conform to the following:

Integrally color the concrete using non-fading synthetic iron oxides conforming to ASTM C979. Follow color pigment manufacturers recommendations for minimum and maximum percentage of loading by weight of the cementitious materials in the mix.

The integral color shall be Light Tan Stain and shall closely match to Federal Standard 595 Color Server, FS color #30315. Provide manufacturer's color chart for integral color to the engineer for approval before use.

B.2 Concrete Curing

Supply a clear, non-yellowing liquid membrane-forming clear curing compound conforming to ASTM C 1315, Type 1 A

B.3 Mix Approval

B.3.1 General

Perform preliminary laboratory and/or field trial batching to establish the mix proportions necessary to meet the final concrete characteristics.

Submit to the engineer the final mix design including specific sources and/or trade names as applicable for all materials.

Concrete shall have a maximum 4" slump.

B.3.2 Test Panels

At an engineer-determined location on the project, place and finish a 10-foot by 10-foot by 5-inch colored concrete test panel using processes and techniques intended for use on permanent work, including curing procedures, stamping, coloring, and sealing.

The engineer will determine acceptance of the test panel color based on review and approval by Village of Hobart, Village of Howard, and Oneida Tribe of Indians of Wisconsin representatives. Test panel color will be evaluated for approval no earlier than 5 days after the test panel was poured and sealed.

Prepare the concrete surfaces of the Stamped and Colored Concrete Test Panel using the same methods and materials outlined in this section.

B.5. Stamp

Use reusable elastomeric/urethane form liners of the architectural surface treatment(s) as detailed in the plans and hereinafter provided.

Pattern shall be flagstone. Provide sample formliner pattern to engineer for approval before use.

B.6. Antiquing Release Agent

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

The antiquing release agent color shall be Light Tan Stain and shall closely match to Federal Standard 595 Color Server, FS color #30315.

Provide manufacturer's color chart for antiquing release agent to engineer for approval before use.

B.7. Cement-Based Color Hardeners

Use color hardeners by the same manufacturer as the integral concrete and antiquing release agent and that is compatible with the form liner and installation methods.

The color hardeners shall be as follows:
Base Color: Light Tan Stain; match to Federal Standard 595 Color Server, FS color #30315; 100% coverage.

Provide manufacturer's color chart for color hardeners to engineer for approval before use.

B.7. Concrete Sealant
Use concrete sealant that is compatible with the form liner and installation methods.

Prime Sealant: Glossy.
Secondary Sealant: Matte.

C Construction
Construct colored concrete in accordance to standard spec 416 and as herein provided.

Coordinate locations of permanent signage requiring PVC pipe box outs per standard spec 634.3.2.

C.1 Form Liner (Stamp) Preparation
Clean the form liner prior to each pour and ensure that it is free of any build-up. Visually inspect each liner for blemishes or tears, and repair if necessary per manufacturer's recommendations.

C.1 Stamp
Coordinate with the engineer and to verify stamping pattern orientation prior to starting the stamping work.

Prepare stamp tools with a full, smooth coat of antiquing release agent.

While concrete is still in the plastic state, apply imprinting tools to the surface and press into the concrete to create the desired impression. Finish all surfaces uniformly.

Ensure that the textured surface is free of laitance; sandblasting is not permitted. Grind or fill any blemishes.

Shake or spray antiquing release agent over concrete surface.

Hand apply antiquing release agent to each individual joint line by spraying or rolling.

C.2 Finishing
Allow concrete to cure for 24 hours after application of the color hardeners, antiquing release agents and stamp pattern.

Pressure wash concrete surface to remove approximately 80% of the antiquing release agent.

Ensure that concrete is clean and dry before proceeding with concrete sealant.

Spray or roll on a single layer of gloss sealant. Follow by spraying on a single coat of matte finish sealer. Do not roll matte finish sealer onto concrete surfaces.

D Measurement

The department will measure Colored and Stamped Concrete, 5-Inch in accordance to standard spec 415.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0180.01	Colored and Stamped Concrete, 5-Inch	SY

Payment is full compensation for preparing the foundation, unless provided otherwise; for developing mix designs and providing sample panels or test panels; for furnishing materials (including concrete masonry, colored pigments, sealers, joint and bond breakers, and retarders), hauling, preparing, placing, curing, and protecting the concrete; for stamping ; for sawing required for construction of colored concrete; for jointing and joint materials, and tie bars; for measuring opening strength including fabricating and testing cylinders, obtaining and testing cores, and evaluating maturity; for furnishing all removal of colored concrete.

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 12 *(number)* TrANS Graduate(s) be utilized on this contract.

2) **On-the-Job Training, Item ASP.1T0A, ASP 1 Apprentice.** At the rate of $5.00 per hour on federal aid projects at the point when an employee who came out of the TrANS Program is subsequently entered into an apprenticeship contract in an underutilized skilled trade (this will include the Skilled Laborer Apprenticeship when that standard is implemented).

Eligibility and Duration: To the employing contractor, for the length of time the TrANS graduate is in apprentice status.

Contract Goal: To maintain the intent of the Equal Employment Opportunity program, it is a goal that __7__ *(number)* TrANS Apprentice(s) be utilized on this contract.

3) The maximum duration of reimbursement is two years as a TrANS graduate plus time in apprentice status.

4) If a TrANS program is not available in the contractor's area and another training program is utilized, payment of On-the-Job Training hours may be approved by the Wisconsin Department of Transportation (WisDOT) if the training program meets the established acceptance criteria. Only On-the-Job Training Hours accumulated after WisDOT approval will be reimbursed as specified under Items ASP.1T0G and ASP.1T0A. For more information, contact the Disadvantaged Business Enterprise Office at the phone numbers listed above.

5) WisDOT reserves the right to deny payments under items ASP.1T0G and ASP.1T0A if the contractor either fails to provide training or there is evidence of a lack of good faith in meeting the requirements of this training special provision.

I. RATIONALE AND SPECIAL NOTE

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

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

II. IMPLEMENTATION

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

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

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

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

IV. *TRANS TRAINING*

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

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

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

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

V. APPRENTICESHIP TRAINING

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

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

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

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

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

ADDITIONAL SPECIAL PROVISION 3
DISADVANTAGED BUSINESS ENTERPRISE PROGRAM

1. Description

General

a. The disadvantaged business enterprise (DBE) requirements of 49 CFR Part 26 apply to this contract. The department's DBE goal is shown on the cover of the bidding proposal. The contractor can meet the specified contract DBE goal by procuring services or materials from a DBE or by subcontracting work to a DBE. The department calculates the DBE participation as the dollar value of DBE participation included in the bid expressed as a percentage of the total contract bid amount.

b. Under the contract, the contractor agrees to provide the assistance to participating DBE's in the following areas:

   i. Produce accurate and complete quotes.
   ii. Understand highway plans applicable to their work.
   iii. Understand specifications and contract requirements applicable to their work.
   iv. Understand contracting reporting requirements.

c. The department encourages the contractor to assist and develop DBE firms to become fully knowledgeable contractors to successfully perform on its contracts.

d. For information on the disadvantaged business program, visit the department's Civil Rights and Compliance Section website at:

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

2. Definitions

a. Interpret these terms, used throughout this additional special provision, as follows:

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

3. DBE Percentage Required at Bid Submission

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

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

4. Department's DBE Evaluation Process

a. Documentation Submittal

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

i. Bidder Meets DBE Goal

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

ii. Bidder Does Not Meet DBE Goal

(1) If the bidder indicates a bid percentage on the Commitment to Subcontract to DBE Form [DT1506] that does not meet the contract DBE goal, the bidder must submit a Good Faith Waiver Form [DT1202] and supporting documentation. After award and before execution, the department will evaluate the bidder's DBE commitment and consider the bidder's good faith waiver request.

(2) The department will review the bidder's good faith waiver request and notify the bidder of one of the following:

a. If the department grants a good faith waiver, the bid is eligible for contract execution with respect to DBE commitment.

b. If the department rejects the good faith waiver request, the department may declare the bid ineligible for execution. The department will provide a written explanation of why the good faith waiver request was rejected. The bidder may appeal the department's rejection as allowed under 7 a. & b.

5. Department's Criteria for Good Faith Effort

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

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

b. The department, in conjunction with industry stakeholders, has developed the following guidance for contractor good faith effort. The guidance and the attached appendices provide a framework for the actions required by all parties in the processing and evaluation of bidder's total efforts to achieve the project specific DBE goal prior to the bid letting date.

c. Prime Contractors should:

i. Document all efforts and decisions made toward achieving the DBE goal on the contract. The bidder should use the Civil Rights & Compliance System [CRCS] and related WisDOT-approved DBE outreach tools, including the Bid Express Small Business Network, to foster DBE participation on all applicable contracts.

ii. Request quotes by identifying potential items to subcontract and solicit. Prime contractors are strongly encouraged to include in their initial contacts a single page including a detailed list of items for which they are accepting quotes, by project, within a letting. *See attached sample entitled "Sample Contractor Solicitation Letter" in Appendix A*. Prime contractors should also indicate a willingness to accept quotes in areas they are planning to perform themselves, ***as required by federal rules***. In some cases, it might be appropriate to use DBE's to do work in a prime contractor's area of specialization.

(1) Solicit quotes through all reasonable and available means from certified DBE firms who match 'possible items to subcontract' and send copies to DBESS office, highlighting areas in which you are seeking quotes. Email is acceptable.

(2) SBN is the preferred outreach tool. https://www.bidx.com/wi/main. Other acceptable means include postal mail, email, fax, phone call.

a. Primes must ask DBE firms for a response in their solicitations. See *Sample Contractors Solicitation Letter* in Appendix. This letter can be included as an attachment to the SBN sub-quote request.

b. Solicit quotes at least 10 calendar days prior to the letting date {ideally two Fridays before the letting} to allow DBE firms sufficient time to respond. Prime contractors should contact DBE firms early, asking them if they need help in putting together a quote, or helping to arrange for equipment needs, or solve other problems.

(3) Second solicitation should take place within 5 days

a. An email solicitation is highly recommended for this second solicitation

(4) Upon request, provide interested DBE firms with adequate information about plans, specifications and the requirements of the contract by letter, information session, email, phone call and/or referral.

(5) When potential exists, advise interested DBE firms on how to obtain bonding, line of credit or insurance as may be requested.

(6) Document DBE firm's interest in quoting by taking appropriate steps to follow up initial solicitation with:

a. Email to all prospective DBE firms in relevant work areas
b. Phone call log to DBE firms who express interest via written response or call.
c. Fax/letter confirmation
d. Copy of the DBE quotes
e. Signed copy of Bid Express SBN Record of Subcontractor Outreach Effort.

d. Evaluate DBE quotes as documentation is critical if the prime does not utilize the DBE firm's quote for any reason.

i. Evaluate DBE firm's capability to perform 'possible items to subcontract' using legitimate reasons, including but not limited to, ***a discussion with the DBE firm*** regarding its

capabilities prior to the bid letting. If lack of capacity is your reason for not utilizing the DBE quote, you are required to contact the DBE directly regarding their ability to perform the work indicated in the UCP directory as their work area [NAICS code]; only the work area and/or NAICS code listed in the UCP directory will be counted for DBE credit. Documentation of the conversation is required.

ii. In striving to meet a DBE conscious contract goal, prime contractors are expected to use DBE quotes that are responsive and reasonable. This includes DBE quotes that are not the low quote.

iii. **Special Circumstance:** Evaluation of DBE quotes with tied bid items. "Tied quotes are the condition in which a subcontractor submits quotes including multiple areas of expertise across multiple work areas noting that the items and price are tied. Typically this type of quoting represents a cost saving to the prime but is not clearly stated as a discount; tied quotes are usually presented as 'all or none' quote to the prime." When non-DBE subcontractors submit tied bid items in their quotes to the prime, the DBE firms' quote may seem not competitive. In such a case, the following steps are taken in comparing the relevant quotes. These are qualitative examples.

(1) Compare bid items common to both quotes, noting the reasonableness in the price comparison.

(2) Review quotes from other firms for the bid items not quoted by the DBE firm to see if combining both can provide the same competitive advantage that the tied bid items offered.

e. After notification of contract award, submit **'Commitment to Subcontract'** form within the time period specified in the contract.

i. Provide the following information along with department form DT1202:

(1) The names, addresses, e-mail addresses, telephone numbers of DBE's contacted. The dates of both initial and follow-up contact. A printed copy of SBN solicitation is acceptable.

(2) A description of information provided to the DBE's regarding the plans, specifications, and estimated quantities for portions of the work to be performed by that DBE.

(3) Photocopies or electronic copies of all written solicitations to DBE's.

(4) Documentation of each quote received from a DBE and, if rejected, the reason for that rejection.

(5) Bidder attendance at any pre-solicitation or pre-bid meetings the department held to inform DBE's of participation opportunities available on the project.

f. The department's DBE Support Services Office is available by phone, email or in writing to request assistance in meeting the DBE goal:

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

6. Bidder's Appeal Process

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

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

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

7. Department's Criteria for DBE Participation

Department's DBE List

a. The department maintains a DBE list on the department's website at

http://app.mylcm.com/wisdot/Reports/WisDotUCPDirectory.aspx

b. The DBE office is also available to assist at 414-438-4583 or 608-266-6961.

8. Counting DBE Participation

Assessing DBE Work

a. The department will only count the DBE usage towards the contract DBE goal if the DBE firm is certified as a DBE by one of the unified certification program agencies. If a firm becomes DBE certified before entering into a subcontract, the department may consider that DBE usage towards the contract goal. The department only counts the value of the work a DBE actually performs towards the DBE goal. The department assesses the DBE work as follows:

b. The department counts work performed by the DBE's own resources. The department includes the cost of materials and supplies the DBE obtains for the work. The department also includes the cost of equipment the DBE leases for the work. The department will not include the cost of materials, supplies, or equipment the DBE purchases or leases from the prime contractor or its affiliate, except the department will count non-project specific leases the DBE has in place before the work is advertised.

c. The department counts fees and commissions the DBE charges for providing a bona fide professional, technical, consultant, or managerial services. The department also counts fees and commissions the DBE charges for providing bonds or insurance. The department will only count costs the engineer deems reasonable based on experience or prevailing market rates.

d. If a DBE subcontracts work, the department counts the value of the subcontracted work only if the DBE's subcontractor is also a DBE.

e. The contractor shall maintain records and may be required to furnish periodic reports documenting its performance under this item.

f. It is the prime contractor’s responsibility to determine the DBE's ability to perform the work with the use of the UCP directory.

9. Commercially Useful Function

a. The department counts expenditures of a DBE toward the DBE goal only if the DBE is performing a commercially useful function on that contract.

b. A DBE is performing a commercially useful function if the following conditions are met:

c. For contract work, the DBE is responsible for executing a distinct portion of the contract work and it is carrying out its responsibilities by actually performing, managing, and supervising that work.

d. For materials and supplies, the DBE is responsible for negotiating price, determining quality and quantity, ordering, and paying for those materials and supplies.

10. Trucking

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

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

11. Manufacturers and Suppliers

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

12. DBE Prime

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

13. Joint Venture

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

14. Mentor Protégé

a. If a DBE performs as a participant in a mentor protégé agreement, the department will credit the portion of the work performed by the DBE protégé firm

b. On every other project that the mentor protégé team identifies itself on.

c. For no more than one half of the total contracted DBE goal on any WisDOT project.

15. DBE Replacement

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

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

16. Changes to the approved DBE Commitment Form DT1506

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

17. Contract Modifications

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

18. Payment

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

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

GFW SAMPLE MEMORANDUM

TO: DBE FIRMS

FROM: POTENTIAL PRIME CONTRACTOR OR MAJOR SUBCONTRACTOR

SUBJECT: **REQUEST FOR DBE QUOTES**

LET DATE & TIME

DATE: MONTH DAY YEAR

CC: DBE OFFICE ENGINEER

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

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

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

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

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

All questions should be directed to:

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

Sample Contractor Solicitation Letter Page 2

This sample is provided as a guide not a requirement

REQUEST FOR QUOTATION

Prime's Name: _____

Letting Date: _____

Project ID: _____

Please check all that apply

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

Prime Contractor 's Contact Person		DBE Contractor Contact Person	
Phone:		Phone	
Fax:		Fax	
Email:		Email	

Please circle the jobs and items you will be quoting below

Proposal No.	1	2	3	4	5	6	7
County							

WORK DESCRIPTION:

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

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

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

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

APPENDIX B
BEST PRACTICES FOR PRIME CONTRACTOR & DBE SUBCONTRACTOR GOOD FAITH EFFORT

This list is not a set of requirements; it is a list of potential strategies

Primes

- Prime contractor open houses inviting DBE firms to see the bid "war room" or providing technical assistance
- Participate in speed networking and mosaic exercises as arranged by DBE office
- Host information sessions not directly associated with a bid letting;
- Participate in a formal mentor protégé or joint venture with a DBE firm
- Participate in WisDOT advisory committees i.e. TRANSAC, or Mega Project committee meetings
- Facilitate a small group DBE 'training session' Clarifying how your firm prepares for bid letting, evaluates subcontractors, preferred qualifications and communication methods
- Encourage subcontractors to solicit and highlight DBE participation in their quotes to you
- Quality of communication, not quantity creates the best results. Contractors should do as thorough a job as possible in communicating with DBE firms before the bid and provide any assistance requested to assure best possible bid.

DBE

- DBE firms should contact primes as soon as possible with questions regarding their quotes or bid; seven days prior is optimal.
- Continually check for contract addendums on the HCCI website through the Thursday prior to letting to stay abreast of changes.
- Review the status of contracts on the HCCI website reviewing the 'apparent low bidder' list, and bid tabs at a minimum.
- Prepare a portfolio or list of related projects and prime and supplier references; be sure to note transportation-related projects of similar size and scope, firm expertise and staffing.
- Participate in DBE office assessment programs
- Participate on advisory and mega-project committees
- Sign up to receive the DBE Contracting Update
- Consider membership in relevant industry or contractor organizations
- Active participation is a must. Quote as many projects as you can reasonably work on; quoting the primes and bidding as a prime with the department are the only ways to get work.

APPENDIX C
Types of Efforts considered in determining GFE
This list represents concepts being assessed; analysis requires additional steps

1. Whether the contractor attended any pre-solicitation or pre-bid meetings that were scheduled by WisDOT to inform DBEs of contracting and subcontracting opportunities;
2. Whether the contractor provided written notice to a reasonable number of specific DBEs that their interest in the contract was being solicited, in sufficient time to allow the DBEs to participate effectively;
3. Whether the contractor followed up initial solicitations of interest by contacting DBEs to determine if the DBEs were interested; returned the phone calls of interested DBE firms.
4. Whether the contractor selected portions of the work to be performed by DBEs in order to increase the likelihood of meeting the DBE goal;
5. Whether the contractor provided interested DBEs with adequate information about the plans, specifications and requirements of the contract;
6. Whether the contractor negotiated in good faith with interested DBEs, not rejected DBEs as unqualified without sound reasons based on a thorough investigation of their capabilities;
7. Whether the contractor made efforts to assist interested DBEs in being more competitive.
8. Whether the contractor effectively used the services of available minority community organizations: minority contractors groups, local, state, and Federal minority business assistance offices, and other organizations that provide assistance to small businesses and DBE firms.
9. Whether Prime used CRCS to identify DBE who specialize in relevant work areas.
10. Whether the contractor used available resources including contacting the DBE office, using WisDOT's website
11. Whether the contractor returned calls of firms expressing interest in a timely manner.

APPENDIX D
Good Faith Effort Evaluation Guidance
Excerpt from Appendix A of 49 CFR Part 26

APPENDIX A TO PART 26 -- GUIDANCE CONCERNING GOOD FAITH EFFORTS

I. When, as a recipient, you establish a contract goal on a DOT assisted contract, a bidder must, in order to be responsible and/or responsive, make good faith efforts to meet the goal. The bidder can meet this requirement in either of two ways. First, the bidder can meet the goal, documenting commitments for participation by DBE firms sufficient for this purpose. Second, even if it doesn't meet the goal, the bidder can document adequate good faith efforts. This means that the bidder must show that it took all necessary and reasonable steps to achieve a DBE goal or other requirement of this part which, by their scope, intensity, and appropriateness to the objective, could reasonably be expected to obtain sufficient DBE participation, even if they were not fully successful.

II. In any situation in which you have established a contract goal, part 26 requires you to use the good faith efforts mechanism of this part. As a recipient, it is up to you to make a fair and reasonable judgment whether a bidder that did not meet the goal made adequate good faith efforts. It is important for you to consider the quality, quantity, and intensity of the different kinds of efforts that the bidder has made. The efforts employed by the bidder should be those that one could reasonably expect a bidder to take if the bidder were actively and aggressively trying to obtain DBE participation sufficient to meet the DBE contract goal. Mere pro forma efforts are not good faith efforts to meet the DBE contract requirements. We emphasize, however, that your determination concerning the sufficiency of the firm's good faith efforts is a judgment call: meeting quantitative formulas is not required.

III. The Department also strongly cautions you against requiring that a bidder meet a contract goal (i.e., obtain a specified amount of DBE participation) in order to be awarded a contract, even though the bidder makes an adequate good faith efforts showing. This rule specifically prohibits you from ignoring bona fide good faith efforts.

IV. The following is a list of types of actions which you should consider as part of the bidder's good faith efforts to obtain DBE participation. It is not intended to be a mandatory checklist, nor is it intended to be exclusive or exhaustive. Other factors or types of efforts may be relevant in appropriate cases.

A. Soliciting through all reasonable and available means (e.g. attendance at pre-bid meetings, advertising and/or written notices) the interest of all certified DBEs who have the capability to perform the work of the contract. The bidder must solicit this interest within sufficient time to allow the DBEs to respond to the solicitation. The bidder must determine with certainty if the DBEs are interested by taking appropriate steps to follow up initial solicitations.

B. Selecting portions of the work to be performed by DBEs in order to increase the likelihood that the DBE goals will be achieved. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate DBE participation, even when the prime contractor might otherwise prefer to perform these work items with its own forces.

C. Providing interested DBEs with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation.

D. (1) Negotiating in good faith with interested DBEs. It is the bidder's responsibility to make a portion of the work available to DBE subcontractors and suppliers and to select those portions of the work or material needs consistent with the available DBE subcontractors and suppliers, so as to facilitate DBE participation. Evidence of such negotiation includes the names, addresses, and telephone numbers of DBEs that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional agreements could not be reached for DBEs to perform the work.

(2) A bidder using good business judgment would consider a number of factors in negotiating with subcontractors, including DBE subcontractors, and would take a firm's price and capabilities as well as contract goals into consideration. However, the fact that there may be some additional costs involved in finding and using DBEs is not in itself sufficient reason for a bidder's failure to meet the contract DBE goal, as long as such costs are reasonable. Also, the ability or desire of a prime contractor to perform the work of a contract with its own organization does not relieve the bidder of the responsibility to make good faith efforts. Prime contractors are not, however, required to accept higher quotes from DBEs if the price difference is excessive or unreasonable.

E. Not rejecting DBEs as being unqualified without sound reasons based on a thorough investigation of their capabilities. The contractor's standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. non-union employee status) are not legitimate causes for the rejection or non solicitation of bids in the contractor's efforts to meet the project goal.

F. Making efforts to assist interested DBEs in obtaining bonding, lines of credit, or insurance as required by the recipient or contractor.

G. Making efforts to assist interested DBEs in obtaining necessary equipment, supplies, materials, or related assistance or services.

H. Effectively using the services of available minority/women community organizations; minority/women contractors' groups; local, state, and Federal minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBEs.

V. In determining whether a bidder has made good faith efforts, you may take into account the performance of other bidders in meeting the contract. For example, when the apparent successful bidder fails to meet the contract goal, but others meet it, you may reasonably raise the question of whether, with additional reasonable efforts, the apparent successful bidder could have met the goal. If the apparent successful bidder fails to meet the goal, but meets or exceeds the average DBE participation obtained by other bidders, you may view this, in conjunction with other factors, as evidence of the apparent successful bidder having made good faith efforts.

Appendix E
Small Business Network [SBN] Overview

The Small Business Network is a part of the Bid Express® service that was created to ensure that prime bidders have a centralized online location to find subs - including small and disadvantaged business enterprises (DBEs). It is available for prime bidders to use as part of their Basic Service subscription. Within the Small Business Network, **Prime Contractors** can:

1. Easily select proposals, work types and items:
    a. After adding applicable work types, select items that you wish to quote. Enter the sub-quote quantities and add comments, if desired. Adding or removing items and work types can be done quickly. If needed, you can save the sub-quote for completion at a later time.
2. Create sub-quotes for the subcontracting community:
    a. Create sub-quotes with ease using the intuitive sub-quote creator. In seven short steps, you can rapidly create a custom sub-quote directed to all subcontractors that bid on the applicable work types. Steps include: provide contact information and sub-quote expiration date, select letting and proposal, add work types and items, specify terms and conditions, upload attachments, and select vendors.
    b. Create a sub-quote to send to subcontractors or suppliers that lists the items in a proposal that you want quoted
    c. Create an unlimited number of sub-quotes for items you want quoted, and optionally mark them as a DBE-preferred request
    d. Add attachments to sub-quotes
3. View sub-quote requests & responses:
    a. After logging into the Bid Express service, you can quickly review all of your sub-quote requests and all unsolicited sub-quote requests from subcontractors. To simplify the Small Business Network home screen, sub-quote requests can be hidden with one click if they are not applicable.
    b. View or receive unsolicited sub-quotes that subcontractors have posted, complete with terms, conditions and pricing
4. View Record of Subcontractor Outreach Effort:
    a. For each sub-quote produced, a *Record of Subcontractor Outreach Effort* is generated that shows the response statistics for a particular sub-quote. If accepted by the letting agency, this report may serve as proof of a "Good Faith" effort in reaching out to the DBE community.
    b. Easily locate pre-qualified and certified small and disadvantaged businesses
    c. Advertise to small and disadvantaged businesses more efficiently and cost effectively
    d. Document your interactions with subs/DBEs by producing an Outreach Report (may be accepted as proof of DBE outreach at the discretion of each agency)

The Small Business Network is a part of the Bid Express® service that was created to ensure that small businesses have a centralized area to access information about upcoming projects. It can help small businesses learn more about opportunities, compete more effectively, network with other contractors and subcontractors, and win more jobs.

1. View and reply to sub-quote requests from primes:
    a. After logging into the Bid Express service, you can quickly review all incoming sub-quote requests and all unsolicited sub-quotes created by your company. Receive notifications by selected work type. To simplify on the Small Business Network home screen, sub-quote requests can be filtered by work types relevant to your interests, or hidden with one click if they are not applicable.
2. Select items when responding to sub-quote requests from primes:
    a. You have the freedom to choose and price any number of items when responding to a sub-quote request. Quantities can be modified, and per-item comments are also available.
    b. View requests for sub-quotes for work that primes have posted for projects they are bidding, add your pricing, terms, and conditions, and submit completed sub-quotes to the requesting primes
    c. Add attachments to a sub-quote
3. Create and send unsolicited sub-quotes to specific contractors:
    a. Create unsolicited sub-quotes with ease using the intuitive sub-quote creator. In eight short steps, you can rapidly create a custom sub-quote directed at any number of specific vendors of your choosing. Steps include: provide contact information and sub-quote expiration date, select letting and proposal, add work types and items, specify terms and conditions, upload attachments, and select vendors.
4. Easily select and price items for unsolicited sub-quotes:
    a. After adding applicable work types, select items that you wish to quote. The extended price calculates automatically, cutting out costly calculation errors. Comments can be provided on an per-item basis as well.
    b. Create an unsolicited sub-quote that lists the items from a proposal that you want to quote, include pricing, terms and conditions, and send it to selected prime/plan holder
    c. Add attachments to a sub-quote
    d. Add unsolicited work items to sub-quotes that you are responding to
5. Easy Access to Valuable Information
    a. Receive a confirmation that your sub-quote was opened by a prime
    b. View Bid Tab Analysis data from past bids, including the high, average and low prices of items.
    c. View important notices and publications from DOT targeted to small and disadvantaged businesses
6. Accessing Small Business Network for WisDOT contracting opportunities
    a. If you are a contractor not yet subscribing to the Bid Express service, go to **www.bidx.com** and select "Order Bid Express." The Small Business Network is a part of the Bid Express Basic Service.
    b. DBE firms can request a Bid Express Small Business Network Account at no cost by calling 414-438-4588

ADDITIONAL SPECIAL PROVISION 4

Payment to all Subcontractors. Within 10 calendar days of receipt by a contractor of a progress payment for work performed, materials furnished, or materials stockpiled by a subcontractor, the contractor shall pay that subcontractor for all work satisfactorily performed and for all materials furnished or stockpiled.

The contractor agrees further to release retainage amounts to each subcontractor within 10 calendar days after the subcontractor's work is satisfactorily completed. In addition, whenever the Department reduces the contract retainage amount, within 10 calendar days of receipt by a contractor of a retainage payment, the contractor must reduce the total amount retained from subcontractors to no more than remains retained by the Department.

The contractor shall pay the subcontractor within the time frames described above unless the contractor complies with both of the following within 10 calendar days of receiving the Department's progress payment:

1) The contractor notifies the subcontractor in writing that the work is not satisfactorily completed.
2) The contractor requests approval from the Department to delay payment because the subcontractor has not satisfactorily completed the work.

The contractor's request for approval should include the written notification to the subcontractor and shall provide sufficient documentation of good cause to assist the engineer in making a timely decision. If the engineer does not grant approval, the contractor shall pay the subcontractor within 10 calendar days of the Department's decision.

All subcontracting agreements made by a contractor shall include the above provisions and shall be binding on all contractors and subcontractors.

The contractor certifies compliance with the requirements of this Additional Special Provision by signing the contract. This clause applies to both DBE and non-DBE subcontractors.

ADDITIONAL SPECIAL PROVISIONS 5

Fuel Cost Adjustment

A Description

Fuel Cost Adjustments will be applied to partial and final payments for work items categorized in Section B as a payment to the contractor or a credit to the department. ASP-5 shall not apply to any force account work.

B Categories of Work Items

The following items and Fuel Usage Factors shall be used to determine Fuel Cost Adjustments:

(1) Earthwork.		Unit	Gal. Fuel Per Unit
205.0100	Excavation Common	CY	0.23
205.0200	Excavation Rock	CY	0.39
205.0400	Excavation Marsh	CY	0.29
208.0100	Borrow	CY	0.23
208.1100	Select Borrow	CY	0.23
209.0100	Backfill Granular	CY	0.23
350.0102	Subbase	CY	0.28
350.0104	Subbase	Ton	0.14
350.0115	Subbase 6-Inch	SY	0.05
350.0120	Subbase 7-Inch	SY	0.05
350.0125	Subbase 8-Inch	SY	0.06
350.0130	Subbase 9-Inch	SY	0.07
350.0135	Subbase 10-Inch	SY	0.08
350.0140	Subbase 11-Inch	SY	0.09
350.0145	Subbase 12-Inch	SY	0.09

C Fuel Index

A Current Fuel Index (CFI) in dollars per gallon will be established by the Department of Transportation for each month. The CFI will be the price of No. 2 fuel oil, as reported in U.S. Oil Week, using the first issue dated that month. The CFI will be the average of prices quoted for Green Bay, Madison, Milwaukee and Minneapolis.

The base Fuel Index (BFI) for this contract is $2.90 per gallon.

D Computing the Fuel Cost Adjustment

The engineer will compute the ratio CFI/BFI each month. If the ratio falls between 0.85 and 1.15, inclusive, no fuel adjustment will be made for that month. If the ratio is less than 0.85 a credit to the department will be computed. If the ratio is greater than 1.15 additional payment to the contractor will be computed. Credit or additional payment will be computed as follows:

(1) The engineer will estimate the quantity of work done in that month under each of the contract items categorized in Section B.

(2) The engineer will compute the gallons of fuel used in that month for each of the contract items categorized in Section B by applying the unit fuel usage factors shown in Section B.

(3) The engineer will summarize the total gallons (Q) of fuel used in that month for the items categorized in Section B.

(4) The engineer will determine the Fuel Cost Adjustment credit or payment from the following formula:

$$FA = \left(\frac{CFI}{BFI} - 1 \right) x\ Q\ x\ BFI$$

(plus is payment to contractor; minus is credit to the department)

Where	FA	=	Fuel Cost Adjustment (plus or minus)
	CFI	=	Current Fuel Index
	BFI	=	Base Fuel Index
	Q	=	Monthly total gallons of fuel

E Payment

A Fuel Cost Adjustment credit to the department will be deducted as a dollar amount each month from any sums due to the contractor. A Fuel Cost Adjustment payment to the contractor will be made as a dollar amount each month.

Upon completion of the work under the contract, any difference between the estimated quantities and the final quantities will be determined. An average CFI, calculated by averaging the CFI for all months that fuel cost adjustment was applied, will be applied to the quantity differences. The average CFI shall be applied in accordance with the procedure set forth in Section D.

ADDITIONAL SPECIAL PROVISION 6
ASP 6 - Modifications to the standard specifications

Make the following revisions to the 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 C150, 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 AWPA 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 Bolts

Correct 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 General

Correct errata by changing section 511 to 550.

(1) Furnish materials conforming to the following:

Concrete ..... section 501

Concrete bridges ..... section 502

Luminaires ..... section 659

Steel piling ..... section 550

Steel reinforcement ..... section 505

660.3.2.3 Pile Type Foundations

Correct errata by changing section 511 to 550.

(1) Drive piles as specified in for steel piling in section 550.

701.3 Contractor Testing

Correct 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 pages 17-22 of the CRCS System Background Information manual available online on the Labor, Wages, and EEO Information page at: http://roadwaystandards.dot.wi.gov/hcci/labor-wages-eeo/crc-basic-info.pdf

REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of $10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding $10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under

this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are

applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurance Required by 49 CFR 26.13(b):

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor

will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of $10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding $2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 “Contract provisions and related matters” with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages

a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH–1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b.(1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or

will notify the contracting officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b.(1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g. , the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH–347 is available for this purpose from the Wage and Hour Division Web site at http://www.dol.gov/esa/whd/forms/wh347instr.htm or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency..

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH–347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

6. Subcontracts. The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility.

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The following clauses apply to any Federal-aid construction contract in an amount in excess of $100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of $10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.

3. Withholding for unpaid wages and liquidated damages. The FHWA or the contacting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2.) of this section.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term “perform work with its own organization” refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:

(1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
(2) the prime contractor remains responsible for the quality of the work of the leased employees;
(3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and
(4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C.3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.
2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost $25,000 or more – as defined in 2 CFR Parts 180 and 1200.

1**. Instructions for Certification – First Tier Participants:**

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

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

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

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. “First Tier Covered Transactions” refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). “Lower Tier Covered Transactions” refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). “First Tier Participant” refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). “Lower Tier Participant” refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

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

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (https://www.epls.gov/), which is compiled by the General Services Administration.

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

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

* * * * *

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

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

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

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification; and

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

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

2. **Instructions for Certification - Lower Tier Participants:**

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost $25,000 or more - 2 CFR Parts 180 and 1200)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. “First Tier Covered Transactions” refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). “Lower Tier Covered Transactions” refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). “First Tier Participant” refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). “Lower Tier Participant” refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

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

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (https://www.epls.gov/), which is compiled by the General Services Administration.

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

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the

department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed $100,000 (49 CFR 20).

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed $100,000 and that all such recipients shall certify and disclose accordingly.

ATTACHMENT A - EMPLOYMENT AND MATERIALS PREFERENCE FOR APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS ROAD CONTRACTS

This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

SEPTEMBER 2002

NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY (EXECUTIVE ORDER 11246)

1. The Offeror's or Bidder's attention is called to the "Employment Practices" and "Equal Opportunity Clause" set forth in the Required Contract Provisions, FHWA 1273.

2. The goals and timetables for minority and female participation expressed in percentage terms for the contractor's aggregate work force in each trade, on all construction work in the covered area, are as follows:

Goals for Minority Participation for Each Trade:

County	%	County	%	County	%
Adams	1.7	Iowa	1.7	Polk	2.2
Ashland	1.2	Iron	1.2	Portage	0.6
Barron	0.6	Jackson	0.6	Price	0.6
Bayfield	1.2	Jefferson	7.0	Racine	8.4
Brown	1.3	Juneau	0.6	Richland	1.7
Buffalo	0.6	Kenosha	3.0	Rock	3.1
Burnett	2.2	Kewaunee	1.0	Rusk	0.6
Calumet	0.9	La Crosse	0.9	St. Croix	2.9
Chippewa	0.5	Lafayette	0.5	Sauk	1.7
Clark	0.6	Langlade	0.6	Sawyer	0.6
Columbia	1.7	Lincoln	0.6	Shawano	1.0
Crawford	0.5	Manitowoc	1.0	Sheboygan	7.0
Dane	2.2	Marathon	0.6	Taylor	0.6
Dodge	7.0	Marinette	1.0	Trempealeau	0.6
Door	1.0	Marquette	1.7	Vernon	0.6
Douglas	1.0	Menominee	1.0	Vilas	0.6
Dunn	0.6	Milwaukee	8.0	Walworth	7.0
Eau Claire	0.5	Monroe	0.6	Washburn	0.6
Florence	1.0	Oconto	1.0	Washington	8.0
Fond du Lac	1.0	Oneida	0.6	Waukesha	8.0
Forest	1.0	Outagamie	0.9	Waupaca	1.0
Grant	0.5	Ozaukee	8.0	Waushara	1.0
Green	1.7	Pepin	0.6	Winnebago	0.9
Green Lake	1.0	Pierce	2.2	Wood	0.6

Goals for female participation for each trade: 6.9%

These goals are applicable to all the contractor's construction work, (whether or not it is federal or federally assisted), performed in the covered area. If the contractor performs construction work in the geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and nonfederally involved construction.

The contractor's compliance with the Executive Order and the Regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from contractor to contractor or from project to project for the sole purpose of meeting the contractor's goals shall be a violation of the contract, the Executive Order and the Regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within ten (10) working days of award of any construction subcontract in excess of $10,000.00 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor, employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed.

   As referred to in this section, the Director means:

   Director
   Office of Federal Contract Compliance Programs
   Ruess Federal Plaza
   310 W. Wisconsin Ave., Suite 1115
   Milwaukee, WI 53202

   The "Employer Identification Number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941.

4. As used in this notice, and in the contract resulting from solicitation, the "covered area" is the county(ies) in Wisconsin to which this proposal applies.

APRIL 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

The schedule of "Minimum Wage Rates" attached hereto and made a part hereof furnishes the prevailing wage rates that have been determined pursuant to Section 103.50 of the Wisconsin Statutes. These wage rates are the minimum required to be paid to the various laborers, workers, mechanics and truck drivers employed by contractors and subcontractors on the construction work embraced by the contract and subject to prevailing hours and wages under Section 103.50, Stats. If necessary to employ laborers, workers, mechanics or truck drivers whose classification is not listed on the schedule, they shall be paid at rates conformable to those listed for similar classifications. Apprentices shall be paid at rates not less than those prescribed in their state indenture contacts.

While the wage rates shown are the minimum rates required by the contract to be paid during its life, this in not a representation that labor can be obtained at these rates. It is the responsibility of bidders to inform themselves as to the local labor conditions and prospective changes or adjustments of wage rates. No increase in the contract price shall be allowed or authorized on account of the payment of wage rates in excess of those listed herein.

Pursuant to Section 103.50 of the Wisconsin Statutes, the prevailing hours of labor have been determined to be up to 10 hours per day and 40 hours per calendar week Monday through Friday. If any laborer, worker, mechanic or truck driver is permitted or required to work more than the prevailing number of hours per day or per calendar week on this contract, they shall be paid for all hours in excess of the prevailing hours at a rate of at least one and one-half (1 1/2) times their hourly rate of pay. All work on Saturday, Sunday and the following holidays is to be paid at time and a half: (1) January 1, (2) the last Monday in May, (3) July 4, (4) the first Monday in September, (5) the fourth Thursday in November, (6) December 25, (7) the day before if January 1, July 4 or December 25 falls on a Saturday and (8) the day following if January 1, July 4 or December 25 falls on a Sunday.

All laborers, workers, mechanics and truck drivers shall be paid unconditionally not less often than once a week. Persons who own and operate their own trucks must receive the prevailing truck driver rate for the applicable type of truck (i.e. 2 axle, 3 or more axle, articulated, eculid or dumptor) he or she operates, plus an agreed upon amount for the use of his or her truck. Every owner-operator MUST be paid separately for their driving and for the use of their truck.

For those projects subject to the requirements of the Davis-Bacon Act, the Secretary of Labor will also have determined "Minimum Wage Rates" for work to be performed under the contract. These rates are, for all or most of the labor, worker, mechanic or truck driver classifications, identical to those established under Section 103.50 of the Wisconsin Statutes. In the event the rates are not identical, the higher of the two rates will govern.

II. PAYROLL REQUIREMENTS

All contractors and subcontractors must submit weekly Certified Payrolls and Compliance Statement verifying that all laborers, workers, mechanics and truck drivers working on the project have been paid the prevailing wage rates for all work performed under the contract required by Section 103.50 of the Wisconsin Statutes.

III. POSTINGS AT THE SITE OF THE WORK

In addition to the required postings furnished by the Department, the contractor shall post the following in at least one conspicuous place at the site of work:

a. "NOTICE TO EMPLOYEES," which provides information required to be posted by the provisions of Section 103.50 of the Wisconsin Statutes.

b. A copy of the State of Wisconsin Minimum Wages Rates. (Four pages.)

c. A copy of the contractor's Equal Employment Opportunity Policy.

d. On any project involving federal aid, in addition to the furnished postings, the contractor shall post a copy of the "Davis-Bacon Act, Minimum Wage Rates". (Three pages.)

IV. WAGE RATE REDISTRIBUTION

The amount specified as the hourly basic rate of pay and the amount(s) specified as the fringe benefit contribution(s), for all classes of laborers, workers, mechanics or truck drivers may be redistributed, when necessary, to conform to those specified in any applicable collective bargaining agreement, provided that both parties to such agreement

request and receive the approval for any such redistribution from both the Department of Transportation and the Department of Workforce Development prior to the implementation of such redistribution.

V. ADDITIONAL CLASSIFICATIONS

Any unlisted laborer or mechanic classification that is needed to perform work on this project, and is not included within the scope of any of the classifications listed in the application prevailing wage rate determination, may be added after award only if all of the following criteria have been met:

1. The affected employer(s) must make a written request to WisDOT Central Office to utilize the unlisted classification on this project.

2. The request must indicate the scope of the work to be performed by the unlisted classification and must indicate the proposed wage/fringe benefit package that the unlisted classification is to receive.

3. The work to be performed by the unlisted classification must not be performed by a classification that is included in the applicable prevailing wage rate determination.

4. The unlisted classification must be commonly employed in the area where the project is located.

5. The proposed wage/fringe benefit package must bear a reasonable relationship to those set forth in the applicable prevailing wage rate determination.

6. The request should be made prior to the actual performance of the work by the unlisted classification.

7. DWD must approve the use of the unlisted classification and the proposed wage/fringe benefit package. USDOL also must approve the use of the unlisted classification and the proposed wage/fringe benefit package on federal aid projects.

8. WisDOT and DWD may amend the proposed wage/fringe benefit package, as deemed necessary, and may set forth specific employment ratios and scope of work requirements in the approval document.

The approved wage/fringe benefit package shall be paid to all laborers, workers, mechanics or truck drivers performing work within the scope of that performed by the unlisted classification, from the first day on which such work is performed. In the event that work is performed by the unlisted classification prior to approval, the wage/fringe benefit package to be paid for such work must be in conformance with the wage/fringe

benefit package approved for such work. Under this arrangement a retroactive adjustment in wages and/or fringe benefits may be required to be made to the affected laborers, workers, mechanics or truck drivers by the affected employer(s).

ANNUAL PREVAILING WAGE RATE DETERMINATION
FOR ALL STATE HIGHWAY PROJECTS
BROWN COUNTY

Compiled by the State of Wisconsin - Department of Workforce Development
for the Department of Transportation
Pursuant to s. 103.50, Stats.
Issued on May 1, 2013

CLASSIFICATION: Contractors are required to call the Department of Workforce Development if there are any questions reqarding the proper trade or classification to be used for any worker on a public works project.

OVERTIME: Time and one-half must be paid for all hours worked over 10 hours per day and 40 hours per calendar week and for all hours worked on Saturday, Sunday and the following six (6) holidays: January 1; the last Monday in May; July 4; the 1st Monday in September; the 4th Thursday in November; December 25; the day before if January 1, July 4 or December 25 falls on a Saturday; the day following if January 1, July 4 or December 25 falls on a Sunday.

FUTURE INCREASE: If indicated for a specific trade or occupation, the full amount of such increase MUST be added to the "TOTAL" indicated for such trade or occupation on the date(s) such increase(s) becomes effective.

PREMIUM PAY: If indicated for a specific trade or occupation, the full amount of such pay MUST be added to the "HOURLY BASIC RATE OF PAY" indicated for such trade or occupation, whenever such pay is applicable.

SUBJOURNEY: Wage rates may be available for some of the classifications indicated below. Any employer that desires to use any subjourney classification on a project MUST request the applicable wage rate from the Department of Workforce Development PRIOR to the date such classification is used on such project. Form ERD-10880 is available for this purpose and can be obtained by writing to the Department of Workforce Development, Equal Rights Division, P.O. Box 8928, Madison, WI 53708.

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
	$	$	$
Bricklayer, Blocklayer or Stonemason	35.58	19.20	54.78
Carpenter	30.16	15.31	45.47
Cement Finisher	31.52	16.60	48.12
Future Increase(s): Add $1.87 on 6/1/13; Add $1.87 on 6/1/14; Add $1.87 on 6/1/15;Add $1.75 on 6/1/16. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.40/hr when the Wisconsin Department of Transportation or responsible governing agency requires that work be performed at night under artificial illumination with traffic control and the work is completed after sunset and before sunrise.			
Electrician	28.01	16.49	44.50
Fence Erector	28.00	4.50	32.50
Ironworker	28.03	21.97	50.00
Line Constructor (Electrical)	31.29	15.34	46.63
Painter	23.62	9.07	32.69
Pavement Marking Operator	24.10	16.85	40.95
Piledriver	30.66	15.31	45.97
Roofer or Waterproofer	20.93	5.48	26.41
Teledata Technician or Installer	21.26	11.75	33.01
Tuckpointer, Caulker or Cleaner	23.41	14.51	37.92
Underwater Diver (Except on Great Lakes)	37.45	19.45	56.90
Heavy Equipment Operator - ELECTRICAL LINE CONSTRUCTION ONLY	33.35	14.21	47.56
Light Equipment Operator -ELECTRICAL LINE CONSTRUCTION ONLY	35.50	15.09	50.59
Heavy Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	25.94	13.57	39.51
Light Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	24.08	12.96	37.04
Groundman - ELECTRICAL LINE CONSTRUCTION ONLY	21.75	11.90	33.65

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
	$	$	$
TRUCK DRIVERS			
Single Axle or Two Axle	33.22	18.90	52.12
Three or More Axle	23.31	17.13	40.44
Future Increase(s): Add $1.85/hr on 6/1/2013. Premium Pay: DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.			
Articulated, Euclid, Dumptor, Off Road Material Hauler	27.77	19.90	47.67
Future Increase(s): Add $2/hr on 6/1/13; Add $1.75/hr on 6/1/14. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr night work premium. See DOT's website for details about the applicability of this night work premium at: http://roadwaystandards.dot.wi.gov/hcci/labor- wages- eeo/ index. shtm.			
Pavement Marking Vehicle	23.99	14.70	38.69
Shadow or Pilot Vehicle	33.22	18.90	52.12
Truck Mechanic	22.50	16.19	38.69
LABORERS			
General Laborer	28.07	13.90	41.97
Future Increase(s): Add $1.70/hr on 6/1/2013; Add $1.60/hr on 6/1/2014. Premium Pay: Add $.10/hr for topman, air tool operator, vibrator or tamper operator (mechanical hand operated), chain saw operator and demolition burning torch laborer; Add $.15/hr for bituminous worker (raker and luteman), formsetter (curb, sidewalk and pavement) and strike off man; Add $.20/hr for blaster and powderman; Add $.25/hr for bottomman; Add $.35/hr for line and grade specialist; Add $.45/hr for pipelayer. DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr for work on projects involving temporary traffic control setup, for lane and shoulder closures, when work under artificial illumination conditions is necessary as required by the project provisions (including prep time prior to and/or cleanup after such time period).			
Asbestos Abatement Worker	30.06	0.00	30.06
Landscaper	28.07	13.90	41.97
Future Increase(s): Add $1.70/hr on 6/1/13; Add $1.60/hr on 6/1/14. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr for work on projects involving temporary traffic control setup, for lane and shoulder closures, when work under artificial illumination conditions is necessary as required by the project provisions (including prep time prior to and/or cleanup after such time period).			
Flagperson or Traffic Control Person	24.70	13.90	38.60
Future Increase(s): Add $1.70/hr on 6/1/2013; Add $1.60/hr on 6/1/2014. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year’s Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr when the Wisconsin Department of Transportation or responsible governing agency requires that work be performed at night under artificial illumination with traffic control and the work is completed after sunset and before sunrise.			
Fiber Optic Laborer (Outside, Other Than Concrete Encased)	17.81	12.22	30.03
Railroad Track Laborer	23.41	15.14	38.55

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY $	HOURLY FRINGE BENEFITS $	TOTAL $
HEAVY EQUIPMENT OPERATORS			
Crane, Tower Crane, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 176 Ft or Over; Crane, Tower Crane, Pedestal Tower or Derrick, With or Without Attachments, With a Lifting Capacity of Over 100 Tons, Self-Erecting Tower Crane With a Lifting Capacity Of Over 4,000 Lbs., Crane With Boom Dollies; Traveling Crane (Bridge Type). Future Increase(s): Add $2/hr on 6/1/13; Add $1.75/hr on 6/1/14. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr night work premium. See DOT's website for details about the applicability of this night work premium at: http://roadwaystandards.dot.wi.gov/hcci/labor- wages- eeo/ index. shtm.	35.22	19.90	55.12
Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of 130,000 Lbs. or Over; Caisson Rig; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 175 Ft or Under; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With or Without Attachments, With a Lifting Capacity of 100 Tons or Under, Self-Erecting Tower Crane With A Lifting Capacity Of 4,000 Lbs., & Under; Dredge (NOT Performing Work on the Great Lakes); Licensed Boat Pilot (NOT Performing Work on the Great Lakes); Pile Driver. Future Increase(s): Add $2/hr on 6/1/13; Add $1.75/hr on 6/1/14. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr night work premium. See DOT's website for details about the applicability of this night work premium at: http://roadwaystandards.dot.wi.gov/hcci/labor- wages- eeo/ index. shtm.	34.72	19.90	54.62
Air Track, Rotary or Percussion Drilling Machine &/or Hammers, Blaster; Asphalt Heater, Planer & Scarifier; Asphalt Milling Machine; Asphalt Screed; Automatic Subgrader (Concrete); Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of Under 130,000 Lbs., Backhoe (Mini, 15,000 Lbs. & Under); Bituminous (Asphalt) Plant & Paver, Screed; Boatmen (NOT Performing Work on the Great Lakes); Boring Machine (Directional, Horizontal or Vertical); Bridge (Bidwell) Paver; Bulldozer or Endloader; Concrete Batch Plant, Batch Hopper; Concrete Breaker (Large, Auto, VIbratory/Sonic, Manual or Remote); Concrete Bump Cutter, Grinder, Planing or Grooving Machine; Concrete Conveyor System; Concrete Laser/Screed; Concrete Paver (Slipform); Concrete Pump, Concrete Conveyor (Rotec or Bidwell Type); Concrete Slipform Placer Curb & Gutter Machine; Concrete Spreader & Distributor; Crane (Carry Deck, Mini) or Truck Mounted Hydraulic Crane (10 Tons or Under); Crane WIth a Lifting Capacity of 25 Tons or Under; Forestry Equipment, Timbco, Tree Shear, Tub Grinder, Processor; Gradall (Cruz-Aire Type); Grader or Motor Patrol; Grout Pump; Hydro-Blaster (10,000 PSI or Over); Loading Machine (Conveyor); Material or Stack Hoist; Mechanic or Welder; Milling Machine; Post Hole Digger or Driver; Roller (Over 5 Ton); Scraper (Self Propelled or Tractor Drawn) 5 cu yds or More Capacity; Shoulder Widener; Sideboom; Skid Rig; Stabilizing or Concrete Mixer (Self-Propelled or 14S or Over); Straddle Carrier or Travel Lift; Tractor (Scraper, Dozer, Pusher, Loader); Tractor or Truck Mounted Hydraulic Backhoe; Trencher (Wheel Type or Chain Type); Tube Finisher; Tugger (NOT Performing Work on the Great Lakes); Winches & A- Frames. Future Increase(s): Add $2/hr on 6/1/13; Add $1.75/hr on 6/1/14.	34.22	19.90	54.12

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
	$	$	$
Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr night work premium. See DOT's website for details about the applicability of this night work premium at: http://roadwaystandards.dot.wi.gov/hcci/labor- wages- eeo/ index. shtm.			
Belting, Burlap, Texturing Machine; Broom or Sweeper; Compactor (Self-Propelled or Tractor Mounted, Towed & Light Equipment); Concrete Finishing Machine (Road Type); Environmental Burner; Farm or Industrial Type Tractor; Fireman (Asphalt Plant, Pile Driver & Derrick NOT Performing Work on the Great Lakes); Forklift; Greaser; Hoist (Tugger, Automatic); Jeep Digger; Joint Sawer (Multiple Blade); Launch (NOT Performing Work on the Great Lakes); Lift Slab Machine; Mechanical Float; Mulcher; Power Subgrader; Robotic Tool Carrier (With or Without Attachments); Roller (Rubber Tire, 5 Ton or Under); Self Propelled Chip Spreader; Shouldering Machine; Skid Steer Loader (With or WIthout Attachments); Telehandler; Tining or Curing Machine.	33.96	19.90	53.86
Future Increase(s): Add $2/hr on 6/1/13; Add $1.75/hr on 6/1/14.			
Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr night work premium. See DOT's website for details about the applicability of this night work premium at: http://roadwaystandards.dot.wi.gov/hcci/labor- wages- eeo/ index. shtm.			
Air Compressor (&/or 400 CFM or Over); Air, Electric or Hydraulic Jacking System; Augers (Vertical & Horizontal); Automatic Belt Conveyor & Surge Bin; Boiler (Temporary Heat); Concrete Proportioning Plant; Crusher, Screening or Wash Plant; Generator (&/or 150 KW or Over); Heaters (Mechanical); High Pressure Utility Locating Machine (Daylighting Machine); Mudjack; Oiler; Prestress Machine; Pug Mill; Pump (3 Inch or Over) or Well Points; Rock, Stone Breaker; Screed (Milling Machine); Stump Chipper; Tank Car Heaters; Vibratory Hammer or Extractor, Power Pack.	33.67	19.90	53.57
Future Increase(s): Add $2/hr on 6/1/13; Add $1.75/hr on 6/1/14.			
Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr night work premium. See DOT's website for details about the applicability of this night work premium at: http://roadwaystandards.dot.wi.gov/hcci/labor- wages- eeo/ index. shtm.			
Fiber Optic Cable Equipment.	25.74	15.85	41.59
Work Performed on the Great Lakes Including Diver; Wet Tender or Hydraulic Dredge Engineer.	37.45	19.45	56.90
Work Performed on the Great Lakes Including 70 Ton & Over Tug Operator; Assistant Hydraulic Dredge Engineer; Crane or Backhoe Operator; Hydraulic Dredge Leverman or Diver's Tender; Mechanic or Welder.	37.45	19.45	56.90
Work Performed on the Great Lakes Including Deck Equipment Operator or Machineryman (Maintains Cranes Over 50 Tons or Backhoes 115,000 Lbs. or More); Tug, Launch or Loader, Dozer or Like Equipment When Operated on a Barge, Breakwater Wall, Slip, Dock or Scow, Deck Machinery.	27.75	19.15	46.90
Work Performed on the Great Lakes Including Deck Equipment Operator, Machineryman or Fireman (Operates 4 Units or More or Maintains Cranes 50 Tons or Under or Backhoes 115,000 Lbs. or Under); Deck Hand, Deck Engineer or Assistant Tug Operator; Off Road Trucks-Great Lakes ONLY.	27.75	19.15	46.90

SUPERSEDES DECISION WI20070010
U. S. DEPARTMENT OF LABOR
(DAVIS-BACON ACT, MINIMUM WAGE RATES)

STATE: Wisconsin
DECISION NUMBER: W1080010
DATE: February 1, 2013
DESCRIPTION OF WORK: Highways and Airport Runway and Taxiway Construction

LABORERS CLASSIFICATION:	Basic Hourly Rates	Fringe Benefits
Group 1: General Laborer; Tree Trimmer; Conduit Layer; Demolition and Wrecking Laborer; Guard Rail, Fence and Bridge Builder; Landscaper, Multiplate Culvert Assembler; Stone Handler; Bituminous Worker (Shoveler, Loader, Utility Man); Batch Truck Dumper; or Cement Handler; Bituminous Worker; (Dumper, Ironer, Smoother, Tamper); Concrete Handler	$26.92	13.45
Group 2: Air Tool Operator; Joint Sawer and Filler (Pavement); Vibrator or Tamper Operator (Mechanical Hand Operated);	27.02	13.45
Group 3: Bituminous Worker (Raker and Luteman); Formsetter (Curb, Sidewalk, and Pavement); Strike Off man	27.07	13.45
Group 4: Line and Grade Specialist	27.27	13.45
Group 5: Blaster and Powderman	27.12	13.45
Group 6: Flagperson; Traffic Control	23.55	13.45

CLASSES OF LABORER AND MECHANICS

Bricklayer	30.77	16.62
Carpenter	30.48	15.80
Millwright	32.11	15.80
Piledriverman	30.98	15.80
Ironworker	28.23	22.72
Cement Mason/Concrete Finisher	31.52	16.30
Electrician		See Page 3
Line Construction		
Lineman	38.25	18.00
Heavy Equipment Operator	34.43	16.71
Equipment Operator	30.60	15.41
Heavy Groundman Driver	26.78	14.11
Light Groundman Driver	24.86	13.45
Groundsman	21.04	12.16
Painters	23.37	11.52
Well Drilling:		
Well Driller	16.52	3.70

Truck Drivers:	Basic Hourly Rates	Fringe Benefits
1 & 2 Axles	23.16	17.13
Three or More Axles; Euclids, Dumptor & Articulated, Truck Mechanic	23.31	17.13

Notes: Welders receive rate prescribed for craft performing operation to which welding is incidental. Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29 CFR, 5.5(a)(1)(ii)). Includes Modification #0, dated January 4, 2013; Modification #1 dated February 1, 2013.

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: February 1, 2013

POWER EQUIPMENT OPERATORS CLASSIFICATION:	Basic Hourly Rates	Fringe Benefits
Group 1: Cranes, tower cranes and derricks, with or without attachments, with a lifting capacity of over 100 tons or cranes, tower cranes and derricks with boom, leads and/or jib lengths measuring 176 feet or longer	$35.22	$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 3: Mechanic or welder - heavy duty equipment, cranes with a lifting capacity of 25 tons or less, concrete breaker (manual or remote); vibrator/sonic concrete breaker; concrete laser screed; concrete slipform paver; concrete batch plant operator; concrete pavement spreader - heavy duty (rubber tired); concrete spreader and distributor, automatic subgrader (concrete); concrete grinder and planing machine; concrete slipform curb and gutter machine; slipform concrete placer; tube finisher; hydro blaster (10,000 psi and over); bridge paver; concrete conveyor system; concrete pump; stabilizing mixer (self propelled); shoulder widener; asphalt plant engineer; bituminous paver; bump cutter and grooving machine; milling machine; screed (bituminous paver); asphalt heater, planer and scarifier; backhoes (excavators) having a manufacturers rated capacity of under 3 cu. yds.; grader or motor patrol; tractor (scraper, dozer, pusher, loader); scraper - rubber tired (single or twin engine); endloader hydraulic backhoe (tractor-type); trenching machine; skid rigs; tractor, side boom (heavy); drilling or boring machine (mechanical heavy); roller (over 5 tons); percussion or rotary drilling machine; air track; blaster; loading machine (conveyor); tugger; boatmen; winches and A-frames; post driver; material hoist operator.	$34.22	$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 5: Air compressor; power pack; vibratory hammer and extractor; heavy equipment, leadman; tank car heaters; stump chipper; curb machine operator; concrete pro-portioning plants generators; mudjack operator; rock breaker; crusher or screening plant; screed (milling machine); automatic belt conveyor and surge bin; pug mill operator; oiler; pump (over 3 inches); drilling machine helper.	$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: February 1, 2013

LABORERS CLASSIFICATION:	Rates	Benefits
Electricians		
Area 1	$27.80	16.52
Area 2:		
Electricians	29.13	17.92
Area 3:		
Electrical contracts under $130,000	26.24	16.85
Electrical contracts over $130,000	29.41	16.97
Area 4:	28.10	17.24
Area 5	28.61	16.60
Area 6	35.25	19.30
Area 8		
Electricians	30.00	17.76
Area 9:		
Electricians	32.94	18.71
Area 10	28.97	19.55
Area 11	31.27	23.12
Area 12	32.87	19.23
Area 13	32.20	21.64
Teledata System Installer		
Area 14		
Installer/Technician	21.89	11.83
Sound & Communications		
Area 15		
Installer	16.47	14.84
Technician	24.75	16.04

Area 1 - CALUMET (except township of New Holstein), GREEN LAKE (N. part, including Townships of Berlin, St. Marie and Seneca), MARQUETTE (N. part, including Townships of Crystal Lake, Neshkoro, Newton & Springfield), OUTAGAMIE, WAUPACA, WAUSHARA and WINNEBAGO COUNTIES.

Area 2 - ASHLAND, BARRON, BAYFIELD, BUFFALO, BURNETT, CHIPPEWA, CLARK (except Mayville, Colby, Unity, Sherman, Fremont, Lynn and Sherwood), CRAWFORD, DUNN, EAU CLAIRE, GRANT, IRON, JACKSON, LA CROSSE, MONROE, PEPIN, PIERCE, POLK, PRICE, RICHLAND, RUSK, ST. CROIX, SAWYER, TAYLOR, TREMPEALEAU, VERNON and WASHBURN COUNTIES

Area 3 - FLORENCE (townships of Aurora, Commonwealth, Fern, Florence and Homestead), MARINETTE (Niagara township)

Area 4 - BROWN, DOOR, KEWAUNEE, MANITOWOC (except Schleswig), MARINETTE (Wausauke and area south thereof), OCONTO, MENOMINEE (East of a line 6 miles West of the West boundary of Oconto County), SHAWANO (except area North of Townships of Aniwa and Hutchins) COUNTIES.

Area 5 - ADAMS, CLARK (Colby, Freemont, Lynn, Mayville, Sherman, Sherwood, Unity), FOREST, JUNEAU, LANGLADE, LINCOLN, MARATHON, MARINETTE (Area North of the town of Wausaukee), MENOMINEE (Area West of a line 6 miles West of the West boundary of Oconto County), ONEIDA, PORTAGE, SHAWANO (Area North of the townships of Aniwa and Hutchins), VILAS AND WOOD COUNTIES

Area 6 - KENOSHA COUNTY

Area 8 - DODGE, (Emmet Township only), GREEN, JEFFERSON, LAFAYETTE, RACINE (Burlington township), ROCK and WALWORTH COUNTIES

Area 9 - COLUMBIA, DANE, DODGE, (area west of Hwy. 26, except Chester & Emmet Townships), GREEN LAKE (except townships of Berlin, Seneca and St. Marie), IOWA, MARQUETTE (except townships of Neshkoka, Crystal Lake, Newton and Springfield), and SAUK COUNTIES

Area 10 - CALUMET (Township of New Holstein), DODGE (East of Hwy. 26 including Chester Township), FOND DU LAC, MANITOWOC (Schleswig), and SHEBOYGAN COUNTIES

Area 11 - DOUGLAS COUNTY

Area 12 - RACINE (except Burlington township) COUNTY

Area 13 - MILWAUKEE, OZAUKEE, WASHINGTON and WAUKESHA COUNTIES

Area 14 - Statewide.

Area 15 - DODGE (East of Hwy 26 including Chester Twp, excluding Emmet Twp), FOND DU LAC (Except Waupun), MILWAUKEE, OZAUKEE, MANITOWOC (Schleswig), WASHINGTON, AND WAUKESHA COUNTIES.

FEBRUARY 1999

NOTICE TO BIDDERS
WAGE RATE DECISION

The wage rate decision of the Secretary of Labor which has been incorporated in these advertised specifications is incomplete in that the classifications may be omitted from the Secretary of Labor's decision.

Since the bidder is responsible, independently, for ascertaining area practice with respect to the necessity, or lack of necessity, for the use of these classifications in the prosecution of the work contemplated by this project, no inference may be drawn from the omision of these classifications concerning prevailing area practices relative to their use. Further, this omission will not, per se, be construed as establishing any governmental liability for increased labor cost if it is subsequently determined that such classifications are required.

There may be omissions and/or errors in the federal wage rates. The bidder is responsible for evaluating and determining the correct applicable rate. The higher of state or federal rate will apply.

CONTRACT: 20130514039 PROJECT(S): 9200-04-71 FEDERAL ID(S): WISC 2013281

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
	SECTION 0001 CONTRACT ITEMS					
0010	108.4300 RBC PROGRESS SCHEDULE	2,000.000 EACH		.		.
0020	201.0105 CLEARING	144.000 STA		.		.
0030	201.0120 CLEARING	124.000 ID		.		.
0040	201.0205 GRUBBING	144.000 STA		.		.
0050	201.0220 GRUBBING	124.000 ID		.		.
0060	203.0100 REMOVING SMALL PIPE CULVERTS	35.000 EACH		.		.
0070	204.0100 REMOVING PAVEMENT	29,880.000 SY		.		.
0080	204.0150 REMOVING CURB & GUTTER	3,870.000 LF		.		.
0090	204.0170 REMOVING FENCE	2,010.000 LF		.		.
0100	204.0195 REMOVING CONCRETE BASES	2.000 EACH		.		.

CONTRACT: 20130514039 PROJECT(S): 9200-04-71 FEDERAL ID(S): WISC 2013281

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0110	204.0210 REMOVING MANHOLES	4.000 EACH		.		.
0120	204.0220 REMOVING INLETS	4.000 EACH		.		.
0130	204.0245 REMOVING STORM SEWER (SIZE) 01. 12-INCH	355.000 LF		.		.
0140	204.0245 REMOVING STORM SEWER (SIZE) 02. 15-INCH	54.000 LF		.		.
0150	204.0245 REMOVING STORM SEWER (SIZE) 03. 18-INCH	145.000 LF		.		.
0160	204.9060.S REMOVING (ITEM DESCRIPTION) 01. APRON ENDWALLS	4.000 EACH		.		.
0170	204.9060.S REMOVING (ITEM DESCRIPTION) 02. REMOVING LANDSCAPING MASONRY AND LIGHTING	2.000 EACH		.		.
0180	204.9090.S REMOVING (ITEM DESCRIPTION) 01. MODULAR WALL	390.000 LF		.		.
0190	204.9105.S REMOVING (ITEM DESCRIPTION) 01. FOOTBRIDGE	LUMP	LUMP			.
0200	205.0100 EXCAVATION COMMON	173,295.000 CY		.		.
0210	205.0400 EXCAVATION MARSH	1,300.000 CY		.		.

CONTRACT: 20130514039 PROJECT(S): 9200-04-71 FEDERAL ID(S): WISC 2013281

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0220	206.1000 EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 01. B-05-402	LUMP	LUMP			.
0230	206.2000 EXCAVATION FOR STRUCTURES CULVERTS (STRUCTURE) 01. B-05-29	LUMP	LUMP			.
0240	206.2000 EXCAVATION FOR STRUCTURES CULVERTS (STRUCTURE) 01. B-05-403	LUMP	LUMP			.
0250	206.6000.S TEMPORARY SHORING	250.000 SF		.		.
0260	208.0100 BORROW	497,650.000 CY		.		.
0270	208.1100 SELECT BORROW	1,300.000 CY		.		.
0280	210.0100 BACKFILL STRUCTURE	1,235.000 CY		.		.
0290	211.0200 PREPARE FOUNDATION FOR CONCRETE PAVEMENT (PROJECT) 01. 9200-04-71	LUMP	LUMP			.
0300	213.0100 FINISHING ROADWAY (PROJECT) 01. 9200-04-71	1.000 EACH		.		.
0310	214.0100 OBLITERATING OLD ROAD	20.000 STA		.		.

CONTRACT: 20130514039 PROJECT(S): 9200-04-71 FEDERAL ID(S): WISC 2013281

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0320	305.0110 BASE AGGREGATE DENSE 3/4-INCH	29,000.000 TON		.		.
0330	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH	101,660.000 TON		.		.
0340	311.0110 BREAKER RUN	22,526.000 TON		.		.
0350	405.0100 COLORING CONCRETE RED	540.000 CY		.		.
0360	415.0060 CONCRETE PAVEMENT 6-INCH	235.000 SY		.		.
0370	415.0085 CONCRETE PAVEMENT 8 1/2-INCH	30,680.000 SY		.		.
0380	415.0410 CONCRETE PAVEMENT APPROACH SLAB	128.000 SY		.		.
0390	416.0160 CONCRETE DRIVEWAY 6-INCH	2,180.000 SY		.		.
0400	416.0512 CONCRETE ROUNDABOUT TRUCK APRON 12-INCH	1,580.000 SY		.		.
0410	416.0610 DRILLED TIE BARS	3,093.000 EACH		.		.
0420	416.0620 DRILLED DOWEL BARS	33.000 EACH		.		.

CONTRACT: 20130514039 PROJECT(S): 9200-04-71 FEDERAL ID(S): WISC 2013281

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS		UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0430	416.1110 CONCRETE RUMBLE STRIPS SHOULDER	3,750.000	LF	.		.	
0440	440.4410.S INCENTIVE IRI RIDE	15,269.000	DOL	1.00000		15269.00	
0450	455.0115 ASPHALTIC MATERIAL PG64-22	659.000	TON	.		.	
0460	455.0120 ASPHALTIC MATERIAL PG64-28	467.000	TON	.		.	
0470	455.0605 TACK COAT	1,660.000	GAL	.		.	
0480	460.1100 HMA PAVEMENT TYPE E-0.3	2,430.000	TON	.		.	
0490	460.1101 HMA PAVEMENT TYPE E-1	6,445.000	TON	.		.	
0500	460.1103 HMA PAVEMENT TYPE E-3	8,000.000	TON	.		.	
0510	460.1110 HMA PAVEMENT TYPE E-10	1,770.000	TON	.		.	
0520	460.2000 INCENTIVE DENSITY HMA PAVEMENT	12,700.000	DOL	1.00000		12700.00	
0530	460.4110.S REHEATING HMA LONGITUDINAL JOINTS	13,030.000	LF	.		.	

CONTRACT: 20130514039 PROJECT(S): 9200-04-71 FEDERAL ID(S): WISC 2013281

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0540	465.0120 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES	190.000 TON		.		.
0550	465.0125 ASPHALTIC SURFACE TEMPORARY	1,410.000 TON		.		.
0560	465.0315 ASPHALTIC FLUMES	210.000 SY		.		.
0570	465.0400 ASPHALTIC SHOULDER RUMBLE STRIP	10,430.000 LF		.		.
0580	502.0100 CONCRETE MASONRY BRIDGES	1,331.000 CY		.		.
0590	502.3200 PROTECTIVE SURFACE TREATMENT	3,537.000 SY		.		.
0600	502.5002 MASONRY ANCHORS TYPE L NO. 4 BARS	164.000 EACH		.		.
0610	503.0155 PRESTRESSED GIRDER TYPE I 54W-INCH	2,638.000 LF		.		.
0620	504.0100 CONCRETE MASONRY CULVERTS	642.000 CY		.		.
0630	504.0500 CONCRETE MASONRY RETAINING WALLS	563.000 CY		.		.
0640	505.0405 BAR STEEL REINFORCEMENT HS BRIDGES	17,145.000 LB		.		.

CONTRACT: 20130514039 PROJECT(S): 9200-04-71 FEDERAL ID(S): WISC 2013281

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0650	505.0410 BAR STEEL REINFORCEMENT HS CULVERTS	76,780.000 LB		.		.
0660	505.0605 BAR STEEL REINFORCEMENT HS COATED BRIDGES	205,505.000 LB		.		.
0670	505.0610 BAR STEEL REINFORCEMENT HS COATED CULVERTS	28,820.000 LB		.		.
0680	505.0615 BAR STEEL REINFORCEMENT HS COATED RETAINING WALLS	20,200.000 LB		.		.
0690	506.2605 BEARING PADS ELASTOMERIC NON-LAMINATED	44.000 EACH		.		.
0700	506.4000 STEEL DIAPHRAGMS (STRUCTURE) 01. B-05-402	40.000 EACH		.		.
0710	513.2000 RAILING PIPE (STRUCTURE) 01. R-05-107	LUMP	LUMP			.
0720	516.0500 RUBBERIZED MEMBRANE WATERPROOFING	234.000 SY		.		.
0730	516.0610.S SHEET MEMBRANE WATERPROOFING FOR TOP SLAB (STRUCTURE) 02. B-05-403	140.000 SY		.		.
0740	517.1010.S CONCRETE STAINING (STRUCTURE) 01. B-05-402	7,260.000 SF		.		.

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CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0750	517.1010.S CONCRETE STAINING (STRUCTURE) 02. R-05-107	575.000 SF		.		.
0760	517.1015.S CONCRETE STAINING MULTI-COLOR (STRUCTURE) 01. B-05-402	4,990.000 SF		.		.
0770	517.1015.S CONCRETE STAINING MULTI-COLOR (STRUCTURE) 02. R-05-107	1,620.000 SF		.		.
0780	517.1050.S ARCHITECTURAL SURFACE TREATMENT (STRUCTURE) 01. B-05-402	4,990.000 SF		.		.
0790	517.1050.S ARCHITECTURAL SURFACE TREATMENT (STRUCTURE) 04. R-05-107	1,620.000 SF		.		.
0800	517.1050.S ARCHITECTURAL SURFACE TREATMENT (STRUCTURE) 05. R-05-108	1,090.000 SF		.		.
0810	517.1050.S ARCHITECTURAL SURFACE TREATMENT (STRUCTURE) 06. R-05-109	975.000 SF		.		.
0820	520.8000 CONCRETE COLLARS FOR PIPE	3.000 EACH		.		.
0830	521.0115 CULVERT PIPE CORRUGATED STEEL 15-INCH	502.000 LF		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS		UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0840	521.0118 CULVERT PIPE CORRUGATED STEEL 18-INCH	201.000	LF		.		.
0850	521.0124 CULVERT PIPE CORRUGATED STEEL 24-INCH	239.000	LF		.		.
0860	521.0130 CULVERT PIPE CORRUGATED STEEL 30-INCH	182.000	LF		.		.
0870	521.0148 CULVERT PIPE CORRUGATED STEEL 48-INCH	19.000	LF		.		.
0880	521.1015 APRON ENDWALLS FOR CULVERT PIPE STEEL 15-INCH	20.000	EACH		.		.
0890	521.1018 APRON ENDWALLS FOR CULVERT PIPE STEEL 18-INCH	10.000	EACH		.		.
0900	521.1024 APRON ENDWALLS FOR CULVERT PIPE STEEL 24-INCH	10.000	EACH		.		.
0910	521.1030 APRON ENDWALLS FOR CULVERT PIPE STEEL 30-INCH	1.000	EACH		.		.
0920	521.1048 APRON ENDWALLS FOR CULVERT PIPE STEEL 48-INCH	2.000	EACH		.		.
0930	522.0118 CULVERT PIPE REINFORCED CONCRETE CLASS III 18-INCH	125.000	LF		.		.
0940	522.0121 CULVERT PIPE REINFORCED CONCRETE CLASS III 21-INCH	200.000	LF		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0950	522.0124 CULVERT PIPE REINFORCED CONCRETE CLASS III 24-INCH	138.000 LF		.		.
0960	522.0130 CULVERT PIPE REINFORCED CONCRETE CLASS III 30-INCH	344.000 LF		.		.
0970	522.0148 CULVERT PIPE REINFORCED CONCRETE CLASS III 48-INCH	120.000 LF		.		.
0980	522.1015 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 15-INCH	2.000 EACH		.		.
0990	522.1018 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 18-INCH	8.000 EACH		.		.
1000	522.1021 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 21-INCH	1.000 EACH		.		.
1010	522.1024 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH	14.000 EACH		.		.
1020	522.1030 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 30-INCH	8.000 EACH		.		.
1030	522.1048 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 48-INCH	2.000 EACH		.		.

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CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1040	523.0124 CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 24X38-INCH	147.000 LF		.		.
1050	523.0138 CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 38X60-INCH	120.000 LF		.		.
1060	523.0524 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL 24X38-INCH	2.000 EACH		.		.
1070	523.0538 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL 38X60-INCH	2.000 EACH		.		.
1080	532.0200.S WALL MODULAR BLOCK GRAVITY	630.000 SF		.		.
1090	550.1120 PILING STEEL HP 12-INCH X 53 LB	8,467.000 LF		.		.
1100	601.0405 CONCRETE CURB & GUTTER 18-INCH TYPE A	995.000 LF		.		.
1110	601.0409 CONCRETE CURB & GUTTER 30-INCH TYPE A	2,090.000 LF		.		.
1120	601.0411 CONCRETE CURB & GUTTER 30-INCH TYPE D	14,665.000 LF		.		.

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CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1130	601.0555 CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE A	2,395.000 LF		.		.
1140	601.0557 CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE D	7,720.000 LF		.		.
1150	601.0580 CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE R	670.000 LF		.		.
1160	601.0582 CONCRETE CURB & GUTTER 4-INCH SLOPED 36-INCH TYPE T	2,880.000 LF		.		.
1170	601.0600 CONCRETE CURB PEDESTRIAN	835.000 LF		.		.
1180	602.0405 CONCRETE SIDEWALK 4-INCH	87,270.000 SF		.		.
1190	602.0505 CURB RAMP DETECTABLE WARNING FIELD YELLOW	975.000 SF		.		.
1200	603.8000 CONCRETE BARRIER TEMPORARY PRECAST DELIVERED	3,910.000 LF		.		.
1210	603.8125 CONCRETE BARRIER TEMPORARY PRECAST INSTALLED	3,910.000 LF		.		.
1220	604.0400 SLOPE PAVING CONCRETE	655.000 SY		.		.
1230	606.0200 RIPRAP MEDIUM	1,256.000 CY		.		.

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CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1240	606.0300 RIPRAP HEAVY	118.000 CY		.		.
1250	608.0312 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH	2,228.000 LF		.		.
1260	608.0315 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 15-INCH	1,386.000 LF		.		.
1270	608.0318 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 18-INCH	1,217.000 LF		.		.
1280	608.0324 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 24-INCH	5,233.000 LF		.		.
1290	608.0330 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 30-INCH	23.000 LF		.		.
1300	608.0412 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 12-INCH	21.000 LF		.		.
1310	608.0418 STORM SEWER PIPE REINFORCED CONCRETE CLASS IV 18-INCH	93.000 LF		.		.
1320	608.0530 STORM SEWER PIPE REINFORCED CONCRETE CLASS V 30-INCH	169.000 LF		.		.
1330	611.0530 MANHOLE COVERS TYPE J	20.000 EACH		.		.
1340	611.0612 INLET COVERS TYPE C	25.000 EACH		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1350	611.0627 INLET COVERS TYPE HM	43.000 EACH		.		.
1360	611.0639 INLET COVERS TYPE H-S	96.000 EACH		.		.
1370	611.0642 INLET COVERS TYPE MS	6.000 EACH		.		.
1380	611.0652 INLET COVERS TYPE T	16.000 EACH		.		.
1390	611.2004 MANHOLES 4-FT DIAMETER	45.000 EACH		.		.
1400	611.2005 MANHOLES 5-FT DIAMETER	21.000 EACH		.		.
1410	611.3230 INLETS 2X3-FT	134.000 EACH		.		.
1420	611.3901 INLETS MEDIAN 1 GRATE	4.000 EACH		.		.
1430	611.3903 INLETS MEDIAN 3 GRATE	2.000 EACH		.		.
1440	611.8115 ADJUSTING INLET COVERS	1.000 EACH		.		.
1450	611.9800.S PIPE GRATES	29.000 EACH		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1460	612.0106 PIPE UNDERDRAIN 6-INCH	315.000 LF		.		.
1470	612.0406 PIPE UNDERDRAIN WRAPPED 6-INCH	1,845.000 LF		.		.
1480	612.0806 APRON ENDWALLS FOR UNDERDRAIN REINFORCED CONCRETE 6-INCH	4.000 EACH		.		.
1490	614.0150 ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	1.000 EACH		.		.
1500	614.0905 CRASH CUSHIONS TEMPORARY	5.000 EACH		.		.
1510	614.0920 SALVAGED RAIL	1,516.000 LF		.		.
1520	614.0925 SALVAGED GUARDRAIL END TREATMENTS	4.000 EACH		.		.
1530	614.2300 MGS GUARDRAIL 3	1,551.000 LF		.		.
1540	614.2500 MGS THRIE BEAM TRANSITION	714.000 LF		.		.
1550	614.2610 MGS GUARDRAIL TERMINAL EAT	7.000 EACH		.		.
1560	614.2620 MGS GUARDRAIL TERMINAL TYPE 2	6.000 EACH		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1570	616.0700.S FENCE SAFETY	1,000.000 LF		.		.
1580	618.0100 MAINTENANCE AND REPAIR OF HAUL ROADS (PROJECT) 01. 9200-04-71	1.000 EACH		.		.
1590	619.1000 MOBILIZATION	1.000 EACH		.		.
1600	620.0100 CONCRETE CORRUGATED MEDIAN	1,030.000 SF		.		.
1610	620.0300 CONCRETE MEDIAN SLOPED NOSE	1,115.000 SF		.		.
1620	623.0200 DUST CONTROL SURFACE TREATMENT	15,300.000 SY		.		.
1630	624.0100 WATER	167.000 MGAL		.		.
1640	625.0100 TOPSOIL	129,699.000 SY		.		.
1650	625.0500 SALVAGED TOPSOIL	170,475.000 SY		.		.
1660	627.0200 MULCHING	300,458.000 SY		.		.
1670	628.1104 EROSION BALES	196.000 EACH		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1680	628.1504 SILT FENCE	42,221.000 LF		.		.
1690	628.1520 SILT FENCE MAINTENANCE	42,221.000 LF		.		.
1700	628.1905 MOBILIZATIONS EROSION CONTROL	24.000 EACH		.		.
1710	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL	14.000 EACH		.		.
1720	628.2004 EROSION MAT CLASS I TYPE B	76,652.000 SY		.		.
1730	628.2008 EROSION MAT URBAN CLASS I TYPE B	16,235.000 SY		.		.
1740	628.2027 EROSION MAT CLASS II TYPE C	102,727.000 SY		.		.
1750	628.6510 SOIL STABILIZER TYPE B	5.900 ACRE		.		.
1760	628.7005 INLET PROTECTION TYPE A	138.000 EACH		.		.
1770	628.7015 INLET PROTECTION TYPE C	110.000 EACH		.		.
1780	628.7020 INLET PROTECTION TYPE D	26.000 EACH		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1790	628.7504 TEMPORARY DITCH CHECKS	995.000 LF		.		.
1800	628.7555 CULVERT PIPE CHECKS	143.000 EACH		.		.
1810	628.7560 TRACKING PADS	7.000 EACH		.		.
1820	628.7570 ROCK BAGS	68.000 EACH		.		.
1830	629.0210 FERTILIZER TYPE B	189.000 CWT		.		.
1840	630.0110 SEEDING MIXTURE NO. 10	1,636.000 LB		.		.
1850	630.0130 SEEDING MIXTURE NO. 30	2,566.000 LB		.		.
1860	630.0140 SEEDING MIXTURE NO. 40	552.000 LB		.		.
1870	632.0101 TREES (SPECIES, ROOT, SIZE) 01. SYRINGA RETICULATA (IVORY SILK), 20-30 FT HEIGHT, #25 POT	12.000 EACH		.		.
1880	632.0201 SHRUBS (SPECIES, ROOT, SIZE) 01. POTENTILLA FRUTICOAS, 'ABBOTTSWOOD', 24-INCH HEIGHT, #2 POT	144.000 EACH		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1890	632.9101 LANDSCAPE PLANTING SURVEILLANCE AND CARE CYCLES	20.000 EACH		.		.
1900	633.0100 DELINEATOR POSTS STEEL	68.000 EACH		.		.
1910	633.0500 DELINEATOR REFLECTORS	90.000 EACH		.		.
1920	633.1000 DELINEATOR BRACKETS	7.000 EACH		.		.
1930	633.1100 DELINEATORS TEMPORARY	74.000 EACH		.		.
1940	633.5100 MARKERS ROW	27.000 EACH		.		.
1950	633.5200 MARKERS CULVERT END	25.000 EACH		.		.
1960	634.0614 POSTS WOOD 4X6-INCH X 14-FT	88.000 EACH		.		.
1970	634.0616 POSTS WOOD 4X6-INCH X 16-FT	105.000 EACH		.		.
1980	634.0618 POSTS WOOD 4X6-INCH X 18-FT	20.000 EACH		.		.
1990	635.0200 SIGN SUPPORTS STRUCTURAL STEEL HS	3,108.000 LB		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS		UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2000	636.0100 SIGN SUPPORTS CONCRETE MASONRY	12.800	CY	.		.	
2010	636.0500 SIGN SUPPORTS STEEL REINFORCEMENT	294.000	LB	.		.	
2020	636.1000 SIGN SUPPORTS STEEL REINFORCEMENT HS	980.000	LB	.		.	
2030	637.0101 SIGNS TYPE I	1,040.500	SF	.		.	
2040	637.0202 SIGNS REFLECTIVE TYPE II	2,035.280	SF	.		.	
2050	637.0402 SIGNS REFLECTIVE FOLDING TYPE II	20.000	SF	.		.	
2060	638.2602 REMOVING SIGNS TYPE II	143.000	EACH	.		.	
2070	638.3000 REMOVING SMALL SIGN SUPPORTS	113.000	EACH	.		.	
2080	641.1200 SIGN BRIDGE CANTILEVERED (STRUCTURE) 01. S-05-190	LUMP	LUMP				.
2090	642.5401 FIELD OFFICE TYPE D	1.000	EACH	.		.	
2100	643.0100 TRAFFIC CONTROL (PROJECT) 01. 9200-04-71	1.000	EACH	.		.	

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2110	643.0300 TRAFFIC CONTROL DRUMS	104,507.000 DAY		.		.
2120	643.0420 TRAFFIC CONTROL BARRICADES TYPE III	24,510.000 DAY		.		.
2130	643.0500 TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS	690.000 EACH		.		.
2140	643.0600 TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER BASES	690.000 EACH		.		.
2150	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A	38,772.000 DAY		.		.
2160	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C	12,742.000 DAY		.		.
2170	643.0800 TRAFFIC CONTROL ARROW BOARDS	1,896.000 DAY		.		.
2180	643.0900 TRAFFIC CONTROL SIGNS	43,522.000 DAY		.		.
2190	643.0910 TRAFFIC CONTROL COVERING SIGNS TYPE I	5.000 EACH		.		.
2200	643.0920 TRAFFIC CONTROL COVERING SIGNS TYPE II	50.000 EACH		.		.
2210	643.1050 TRAFFIC CONTROL SIGNS PCMS	1,896.000 DAY		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2220	645.0113 GEOTEXTILE FABRIC TYPE DF SCHEDULE C	464.000 SY		.		.
2230	645.0120 GEOTEXTILE FABRIC TYPE HR	1,396.000 SY		.		.
2240	645.0140 GEOTEXTILE FABRIC TYPE SAS	12,965.000 SY		.		.
2250	646.0103 PAVEMENT MARKING PAINT 4-INCH	460.000 LF		.		.
2260	646.0106 PAVEMENT MARKING EPOXY 4-INCH	70,265.000 LF		.		.
2270	646.0123 PAVEMENT MARKING PAINT 8-INCH	270.000 LF		.		.
2280	646.0126 PAVEMENT MARKING EPOXY 8-INCH	6,398.000 LF		.		.
2290	646.0136 PAVEMENT MARKING EPOXY 12-INCH	870.000 LF		.		.
2300	646.0156 PAVEMENT MARKING EPOXY 18-INCH	554.000 LF		.		.
2310	647.0163 PAVEMENT MARKING ARROWS PAINT TYPE 2	1.000 EACH		.		.
2320	647.0166 PAVEMENT MARKING ARROWS EPOXY TYPE 2	3.000 EACH		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2330	647.0353 PAVEMENT MARKING WORDS PAINT	1.000 EACH		.		.
2340	647.0356 PAVEMENT MARKING WORDS EPOXY	2.000 EACH		.		.
2350	647.0606 PAVEMENT MARKING ISLAND NOSE EPOXY	5.000 EACH		.		.
2360	647.0726 PAVEMENT MARKING DIAGONAL EPOXY 12-INCH	855.000 LF		.		.
2370	647.0856 PAVEMENT MARKING CONCRETE CORRUGATED MEDIAN EPOXY	660.000 SF		.		.
2380	649.0400 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH	2,060.000 LF		.		.
2390	650.4000 CONSTRUCTION STAKING STORM SEWER	225.000 EACH		.		.
2400	650.4500 CONSTRUCTION STAKING SUBGRADE	38,790.000 LF		.		.
2410	650.5000 CONSTRUCTION STAKING BASE	18,140.000 LF		.		.
2420	650.5500 CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER	32,820.000 LF		.		.
2430	650.6000 CONSTRUCTION STAKING PIPE CULVERTS	36.000 EACH		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2440	650.6500 CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 01. B-5-29	LUMP	LUMP			.
2450	650.6500 CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 02. B-5-402	LUMP	LUMP			.
2460	650.6500 CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 03. B-5-403	LUMP	LUMP			.
2470	650.6500 CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 04. R-5-105	LUMP	LUMP			.
2480	650.6500 CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 05. R-5-106	LUMP	LUMP			.
2490	650.6500 CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 06. R-5-107	LUMP	LUMP			.
2500	650.6500 CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 07. R-5-108	LUMP	LUMP			.
2510	650.6500 CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 08. R-5-109	LUMP	LUMP			.
2520	650.7000 CONSTRUCTION STAKING CONCRETE PAVEMENT	23,610.000 LF	.			.

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2530	650.8500 CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS (PROJECT) 01. 9200-04-71	LUMP	LUMP			.
2540	650.9910 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) 01. 9200-04-71	LUMP	LUMP			.
2550	650.9920 CONSTRUCTION STAKING SLOPE STAKES	31,380.000 LF		.		.
2560	652.0125 CONDUIT RIGID METALLIC 2-INCH	135.000 LF		.		.
2570	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	4,541.000 LF		.		.
2580	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH	620.000 LF		.		.
2590	652.0335 CONDUIT RIGID NONMETALLIC SCHEDULE 80 3-INCH	480.000 LF		.		.
2600	653.0105 PULL BOXES STEEL 12X24-INCH	8.000 EACH		.		.
2610	653.0135 PULL BOXES STEEL 24X36-INCH	2.000 EACH		.		.
2620	653.0140 PULL BOXES STEEL 24X42-INCH	24.000 EACH		.		.

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CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2630	653.0222 JUNCTION BOXES 18X12X6-INCH	2.000 EACH		.		.
2640	654.0105 CONCRETE BASES TYPE 5	19.000 EACH		.		.
2650	654.0215 CONCRETE CONTROL CABINET BASES TYPE 9	1.000 EACH		.		.
2660	654.0217 CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL	1.000 EACH		.		.
2670	655.0610 ELECTRICAL WIRE LIGHTING 12 AWG	3,150.000 LF		.		.
2680	655.0615 ELECTRICAL WIRE LIGHTING 10 AWG	16,035.000 LF		.		.
2690	655.0620 ELECTRICAL WIRE LIGHTING 8 AWG	3,700.000 LF		.		.
2700	655.0625 ELECTRICAL WIRE LIGHTING 6 AWG	705.000 LF		.		.
2710	656.0200 ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 01. CTH C ROUNDABOUT	LUMP	LUMP			.
2720	656.0500 ELECTRICAL SERVICE BREAKER DISCONNECT BOX (LOCATION) 01. CCTV-05-0075	LUMP	LUMP			.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2730	657.6005.S ANCHOR ASSEMBLIES LIGHT POLES ON STRUCTURES	2.000 EACH		.		.
2740	659.0802 PLAQUES SEQUENCE IDENTIFICATION	13.000 EACH		.		.
2750	670.0100 FIELD SYSTEM INTEGRATOR	LUMP	LUMP			.
2760	670.0200 ITS DOCUMENTATION	LUMP	LUMP			.
2770	672.0250 BASE CAMERA POLE 50-FT	1.000 EACH		.		.
2780	673.0225.S INSTALL POLE MOUNTED CABINET	1.000 EACH		.		.
2790	675.0400.S INSTALL ETHERNET SWITCH	1.000 EACH		.		.
2800	677.0100 INSTALL CAMERA POLE	1.000 EACH		.		.
2810	677.0200 INSTALL CAMERA ASSEMBLY	1.000 EACH		.		.
2820	677.0300.S INSTALL VIDEO ENCODER	1.000 EACH		.		.
2830	690.0150 SAWING ASPHALT	4,850.000 LF		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2840	690.0250 SAWING CONCRETE	17,600.000 LF		.		.
2850	715.0415 INCENTIVE STRENGTH CONCRETE PAVEMENT	13,292.000 DOL	1.00000		13292.00	
2860	715.0502 INCENTIVE STRENGTH CONCRETE STRUCTURES	7,986.000 DOL	1.00000		7986.00	
2870	ASP.1T0A ON-THE-JOB TRAINING APPRENTICE AT $5.00/HR	2,100.000 HRS	5.00000		10500.00	
2880	ASP.1T0G ON-THE-JOB TRAINING GRADUATE AT $5.00/HR	5,760.000 HRS	5.00000		28800.00	
2890	SPV.0035 SPECIAL 01. PLANTING MIXTURE	764.000 CY		.		.
2900	SPV.0035 SPECIAL 02. EXCAVATION OF PHRAGMITES SOIL	1,070.000 CY		.		.
2910	SPV.0060 SPECIAL 01. TRANSFORMER BASES BREAKWAY 11 1/2-INCH BOLT CIRCLE BLACK	19.000 EACH		.		.
2920	SPV.0060 SPECIAL 02. POLES TYPE 5 ALUMINUM BLACK	21.000 EACH		.		.
2930	SPV.0060 SPECIAL 03. LUMINAIRE ARMS TRUSS TYPE 4 1/2-INCH CLAMP 12-FT BLACK	21.000 EACH		.		.

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CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2940	SPV.0060 SPECIAL 04. LED LUMINAIRE, LED-A BLACK	21.000 EACH		.		.
2950	SPV.0060 SPECIAL 05. INSTALL WIRELESS ETHERNET RADIO	2.000 EACH		.		.
2960	SPV.0060 SPECIAL 06. IN CULVERT BOULDER ASSEMBLY	5.000 EACH		.		.
2970	SPV.0060 SPECIAL 07. SECTION SURVEY MONUMENTS, RECONSTRUCTION PROJECT	4.000 EACH		.		.
2980	SPV.0060 SPECIAL 08. RECONNECT STORM SEWER LATERALS	1.000 EACH		.		.
2990	SPV.0060 SPECIAL 09. LUMINAIRE LED VILLAGE OF HOWARD BETALED LEDWAY BLACK	7.000 EACH		.		.
3000	SPV.0060 SPECIAL 10. LIGHTING CONTROL AND ELECTRICAL DISTRIBUTION CABINET VILLAGE OF HOWARD	1.000 EACH		.		.
3010	SPV.0060 SPECIAL 11. CONCRETE BASES VILLAGE OF HOWARD	7.000 EACH		.		.
3020	SPV.0060 SPECIAL 12. LIGHT POLE COMPOSITE VILLAGE OF HOWARD NOMINAL HEIGHT 30-FT BLACK	7.000 EACH		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
3030	SPV.0060 SPECIAL 13. LUMINAIRE ARMS SINGLE MEMBER TENON MOUNT 10-FT BLACK	7.000 EACH		.		.
3040	SPV.0060 SPECIAL 14. PERENNIALS ASTER NOVAE-ANGLIAE, CG, #1 POT	108.000 EACH		.		.
3050	SPV.0060 SPECIAL 15. PERENNIALS ASCLEPIAS TUBEROSA, CG, #1 POT	56.000 EACH		.		.
3060	SPV.0060 SPECIAL 16. PERENNIALS ECHINACEA PURPUREA 'BRAVADO', CG, #1 POT	212.000 EACH		.		.
3070	SPV.0060 SPECIAL 17. PERENNIALS HEMROCALIS 'STELLA D'ORO', CG, #1 POT	476.000 EACH		.		.
3080	SPV.0060 SPECIAL 18. PERENNIALS DICATMNUS ALBUS 'PURPUREUS', CG, #1 POT	100.000 EACH		.		.
3090	SPV.0060 SPECIAL 19. PERENNIALS MONARDA DIDYMA 'FIREBALL', CG, #1 POT	164.000 EACH		.		.
3100	SPV.0060 SPECIAL 20. PERENNIALS PEROVSKIA ATRIPLICIFOLIA, CG, #1 POT	64.000 EACH		.		.
3110	SPV.0060 SPECIAL 21. PERENNIALS SEDUM X 'AUTUMN FIRE', CG, #1 POT	284.000 EACH		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
3120	SPV.0060 SPECIAL 22. GRASSES SCHIZACHYRIUM SCOPARIUM, CG, #4 POT	2,464.000 EACH		.		.
3130	SPV.0060 SPECIAL 23. TRACKING PAD MAINTENANCE	7.000 EACH		.		.
3140	SPV.0060 SPECIAL 24. CONCRETE BASES WPS LIGHTING FOR HOBART ROUNDABOUT	12.000 EACH		.		.
3150	SPV.0060 SPECIAL 25. REMOVING MEDIAN CROSSOVER	1.000 EACH		.		.
3160	SPV.0075 SPECIAL 01. STREET SWEEPING	200.000 HRS		.		.
3170	SPV.0090 SPECIAL 01. STORM SEWER LATERAL	95.000 LF		.		.
3180	SPV.0090 SPECIAL 02. CULVERT PIPE REINFORCED CONCRETE ARCH CLASS A-IV 122X77-INCH	208.000 LF		.		.
3190	SPV.0105 SPECIAL 01. METER BREAKER PEDESTAL BLACK	LUMP	LUMP			.
3200	SPV.0105 SPECIAL 02. RAILING TUBULAR SPECIAL B-05-402	LUMP	LUMP			.
3210	SPV.0105 SPECIAL 03. METER BREAKER PEDESTAL (HOBART ROUNDABOUT) UNDERGROUND WORK ONLY	LUMP	LUMP			.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
3220	SPV.0105 SPECIAL 04. CONCRETE PAVEMENT JOINT LAYOUT	LUMP	LUMP			.
3230	SPV.0105 SPECIAL 05. RAILING TUBULAR STEEL TYPE H GALVANIZED R-5-108	LUMP	LUMP			.
3240	SPV.0105 SPECIAL 06. RAILING TUBULAR STEEL TYPE H GALVANIZED R-5-109	LUMP	LUMP			.
3250	SPV.0120 SPECIAL 01. WATER FOR SEEDED AREAS	120.000 MGAL		.		.
3260	SPV.0165 SPECIAL 01. WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP PILOT	16,570.000 SF		.		.
3270	SPV.0165 SPECIAL 02. WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP PILOT R-5-108	1,625.000 SF		.		.
3280	SPV.0165 SPECIAL 03. WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD/QMP PILOT R-5-109	1,610.000 SF		.		.
3290	SPV.0165 SPECIAL 04. LANDSCAPE BOULDER WALL	150.000 SF		.		.
3300	SPV.0180 SPECIAL 01. COLORED AND STAMPED CONCRETE 5-INCH	1,000.000 SY		.		.
	SECTION 0001 TOTAL					.
	TOTAL BID					.

PLEASE ATTACH SCHEDULE OF ITEMS HERE