HIGHWAY WORK PROPOSAL

Proposal Number: 1 6

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

COUNTY	STATE PROJECT ID	FEDERAL PROJECT ID	PROJECT DESCRIPTION	HIGHWAY
Waukesha	2810-06-70		Big Bend to Waukesha Road Hennebery Avenue to IH 43	STH 164

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, $ 75,000.00 Payable to: Wisconsin Department of Transportation	Attach Proposal Guaranty on back of this PAGE.
Bid Submittal Due Date: March 12, 2013 Time (Local Time): 9:00 AM	Firm Name, Address, City, State, Zip Code **SAMPLE** **NOT FOR BIDDING PURPOSES**
Contract Completion Time October 11, 2013	
Assigned Disadvantaged Business Enterprise Goal 0 %	This contract is exempt from federal oversight.

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

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

Subscribed and sworn to before me this date _____

(Signature, Notary Public, State of Wisconsin)

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

(Date Commission Expires)

Notary Seal

(Bidder Signature)

(Print or Type Bidder Name)

(Bidder Title)

For Department Use Only

Type of Work Grading, pulverizing existing pavement, milling, base aggregate dense, concrete pavement, HMA pavement, storm sewer, concrete curb and gutter, concrete sidewalk, permanent signing, pavement marking, and traffic signals.	
Notice of Award Dated	Date Guaranty Returned

PLEASE ATTACH
PROPOSAL GUARANTY HERE

Effective with November 2007 Letting

PROPOSAL REQUIREMENTS AND CONDITIONS

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

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

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

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

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

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

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

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

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

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

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

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

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

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)

NOTARY FOR PRINCIPAL

(Date)

State of Wisconsin)
) ss.
_____ County)

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

(Signature, Notary Public, State of Wisconsin)

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

(Date Commission Expires)

Notary Seal

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

(Signature of Attorney-in-Fact)

NOTARY FOR SURETY

(Date)

State of Wisconsin)
) ss.
_____ County)

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

(Signature, Notary Public, State of Wisconsin)

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

(Date Commission Expires)

Notary Seal

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

CERTIFICATE OF ANNUAL BID BOND

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

Table of Contents

SPECIAL PROVISIONS

1. General.

Perform the work under this construction contract for Project 2810-06-70, Big Bend to Waukesha Road, Henneberry Avenue to IH 43, STH 164, Waukesha 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 grading, pulverizing existing pavement, milling, base aggregate dense, concrete pavement, HMA pavement, storm sewer, concrete curb and gutter, concrete sidewalk, permanent signing, pavement marking, and traffic signals and all incidental items necessary to complete the work as shown on the plans and included in the proposal and contract.
104-005 (20090901)

3. Prosecution and Progress.

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

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

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

The contract completion date requires higher than normal production of materials and work efforts. Included in this "Prosecution and Progress" special provision are interim and final completion dates. These dates indicate that work efforts will possibly require multiple or concurrent controlling operations to occur at the same time. This information is included to assist the contractor and its subcontractors and shall not be interpreted as a

demonstration of specified means and methods or work periods other than interim and final completion dates.
The schedule of operations shall conform to the construction staging as shown in the construction staging plans, unless the engineer approves modifications to the schedule in writing. The schedule of operations shall conform to the following construction staging as described herein:

Stage 1

- Construct STH 164 from Station 196+58 to the north end of the project at Station 270+82.65.

Stage 2

- Construct STH 164 from Station 161+01 to Station 196+58.
- Construct Nevins Street.
- Construct Edgewood Avenue and a portion of CTH L utilizing staged construction as shown in the construction staging plans and as described below:

CTH L

Stage 2A

- Place temporary widening along the south side.

Stage 2B

- Construct westbound lane and place temporary widening along the north side.

Edgewood Avenue – The intersection of Edgewood Avenue and STH 164 will be an all-way stop controlled intersection during construction of Stage 2.

Stage 2A

- Place temporary widening along the north side.

Stage 2B

- Construct the south side and place temporary widening along the south side.

Stage 2C

- Construct north half.
- Utilize flaggers as necessary to construct the west and east ends of Edgewood Avenue.

Stage 2D

- Remove remaining temporary widening and construct remaining portions.

Stage 3

- Construct STH 164 from the beginning of the project (Station 137+25) to Station 161+01.
- Construct the remaining portion of CTH L utilizing staged construction as shown in the construction staging plans and as described below:

CTH L

Stage 3A

- Construct center portion of CTH L. Maintain turning movements from CTH L onto Nevins Street and STH 164 north at all times. Construct those intersections in halves.

Stage 3B

- Construct the remaining south portion.

Stage 3C

- Remove remaining temporary widening and construct remaining portions.

Paving of village side streets can occur during any of the stages.

Complete all Stage 1 work prior to starting Stage 2. Stage 2 cannot begin prior to June 10, 2013. Complete all Stage 2 work as described above prior to 12:01 AM August 30, 2013.

Supplement standard spec 108.11 as follows:

If the contractor fails to complete the work necessary as described above prior to 12:01 AM August 30, 2013, the department will assess the contractor $5,000 in interim liquidated damages for each calendar day that the roadway remains closed after 12:01 AM, August 31, 2013. An entire calendar day will be charged for any period of time within a calendar day that the road remains closed beyond 12:01 AM.

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

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

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

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

Place HMA pavement on STH 164 within seven calendar days of pulverizing the existing pavement.

Construct the culverts at Station 155+62, Station 216+58, and Station 221+64 utilizing the following phases:

Phase 1

- Install temporary culvert and open STH 164 back to two lane operation.
- Divert flow from the existing culvert to the temporary culvert.

Phase 2

- Remove the existing culvert, and place the proposed culvert.
- Divert flow from the temporary culvert to the proposed culvert.

Phase 3

- Remove the temporary culvert.

Complete the above work in four calendar days or less. For each culvert replacement across STH 164, the road can be closed no more than 48 hours. Construct culverts in a sequence that does not close access to any properties abutting the project.

Construct the Class III Type C Erosion Mat ditches (Station 225+00 to Station 232+50 LT and Station 224+25 to Station 232+50 RT) utilizing the steps below:

1. Install Class III Type C Erosion Mat within 48 hours after removing existing concrete ditches.
2. Install temporary ditch checks on top of erosion mat.
3. Install topsoil on top of erosion mat.
4. Install Class II Type C Erosion mat over topsoil within 48 hours of topsoil placement.
5. Install temporary ditch checks on top of erosion mat.
6. Place seed.
7. Install stone or rock ditch checks.

Complete an application of dust control treatment within 48 hours of base aggregate dense placement.

Hold progress meetings once a week. Provide a written schedule of the next week(s)' operations. The written schedule shall include begin and end dates of specific prime and subcontractor work operations. The Village of Big Bend representatives shall be invited to attend the prosecution and progress meetings. Agenda items at the meeting will include review of the contractor's schedule and subcontractors' schedule and, evaluation of progress and pay items. Plans, schedule and specifications for upcoming work will be reviewed.

Place breaker run or base aggregate dense on the same day as excavation. Provide a temporary 3:1 sloped wedge in areas that will have greater than a 6-inch drop for more than three calendar days. At the end of each day, place base aggregate dense to provide a ramp to the entrances.

Construct the residential driveways at Station 170+50 LT and Station 174+20 LT in halves to maintain access at all times.

The Big Bend Village Park is host to the Rumble by the River Truck and Tractor Pull, which is scheduled for July 12-13, 2013. Provide access across CTH L and Nevins Street to the park. Do not perform work on Nevins Street or CTH L during the following periods:

- From noon Friday, July 12, 2013 to 6:00 AM Monday, July 15, 2013.

4. Traffic.

Roadway signing and roadway temporary pavement marking shall be in place as detailed on the plans and specials and in conformance with the Manual on Uniform Traffic Control Devices (MUTCD), latest edition. Place traffic control completely for the next stage by the end of the working day of a traffic switch. Cover or remove conflicting signs and signals as necessary to avoid confusion.

Do not store equipment, vehicles, or materials on adjacent streets beyond the project limits without the specific approval of the engineer.

Use drums, barricades and/or safety fence to direct vehicular and pedestrian traffic in the work zone. Protect and delineate hazards such as open excavations, abrupt drop-offs, and exposed manholes, inlets, and hydrants, with wedged material, drums, barricades, and safety fence as shown in the plans, special provisions or as directed by the engineer.

Maintain emergency vehicle access to all properties at all times.

For each culvert replacement across STH 164, the road can be closed no more than 48 hours. Use Traffic Control Signs PCMS prior to road closures to alert local traffic.

Notify the following emergency responders 48 hours in advance of any traffic switches or road closures.

Big Bend Police Dept.:	Chief Michael Hartert	(262) 662-3782
Big Bend Volunteer Fire Dept.:	Chief Todd Bluhm	(262) 758-8965
Waukesha County Sheriff:	Sheriff Daniel Trawicki	(262) 548-7126
Wisconsin State Patrol:	Captain Timothy Carnahan	(262) 785-4700

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

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

STH 164

STH 164 through traffic will be directed onto a detour route that is being established through a concurrent WisDOT project (2810-04-70) on STH 164 south of this project.

Place and operate Traffic Control Signs Portable Changeable Message near the beginning of the project facing northbound STH 164 traffic and near the beginning of the southbound detour route facing southbound STH 164 traffic two weeks prior to starting Stage 1 construction with the message "STH 164 WILL BE CLOSED STARTING XX-XX".

STH 164 will be closed to through traffic during construction. A signed detour will utilize STH 36, STH 83 and IH 43. The detour route has been coordinated with the STH 164 Big Bend Road, ID 2810-04-70, from STH 36 to N. Co. Line, which is also scheduled for construction in 2013. Projects 2810-04-70 and 2810-06-70 utilize the same detour route, which is signed as part of the 2810-04-70 contract. A rehabilitation and reconstruction project is scheduled for construction in 2012 and 2013 on IH 43 from STH 83 to STH 164, ID 1090-19-72. The project includes the resurfacing of the northbound on-ramps from STH 83 and STH 164 to IH 43, which will be closed for a period of 3 days. The alternate route during the ramp closure utilizes STH 83, Holz Parkway, and CTH ES. Coordinate the detour route with projects 2810-06-70 and 1090-19-72. Refer to the "Work By Others" article for additional information.

CTH L

Stage 1
Maintain traffic on existing lanes.

Stage 2A
Maintain traffic on existing lanes.

Stage 2B
Shift traffic to south side onto temporary widening and existing pavement.

Stage 3A
Maintain eastbound traffic on south side on temporary widening and existing pavement. Shift westbound traffic on new surface on the north side and temporary widening.

Stage 3B
Maintain westbound traffic on north side on temporary widening and new pavement. Shift eastbound traffic to be adjacent to westbound traffic on new pavement.

Stage 3C
Shift both directions of traffic onto final surface.

Edgewood Avenue

Stage 1
Maintain traffic on existing lanes.

Stage 2A
Maintain traffic on existing lanes.

Stage 2B
Shift traffic to north side onto temporary widening and existing pavement.

Stage 2C
Shift traffic to south side onto new pavement and temporary widening.

Stage 2D
Shift traffic onto final surface.

Stage 3
Traffic on final surface.

5. Holiday Work Restrictions.

Do not perform work on, nor haul materials of any kind along or across any portion of the highway carrying STH 164 traffic, and entirely clear the traveled way and shoulders of such portions of the highway of equipment, barricades, signs, lights, and any other material that might impede the free flow of traffic during the following holiday periods:

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

107-005 (20050502)

6. Utilities.

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

Underground and overhead utility facilities are located within the project limits. Utility adjustments are required for this construction project as noted below. Coordinate construction activities with a call to Diggers Hotline or a direct call to the utilities that have facilities in the area as required per statutes. Use caution to ensure the integrity of underground facilities and maintain code clearances from overhead facilities at all times.

Contact each utility company listed in the plans, prior to preparing bids, to obtain current information on the status of existing and any new utility relocation work.

AT&T (Communications)
AT&T has buried communication line adjacent to STH 164 throughout the length of the project, and buried communication lines adjacent to CTH L, Edgewood Avenue, Villa

Drive, Artesian Avenue, and Cheri Avenue. AT&T also has some aerial facilities on WE Energies poles.

The following facility adjustments have been done on the buried communication lines:

STH 164

- Station 149+25: The communication line will remain in place, with placement of the new culvert below the communication line.
- Station 155+60: The communication line will remain in place, with placement of the new culvert below the communication line.
- Station 165+00 – Station 166+10, RT: Abandon line
- Station 168+00 – Station 185+00, RT: Existing line will be lowered below excavation limits.
- Station 188+15: Existing crossing will be replaced with a new crossing at Station 188+25. The proposed storm sewer will be installed below the new crossing.
- Station 221+75: The communication line will remain in place, with placement of the new culvert place below the communication line.

Nevins Street

- Station 51+90: The communication line will remain in place with placement of the new storm sewer below the communication line.

Edgewood Avenue

- Station 51+85: Two lines crossing Edgewood Avenue will be routed to a new crossing at Station 53+00.

Artesian Avenue

- Station 218+50 LT: The line crossing Artesian Avenue in conflict with the culvert will be lowered below excavation limits. A second line just west of the culvert crossing will be replaced with a new cable crossing.

No other conflicts are anticipated. All work by AT&T will take place prior to construction.

Contact AT&T three days prior to installing culverts or storm sewer under AT&T facilities. AT&T will be on site for those operations.

Contact AT&T if any other buried communications lines are found during construction to confirm “active” or “abandon” status of the line.
Contact: Dean Herro, (414) 678-2644

ATC (Electric)
ATC has a transmission line crossing STH 164 at approximately Station 183+25. No relocation or adjustments of the line are anticipated.
Contact: Michael Olsen, (920) 338-6582

Time Warner (Communications)
Time Warner has aerial facilities throughout the project on poles owned by WE Energies. They also have buried facilities on the left side of STH 164 from Station 226+00 to Station 234+00 and on the right side from Station 228+50 to Station 241+00. The buried facilities are not expected to conflict with construction. The aerial facilities will be relocated along with WE Energies pole relocations prior to construction.
Contact: Lukas Lacrosse (414) 908-4766

WE Energies (Electric)
WE Energies (Electric) has aerial facilities throughout the project on poles. Some of their poles also carry Time Warner and AT&T facilities.

Poles at the following locations are being relocated prior to construction to avoid conflict:

STH 164
Station 161+28 RT (new pole to be installed at Station 160+21, 47' LT)
Station 165+02 RT (new pole to be installed at Station 164+89, 30.5' RT)
Station 166+10 RT (new pole to be installed at Station 166+10, 25.5' RT)
Station 166+93 RT (new pole to be installed at Station 166+93, 24' RT)
Station 168+46 RT (new pole to be installed at Station 168+49, 26' RT)
Station 173+84 RT (new pole to be installed at Station 173+81, 26' RT)
Station 221+77 RT (new pole to be installed at Station 221+89, 50' RT)

CTH L
Station 48+90 LT (new pole to be installed at Station 48+93, 29' LT)
Station 51+49 LT (new pole to be installed at Station 51+49, 26' LT)

Edgewood Avenue
Station 49+20 RT (new pole to be installed at Station 49+11, 30' RT)
Station 50+72 RT (new pole to be installed at Station 50+75, 30.5' RT)

No other conflicts are anticipated.

Contact WE Energies before removing any electrical underground cable to verify that they have been abandoned and carry no electrical current. Do not assume that unmarked facilities have been abandoned. At no time is it acceptable to push, pull, cut or drill an unmarked facility without explicit consent from WE Energies. Call the WE Energies 24 hour dispatch to arrange for this verification.
WE Energies Electric Dispatch: (800) 662-4797
Contact: Terry Connelly, (262) 968-5771

WE Energies (Gas)

WE Energies (Gas) has underground facilities throughout the project at the following locations along STH 164:

Station 141+00 – Station158+50, LT
Station 158+50 – Station 160+80, LT and RT
Station 160+80 – Station 166+30, LT
Station 166+30 – Station 172+10, LT and RT
Station 172+10 – Station 270+83, LT (end of project)

Lateral crossings of STH 164 occur at the following locations within the reconstruction limits of the projects:

Station 156+17 (Orchard Street)
Station 160+80 (CTH L)
Station 167+81 (Rose Avenue)
Station 173+99 (Maple Avenue)
Station 176+35 (Kings Parkway)
Station 177+82
Station 178+61 (Ramona Avenue)
Station 180+15
Station 180+83
Station 182+72
Station 184+20 (Park Avenue)
Station 185+70
Station 185+80
Station 186+97
Station 186+98
Station 187+78
Station 189+81
Station 190+41
Station 190+49
Station 194+75 (Edgewood Avenue)

Underground facilities are also located along the following adjacent side roads within the project:

Orchard Street
CTH L
Maple Avenue
Kings Parkway
Park Avenue
Edgewood Avenue
Artesian Avenue
CTH U
Cheri Avenue

The following facility adjustments are being done by WE Energies:

STH 164

Station 156+00: Abandon main
Station 156+17 – Station 161+67, 28’ LT: New main
Station 156+17 – 160+80: Abandon main
Station 156+27: Tie into existing main
Station 158+90: New main crossing
Station 157+30 – Station 159+50, 31’ RT: New main
Station 158+47 – Station 160+83: Abandon main
Station 161+80 – Station 163+55: Abandon main
Station 166+30 – Station 178+66, 38’ RT: New main
Station 166+30 – Station 172+10: Abandon main
Station 167+65: New main crossing
Station 167+81: Abandon main crossing
Station 173+99: Abandon main crossing
Station 174+33: New main across storm sewer
Station 176+35: Abandon service crossing
Station 177+82: Abandon service crossing
Station 178+56: New main crossing
Station 178+61: Abandon main crossing
Station 180+15: New service, abandon existing
Station 180+83: New service crossing, abandon existing
Station 182+72: New service crossing, abandon existing
Station 184+10, 38’ RT: New main
Station 184+10: New main crossing
Station 185+70: Abandon service crossing
Station 185+80: Abandon service crossing
Station 186+97: Abandon service crossing
Station 186+98: Abandon service crossing
Station 187+78: Abandon service crossing
Station 189+81: Abandon service crossing
Station 190+40 – Station 193+00, LT: New main
Station 190+41: Abandon service crossing
Station 190+49: Abandon service crossing
Station 191+42: New main crossing

CTH L

Station 45+97 – Station 47+12, 39’ RT: New main
Station 47+12 – Station 48+07, 39’ RT – 31’ RT: New main
Station 48+07 – Station 53+32, 31’ RT: New main
Station 45+97: New main crossing
Station 51+55: Abandon service crossing
Station 52+68: Abandon service crossing
Station 52+95: Abandon service crossing

Nevins Street
Station 45+97 CTH L – Station 163+55 STH 164: New main

Rose Avenue
Station 50+36 – Station 51+58: New main

Maple Avenue
Abandon main

Ramona Avenue
Station 50+38 – Station 50+62, 19' RT: New main

Edgewood Avenue
Station 49+00 – Station 52+50: New main, abandon existing

Cheri Avenue
Station 46+25 – Station 48+85: New main, abandon existing

No other conflicts are anticipated.

Relocations by WE Energies will take place prior to construction unless mains are found to contain asbestos. If asbestos is found, the department will be notified, and removal of existing mains will be done during construction by WE Energies, and will take 2-3 weeks to complete.

Contact WE Energies before removing any gas facilities to verify that they have been abandoned and carry no natural gas. Do not assume that unmarked facilities have been abandoned. At no time is it acceptable to push, pull, cut or drill an unmarked facility without explicit consent from WE Energies. Call the WE Energies 24 hour dispatch to arrange for this verification.
WE Energies Gas Dispatch: (800) 261-5325
Contact: Joe Dable, (414) 944-5543

WisDOT (Traffic Signals)
Existing traffic signals at the STH 164 and Edgewood Avenue intersection will be removed and replaced during this project. New traffic signals will be installed at the STH 164 and CTH L intersection.
Contact: Dennis Cauley, (414) 266-1170

Village of Big Bend (Sanitary Sewer)
The Village of Big Bend is planning to install sanitary sewer from Nevins Street north to approximately Station 197+00. The sanitary sewer will generally be installed in the west parking lane of STH 164. Construction will be completed by May 31, 2013. Contact the Village for plans prior to the start of construction. Adjust sanitary manholes as needed using bid items provided in the contract.
Contact: Jim Smith, (262) 784-7690

7. Environmental Protection.

Supplement standard spec 107.18 with the following:

Provide the Erosion Control Implementation Plan (ECIP) 14 days prior to the pre-construction conference.

Take adequate precautions to install and maintain necessary erosion and sediment control during grading. Protect storm drain inlets and manholes at locations determined by the engineer with a filter fabric or equivalent barrier meeting accepted design criteria, standards, and specifications.

Place stockpiled spoil material on an upland site an adequate distance from streams and any open water created by excavation. Install silt fence between the spoil pile and excavation site and between any disturbed area and the waterway. Seed and mulch, or sod all disturbed areas as designated in the plans. Leave the silt fence in place until the seeded area has produced sufficient grass cover to stabilize the area and thereby reduce the danger of site erosion.

If dewatering is required, the contractor will by either constructing a temporary sediment basin or by some other approved method, filter the water before discharging it into any waterways or off the construction site. This condition will be limited to a 48-hour time limit per location.

Do not use fertilizer in areas that are within wetlands or within 100 feet of wetlands or existing waterways.

The contractor shall pursue operations in a timely and diligent manner, continuing all construction operations methodically from the initial topsoil stripping operation through the subsequent grading and re-topsoiling to minimize the period of exposure to possible erosion. Re-topsoiling of graded areas, as designated by the engineer, shall be done immediately after grading is completed within those areas. All top soiled areas shall be seeded, fertilized, and mulched within 3 calendar days after placement of topsoil The contractor shall take adequate precautions to install and maintain necessary erosion and sediment control during grading and construction operations by use of accepted design criteria, standards, and specifications.

Minimize dust emissions resulting from land disturbing activities. Do not generate excessive air borne particulate matter or nuisance dust conditions. The contractor has direct responsibility for controlling dust at all times throughout the duration of the contract, 24 hours per day, 7 days per week, including non-working hours, weekends, and holidays.

When performing roadway cleaning operations, the contractor shall use equipment having vacuum or water spray mechanism to eliminate the dispersion of dust. If vacuum

equipment is employed, it shall have suitable self-contained particulate collectors to prevent discharge from the collection bin into the atmosphere.

Contain all slurry resulting from milling or grinding pavement activities and prevent from draining into storm drains, wetlands or waterways.

8. Environmental Protection, Archaeological Site Monitoring.

Notify the Wisconsin Department of Transportation, Bureau of Equity and Environmental Services, at least two weeks prior to the start of construction to arrange for the Bureau to monitor excavation outside the boundary of the existing pavements/shoulder in the southeast quadrant of the intersection of STH 164 and CTH L. The contact person at the Bureau of Equity and Environmental Services is Mr. James Becker III, (608) 261-0137.

9. Public Convenience and Safety.

Revise standard spec 107.8(6) as follows:

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

10. 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 Karla Leithoff, (262) 548-6709.
107-054 (20080901)

11. Work By Others.

Coordinate the detour route signing and traffic control with the concurrent WisDOT project 2810-04-70 on STH 164 from STH 36 to N. Co. Line, Racine County. Contact Traci Gengler, WisDOT Southeast Region Project manager at (262) 548-8727 for more information.

Coordinate the detour route and traffic control with the concurrent WisDOT project 1090-19-72 on IH 43 northbound resurfacing from STH 83 to STH 164. Contact WisDOT Southeast Region Construction Manager Emmanuel Yartey at (262) 548-6429 for more information.

The Village of Big Bend will be reconstructing Edgewood Avenue east of the project limits during the summer of 2013. Contact the Village engineer, Jim Smith, at (262) 784-7690 for further information regarding the schedule of that project.

12. Clearing.

Provide the black walnut tree cleared at Station 47+30 LT (CTH L) to the property owner, Keith and Mary Stein, S91W22990 Milwaukee Ave, Big Bend, WI, (262) 662-4089. Notify the Stein's one week prior to clearing the tree. Contact the Stein's to verify where the tree is to be stockpiled on the property.

13. Clearing and Grubbing, Emerald Ash Borer.

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

Supplement standard spec 201.3 with the following:
The emerald ash borer (EAB) has resulted in a quarantine of ash trees (*Fraxinus sp.*) by the Wisconsin Department of Agriculture, Trade, and Consumer Protection (DATCP) and the Wisconsin Department of Natural Resources (DNR).

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

- Green ash (F. pennsylvanica) is found throughout the state, but is most common in southern Wisconsin. It may form pure stands or grow in association with black ash, red maple, swamp white oak, and elm. It grows as an associate in upland hardwood stands, but is most common in and around stream banks, floodplains, and swamps.
- Black ash (F. nigra) is distributed over the entire state but is most frequently found in northern Wisconsin. It is most common in swamps, but is also found in other wet forest types.
- Blue ash (F. quadrangulata) is a threatened species that is currently found only at a few sites in Waukesha County. The species is at the edge of its range in Wisconsin, but is common in states farther south. The species is not of commercial importance. Blue ash twigs are 4-sided.
- White ash (F. americana) tends to occur primarily in upland forests, often with Acer saccharum.

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

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

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

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

ATCP 21.17 Emerald ash borer; import controls and quarantine.

Importing or Moving Regulated Items from Infested Areas; Prohibition.
Except as provided in subparagraph (3), no person may do any of the following:

(a) Import a regulated item under sub. (2) into this state if that item originates from an emerald ash borer regulated area identified in 7CFR 301.53-3.

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

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

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

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

Ash trees.

Ash limbs, branches, and roots.

Ash logs, slabs or untreated lumber with bark attached.

Cut firewood of all non-coniferous species.

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

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

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

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

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

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

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

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

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

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

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

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

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

Burning is optional if in compliance with standard spec 201.3.

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

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

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

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

Furnishing and Planting Plant Materials
Supplement standard spec 632.2.2:

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

Updates for Compliance
Each year, as a service, the Wisconsin department of agriculture, trade and consumer protection distributes an updated federal CFR listing to nursery license holders and other affected persons in this state. More frequent updates, if any, are available on the Department of Agriculture, Trade, and Consumer Protection (DATCP) website at **www.datcp.state.wi.us** . Subsection (1) applies to new regulated areas as those areas are identified in the CFR, regardless of whether affected persons receive update notices from the DATCP. Persons may request update notices by calling (608) 224−4573, by visiting the DATCP website, or by writing to the following address:

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

Regulated Items
More frequent updates, if any, are available on the DATCP website at **www.datcp.state.wi.us** . Subsection (1) applies to new regulated areas as those areas are identified in the CFR, regardless of whether affected persons receive update notices from DATCP. Persons may request update notices by calling (608) 224−4573, by visiting the DATCP website, or by writing to the above address.
201-SER1 (20100401)

14. Removing Fence.

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

Carefully remove and stockpile the fence removed from Station 47+00 – Station 48+25 LT (CTH L) and provide to the property owner, Keith and Mary Stein, S91W22990 Milwaukee Ave, Big Bend, WI, (262) 662-4089. Notify the Stein's one week prior to removing the fence. Contact the Stein's to verify where the fence is to be stockpiled on the property.

15. Removing Pipe Railing, Item 204.9090.S.01.

A Description
This special provision describes removing pipe railing 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 Pipe Railing in linear feet, acceptably completed.

E Payment
Supplement standard spec 204.5 to include the following:

ITEM NUMBER	DESCRIPTION	UNIT
204.9090.S.01	Removing Pipe Railing	LF
204-025 (20041005)		

16. Excavation, Hauling, and Disposal of Petroleum Contaminated Soil, Item 205.0501.S.

A Description
A.1 General
This special provision describes excavating, loading, hauling, and disposing of petroleum contaminated soil at a DNR licensed facility. The closest DNR licensed landfill facilities are:

Veolia Emerald Park Landfill
W124S10629 South 124th Street
Muskego, WI 53150

Waste Management's Metro Recycling and Disposal Facility
10712 South 124th Street
Franklin, WI 53132
414-529-6180

Perform this work in accordance to standard spec 205 and with pertinent parts of Chapters NR 700-754 of the Wisconsin Administrative Code, as supplemented herein. Per NR 718.07, a solid waste collection and transportation service-operating license is required under NR 502.06 for each vehicle used to transport contaminated soil.

A.2 Notice to the Contractor – Contaminated Soil Locations.
The department and others completed testing for soil contamination for locations within this project where excavation is required. Testing indicated that petroleum-contaminated soil is present at the following locations as shown on the plans:

- STH 164 Station 160+00 to 162+00, and from CTH L Station 48+80 to 51+50, left and right of project limits. DRO- and lead-contaminated is present here from approximately 1' to 22' bgs. An estimated 230 cubic yards (approximately 400 tons at an estimated 1.7 tons per cubic yard) is to be excavated here for storm sewer installations.

Directly load soil excavated by the project at the above location into trucks that will transport the soil to a WDNR-licensed landfill facility for bioremediation.

A.3 Notice to the Contractor – Contaminated Soil and Potential UST Beyond the Construction Limits.
A review of available information for the construction corridor indicates that contaminated soil is present below the proposed excavation at the locations listed below:

- STH 164 Station 190+20 to 192+00, from approximately 30 feet left to project limits right).

Contaminated soil at the above location is expected to be beyond the excavation limits necessary to complete the work under this project. Control construction operations at this location to ensure that they do not extend beyond the excavation limits indicated in the plans.

If contaminated soils are encountered elsewhere on the project, terminate excavation activities in the area and notify the engineer.

Several active groundwater monitoring wells were observed within the construction limits near the CTH L intersection. If active groundwater monitoring wells are encountered during construction, notify engineer and protect them to maintain their integrity. The environmental consultant will determine if monitoring wells need to be maintained. For monitoring wells that do need to be maintained, adjust the wells that do not conflict with structures or curb and gutter to be flush with the final grade. For wells that conflict with the previously mentioned items or if monitoring wells are not required to be maintained, they will be abandoned by others.

The excavation management plan for this project has been designed to minimize the offsite disposal of contaminated material. The excavation management plan, including these special provisions, has been developed in cooperation with the WDNR. The WDNR concurrence letter is on file at the Wisconsin Department of Transportation. For further information regarding previous investigation and remediation activities at these sites contact:

Name:	Mr. Ken Yass or Mr. Tyler Stapel
Address:	150 N. Patrick Blvd. Ste. 180, Brookfield, WI 53045
Phone:	(262) 879-1212
Fax:	(262) 879-1220
E-mail:	kyass@trcsolutions.com or wstapel@trcsolutions.com

A.4 Coordination

Coordinate work under this contract with the environment consultant:

Consultant:	TRC Environmental Corporation
Address:	150 N. Patrick Blvd. Ste. 180, Brookfield, WI 53045
Contact:	Mr. Ken Yass or Mr. Tyler Stapel
Phone:	(262) 901-2145 or (262) 825-2045
Fax:	(262) 879-1220
E-mail:	kyass@trcsolutions.com or wstapel@trcsolutions.com

The role of the environmental consultant will be limited to:

1. Determining the location and limits of contaminated soil to be excavated based on soil analytical results from previous investigations, visual observations, and field screening of soil that is excavated;
2. Identifying contaminated soils to be hauled to the landfill facility;
3. Documenting that activities associated with management of contaminated soil are in conformance with the contaminated soil management methods for this project as specified herein; and
4. Obtaining the necessary approvals for disposal of contaminated soil from the landfill facility.

Provide at least a 14-calendar day notice of the preconstruction conference date to the environmental consultant. At the preconstruction conference, provide a schedule for all excavation activities in the areas of contamination to the environmental consultant. Also notify the environmental consultant at least three calendar days prior to commencement of excavation activities in each of the contaminated areas.

Coordinate with the environmental consultant to ensure that the environmental consultant is present during excavation activities in the contaminated areas. Perform excavation work in each of the contaminated areas on a continuous basis until excavation work is completed.

Identify the DNR licensed landfill facility that will be used for disposal of contaminated soils, and provide this information to the environmental consultant no later than 30 calendar days prior to commencement of excavation activities in the contaminated areas or at the preconstruction conference, whichever comes first. The environmental consultant will be responsible for obtaining the necessary approvals from the landfill facility for disposal of contaminated soils. Do not transport contaminated soil offsite without prior approval from the environmental consultant.

A.5 Health and Safety Requirements
Supplement standard spec 107.1 with the following:

During excavation activities, expect to encounter soil contaminated with lead, gasoline, diesel fuel, fuel oil, or other petroleum-related products. Site workers taking part in activities that will result in the reasonable probability of exposure to safety and health hazards associated with hazardous materials shall have completed health and safety training that meets the Occupational Safety and Health Administration (OSHA) requirements for Hazardous Waste Operations and Emergency Response (HAZWOPER), as provided in 29 CFR 1910.120.

Prepare a site-specific Health and Safety Plan, and develop, delineate and enforce the health and safety exclusion zones for each contaminated site location as required by 29 CFR 1910.120. Submit the site-specific health and safety plan and written documentation of up-to-date OSHA training to the engineer prior to the start of work.

B (Vacant)

C Construction
Supplement standard spec 205.3 with the following:

Control operations in the contaminated areas to minimize the quantity of contaminated soil excavated.

The environmental consultant will periodically monitor soil excavated from the contaminated areas. The environmental consultant will evaluate excavated soil based on field screening results, visual observations, and soil analytical results from previous environmental investigations. Assist the environmental consultant in collecting soil samples for evaluation using excavation equipment. The sampling frequency shall be a maximum of one sample for every 20 cubic yards excavated.

On the basis of the results of such field-screening, the material will be designated for disposal as follows:

- Excavation Common – clean soil, construction and demolition fill (such as clean soil, boulders, concrete, reinforced concrete, bituminous pavement, bricks, building stone, unpainted or untreated wood), which under NR 500.08 are exempt materials.
- Low-level contaminated material for reuse as fill within the construction limits, or
- Contaminated soil for disposal at the WDNR-licensed disposal facility, or
- Potentially contaminated for temporary stockpiling and additional characterization prior to disposal.

If during excavations outside the areas of known contamination, materials are encountered that exhibit characteristics of municipal wastes or contain significant quantities of industrial-type wastes, such as fly ash, foundry sand, and cinders, or when

conditions such as unknown underground storage tanks or soil/fill material with noticeable impacts from petroleum or chemical products, or other obvious potentially contaminated materials are encountered, suspend excavation in that area and notify the engineer and the environmental consultant.

Some material may require additional characterization prior to disposal. Provide for the temporary stockpiling of up to 200 cubic yards of contaminated soil on-site that require additional characterization. Construct and maintain a temporary stockpile of the material in accordance to NR 718.05(3), including, but not limited to, placement of the contaminated soil/fill material on an impervious surface and covering the stockpile with material to prevent infiltration of precipitation. The department's environmental consultant will collect representative samples of the stockpiled material, laboratory-analyze the samples, and advise the contractor, within 10 business days of the construction of the stockpile, of disposal requirements. The stockpiled material shall be disposed either at the WDNR-licensed disposal facility by contractor or if characterized as a hazardous wastes, by the department. As an alternative to temporarily stockpiling contaminated soil/fill material that requires additional characterization, the contractor has the option of suspending excavation in those areas where such soil is encountered until such time as characterization is completed.

Directly load and haul soils designated by the environmental consultant for offsite disposal to the DNR approved landfill facility. Use loading and hauling practices that are appropriate to prevent any spills or releases of petroleum-contaminated soils or residues. Prior to transport, sufficiently dewater soils designated for off-site disposal so as not to contain free liquids.

Groundwater was not encountered in the Phase 2.5 investigation and is not expected to be encountered at the planned excavation depths.

The Wisconsin Department of Transportation will be the generator of regulated solid waste from this construction project.

D Measurement

The department will measure Excavation, Hauling, and Disposal of Petroleum Contaminated Soil in tons of contaminated soil accepted by the landfill facility as documented by weight tickets generated by the landfill facility.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
205.0501.S	Excavation, Hauling, and Disposal of Petroleum Contaminated Soil	Ton

Payment is full compensation for excavating, segregating, loading, hauling, and disposal of contaminated soil; obtaining solid waste collection and transportation service operating licenses; assisting in the collection soil samples for field evaluation; dewatering of soils prior to transport, if necessary; and taxes. No additional payment will be made for tipping fees associated with the disposal of contaminated soil.

17. Grading and Shaping Intersection Mardith Avenue South, Item 205.9010.S.01, Villa Drive, Item 205.9010.S.02, Mardith Avenue North, Item 205.9010.S.03, Artesian Avenue, Item 205.9010.S.04, CTH U, Item 205.9010.S.05, Henneberry Avenue, Item 205.9010.S.06.

A Description
This special provision describes excavating, filling, grading, shaping, and compacting, as necessary to construct the intersection as shown on the plans and in accordance to the pertinent requirements of the standard specifications and as hereinafter provided.

B (Vacant)

C Construction
Dispose of all surplus and unsuitable material in accordance to standard spec 205.3.12.

D Measurement
The department will measure Grading and Shaping Intersection (Location) as a single complete unit of work.

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

ITEM NUMBER	DESCRIPTION	UNIT
205.9010.S.01	Grading and Shaping Intersection Mardith Ave. South	LS
205.9010.S.02	Grading and Shaping Intersection Villa Drive	LS
205.9010.S.03	Grading and Shaping Intersection Mardith Ave. North	LS
205.9010.S.04	Grading and Shaping Intersection Artesian Avenue	LS
205.9010.S.05	Grading and Shaping Intersection CTH U	LS
205.9010.S.06	Grading and Shaping Intersection Henneberry Avenue	LS

Payment is full compensation for furnishing all excavating, grading, shaping, and compacting; and for providing and placing fill.

The base course, surfacing and finishing items will be measured and paid for under the pertinent items provided in the contract.
205-010 (20030820)

18. 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)

19. Pulverize and Relay.

Replace standard spec 325.3(2) with the following:

(2) Immediately after pulverizing, relay the material with a paver, grader, or both the paver and grader. Use equipment with automatic grade and slope control systems for adjusting the slope through superelevated curves, transitions, and tangent sections and an averaging device to achieve a smooth profile. If the automatic control systems break down, the contractor may use manual controls for the remainder of that day only.

325-001 (20080902)

20. 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)

21. 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)

22. Railing Pipe, Item 513.2050.S.

A Description

This special provision describes furnishing and installing a pipe railing system for pedestrians as shown on the plans, and according to the applicable provisions of standard spec 513 and as hereinafter provided.

B (Vacant)

C Construction
Weld the posts and rails together.

D Measurement
The department will measure Railing Pipe in length by the linear foot along the top rail.

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

ITEM NUMBER	DESCRIPTION	UNIT
513.2050.S	Railing Pipe	LF

Payment is full compensation for furnishing all materials; installing all materials; and painting.
513-005 (20030820)

23. Wall Modular Block Mechanically Stabilized Earth, Item 532.0300.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 Mechanically Stabilized Earth Modular Block Wall Systems
The department specifies approved modular block mechanically stabilized earth wall products on the department's approved product 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 department's 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 the proposed wall design is in compliance with the design specifications.

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 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 and calculations shall be signed, sealed and dated by a professional engineer licensed in the State of Wisconsin.

The design of the Wall Modular Block Mechanically Stabilized Earth shall consider the internal stability of the wall mass, including the reinforcement pullout resistance. The design shall be in compliance with the current AASHTO Standard Specifications for Highway Bridges including interim specifications, the standard specifications, and standard engineering design procedures as determined by the department. The walls shall be designed for the heights shown on the plans and 100% of the soil reinforcement shall be connected to the wall facing. The maximum value of the angle of internal friction of the wall backfill material 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.

The embedment to the top of the leveling pad shall be 1 foot 6 inches or as specified in the plan or AASHTO section 5.8.1 minimum, whichever is greater. Potential depth of frost penetration at the wall location shall not be considered in designing the wall for depth of leveling pad. Vertical earth pressure shall be determined using the Meyerhof distribution. A connection factor of safety of 1.5 at 0.75 inch deformation is required. A geosynthetic waterproof membrane is not required to cover the reinforced mass.

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 6 feet. The soil reinforcement shall extend 3 feet beyond the theoretical failure plane in all cases. The maximum vertical spacing of soil reinforcement layers shall be two times the block depth (front face to back face) or 32 inches, whichever is less. The first (bottom) layer of reinforcement shall be placed no further than 12 inches above the top of the leveling pad, but at least one block height above the leveling pad. The last (top) layer of soil reinforcement shall be no further than 24 inches below the top of the uppermost block.

Submit the following to the engineer for review: complete design calculations, explanatory notes, specifications, and detailed plans and shop drawings for the proposed wall system. Submit them no later than 21 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. The design calculations and notes shall clearly indicate the factor of safety against pullout and the design soil pressure

beneath the wall footing and retained earth mass. Four copies of shop drawings and two copies of the design calculations and supporting materials shall be submitted.

B.3 Wall System Components

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

B.3.1 Leveling Pad

For all walls over 5 feet tall measured from the top of the leveling pad to the top of the wall, provide a wall leveling pad that consists of poured concrete masonry, 6 inches deep by 12 inch (minimum) wide Grade A conforming to standard spec 501 as modified in standard spec 716. Provide QMP for class II concrete as specified in standard spec 716. The leveling pad shall be as wide as the proposed blocks or a minimum of 12 inches whichever is greater. The bottom row of blocks shall be horizontal and 100% of the block surface shall bear on the leveling pad. If any portion of the wall is over 5 feet tall, 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, regardless of wall height. 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 thickness of the minimum embedment, i.e., a minimum embedment plus an additional embedment of up to one block's thickness. Additional embedment may be detailed, but will not be measured for payment.

For walls that are less than or equal to 5 feet in height and do not have a wall number assigned to them, a compacted 1 foot deep by 2 foot wide leveling pad made from base aggregate dense 1¼-inch in conformance with standard spec 305 may be used.

B.3.2 Wall Facing

Wall facing units shall 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 appearance that complement 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.

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 portions 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 (%) 40 cycles, 5 of 5 samples 50 cycles, 4 of 5 samples	ASTM C1262[1]	 1.0 max.[2] 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 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 conducting the sampling and testing, the type of block, the date sampled, name of the person who conducted 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 no expense to the department.

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. At no expense to the department, the contractor shall remove all rejected blocks from the project.

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 not installed in the finished work at no cost to the department, unless the engineer allow 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 Geogrids

Geogrid supplied as reinforcing members shall be manufactured from long chain polymers limited to polypropylene, high-density polyethylene, polyaramid, and polyester.

Geogrids shall form a uniform rectangular grid of bonded, formed, or fused polymer tensile strands crossing with a nominal right angle orientation. The minimum grid aperture shall be 0.5 inch. The geogrid shall maintain dimension stability during handling, placing, and installation. The geogrid shall be insect, rodent, mildew, and rot resistant.

The geogrid shall be furnished in a protective wrapping that shall prevent exposure to ultraviolet radiation and damage from shipping or handling. The geogrid shall be kept dry until installed. Each roll shall be clearly marked to identify the material contained.

The wall designer shall supply the allowable Tension Reinforcement Load (T_A) used in the design for each reinforcement layer. The wall system composed of geogrid and modular blocks shall be from a preapproved supplier. The current list of preapproved geogrids and their corresponding modular blocks is maintained by the department's Structures Development Section and may be obtained by calling (608) 266-8494. Only geogrid and modular blocks preapproved before contract letting will be allowed in the construction of the wall.

The value of T_A for a specific geogrid shall be the lowest value as determined by the following two methods for each layer used.

1. The Ultimate Tensile Strength (T_{ult}) divided by the factors RF_{ID}, RF_{CR}, RF_D and FS.

   Hence,

$$T_A = \frac{T_{ult}}{RF_{ID} x\ RF_{CR}\ x\ RF_D\ x\ FS}$$

   where:

   T_{ult} = is the ultimate tensile strength of the reinforcement determined from wide width tensile tests (ASTM D4595) for geogrids, or rib tensile test (GRI:GG1), but at a strain rate of 10% per minute.

   RF_{ID} = strength reduction factor to account for installation damage to the reinforcement. In no case shall RF_{ID} be less than 1.1.

   RF_{CR} = strength reduction factor to prevent long-term creep rupture of the reinforcement. In no case shall RF_{CR} be less than 1.2.

   RF_D = strength reduction factor to prevent rupture of the reinforcement due to chemical and biological degradation. In no case shall RF_D be less than 1.1.

   FS = a global safety factor which accounts for uncertainties in structure geometry, fill properties, externally applied loads, overstress due to load nonuniformities, and uncertainties in long-term reinforcement strength shall be 1.5.

   Values for RF_{ID}, RF_{CR}, and RF_D shall be determined from product specific test results.

   Guidelines for how to determine RF_{ID}, RF_{CR}, and RF_D from product specific data are provided in FHWA Publication No. FHWA SA-96-071 "Mechanically Stabilized Earth Walls and Reinforced Soil Slopes Design and Construction Guidelines" Appendix B, and in FHWA Publication No. FHWA SA-96-072 "Corrosion/Degradation of Soil Reinforcements for Mechanically Stabilized Earth Walls and Reinforced Soil Slopes."

2 The geogrid connection load (T_B) divided by the factor FS = 1.5. Hence,

$$T_A = \frac{T_B}{FS}$$

The Geogrid Connection Load (T_B) is defined as the maximum tension load that may be developed in a geogrid reinforcement layer that will result in no more than 0.75 inches of deformation. This value shall be determined from tests conducted on the same facing blocks and grids as proposed for the wall and shall cover a range of overburden pressures comparable to those anticipated in the proposed wall. The value of T_B for any specific layer shall be determined for the overburden pressure applied to that specific layer. The test shall be conducted on grid samples at least 8 inches wide and at a rate of elongation not exceeding 0.05 inches per minute. The geogrid shall remain normal to the block face during loading. The contractor shall provide to the engineer all load test data used to determine the value of $T_{B.}$

Submit the following items for the review and acceptance of the engineer.

1. The Allowable Reinforcement Tension Load (T_A) for the geogrid to be supplied.
2. The values of $T_{ult,}$ $RF_{ID,}$ RF_{CR}, $RF_{D,}$ and T_B used to determine $T_{A.}$

Work on the wall shall not begin until the engineer accepts these submittals.

B.3.4 Galvanized Metal Reinforcement

In lieu of polymeric geogrid earth reinforcement, galvanized metal reinforcement may be used. Design and materials shall be in accordance to section 5.8.6.1.1 of the current AASHTO Specifications.

B.3.5 Connectors

Pins, rods, clips, or other devices used to develop mechanical interlock between facing unit block layers shall be manufactured from corrosion resistant materials. Furnish documentation that establishes and substantiates the design life of such devices.

B.3.6 Backfill Materials

Wall Backfill, Type A, shall comply with the requirements for Coarse Aggregate No. 1 as given in standard spec 501.2.5.4.4. 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.

Wall Backfill, Type B, shall comply with the requirements for Grade 1 Granular Backfill as contained in standard spec 209.2.2. All backfill placed in a zone extending horizontally from 1 foot behind the back face of the wall to 1 foot beyond the end of the reinforcement and extending vertically from the base of the leveling pad to the top of the final layer of all facing units shall be Wall Backfill, Type B.

All backfill within the reinforced zone shall meet the following pH and Angle of Internal Friction requirements.

Test	Method	Value
pH	AASHTO T-289	4.5 – 10.0
Sulfate content[1]	AASHTO T-290	200 ppm max.
Chloride content[1]	AASHTO T-291	100 ppm max.
Electrical Resistivity[1]	AASHTO T-288	3000 ohm/cm min.
Angle of Internal Friction	AASHTO T-236	30 degrees min.

[1] Backfill used on walls with metallic reinforcement shall also meet this requirement.

Prior to placement of the backfill, obtain and furnish to the engineer certified report of test results that the backfill material complies with the requirements of this specification. Tests will be performed by a certified independent laboratory. When backfill characteristics and/or sources change, a certified report of tests will be provided for the new backfill material.

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

C Construction

C.1 General

Place the wall facing units in accordance to the manufacturer's instructions and to the lines, elevations, batter, and tolerances as shown on the plans. Center the initial layer of facing units on the leveling pad; then level them and properly align them. Fill formed voids or openings in the facing units with wall backfill, Type A. Remove all debris on the top of each layer of facing units, before placing the next layer of facing units.

Install all pins, rods, clips, or other devices used to develop mechanical interlock between facing unit layers in accordance to the manufacturer's directions.

All excavation for the Wall Modular Block Mechanically Stabilized Earth shall conform to standard spec 206. 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.

C.2 Backfill

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

Compact wall backfill Type B as specified in standard spec 207.3.6. For walls with a maximum height of any portion greater than 5 feet, compact Wall Backfill Type B to 95.0% of maximum density as determined by AASHTO T-99, Method C. Perform

compaction testing on the backfill. When performing nuclear testing, use a nuclear gauge from the department's approved list, ensure that the operator is a HTCP certified Nuclear Density Technician I, and conform to CMM 8.15 for testing and gauge monitoring methods. Conduct testing at a minimum frequency of 1 test per 2-foot layer per 200 feet of wall, or major portion thereof. A minimum of one test for every 2-foot layer is required. Test sites shall be selected using ASTM Method D3665. Deliver documentation of all compaction testing results to the engineer at the time of testing. The department may perform quality control compaction tests on walls less than 5 feet in height to ensure compliance with standard spec 207.3.6.

Conduct backfilling operations in such a manner as to prevent damage or misalignment of the wall facing units, soil reinforcement, or other wall components. At no expense to the department, correct any such damage or misalignment as directed by the engineer. A field representative of the wall supplier shall be available during wall construction to provide technical assistance to the contractor and the engineer.

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 top of the most recently placed and compacted layer of MSE backfill.

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

C.3 Soil Reinforcement

Place soil reinforcement at the positions and to the lengths as indicated on the accepted shop drawings. Take care that backfill placement over the positioned soil reinforcement elements does not cause damage or misalignment of these elements. Correct any such damage or misalignment as directed by the engineer. Do not operate wheeled or tracked equipment directly on the soil reinforcement. A minimum cover of 6 inches is required before such operation is allowed.

C.4 Geogrid Layers

Place and anchor geogrid material between wall unit layers in the same manner as used to determine the Geogrid Connection Load (T_B). Place the grid material so that the machine direction of the grid is perpendicular to the wall face. Each grid layer shall be continuous throughout the lengths indicated on the plans. Join grid strips with straps, rings, hooks or other mechanical devices to prevent movement during backfilling operations. Prior to placing backfill on the grid, pull the grids taunt and hold in position with pins, stakes or other methods approved by the engineer.

C.5 Steel Layers

Place the steel reinforcement full width in one piece as shown on the plans. No splicing will be allowed. Maintain elements in position during backfilling.

C.6 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 completing the excavation of the entire reinforced zone, the department's Regional Soils Engineer will inspect the site and determine if the foundation is adequate for the intended loads. Allow the Regional Soils Engineer two working days to perform the inspection.

D Measurement
The department will measure Wall Modular Block Mechanically Stabilized Earth 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 ordered 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
532.0300.S	Wall Modular Block Mechanically Stabilized Earth	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; and performing compaction testing. 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.
532-031 (20120615)

24. 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 as each individual 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)

25. Salvaged Rail and Salvaged Guardrail End Treatments.

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

Carefully remove and stockpile guardrail, end terminals, and posts that the engineer determines are salvageable at a location on the right-of-way, outside the construction limits for pick up by WisDOT. Stack and band the posts onto pallets for pickup.

Contact Andrea Maxwell with WisDOT at (414) 750-1411 to coordinate removal of the salvaged materials from the right-of-way.

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

26. Stone or Rock Ditch Checks, Item 628.7560.S.

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

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

Railroad Ballast

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

Breaker Run Stone

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

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

C Construction

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

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

D Measurement

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

E Payment

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

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

(2) Payment is full compensation for furnishing, producing, crushing, loading, hauling, placing, shaping and maintaining Stone or Rock Ditch Checks; and for furnishing all labor, tools, equipment, and incidentals necessary to complete the contract work.

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

(090208) 628-050

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

A Description

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

B Materials

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

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

C Construction

C.1 General

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

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

C.2 Groove Depth

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

C.3 Groove Width – Longitudinal Markings

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

C.4 Groove Position

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

C.5 Groove Cleaning

C.5.1 Concrete

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

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

C.5.2 New Asphalt

Groove pavement five or more days after paving.

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

C.5.3 Existing Asphalt

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

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

C.6 Tape Application

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

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

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

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

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

2) For the remainder counties:

    - Apply either adhesive.

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

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

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

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

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

Payment is full compensation for cleaning and preparing the pavement surface; furnishing and installing the material; and for removing temporary pavement marking, if necessary.
646-022 (20120615)

28. Pavement Marking Grooved Wet Reflective Tape 4-Inch, Item 646.0881.S; 8-Inch, Item 646.0883.S.

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

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

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

C Construction

C.1 General

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

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

C.2 Groove Depth

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

C.3 Groove Width – Longitudinal Markings

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

C.4 Groove Position

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

C.5 Groove Cleaning

C.5.1 Concrete

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

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

C.5.2 New Asphalt

Groove pavement five or more days after paving.

Use a high-pressure air blower with at least 185 ft^3/min air flow and 120 psi air pressure to clean the groove.

C.5.3 Existing Asphalt

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

Use a high-pressure air blower with at least 185 ft^3/min air flow and 120 psi air pressure to clean the groove.

C.6 Tape Application

Apply the wet reflective pavement marking tape when both the air and surface temperature are 40 degrees F and rising.

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

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

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

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

2) For the remainder counties:

    - Apply either adhesive.

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

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

D Measurement

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

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
646.0881.S	Pavement Marking Grooved Wet Reflective Tape 4-Inch	LF
646.0883.S	Pavement Marking Grooved Wet Reflective Tape 8-Inch	LF

Payment is full compensation for cleaning and preparing the pavement surface; furnishing and installing the material; and for removing temporary pavement marking, if necessary.
646-018 (20120615)

29. Locating No-Passing Zones, Item 648.0100.

The spotting sight distance in areas with a 35 mph posted speed limit (STH 164 from Station 165+00 to Station 192+00) is 0.13 miles (686 feet).

The spotting sight distance in areas with a 40 mph posted speed limit (STH 164 from Station 137+25 to Station 165+00 and from Station 192+00 to Station 224+50) is 0.13 miles (686 feet).

The spotting sight distance in areas with a 50 mph posted speed limit (STH 164 from Station 224+50 to Station 242+50) is 0.16 miles (845 feet).

The spotting sight distance in areas with a 55 mph posted speed limit (STH 164 from Station 242+50 to Station 270+83) is 0.21 miles (1108 feet).

30. Electrical Service Meter Breaker Pedestal Intersection of STH 164 and Edgewood Avenue, Item 656.0200.01, and Intersection of STH 164 and CTH L, Item 656.0200.02.

Append standard spec 656.2.3 with the following:

The department will be responsible for the electric service installation request for any department maintained facility. Notify the maintaining authority if the signal is not state maintained that it is their responsibility to arrange for the electrical service installation.

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

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

Append standard spec 656.5(3) with the following:

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

31. Traffic Signal Faces, Item 658.0110.

Append standard spec 658.3.2(3) with the following:

Connect all ungrounded conductors with wire nuts in the appropriate sections of the signal heads, when directed by WisDOT personnel. Connect the neutral conductors to the terminal strip. Be certain to twist wires prior to installing the wire nuts. All wire nuts must be installed facing up to prevent the entrance of water.

32. Pedestrian Signal Face, Item 658.0416.

Append standard spec 658.2.4(1) with the following:

The contractor shall furnish 16 inch LED ready pedestrian signal housing, drilled for top/bottom pipe mount with the ability to rotate 270 degrees on poly mounting bracket. Black polycarbonate door with integral "Z" style protectors, egg-crate type visor, lens and gasket mounted to door with four 1-1/2 inch stainless steel tabs.

Append standard spec 658.2.4(2) with the following:

The contractor shall anchor a 5-position, 20a terminal block in the pedestrian signal face to the housing with threaded screws.

Append standard spec 658.2.4(3) with the following:

The contractor shall furnish 16-inch, incandescent look, full symbol, and dual pedestrian, countdown signal module with Portland Orange hand, Lunar White man and Portland Orange countdown symbols, made of an approved polycarbonate resin.

Append standard spec 658.3.4(3) with the following:

Connect all ungrounded conductors with wire nuts in the appropriate sections of the signal heads, when directed by WisDOT personnel. Connect the neutral conductors to the terminal strip. Be certain to twist wires prior to installing the wire nuts. All wire nuts must be installed facing up to prevent the entrance of water.

33. Pedestrian Push Buttons, Item 658.0500.

Append standard spec 658.2.5 with the following:

The contractor shall furnish vandal resistant, pressure activated, pedestrian push buttons, with die cast body type, in unfinished aluminum or yellow. Button constructed shall be constructed of stainless steel, with a Piezo driven solid state switch, momentary LED display and beeper that sounds simultaneously with button push.

The contractor shall furnish low profile, unfinished cast aluminum, vandal resistant, and flush mounting pole mount.

The contractor shall place a Size 1, Type H reflective (R10-3EL, R, D) sign sticker (per state sign plate), message series – B, directly above each push button. Include a directional arrow or arrows on the sign as the plans show.

34. Poles Type 13, Item SPV.0060.01.

A Description

Work under this item consists of furnishing and installing monotube poles.

B Materials

Design support structures conforming to the minimum wall thickness the plan details show and to AASHTO design and fabrication standards for structural supports for highway signs, luminaries, and traffic signals. Use a design life of 50 years. Design to withstand a 3 second gust wind speed of 90 mph (145 km/h). Do not use the methods of Appendix C of those AASHTO standards.

Use Category III criteria for Type 9 and Type 10 Poles. Use Category II criteria for Type 12 and Type 13 Poles.

For structures requiring a fatigue analysis, use 45 mph (72 km/h) for truck-induced gusts.

After welding and before zinc coating, clean the exterior surface of each steel pole free of all loose rust and mill scale, dirt, oil or grease, and other foreign substances.

Apply a zinc coating conforming to the process specified for steel sign bridges in 641.2.8. Ensure that the zinc coating is tight, free from rough areas or slag, and presents a uniform appearance.

After completing manufacturing, clean the exterior surfaces of each pole free of all loose scale, dirt, oil or grease, and other foreign substances.

Provide a reinforced hand hole measuring 4 inches by 6 inches (100 mm by 150 mm) as the plans show. Locate the hand hole 18 inches (450 mm) from the bottom of the pole base to the center of the door.

For the hand hole, include an access cover mounted to the pole by two ¼”-20 x ¾” (m6 x 1.00 x 19 mm) hex-head stainless steel bolts.

Provide a grounding lug complete with mounting hardware, as required, inside the pole as the plans show.

Provide access to the grounding lug from the hand hole. Weld the ground lug directly opposite the hand hole on the inside wall of the pole.

Equip the top of the shaft with a removable, ventilated cap held securely in place by at least 3 ¼” -20 x ¾” (m6 x 1.00 x 19 mm) hex-head stainless steel set screws.

Ensure that all castings are clean, smooth, and with all details well defined and true to pattern.

Attach base plates firmly to the pole shaft by welding or other approved method.

Include anchor bolts meeting AASHTO standards applicable to the pole type and loading. Provide a mounting template that ensures correct installation of anchor bots in foundation.

C Construction

Install poles as specified in the plan details and using appropriate contractor-furnished anchor bolts and hardware. Use the appropriate anchor bolt template to ensure correct installation. Secure pole to anchor assembly and document tensioning procedures conforming to standard spec 641.3.1.2.

After completing erection using normal pole shaft raking techniques, ensure the centerline of the shaft appears vertical.

D Measurement

The department will measure Poles Type 13 as each individual pole, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.01	Poles Type 13	Each

Payment is full compensation for providing and installing poles including all hardware and fittings necessary to install the poles, and for installing identification plaques, if required.

35. Concrete Bases Type 13, Contractor Supplied Anchor Bolts and Anchor Rod Template, Item SPV.0060.02.

A Description

This special provision describes constructing concrete bases, including the use of contractor supplied anchor bolts and anchor rod templates.

B Materials

B1. Concrete Bases

Furnish grade A, A-FA, A-S, A-T, A-IS, or A-IP concrete conforming to standard spec 501.2 as modified in standard spec 716. Provide QMP for class III ancillary concrete as specified in standard spec 716.

Furnish bar steel reinforcement conforming tostandard spec 505.2.

Use schedule 40 PVC electrical conduit conforming to the electrical conduit specified in standard spec 652.

B2. Anchor Bolts
Provide anchor bolts conforming to AASHTO M 314, grade 55 and Supplementary Specification S1, or ASTM F1554 Grade 55. Threads on bolts shall be formed by rolling.

Hot-dip galvanize the entire length of the anchor rods according to AASHTO M111. Hot-dip the nuts and washers according to AASHTO M232. Use zinc coated nuts manufactured with sufficient allowance to allow nuts to run freely on the threads.

B3. Anchor Rod Template
Furnish a steel top and bottom template conforming to ASTM A709, grade 36 as part of each anchor assembly. Provide a top template of sufficient gauge to hold the anchor rods securely in position at the top, and resist racking or twisting during the pour. Use a ½-inch thick bottom anchor plate-template and secure it to each anchor rod. Templates shall not be welded to the anchor rods.

C Construction
C1. Concrete Bases Construct concrete bases, including necessary hardware, as specified in standard spec 501 and plan details, and provide the surface finish specified in standard spec 502.3.7.2. Inspect the forming and applicable reinforcement for concrete bases before pouring the concrete. Cure exposed portions of concrete bases as specified for concrete pavement in standard spec 415.3.12 except the contractor may use curing compound conforming to standard spec 501.2.9. Wait at least 7 days before installing poles.

C2. Anchor Bolts
Lubricate anchor bolt threads and nuts with bees wax or other high-wax lubricant. Set leveling nuts to the required elevation before installing the structure. Adjust top nuts and leveling nuts to align and plumb the structure. Ensure that all nuts are snug-tight with no gaps. Tighten each top nut 1/3 turn past snug for bolts 1 1/2 inch or smaller in diameter and 1/6 turn for larger diameter bolts conforming to the tightening sequence specified on department form DT 2321. If required, install jamb nuts wrench tight.

Complete department form DT 2321 for each structure. Indicate the parties responsible for the installation and submit the form to the engineer for inclusion in the permanent project record.

C3. Anchor Rod Templates
Secure the anchor rod template to all anchor rods at one time in its correct position as the plan details show. Ensure relative movement and misalignment does not occur. If any twisting, racking, or other movement of the anchor rods out of plumb, projection, or pattern, or any damage to the threads exists the engineer will reject the entire base.

Maintain the clear distance between the soil and the reinforcing steel cage using the means the plan detail shows. Do not weld the anchor rods to each other, the reinforcing steel cage, and the templates or to any other component of the foundation.

If an anchor rod template is located above the concrete surface, it may be removed 24 hours after placing the concrete.

D Measurement
The department will measure Concrete Bases Type 13, Contractor Supplied Anchor Bolts and Anchor Rod Template 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.0060.02	Concrete Bases Type 13, Contractor Supplied Anchor Bolts and Anchor Rod Template	Each

Payment for the Concrete Bases Type 13, Contractor Supplied Anchor Bolts and Anchor Rod Template is full compensation for providing concrete, reinforcing steel, and electrical conduit; for providing anchor rods, templates, nuts, and washers; for excavating; for driving steel piling if required; for installing electrical conduit, electrical ground, templates; for placing and curing concrete; for backfilling; and for disposing of surplus material and restoring the site.

36. Monotube Arms 40-FT, Item SPV.0060.03.

A Description
Work under this item consists of furnishing and installing monotube arms.

B Materials
Design support structures conforming to the minimum wall thickness the plan details show and to AASHTO design and fabrication standards for structural supports for highway signs, luminaires, and traffic signals. Use a design life of 50 years. Design to withstand a 3 second gust wind speed of 90 mph (145 km/h). Do not use the methods of appendix C of those AASHTO standards.

Use category III criteria for 15 to 30-foot arms. Use category II criteria for 35 to 55-foot arms.

For structures requiring a fatigue analysis, use 45 mph (72 km/h) for truck-induced gusts.

Base the designs on the completed maximum loading configuration the standard detail drawing shows. Along with the materials list, submit a certificate of compliance certifying that the arms as furnished, conform to the above structural performance requirements. Ensure that the certificate of compliance is on the manufacturer's letterhead, signed by an authorized company officer, and notarized. Send a copy of the

certificate and a copy of the monotube arm shop drawings to the department electrical engineer.

Furnish monotube arms conforming to the following:

1. Consist of zinc coated steel round or oval members.

2. Have a mounting device welded to the pole end of the monotube arm that allows the attachment of the arm to a pole as the plans show.

3. Have stiffeners or gussets if required between the arm tube and the arm mounting device to provide adequate strength to resist side loads.

4. Have a clean, uniform natural finish. No paint or other corrosion preventive maintenance coating is required.

After welding and before zinc coating, clean exterior surfaces of each arm free of all loose rust and mill scale, dirt, oil or grease, and other foreign substances.

Apply zinc coating as specified for sign bridge components in standard spec 641.2.8. Ensure that the zinc coating is tight, free from rough areas or slag, and presents a uniform appearance.

After manufacturing is complete, clean the exterior surfaces of each pole free of all loose scale, dirt, oil, or grease, and other foreign substances.

C (Vacant)

D Measurement
The department will measure Monotube Arm 40-FT as each individual arm, 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	Monotube Arms 40-FT	Each

Payment is full compensation for providing and installing all materials, including all hardware, fittings, mounting devices, shims, and attachments necessary to completely install the arms.

37. Luminaire Arms Steel 15-FT, Item SPV.0060.04.

A Description
Work under this item consists of furnishing and installing steel luminaire arms.

B Materials

Design support structures conforming to the minimum wall thickness the plan details show and to AASHTO design and fabrication standards for structural supports for highway signs, luminaires, and traffic signals. Use a design life of 50 years. Design to withstand a 3 second gust wind speed of 90 mph (145 km/h). Do not use the methods of appendix C of those AASHTO standards.

Use category III criteria if mounted on top of a Type 10 pole and category II criteria if mounted on top of a Type 13 pole.

For structures requiring a fatigue analysis, use 45 mph (72 km/h) for truck-induced gusts.

Base the designs on the completed maximum loading configuration the standard detail drawing shows. Along with the materials list, submit a certificate of compliance certifying that the arms as furnished conform to the above structural performance requirements. Ensure that the certificate of compliance is on the manufacturer's letterhead, signed by an authorized company officer, and notarized. Send a copy of the certificate and a copy of the luminaire arm shop drawings to the department electrical engineer.

Furnish luminaire arms conforming to the following:

1. Consist of zinc coated steel round or oval members.

2. Have a mounting device welded to the pole end of the luminaire arm that allows the attachment of the arm to a pole as the plans show.

3. Have stiffeners or gussets if required between the arm tube and the arm mounting device to provide adequate strength to resist side loads.

4. Have a clean, uniform natural finish. No paint or other corrosion preventive maintenance coating is required.

After welding and before zinc coating, clean exterior surfaces of each arm free of all loose rust and mill scale, dirt, oil or grease, and other foreign substances.

Apply zinc coating as specified for sign bridge components in standard spec 641.2.8. Ensure that the zinc coating is tight, free from rough areas or slag, and presents a uniform appearance.

After manufacturing is complete, clean the exterior surfaces of each pole free of all loose scale, dirt, oil, or grease, and other foreign substances.

C (Vacant)

D Measurement
The department will measure Luminaire Arms Steel 15-Foot as each individual arm, 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	Luminaire Arms Steel 15-FT	Each

Payment is full compensation for providing and installing all materials, including all hardware, fittings, mounting clamps, shims if required and attachments necessary to completely install arms.

38. Luminaires Utility LED Category C, Item SPV.0060.05.

A Description
This special provision describes furnishing and installing Light Emitting Diode (LED) roadway luminaires.

B Materials
Furnish Luminaires Utility LED Category C from the department qualified product list. 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 gray powder-coated or anodized aluminum 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 (+/- 300K) 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 and 480 V with 90% power factor and THD 20% max at full load. Surge protection shall be provided and tested in accordance to the 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:

- Philips RVM-215W128LED4K-LE3
- Cree STR-LWY-2S-HT-10-D-UL-SV-700-43K

Furnish shop drawings as specified in standard spec 506.3.2, except submit 5 copies with the materials list. Ensure the drawings contain sufficient detail to allow satisfactory review and show the dimensions of all equipment shown in the plans.

C Construction
Under the bid item Luminaires Utility LED Category C, 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. 12 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.

The contractor shall 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 Luminaires Utility LED Category C 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.0060.05	Luminaires Utility LED Category C	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.

39. Retaining Wall End Cap, Item SPV.0060.06.

A Description
This special provision describes furnishing a cast in place concrete end cap at the location shown on the plans. The end cap shall cover the ends of the existing and the proposed retaining walls.

B Materials
Provide concrete masonry in accordance to standard spec 501.

C Construction
Perform construction in accordance to standard spec 502.3.

D Measurement
The department will measure Retaining Wall End Cap as each individual unit, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.06	Retaining Wall End Cap	Each

Payment is full compensation for furnishing, hauling and placing of all materials; excavation, backfilling and disposing of excess material.

40. Pavement Marking Grooved Preformed Thermoplastic Arrows Type 2, Item SPV.0060.07; Arrows Type 3, Item SPV.0060.08; Words, Item SPV.0060.09.

A Description
This special provision describes grooving the pavement surface, and furnishing and installing preformed thermoplastic pavement marking as shown on the plans, in accordance with standard spec 647, and as hereinafter provided.

B Materials
Furnish 125 mils preformed thermoplastic pavement marking from the department's approved products list. If required, furnish sealant material recommended by the manufacturer.

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

Plane the grooved lines in accordance with the plan details. Use grooving equipment with a free-floating, independent cutting or grinding head. Plane a minimum number of passes to create a smooth groove.

C.2 Groove Depth
Cut the groove to a depth of 120 mils ±10 mils deep from the pavement surface or, if tined, from the high point of the tined surface. Measure depth using a straightedge placed perpendicular to the groove. The department may periodically check groove depths.

C.3 Groove Width – Linear Markings
Cut the groove 1-inch wider than the width of the thermoplastic.

C.4 Groove Position
Position the groove edge in accordance with the plan details.

C.4.1 Linear Marking
Groove at a minimum of 4-inches, but not greater than, 12-inches from both ends of the line segment. Achieve straight alignment with the grooving equipment.

C.4.2 Special Marking
Groove at a minimum of 4-inches from the perimeter of the special marking. Groove separate areas for Word Items.

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

If water is used in the grooving process, allow the groove to dry a minimum of 24 hours after groove cleaning, after removal of excess water, and prior to pavement marking application. Clean and dry the groove for proper application of the sealant, and placement of the pavement marking. Use a high-pressure air blower with at least 185 ft^3/min air flow and 90 psi air pressure to clean the groove; use of the air blower does not decrease the amount of time required for the groove to dry.

C.5.2 Asphalt
Use a high-pressure air blower with at least 185 ft^3/min air flow and 90 psi air pressure to clean the groove.

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

C.6 Preformed Thermoplastic Application
Preheat the surface if necessary based on manufacturer's recommendation.

Apply preformed thermoplastic in the groove as per manufacturer's recommendations. If manufacturer's recommendations require a sealant, apply a sealant lower than 91g/l VOC during the following period of time due to Volatile Organic Compound Limitations:

May 1 to September 30, both dates inclusive – the Southeast Region and the ozone non-attainment Northeast Region counties of Sheboygan, Manitowoc, and Kewaunee.

Use any sealant in the remainder counties and for the remainder of the year. The sealant must be wet.

D Measurement
The department will measure Pavement Marking Grooved Preformed Thermoplastic (Type) as each individual pavement marking 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.0060.07	Pavement Marking Grooved Preformed Thermoplastic Arrows Type 2	Each
SPV.0060.08	Pavement Marking Grooved Preformed Thermoplastic Arrows Type 3	Each
SPV.0060.09	Pavement Marking Grooved Preformed Thermoplastic Words	Each

Payment is full compensation for cleaning and preparing the pavement surface, furnishing and installing the material; and for furnishing all labor, tools, equipment, and incidentals necessary to complete the contract work.

41. Adjusting Sanitary Sewer Manhole Castings, Item SPV.0060.10.

A Description
This special provision describes adjusting existing sanitary sewer manhole castings to grade by adding or removing adjusting rings. Perform the work in accordance with standard spec 611 and as hereinafter provided.

B Materials
Provide precast concrete grade rings conforming to the requirements of Section 8.39.11 of the Standard Specifications for Sewer and Water Construction in Wisconsin, Sixth Edition. Grade rings shall match the dimensions of existing rings and/or manhole castings.

Provide frame and chimney sealant composed of butyl rubber caulk conforming to the requirements of AASHTO M-198 Type B.

C Construction
Prevent debris from falling into manhole. Any debris which falls into the manhole shall be removed immediately.

Remove existing internal seal and add or remove grade rings to adjust to the proper height. Apply chimney sealant to grade rings before installation. Do not use bricks, stones, wood, or other pieces to set rings.

Reinstall existing internal seal in accordance with manufacturer's recommendations. If required, provide seal extensions to extend seal from manhole frame to the manhole corbel.

D Measurement
The department will measure Adjusting Sanitary Sewer Manhole Castings as each individual unit, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.10	Adjusting Sanitary Sewer Manhole Castings	Each

Payment is full compensation for adjusting the casting including removal, adjusting rings, and reinstalling interior seal; and for furnishing all labor, tools, equipment, services and incidentals necessary to complete the contract work.

42. Traffic Signal Emergency Vehicle Preemption (EVP) Detector Cable Installed, Item SPV.0090.01.

A Description
This special provision describes the transporting and installing of department furnished traffic signal emergency vehicle preemption (EVP) detector cable.

B Materials
The contractor shall pick up the department furnished materials at the department's Electrical Shop located at 935 South 60th Street, West Allis. Notify the department's Electrical Field Unit at (414) 266-1170 and make arrangements for picking up the department furnished materials five working days prior to picking the materials up.

C Construction
Install the EVP detector cable as shown on the plans. The department's Electrical Personnel will terminate both ends of each cable run and install the discriminators and card racks in the cabinet.

Install the EVP detector cable to run continuously (without splices) from the pull box nearest the cabinet, coiling enough cable in the pull box to reach the cabinet plus an additional 6 feet, to the pull box nearest the appropriate base, leaving enough cable in the pull box to reach the top of the signal pole plus an additional 2.5 feet. In the case of a mast arm installation provide enough cable to reach the end of the mast arm plus an additional 2.5 feet.

Mark each end of the lead appropriately as to which signal phase it is associated with. At no time will the contractor have entry to the control cabinet without the presence of a department electrician.

Do not splice detector cable from the detector assembly to the controller terminations.

Notify department's Electrical Shop at (414) 266-1170 upon completion of the installation of the EVP detector cable.

D Measurement
The department will measure Traffic Signal Emergency Vehicle Preemption (EVP) Detector Cable Installed by the foot of cable, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.01	Traffic Signal Emergency Vehicle Preemption Detector Cable Installed	LF

Payment is full compensation for transporting and installing the Traffic Signal Emergency Vehicle Preemption Detector Cable.

43. Split Rail Fence, Item SPV.0090.02.

A Description
This special provision describes furnishing and erecting split rail fence at the locations shown on the plans in accordance to the details of the plans.

B Materials
Materials used in the work shall meet the requirements as specified below:

Wood posts and rails shall be #1 grade Western Red Cedar. The rails shall be 10 feet in length with a circumference of 12 inches and weigh 24 pounds. Posts shall be 6 feet 6 inches in length with a circumference of 18 inches and weigh 37 pounds. The posts shall conform to the dimensions described with a tolerance of plus two inches for length. Posts shall have pre-drilled holes for rails.

C Construction
Excavate post holes to the required depth and location as shown on the plans. Furnish backfill that is a suitable material; place and compact in layers about the post until the post is firmly embedded, plumb and true to alignment. If rock is encountered, employ necessary drilling or other means of excavation.

D Measurement
The department will measure Split Rail Fence by the linear foot, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.02	Split Rail Fence	LF

Payment is full compensation for furnishing all materials; for erecting fence, including all hauling, clearing and grubbing; for excavation of post holes, setting posts, and placing rails; for removal and proper disposal of all debris, excess excavation and surplus materials.

44. Heavy Duty Silt Fence, Item SPV.0090.03.

A Description

Furnish, install, and remove heavy duty silt fence as shown on the plans or as directed by the engineer before construction activities begin. Remove the silt fence only after construction activities have been completed. Remove trapped silt prior to removing the fence as directed by the engineer. Use in wetland areas with 6-12 inches of standing water.

B Materials

Furnish heavy duty silt fence consisting of a composite of woven wire fabric, posts, geotextile fabric, and fasteners to be assembled by the contractor. Woven wire fabric shall be a standard field fence type a minimum of 5 feet high with a maximum mesh spacing of 6 inches and minimum 14½-gage wire.

Posts shall be metal with a minimum length of 8 feet, 3 inches. Metal posts shall be "studded tee" or "U" type with a minimum weight of 1.3 lb/ft.

The geotextile fabric shall be non-woven with properties as specified in standard spec 628.2.6.1.

C Construction

Install heavy duty silt fence as shown on the plans. Spacing of ties and anchors shall be adequate to resist current flow.

D Measurement

The department will measure Heavy Duty Silt Fence by the linear foot, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.03	Heavy Duty Silt Fence	LF

Payment is full compensation for furnishing, installing, removing and disposing of all materials.

45. Pavement Marking Grooved Preformed Thermoplastic Stop Line 18-Inch, Item SPV.0090.04; Crosswalk 6-Inch, Item SPV.0090.05.

A Description

This special provision describes grooving the pavement surface, and furnishing and installing preformed thermoplastic pavement marking as shown on the plans, in accordance with standard spec 647, and as hereinafter provided.

B Materials

Furnish 125 mils preformed thermoplastic pavement marking from the department's approved products list. If required, furnish sealant material recommended by the manufacturer.

C Construction

C.1 General

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

Plane the grooved lines in accordance with the plan details. Use grooving equipment with a free-floating, independent cutting or grinding head. Plane a minimum number of passes to create a smooth groove.

C.2 Groove Depth

Cut the groove to a depth of 120 mils ±10 mils deep from the pavement surface or, if tined, from the high point of the tined surface. Measure depth using a straightedge placed perpendicular to the groove. The department may periodically check groove depths.

C.3 Groove Width – Linear Markings

Cut the groove 1-inch wider than the width of the thermoplastic.

C.4 Groove Position

Position the groove edge in accordance with the plan details.

C.4.1 Linear Marking

Groove at a minimum of 4-inches, but not greater than, 12-inches from both ends of the line segment. Achieve straight alignment with the grooving equipment.

C.4.2 Special Marking

Groove at a minimum of 4-inches from the perimeter of the special marking. Groove separate areas for Word Items.

C.5 Groove Cleaning

C.5.1 Concrete

Cooling the cutting head with water may be necessary for some applications and equipment. If cooling water is necessary, flush the groove immediately with water after

cutting to remove any build-up of cement dust and water slurry. If this is not done, the slurry may harden in the groove.

If water is used in the grooving process, allow the groove to dry a minimum of 24 hours after groove cleaning, after removal of excess water, and prior to pavement marking application. Clean and dry the groove for proper application of the sealant, and placement of the pavement marking. Use a high-pressure air blower with at least 185 ft^3/min air flow and 90 psi air pressure to clean the groove; use of the air blower does not decrease the amount of time required for the groove to dry.

C.5.2 Asphalt

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

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

C.6 Preformed Thermoplastic Application

Preheat the surface if necessary based on manufacturer's recommendation.

Apply preformed thermoplastic in the groove as per manufacturer's recommendations. If manufacturer's recommendations require a sealant, apply a sealant lower than 91g/l VOC during the following period of time due to Volatile Organic Compound Limitations:

May 1 to September 30, both dates inclusive – the Southeast Region and the ozone non-attainment Northeast Region counties of Sheboygan, Manitowoc, and Kewaunee.

Use any sealant in the remainder counties and for the remainder of the year. The sealant must be wet.

D Measurement

The department will measure Pavement Marking Grooved Preformed Thermoplastic (Inch) by the linear foot of tape, 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.0090.04	Pavement Marking Grooved Preformed Thermoplastic Stop Line 18-Inch	LF
SPV.0090.05	Pavement Marking Grooved Preformed Thermoplastic Crosswalk 6-Inch	LF

Payment is full compensation for cleaning and preparing the pavement surface, and for furnishing and installing the material.

46. Install Vendor Supplied Traffic Signal Cabinet, Intersection of STH 164 and Edgewood Avenue, Item SPV.0105.01, and Intersection of STH 164 and CTH L, Item SPV.0105.02.

A Description

This special provision describes the transporting and installing of the vendor furnished traffic signal cabinet, signal controller, and other cabinet equipment for traffic signals, and for making the cabinet fully operational as shown in the plans.

B Materials

Pick up the vendor furnished materials at the department's Electrical Shop located at 935 South 60th Street, West Allis. Notify the department's Electrical Field Unit at (414) 266-1170 and make arrangements for picking up the vendor furnished materials five working days prior to picking the materials up. The department will provide notification at the preconstruction meeting of the traffic signal cabinet vendor and provide the vendor's contact information.

The region signal engineer will provide the project plans and specifications to the department's traffic signal cabinet vendor prior to scheduled field installation. It shall be the contractor's responsibility to deliver the traffic signal cabinet from the department's Electrical Shop to the site location.

Coordinate directly with the department's Traffic Signal Cabinet vendor to schedule the cabinet acceptance testing. Notify the department's Electrical Field Unit at (414) 266-1170 and participate in the acceptance testing. The department has the final determination of the cabinet acceptance testing date and time. The acceptance testing procedures will be provided by the department.

Append standard spec 651.3.3 (6) with the following:

Operate the completed traffic signal installation for 30 days consecutively, using the specified signal sequence(s) and all special functions, such as preemption as the plans show or as specified by the engineer.

The department shall not be responsible for project delays and costs due to the delays of delivery by the vendor or by the failure of the Traffic Signal Cabinet to pass acceptance testing.

Provide all other needed materials in conformance with standard spec 651.2, 652.2, 653.2, 654.2, 655.2, 656.2, 657.2, 658.2 and 659.2.

C Construction

Perform work in accordance to standard spec 651.3, 652.3, 653.3, 654.3, 655.3, 656.3, 657.3, 658.3 and 659.3 except as specified below.

Install the vendor supplied traffic signal cabinet on the concrete control cabinet base the same day it is transported from the department's Electrical Shop to the site location.

Request a signal inspection of the completed signal installation to the engineer at least five working days prior to the time of the requested inspection. The departments' region electrical personnel will perform the inspection.

D Measurement

The department will measure Traffic Signal Cabinet Installation [Location] as a single lump sum unit of work, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.01	Install Vendor Supplied Traffic Signal Cabinet, Intersection of STH 164 and Edgewood Avenue	LS
SPV.0105.02	Install Vendor Supplied Traffic Signal Cabinet, Intersection of STH 164 and CTH L	LS

Payment is full compensation for pickup, transport, installing and testing the Traffic Signal Cabinet; for furnishing and installing all other items necessary (such as, wire nuts, splice kits and/or connectors, tape, insulating varnish, ground lug fasteners, etc.) to make the proposed system complete from the source of supply to the most remote unit and for clean-up and waste disposal.

47. Transporting and Installing State Furnished Autoscope Video Detection System, Intersection of STH 164 and Edgewood Avenue, Item SPV.0105.03; Intersection of STH 164 and CTH L, Item SPV.0105.04.

A Description

This special provision describes the transporting and installing of department furnished Traffic Signal Autoscope Video Detection System in Monotubes and Luminaires.

B Materials

The contractor shall pick up all the department furnished Autoscope Video Detection System for all state maintained traffic signals for the project at the Electrical Shop in West Allis.

C Construction

Install the Traffic Signal Terra Power Cable 18/3, pole/arm mounting bracket and camera as shown on the plans (the final determination of location will be made by the department's electrical personnel to ensure best line of sight). The department's Electrical Field Unit (EFU) shall install State-furnished Autoscope video equipment in the traffic signal control cabinet.

Install the Traffic Signal Terra Power Cable 18/3 to run continuously (without splices) from the pull box nearest the cabinet ensuring enough cable to reach the cabinet plus an additional 10 feet, to the mounting bracket on the Monotube or luminaire arm. Provide enough cable to reach the end of the Monotube or luminaire arm plus an additional 2.5 feet. Leave 10 feet of cable in each pull box and an additional 20 feet coiled in pull box nearest the signal base.

Mark each end of the lead appropriately to indicate the equipment label (i.e. VID1, VID2, etc.). Splice, solder and shrink wrap the Terra power cable to the camera manufacturer's cable whip. Allow 3 feet of slack on each cable.

Notify department's Electrical Shop at (414) 266-1170 upon completion of the Monotube and Luminaire installation of the Traffic Signal Terra Power Cable 18/3 at each intersection. Camera programming will be performed by the department with assistance from the vendor and the contractor when operation of the permanent signal begins.

D Measurement

The department will measure Transporting and Installing State Furnished Autoscope Video Detection System (Location) as a single lump sum unit of work for each intersection, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.03	Transporting and Installing State-furnished Autoscope Video Detection System, Intersection of STH 164 and Edgewood Avenue	LS
SPV.0105.04	Transporting and Installing State-furnished Autoscope Video Detection System, Intersection of STH 164 and CTH L	LS

Payment is full compensation for transporting and installing the Intersection Autoscope Video Detection System, Traffic Signal Terra Power Cable 18/3, cable whips, mounting hardware, cameras and programming and for furnishing all labor, tools, equipment, and incidentals necessary to complete the contract work.

48. Emergency Vehicle Preemption (EVP) Detector Head Installation, Intersection of STH 164 and Edgewood Avenue, Item SPV.0105.05, and Intersection of STH 164 and CTH L, Item SPV.0105.06.

A Description

This special provision describes the transporting and installing of department furnished emergency vehicle preemption (EVP) detector heads and EVP detector head mounting brackets.

B Materials
Use materials furnished by the department including: EVP detector heads and EVP detector head mounting brackets.

Pick up the department furnished materials at the department's Electrical Shop located at 935 South 60th Street, West Allis. Notify the department's Electrical Field Unit at (414) 266-1170 and make arrangements for picking up the department furnished materials five working days prior to picking the materials up.

C Construction
Install the EVP detector heads and EVP detector head mounting brackets as shown on the plans. The department will determine the exact location to ensure that the installation does not create a sight obstruction. The department will terminate the EVP cable ends and install the discriminators and card rack in the cabinet.

Notify the department's Electrical shop at (414) 266-1170 upon completion of the installation of the EVP detector heads and EVP detector head mounting brackets.

D Measurement
The department will measure Emergency Vehicle Pre-emption EVP Detector Head Installation (Location) as a single lump sum unit of work, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.05	Emergency Vehicle Preemption (EVP) Detector Head Installation, Intersection of STH 164 and Edgewood Avenue	LS
SPV.0105.06	Emergency Vehicle Preemption (EVP) Detector Head Installation, Intersection of STH 164 and CTH L	LS

Payment is full compensation for transporting and installing of department furnished EVP detector heads and EVP detector head mounting brackets.

49. Remove Traffic Signals Intersection of STH 164 and Edgewood Avenue, Item SPV.0105.07.

A Description
This special provision describes removing existing traffic signals at the intersection of STH 164 and Edgewood Avenue in accordance to the pertinent provisions of standard spec 204 and as hereinafter provided. Specific removal items are noted in the plans.

B (Vacant)

C Construction

Arrange for the de-energizing of the traffic signals with the local electrical utility after receiving approval from the engineer that the existing traffic signals can be removed.

Notify the department's Electrical Field Unit at (414) 266-1170 at least five working days prior to the removal of the traffic signals. Complete the removal work as soon as possible following shut down of this equipment.

The department assumes that all equipment is in good condition and in working order prior to the contractor's removal operation. Prior to removal, inspect and provide a list of any damaged or non-working traffic signal equipment to the engineer. Any equipment not identified as damaged or not working, prior to removal, will be replaced by the contractor at no cost to the department.

Remove all standards and poles per plan from their concrete footings and disassemble out of traffic. Remove the transformer bases from each pole. Remove video detection cameras per plan. Remove the signal heads, mast arms, luminaires, wiring/cabling, and traffic signal mounting devices from each signal standard, arm or pole. Ensure that all access hand hole doors and all associated hardware remain intact. Dispose of the underground signal cable, internal wires and street lighting cable off the state right-of-way. Deliver the remaining materials to the West Allis Electrical Service Facility at 935 South 60th Street, West Allis, Milwaukee County. Contact the department's Electrical Field Unit at (414) 266-1170 at least five working days prior to delivery to make arrangements.

DOT forces will remove the signal cabinet from the footing. The signal cabinet and associated signal cabinet equipment will be removed from the site by DOT forces and will remain the property of the department.

D Measurement

The department will measure Remove Traffic Signals (Location) as a single lump sum unit of work for each intersection, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.07	Remove Traffic Signals Intersection of STH 164 and Edgewood Avenue	LS

Payment is full compensation for removing, disassembling traffic signals, scrapping of some materials, disposing of scrap material, for delivering the requested materials to the department, and incidentals necessary to complete the contract work.

50. Concrete Pavement Joint Layout, Item SPV.0105.08.

A Description

This work shall consist of staking the location of all joints on the project, including mainline and intersections to accommodate the concrete paving operation. The contractor shall set all points necessary to establish the horizontal position of the dowel bar sets and saw joints in the concrete pavement in accordance to the plans or as directed by the engineer.

B (Vacant)

C Construction

Plan and locate all points necessary to establish the horizontal position of the transverse and longitudinal joints in the concrete to prevent uncontrolled cracking. Mark the location of all concrete joints in the field. Make joint adjustments as required to fit field conditions, traffic staging, or as directed by the engineer.

D Measurement

The department will measure Concrete Pavement Joint Layout 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.0105.08	Concrete Pavement Joint Layout	LS

Payment is full compensation for survey work necessary to locate all dowel bar sets and saw joints on the mainline and intersections, and for adjustments to match field conditions and traffic staging.

ADDITIONAL SPECIAL PROVISION 4

Payment to all Subcontractors. Within 10 calendar days of receipt by a contractor of a progress payment for work performed, materials furnished, or materials stockpiled by a subcontractor, the contractor shall pay that subcontractor for all work satisfactorily performed and for all materials furnished or stockpiled.

The contractor agrees further to release retainage amounts to each subcontractor within 10 calendar days after the subcontractor's work is satisfactorily completed. In addition, whenever the Department reduces the contract retainage amount, within 10 calendar days of receipt by a contractor of a retainage payment, the contractor must reduce the total amount retained from subcontractors to no more than remains retained by the Department.

The contractor shall pay the subcontractor within the time frames described above unless the contractor complies with both of the following within 10 calendar days of receiving the Department's progress payment:

1) The contractor notifies the subcontractor in writing that the work is not satisfactorily completed.
2) The contractor requests approval from the Department to delay payment because the subcontractor has not satisfactorily completed the work.

The contractor's request for approval should include the written notification to the subcontractor and shall provide sufficient documentation of good cause to assist the engineer in making a timely decision. If the engineer does not grant approval, the contractor shall pay the subcontractor within 10 calendar days of the Department's decision.

All subcontracting agreements made by a contractor shall include the above provisions and shall be binding on all contractors and subcontractors.

The contractor certifies compliance with the requirements of this Additional Special Provision by signing the contract. This clause applies to both DBE and non-DBE subcontractors.

ADDITIONAL SPECIAL PROVISION 6
ASP 6 - Modifications to the standard specifications

Make the following revisions to the 2013 edition of the standard specifications:

106.3.4.3.1 General

Replace paragraph two with the following effective with the November 2012 letting:

(2) Required sampling and testing methodologies and documentation are specified in CMM chapter 8.

(3) If disputed, approval of materials and components, as well as acceptance of the work incorporating those materials or components, is subject to review under the QMP dispute resolution process.

107.17.3 Railroad Insurance Requirements

Replace the entire text with the following effective with the August 2012 letting:

(1) If required by the special provisions, provide or arrange for a subcontractor to provide railroad protective liability insurance in addition to the types and limits of insurance required in 107.26. Keep railroad protective liability insurance coverage in force until completing all work, under or incidental to the contract, on the railroad right of way or premises of the railroad and until the department has accepted the work as specified in 105.11.2.4.

(2) Provide railroad protective liability insurance coverage written as specified in 23 CFR part 646 subpart A. Provide a separate policy for each railroad owning tracks on the project. Ensure that the railroad protective liability insurance policies provide the following minimum limits of coverage:

1. Coverage A, bodily injury liability and property damage liability; $2 million per occurrence.
2. Coverage B, physical damage to property liability; $2 million per occurrence.
3. An annual aggregate amount of $6 million that shall apply separately to each policy renewal or extension.

(3) Obtain coverage from insurance companies licensed to do business in Wisconsin that have an A.M. Best rating of A- or better. The cost of providing the required insurance coverage and limits is incidental to the contract. The department will make no additional or special payment for providing insurance.

(4) Submit the following to each railroad owning tracks on the project as evidence of that railroad's respective coverage:

1. A certificate of insurance for the types and limits of insurance specified in 107.26.
2. The railroad protective liability insurance policy or other acceptable documentation to the railroad company.

(5) Submit the following to the region as evidence of the required coverage:

1. A copy of the letter to the railroad company transmitting the submittal documents specified in 107.17.3(4).
2. A certificate of insurance for the required railroad protective liability coverages.

(6) Do not begin work on the right of way or premises of the railroad company until the region receives the submittals specified in 107.17.3(5) and notification from the railroad company that the contractor has provided sufficient insurance information to begin work.

(7) Notify the railroad and the region immediately upon cancellation or initiating cancellation, whichever is earlier, or any material change in coverage. Cease operations within 50 feet of the railroad right of way immediately if insurance is cancelled or reduced. Do not resume operations until the required coverage is in force.

460.2.8.3.1.4 Department Verification Testing Requirements

Replace paragraph four with the following effective with the December 2012 letting:

(4) The department will randomly test each design mixture at the following minimum frequency:

FOR TONNAGES TOTALING:	
Less than 501 tons	no tests required
From 501 to 5,000 tons	one test
More than 5,000 tons	add one test for each additional 5,000-ton increment

501.2.1 Portland Cement

Replace paragraph one with the following effective with the March 2013 letting:

(1) Use cement conforming to ASTM specifications as follows:

- Type I portland cement; ASTM C150.
- Type II portland cement; ASTM C150.
- Type III portland cement; ASTM C50, for high early strength.
- Type IP portland-pozzolan cement; ASTM C595, except maximum loss on ignition is 2.0 percent.
- Type IS portland blast-furnace slag cement; ASTM C595.
- Type IL portland-limestone cement; ASTM C595, except maximum nominal limestone content is 10 percent with no individual test result exceeding 12.0 percent.

501.2.5.5 Sampling and Testing

Replace the entire text with the following effective with the January 2013 letting:

(1) Sample and test aggregates for concrete according to the following:

Sampling aggregates	AASHTO T2
Lightweight pieces in aggregate	AASHTO T113
Material finer than No. 200 sieve	AASHTO T11
Unit weight of aggregate	AASHTO T19
Organic impurities in sands	AASHTO T21
Sieve analysis of aggregates	AASHTO T27
Effect of organic impurities in fine aggregate	AASHTO T71
Los Angeles abrasion of coarse aggregate	AASHTO T96
Freeze-thaw soundness of coarse aggregate	AASHTO T103
Sodium sulfate soundness of aggregates	AASHTO T104
Specific gravity and absorption of fine aggregate	AASHTO T84
Specific gravity and absorption of coarse aggregate	AASHTO T85
Flat & elongated pieces based on a 3:1 ratio	ASTM D4791[1]
Sampling fresh concrete	AASHTO R60
Making and curing concrete compressive strength test specimens	AASHTO T23
Compressive strength of molded concrete cylinders	AASHTO T22

[1] As modified in CMM 8-60.

501.2.6 Fly Ash

Replace paragraph three with the following effective with the March 2013 letting:

(3) Test fly ash using a recognized laboratory, as defined in 501.2.2(1), starting at least 30 days before its proposed use, and continuing at ASTM-required frequencies as the work progresses. The manufacturer shall test the chemical and physical properties listed in tables 1 and 2 of ASTM C618 at the frequencies and by the test methods prescribed in ASTM C311.

501.3.1.1.1 Air-Entrained Concrete

Replace paragraph one with the following effective with the March 2013 letting:

(1) Prepare air-entrained concrete with type I, IL, II, IS, or IP portland cement and sufficient air-entraining admixture to produce concrete with the air content specified in 501.3.2.4.

503.2.2 Concrete

Replace paragraph five with the following effective with the March 2013 letting:

(5) Furnish prestressed concrete members cast from air-entrained concrete, except I-type girders may use non-air-entrained concrete. Use type I, IL, IS, , IP, II, or III portland cement. The contractor may replace up to 30 percent of type I, IL, II, or III portland cement with an equal weight of fly ash, slag, or a combination of fly ash and slag, except for prestressed box girders and slabs, the contractor shall replace 20-30 percent of the cement with fly ash, slag, or a combination of fly ash and slag. Ensure that fly ash conforms to 501.2.6 and slag conforms to 501.2.7. Use only one source and replacement rate for work under a single bid item. Use a department-approved air-entraining admixture conforming to 501.2.2 for air-entrained concrete. Use only size No. 1 coarse aggregate conforming to 501.2.5.4.

506.3.22 Shop Inspection

Replace paragraph one with the following effective with the July 2010 letting:

(1) The engineer or an independent inspection agency under department contract may inspect all structural steel and miscellaneous metals furnished. The department will provide the contractor with monthly consultant inspection invoices and identify any quality deficiencies at the fabrication facility.

506.5 Payment

Add paragraph nine as follows effective with the June 2010 letting:

(9) The department will limit costs for inspections conducted under 506.3.2 to $0.05 per pound of material and deduct costs in excess of that amount from payment due the contractor. The department will determine costs for in-house inspections based on hourly rates for department staff plus overhead and use invoiced costs for contracted-out inspections. The department will administer deductions for the contractor's share of the total inspection cost under the Excess Costs For Fabrication Shop Inspection administrative item.

507.2.2.1 General

Replace paragraph four with the following effective with the December 2012 letting:

(4) Ensure that there are no unsound knots or knot holes. Also ensure that there are no tight knots of a diameter exceeding one-quarter of the greater dimension at the point where they occur. Measure a knot by taking its diameter at right angles to the length of the timber. Ensure that the sum of sizes of all knots in any one-foot length does not exceed 2 times the size of the largest allowed single knot. The engineer will treat cluster knots as if they were a single knot. A cluster knot is 2 or more knots grouped together, with the fibers of the wood deflected around the entire unit.

512.3.1 Driving and Cutting Off

Replace the entire text with the following effective with the December 2012 letting:

512.3.1.1 General

(1) Coordinate driving operations to prevent damage or displacement of concrete in substructure units or damage to adjacent facilities due to vibrations.

(2) Drive sheeting with a variation of 1/4 inch or less per foot from the vertical or from the batter the plans show. Ensure that the sheetpiles are within 6 inches of the plan position after driving. Do not damage sheetpiles attempting to correct for misalignment.

(3) Remove and replace, or otherwise correct, sheetpiles the engineer deems unacceptable under 105.3. Submit details of planned corrections to the engineer for review and approval before initiating any corrective actions.

(4) Drive sheetpiles to or beyond the required tip elevation the plans show.

512.3.1.2 Driving System

(1) Furnish a sheetpile driving system capable of driving the sheetpiles to the required minimum tip elevation the plans show.

(2) The engineer may order the contractor to remove a pile driving system component from service if it causes insufficient energy transfer or damages the sheetpiles. Do not return a component to service until the engineer determines that it has been satisfactorily repaired or adjusted.

(3) Drive sheetpiles with diesel, air, steam, gravity, hydraulic, or vibratory hammers.

512.3.1.3 Cut-Offs

(1) Cut off sheetpiles at the elevations the plans show or as the engineer directs. Pile cut-offs become the property of the contractor. Dispose of cut-offs not incorporated into the work.

518.2.1 General

Replace paragraph one with the following effective with the March 2013 letting:

(1) Furnish portland cement and water as specified in 501.2. Unless the engineer allows an alternate, use either type I, IL, IS, , or IP portland cement.

526.3.3 Temporary Structures

Replace paragraphs two through four with the following effective with the January 2013 letting:

(2) Inspect temporary structures conforming to the National Bridge Inspection Standards (NBIS) and the department's structure inspection manual before opening to traffic. Perform additional inspections, as the department's structure inspection manual requires, based on structure type and time in service. Submit inspection reports on department form DT2007 to the engineer and electronic copies to the department's bureau of structures maintenance section. Ensure that a department-certified active team leader, listed online in the department's highway structures information system (HSIS), performs the inspections.

(3) Maintain temporary structures and approaches in place until no longer needed. Unless the engineer directs otherwise, completely remove and dispose of as specified in 203.3.4. Contractor-furnished materials remain the contractor's property upon removal.

614.2.5 Wood Posts and Offset Blocks

Retitle and replace the entire text with the following effective with the July 2012 letting:

614.2.5 Posts and Offset Blocks

614.2.5.1 Wood Posts and Offset Blocks

(1) Furnish sawed posts and offset blocks of one of the following species:

Douglas fir	Southern pine	Ponderosa pine	Jack pine	White pine
Red pine	Western hemlock	Western larch	Hem-fir	Oak

(2) Ensure that posts are the size the plans show and conform to the nominal and minimum dimensions tabulated in 507.2.2.3. The contractor does not have to surface the posts. Provide posts of the net length the plans show after setting and cut off.

(3) Use stress graded posts rated at 1200 psi f_b or higher. Determine the stress grade rating for douglas fir, western larch, and southern pine as specified in 507.2.2.4.

(4) For hem-fir, hemlock, red pine, white pine, jack pine, ponderosa pine, and oak conform to the following:

TABLE 614-1 PROPERTIES FOR WOOD POSTS AND BLOCKS

SPECIES			WESTERN HEMLOCK, HEM-FIR, RED PINE, WHITE PINE, JACK PINE, PONDEROSA PINE		OAK	
MAXIMUM SLOPE OF GRAIN			1 in 15		1 in 12	
NOMINAL WIDTH OF FACE			6"	8"	6"	8"
SHAKES, CHECKS, AND SPLITS		GREEN	1"	1 3/8"	2 3/8"	3 1/8"
		SEASONED	1 1/2"	2"	2 5/8"	3 1/2"
MAXIMUM WANE			1"	1 3/8"	1 1/8"	1 5/8"
MAXIMUM ALLOWABLE KNOTS	NARROW FACE	MIDDLE 1/3 OF LENGTH	1 3/8"	1 5/8"	2 1/8"	2 3/8"
		END[1]	2 3/4"	3 1/4"	4 1/4"	4 3/4"
		SUM IN MIDDLE 1/2 OF LENGTH[2]	11"	13"	17"	19
	WIDE FACE	EDGE KNOT N MIDDLE 1/3 OF LENGTH	1 3/8"	1 5/8"		
		EDGE KNOT AT END[1]	2 3/4" 7	3 1/4"		
		CENTERLINE	1 3/8"	1 7/8"	2 1/4"	2 7/8"
		SUM IN MIDDLE 1/2 OF LENGTH	5 1/2"	7 1/2"	9"	11 1/2"

[1] But do not exceed the maximum allowable knot on the centerline of the wide face of the same piece.

[2] But do not exceed 4 times the maximum allowable knot on the centerline of the wide face of the same piece.

(5) Pressure treat posts and offset blocks as specified in 507.2.2.6. Use one of the oil-soluble preservatives or chromated copper arsenate conforming to 507.2.3. Use the same material for offset blocks and posts and treat material used in each continuous installation with the same type of preservative.

614.2.5.2 Steel Posts

(1) Furnish steel posts conforming to AASHTO M270 Grade 36 and galvanized according to AASTHO M111.

614.2.5.3 Plastic Offset Blocks

(1) Furnish plastic offset blocks from the department's approved products list.

614.3.1 General

Replace the entire text with the following effective with the July 2012 letting:

(1) Paint the ends of cut-off galvanized posts, rail, bolts, cut or drilled surfaces of galvanized components, and areas of damaged zinc coating with 2 coats of zinc dust/zinc oxide paint. Clean the damaged and adjacent areas thoroughly before applying paint.

(2) Apply 2 coats of wood preservative to cut surfaces of wood components. Use the same preservative originally used to treat that component or use a 2-percent solution of copper naphthenate conforming to 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 section 3.2 of the CRCS System Background Information manual available online on the Labor, Wages, and EEO Information page at: http://roadwaystandards.dot.wi.gov/hcci/labor-wages-eeo/docs/crc-basic-info.pdf

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
WAUKESHA COUNTY

Compiled by the State of Wisconsin - Department of Workforce Development
for the Department of Transportation
Pursuant to s. 103.50, Stats.
Issued on April 1, 2012

CLASSIFICATION: Contractors are required to call the Department of Workforce Development if there are any questions reqarding the proper trade or classification to be used for any worker on a public works project.

OVERTIME: Time and one-half must be paid for all hours worked over 10 hours per day and 40 hours per calendar week and for all hours worked on Saturday, Sunday and the following six (6) holidays: January 1; the last Monday in May; July 4; the 1st Monday in September; the 4th Thursday in November; December 25; the day before if January 1, July 4 or December 25 falls on a Saturday; the day following if January 1, July 4 or December 25 falls on a Sunday.

FUTURE INCREASE: If indicated for a specific trade or occupation, the full amount of such increase MUST be added to the "TOTAL" indicated for such trade or occupation on the date(s) such increase(s) becomes effective.

PREMIUM PAY: If indicated for a specific trade or occupation, the full amount of such pay MUST be added to the "HOURLY BASIC RATE OF PAY" indicated for such trade or occupation, whenever such pay is applicable.

SUBJOURNEY: Wage rates may be available for some of the classifications indicated below. Any employer that desires to use any subjourney classification on a project MUST request the applicable wage rate from the Department of Workforce Development PRIOR to the date such classification is used on such project. Form ERD-10880 is available for this purpose and can be obtained by writing to the Department of Workforce Development, Equal Rights Division, P.O. Box 8928, Madison, WI 53708.

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
	$	$	$
Bricklayer, Blocklayer or Stonemason	32.66	15.92	48.58
Carpenter	31.68	18.59	50.27
Cement Finisher	29.33	17.03	46.36
Future Increase(s): Add $1.86 on 6/1/12; Add $1.87 on 6/1/13; Add $1.87 on 6/1/14; Add $1.87 on 6/1/15; Add $1.75 on 6/ 1/ 16. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.40/hr when the Wisconsin Department of Transportation or responsible governing agency requires that work be performed at night under artificial illumination with traffic control and the work is completed after sunset and before sunrise.			
Electrician	31.14	24.60	55.74
Fence Erector	35.62	0.00	35.62
Ironworker	30.90	19.11	50.01
Line Constructor (Electrical)	35.97	18.08	54.05
Painter	27.87	14.39	42.26
Pavement Marking Operator	27.87	14.39	42.26
Piledriver	28.11	23.94	52.05
Roofer or Waterproofer	28.85	14.60	43.45
Teledata Technician or Installer	24.50	15.17	39.67
Tuckpointer, Caulker or Cleaner	34.30	15.47	49.77
Underwater Diver (Except on Great Lakes)	36.20	18.81	55.01
Heavy Equipment Operator - ELECTRICAL LINE CONSTRUCTION ONLY	33.87	16.10	49.97
Light Equipment Operator -ELECTRICAL LINE CONSTRUCTION ONLY	28.78	14.42	43.20
Heavy Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	26.98	13.21	40.19
Light Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	23.38	12.48	35.86

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
	$	$	$
Groundman - ELECTRICAL LINE CONSTRUCTION ONLY	21.30	10.97	32.27
TRUCK DRIVERS			
Single Axle or Two Axle	22.35	16.19	38.54
Future Increase(s): Add $1.75/hr on 6/1/2012; Add $1.85/hr on 6/1/2013. Premium Pay: DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.			
Three or More Axle	22.50	16.19	38.69
Future Increase(s): Add $1.75/hr on 6/1/2012; Add $1.85/hr on 6/1/2013. Premium Pay: DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.			
Articulated, Euclid, Dumptor, Off Road Material Hauler	22.50	16.19	38.69
Future Increase(s): Add $1.75/hr on 6/1/2012; Add $1.85/hr on 6/1/2013. Premium Pay: DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.			
Pavement Marking Vehicle	23.84	14.70	38.54
Shadow or Pilot Vehicle	24.76	15.35	40.11
Truck Mechanic	24.91	15.35	40.26
LABORERS			
General Laborer	24.34	17.85	42.19
Future Increase(s): Add $1.60/hr on 6/1/2012: Add $1.70/hr on 6/1/2013; Add $1.60/hr on 6/1/2014. Premium Pay: Add $.15/hr for air tool operator, joint sawer and filler (pavement), vibrator or tamper operator (mechanical hand operated), chain saw operator and demolition burning torch laborer; Add $.35/hr for bituminous worker (raker and luteman), formsetter (curb, sidewalk and pavement) and strike off man; Add $.50/hr for line and grade specialist; Add $.65/hr for blaster and powderman; Add $2.01/hr for topman; Add $2.46/hr for bottomman; Add $3.23/hr for pipelayer. / DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr for work on projects involving temporary traffic control setup, for lane and shoulder closures, when work under artificial illumination conditions is necessary as required by the project provisions (including prep time prior to and/or cleanup after such time period).			
Asbestos Abatement Worker	22.00	16.86	38.86
Landscaper	23.71	15.03	38.74
Flagperson or Traffic Control Person	20.83	17.85	38.68
Future Increase(s): Add $1.60/hr on 6/1/2012; Add $1.70/hr on 6/1/2013; Add $1.60/hr on 6/1/2014. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr when the Wisconsin Department of Transportation or responsible governing agency requires that work be performed at night under artificial illumination with traffic control and the work is completed after sunset and before sunrise.			
Fiber Optic Laborer (Outside, Other Than Concrete Encased)	17.09	14.40	31.49
Railroad Track Laborer	17.00	1.71	18.71
HEAVY EQUIPMENT OPERATORS			
Crane, Tower Crane, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 176 Ft or Over; Crane, Tower Crane, Pedestal Tower or	34.22	18.90	53.12

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY $	HOURLY FRINGE BENEFITS $	TOTAL $
Derrick, With or Without Attachments, With a Lifting Capacity of Over 100 Tons, Self-Erecting Tower Crane With a Lifting Capacity Of Over 4,000 Lbs., Crane With Boom Dollies; Traveling Crane (Bridge Type). Future Increase(s): Add $2/hr on 6/1/12; Add $2/hr on 6/1/13; Add $1.75/hr on 6/1/14. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr for work on projects involving temporary traffic control setup, for lane and shoulder closures, when work under artificial illumination conditions is necessary as required by the project provisions (including prep time prior to and/or cleanup after such time period).			
Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of 130,000 Lbs. or Over; Caisson Rig; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 175 Ft or Under; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With or Without Attachments, With a Lifting Capacity of 100 Tons or Under, Self-Erecting Tower Crane With A Lifting Capacity Of 4,000 Lbs., & Under; Dredge (NOT Performing Work on the Great Lakes); Licensed Boat Pilot (NOT Performing Work on the Great Lakes); Pile Driver. Future Increase(s): Add $2/hr on 6/1/12; Add $2/hr on 6/1/13; Add $1.75/hr on 6/1/14. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr for work on projects involving temporary traffic control setup, for lane and shoulder closures, when work under artificial illumination conditions is necessary as required by the project provisions (including prep time prior to and/or cleanup after such time period).	33.72	18.90	52.62
Air Track, Rotary or Percussion Drilling Machine &/or Hammers, Blaster; Asphalt Heater, Planer & Scarifier; Asphalt Milling Machine; Asphalt Screed; Automatic Subgrader (Concrete); Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of Under 130,000 Lbs., Backhoe (Mini, 15,000 Lbs. & Under); Bituminous (Asphalt) Plant & Paver, Screed; Boatmen (NOT Performing Work on the Great Lakes); Boring Machine (Directional, Horizontal or Vertical); Bridge (Bidwell) Paver; Bulldozer or Endloader; Concrete Batch Plant, Batch Hopper; Concrete Breaker (Large, Auto, VIbratory/Sonic, Manual or Remote); Concrete Bump Cutter, Grinder, Planing or Grooving Machine; Concrete Conveyor System; Concrete Laser/Screed; Concrete Paver (Slipform); Concrete Pump, Concrete Conveyor (Rotec or Bidwell Type); Concrete Slipform Placer Curb & Gutter Machine; Concrete Spreader & Distributor; Crane (Carry Deck, Mini) or Truck Mounted Hydraulic Crane (10 Tons or Under); Crane WIth a Lifting Capacity of 25 Tons or Under; Forestry Equipment, Timbco, Tree Shear, Tub Grinder, Processor; Gradall (Cruz-Aire Type); Grader or Motor Patrol; Grout Pump; Hydro-Blaster (10,000 PSI or Over); Loading Machine (Conveyor); Material or Stack Hoist; Mechanic or Welder; Milling Machine; Post Hole Digger or Driver; Roller (Over 5 Ton); Scraper (Self Propelled or Tractor Drawn) 5 cu yds or More Capacity; Shoulder Widener; Sideboom; Skid Rig; Stabilizing or Concrete Mixer (Self-Propelled or 14S or Over); Straddle Carrier or Travel Lift; Tractor (Scraper, Dozer, Pusher, Loader); Tractor or Truck Mounted Hydraulic Backhoe; Trencher (Wheel Type or Chain Type); Tube Finisher; Tugger (NOT Performing Work on the Great Lakes); Winches & A- Frames. Future Increase(s): Add $2/hr on 6/1/12; Add $2/hr on 6/1/13; Add $1.75/hr on 6/1/14. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr for work on projects involving temporary traffic control setup, for lane and shoulder closures, when work under artificial illumination conditions is necessary as required by the project provisions (including prep time prior to and/or cleanup after	33.22	18.90	52.12

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY $	HOURLY FRINGE BENEFITS $	TOTAL $
such time period).			
Belting, Burlap, Texturing Machine; Broom or Sweeper; Compactor (Self-Propelled or Tractor Mounted, Towed & Light Equipment); Concrete Finishing Machine (Road Type); Environmental Burner; Farm or Industrial Type Tractor; Fireman (Asphalt Plant, Pile Driver & Derrick NOT Performing Work on the Great Lakes); Forklift; Greaser; Hoist (Tugger, Automatic); Jeep Digger; Joint Sawer (Multiple Blade); Launch (NOT Performing Work on the Great Lakes); Lift Slab Machine; Mechanical Float; Mulcher; Power Subgrader; Robotic Tool Carrier (With or Without Attachments); Roller (Rubber Tire, 5 Ton or Under); Self Propelled Chip Spreader; Shouldering Machine; Skid Steer Loader (With or WIthout Attachments); Telehandler; Tining or Curing Machine. Future Increase(s): Add $2/hr on 6/1/12; Add $2/hr on 6/1/13; Add $1.75/hr on 6/1/14. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr for work on projects involving temporary traffic control setup, for lane and shoulder closures, when work under artificial illumination conditions is necessary as required by the project provisions (including prep time prior to and/or cleanup after such time period).	32.96	18.90	51.86
Air Compressor (&/or 400 CFM or Over); Air, Electric or Hydraulic Jacking System; Augers (Vertical & Horizontal); Automatic Belt Conveyor & Surge Bin; Boiler (Temporary Heat); Concrete Proportioning Plant; Crusher, Screening or Wash Plant; Generator (&/or 150 KW or Over); Heaters (Mechanical); High Pressure Utility Locating Machine (Daylighting Machine); Mudjack; Oiler; Prestress Machine; Pug Mill; Pump (3 Inch or Over) or Well Points; Rock, Stone Breaker; Screed (Milling Machine); Stump Chipper; Tank Car Heaters; Vibratory Hammer or Extractor, Power Pack. Future Increase(s): Add $2/hr on 6/1/12; Add $2/hr on 6/1/13; Add $1.75/hr on 6/1/14. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr for work on projects involving temporary traffic control setup, for lane and shoulder closures, when work under artificial illumination conditions is necessary as required by the project provisions (including prep time prior to and/or cleanup after such time period).	32.67	18.90	51.57
Fiber Optic Cable Equipment.	24.39	15.45	39.84

CONTRACT: 20130312016 PROJECT(S): 2810-06-70 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
	SECTION 0001 ROADWAY ITEMS MILLING, PULVERIZING, AND RELAYING					
0010	201.0105 CLEARING	36.000 STA		.		.
0020	201.0205 GRUBBING	36.000 STA		.		.
0030	203.0100 REMOVING SMALL PIPE CULVERTS	14.000 EACH		.		.
0040	203.0200 REMOVING OLD STRUCTURE (STATION) 01. 216+58	LUMP	LUMP			.
0050	203.0200 REMOVING OLD STRUCTURE (STATION) 02. 155+62	LUMP	LUMP			.
0060	204.0100 REMOVING PAVEMENT	2,000.000 SY		.		.
0070	204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS	240.000 SY		.		.
0080	204.0120 REMOVING ASPHALTIC SURFACE MILLING	54,050.000 SY		.		.
0090	204.0150 REMOVING CURB & GUTTER **P**	8,650.000 LF		.		.
0100	204.0155 REMOVING CONCRETE SIDEWALK	1,850.000 SY		.		.

CONTRACT: 20130312016 PROJECT(S): 2810-06-70 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0110	204.0170 REMOVING FENCE	284.000 LF		.		.
0120	204.0185 REMOVING MASONRY	700.000 CY		.		.
0130	204.0195 REMOVING CONCRETE BASES	11.000 EACH		.		.
0140	204.0210 REMOVING MANHOLES	12.000 EACH		.		.
0150	204.0220 REMOVING INLETS	39.000 EACH		.		.
0160	204.0245 REMOVING STORM SEWER (SIZE) 01. 8-INCH	480.000 LF		.		.
0170	204.0245 REMOVING STORM SEWER (SIZE) 02. 12-INCH	960.000 LF		.		.
0180	204.0245 REMOVING STORM SEWER (SIZE) 03. 15-INCH	1,250.000 LF		.		.
0190	204.0245 REMOVING STORM SEWER (SIZE) 04. 18-INCH	1,100.000 LF		.		.
0200	204.0245 REMOVING STORM SEWER (SIZE) 05. 24-INCH	470.000 LF		.		.
0210	204.9090.S REMOVING (ITEM DESCRIPTION) 01. PIPE RAILING	59.000 LF		.		.

CONTRACT: 20130312016 PROJECT(S): 2810-06-70 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0220	205.0100 EXCAVATION COMMON	29,828.000 CY		.		.
0230	205.0501.S EXCAVATION, HAULING, AND DISPOSAL OF PETROLEUM CONTAMINATED SOIL	400.000 TON		.		.
0240	205.9010.S GRADING & SHAPING INTERSECTION (LOCATION) 01. MARDITH AVE	LUMP	LUMP			.
0250	205.9010.S GRADING & SHAPING INTERSECTION (LOCATION) 02. VILLA DRIVE	LUMP	LUMP			.
0260	205.9010.S GRADING & SHAPING INTERSECTION (LOCATION) 03. MARDITH AVE	LUMP	LUMP			.
0270	205.9010.S GRADING & SHAPING INTERSECTION (LOCATION) 04. ARTESIAN AVE	LUMP	LUMP			.
0280	205.9010.S GRADING & SHAPING INTERSECTION (LOCATION) 05. CTH U	LUMP	LUMP			.
0290	205.9010.S GRADING & SHAPING INTERSECTION (LOCATION) 06. HENNEBERRY AVE	LUMP	LUMP			.
0300	208.0100 BORROW	3,850.000 CY		.		.

CONTRACT: 20130312016 PROJECT(S): 2810-06-70 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0310	209.0100 BACKFILL GRANULAR	3,800.000 CY		.		.
0320	213.0100 FINISHING ROADWAY (PROJECT) 01. 2810-06-70	1.000 EACH		.		.
0330	305.0110 BASE AGGREGATE DENSE 3/4-INCH	630.000 TON		.		.
0340	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH	19,600.000 TON		.		.
0350	311.0110 BREAKER RUN	26,400.000 TON		.		.
0360	325.0100 PULVERIZE AND RELAY	43,850.000 SY		.		.
0370	415.0085 CONCRETE PAVEMENT 8 1/2-INCH	21,300.000 SY		.		.
0380	416.0160 CONCRETE DRIVEWAY 6-INCH	895.000 SY		.		.
0390	416.0610 DRILLED TIE BARS	20.000 EACH		.		.
0400	440.4410.S INCENTIVE IRI RIDE	10,074.000 DOL	1.00000		10074.00	
0410	455.0105 ASPHALTIC MATERIAL PG58-28	1,000.000 TON		.		.

CONTRACT: 20130312016 PROJECT(S): 2810-06-70 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0420	455.0605 TACK COAT	1,770.000 GAL		.		.
0430	460.1101 HMA PAVEMENT TYPE E-1	3,110.000 TON		.		.
0440	460.1103 HMA PAVEMENT TYPE E-3	15,250.000 TON		.		.
0450	460.2000 INCENTIVE DENSITY HMA PAVEMENT	10,797.000 DOL	1.00000		10797.00	
0460	465.0120 ASPHALTIC SURFACE DRIVEWAYS AND FIELD ENTRANCES	690.000 TON		.		.
0470	465.0125 ASPHALTIC SURFACE TEMPORARY	450.000 TON		.		.
0480	465.0315 ASPHALTIC FLUMES	100.000 SY		.		.
0490	513.2050.S RAILING PIPE	30.000 LF		.		.
0500	520.4030 CULVERT PIPE TEMPORARY 30-INCH	210.000 LF		.		.
0510	520.4036 CULVERT PIPE TEMPORARY 36-INCH	60.000 LF		.		.
0520	520.8000 CONCRETE COLLARS FOR PIPE	1.000 EACH		.		.

CONTRACT: 20130312016 PROJECT(S): 2810-06-70 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0530	521.0112 CULVERT PIPE CORRUGATED STEEL 12-INCH	22.000 LF		.		.
0540	521.0118 CULVERT PIPE CORRUGATED STEEL 18-INCH	216.000 LF		.		.
0550	521.1012 APRON ENDWALLS FOR CULVERT PIPE STEEL 12-INCH	2.000 EACH		.		.
0560	521.1018 APRON ENDWALLS FOR CULVERT PIPE STEEL 18-INCH	8.000 EACH		.		.
0570	522.0324 CULVERT PIPE REINFORCED CONCRETE CLASS IV 24-INCH	310.000 LF		.		.
0580	522.0336 CULVERT PIPE REINFORCED CONCRETE CLASS IV 36-INCH	134.000 LF		.		.
0590	522.0348 CULVERT PIPE REINFORCED CONCRETE CLASS IV 48-INCH	304.000 LF		.		.
0600	522.1012 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 12-INCH	3.000 EACH		.		.
0610	522.1024 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH	8.000 EACH		.		.
0620	522.1030 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 30-INCH	1.000 EACH		.		.

CONTRACT: 20130312016 PROJECT(S): 2810-06-70 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0630	522.1036 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 36-INCH	2.000 EACH		.		.
0640	522.1048 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 48-INCH	4.000 EACH		.		.
0650	523.0119 CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 19X30-INCH	130.000 LF		.		.
0660	523.0124 CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 24X38-INCH	68.000 LF		.		.
0670	523.0129 CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 29X45-INCH	58.000 LF		.		.
0680	523.0148 CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 48X76-INCH	138.000 LF		.		.
0690	523.0519 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL 19X30-INCH	2.000 EACH		.		.

CONTRACT: 20130312016 PROJECT(S): 2810-06-70 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0700	523.0524 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL 24X38-INCH	2.000 EACH		.		.
0710	523.0529 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL 29X45-INCH	2.000 EACH		.		.
0720	523.0548 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL 48X76-INCH	4.000 EACH		.		.
0730	532.0300.S WALL MODULAR BLOCK MECHANICALLY STABILIZED EARTH	528.000 SF		.		.
0740	601.0409 CONCRETE CURB & GUTTER 30-INCH TYPE A **P**	8,164.000 LF		.		.
0750	601.0411 CONCRETE CURB & GUTTER 30-INCH TYPE D	346.000 LF		.		.
0760	601.0411 CONCRETE CURB & GUTTER 30-INCH TYPE D **P**	2,298.000 LF		.		.
0770	601.0553 CONCRETE CURB AND GUTTER 4-INCH SLOPED 36-INCH TYPE D **P**	142.000 LF		.		.
0780	601.0557 CONCRETE CURB AND GUTTER 6-INCH SLOPED 36-INCH TYPE D **P**	606.000 LF		.		.

CONTRACT: 20130312016 PROJECT(S): 2810-06-70 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0790	601.0600 CONCRETE CURB PEDESTRIAN **P**	48.000 LF		.		.
0800	602.0410 CONCRETE SIDEWALK 5-INCH	23,255.000 SF		.		.
0810	602.0515 CURB RAMP DETECTABLE WARNING FIELD NATURAL PATINA	304.000 SF		.		.
0820	602.1500 CONCRETE STEPS	131.000 SF		.		.
0830	606.0200 RIPRAP MEDIUM	200.000 CY		.		.
0840	606.0300 RIPRAP HEAVY	280.000 CY		.		.
0850	607.0406 STORM SEWER PIPE COMPOSITE 6-INCH	52.000 LF		.		.
0860	608.0312 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH	960.000 LF		.		.
0870	608.0315 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 15-INCH	466.000 LF		.		.
0880	608.0318 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 18-INCH	60.000 LF		.		.
0890	608.0324 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 24-INCH	2,725.000 LF		.		.

CONTRACT: 20130312016 PROJECT(S): 2810-06-70 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0900	608.0330 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 30-INCH	569.000 LF		.		.
0910	611.0530 MANHOLE COVERS TYPE J	17.000 EACH		.		.
0920	611.0600 INLET COVERS TYPE A	1.000 EACH		.		.
0930	611.0624 INLET COVERS TYPE H	34.000 EACH		.		.
0940	611.0639 INLET COVERS TYPE H-S	18.000 EACH		.		.
0950	611.0642 INLET COVERS TYPE MS	1.000 EACH		.		.
0960	611.2004 MANHOLES 4-FT DIAMETER	16.000 EACH		.		.
0970	611.2005 MANHOLES 5-FT DIAMETER	2.000 EACH		.		.
0980	611.3230 INLETS 2X3-FT	52.000 EACH		.		.
0990	611.3903 INLETS MEDIAN 3 GRATE	1.000 EACH		.		.
1000	611.9800.S PIPE GRATES	22.000 EACH		.		.

CONTRACT: 20130312016 PROJECT(S): 2810-06-70 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1010	612.0106 PIPE UNDERDRAIN 6-INCH	140.000 LF		.		.
1020	614.0920 SALVAGED RAIL	1,748.000 LF		.		.
1030	614.0925 SALVAGED GUARDRAIL END TREATMENTS	1.000 EACH		.		.
1040	614.2300 MGS GUARDRAIL 3	2,748.000 LF		.		.
1050	614.2320 MGS GUARDRAIL 3 QS	88.000 LF		.		.
1060	614.2610 MGS GUARDRAIL TERMINAL EAT	7.000 EACH		.		.
1070	614.2620 MGS GUARDRAIL TERMINAL TYPE 2	1.000 EACH		.		.
1080	618.0100 MAINTENANCE AND REPAIR OF HAUL ROADS (PROJECT) 01. 2810-06-70	1.000 EACH		.		.
1090	619.1000 MOBILIZATION	1.000 EACH		.		.
1100	623.0200 DUST CONTROL SURFACE TREATMENT	72,350.000 SY		.		.
1110	625.0100 TOPSOIL	13,600.000 SY		.		.

CONTRACT: 20130312016 PROJECT(S): 2810-06-70 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1120	625.0500 SALVAGED TOPSOIL	26,980.000 SY		.		.
1130	627.0200 MULCHING	13,700.000 SY		.		.
1140	628.1504 SILT FENCE	4,840.000 LF		.		.
1150	628.1520 SILT FENCE MAINTENANCE	10,380.000 LF		.		.
1160	628.1905 MOBILIZATIONS EROSION CONTROL	11.000 EACH		.		.
1170	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL	6.000 EACH		.		.
1180	628.2004 EROSION MAT CLASS I TYPE B	960.000 SY		.		.
1190	628.2027 EROSION MAT CLASS II TYPE C	10,200.000 SY		.		.
1200	628.2037 EROSION MAT CLASS III TYPE C	4,700.000 SY		.		.
1210	628.6005 TURBIDITY BARRIERS	200.000 SY		.		.
1220	628.7005 INLET PROTECTION TYPE A	56.000 EACH		.		.

CONTRACT: 20130312016 PROJECT(S): 2810-06-70 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1230	628.7010 INLET PROTECTION TYPE B	1.000 EACH		.		.
1240	628.7015 INLET PROTECTION TYPE C	55.000 EACH		.		.
1250	628.7504 TEMPORARY DITCH CHECKS	600.000 LF		.		.
1260	628.7555 CULVERT PIPE CHECKS	325.000 EACH		.		.
1270	628.7560.S STONE OR ROCK DITCH CHECKS	20.000 CY		.		.
1280	629.0210 FERTILIZER TYPE B	20.000 CWT		.		.
1290	630.0120 SEEDING MIXTURE NO. 20	450.000 LB		.		.
1300	630.0140 SEEDING MIXTURE NO. 40	150.000 LB		.		.
1310	630.0200 SEEDING TEMPORARY	420.000 LB		.		.
1320	630.0300 SEEDING BORROW PIT	50.000 LB		.		.
1330	631.0300 SOD WATER	160.000 MGAL		.		.

CONTRACT: 20130312016 PROJECT(S): 2810-06-70 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1340	631.1000 SOD LAWN	7,300.000 SY		.		.
1350	633.5200 MARKERS CULVERT END	24.000 EACH		.		.
1360	634.0616 POSTS WOOD 4X6-INCH X 16-FT	125.000 EACH		.		.
1370	634.0816 POSTS TUBULAR STEEL 2X2-INCH X 16-FT	49.000 EACH		.		.
1380	637.0202 SIGNS REFLECTIVE TYPE II	1,646.880 SF		.		.
1390	637.0402 SIGNS REFLECTIVE FOLDING TYPE II	155.200 SF		.		.
1400	638.2102 MOVING SIGNS TYPE II	11.000 EACH		.		.
1410	638.2602 REMOVING SIGNS TYPE II	202.000 EACH		.		.
1420	638.3000 REMOVING SMALL SIGN SUPPORTS	140.000 EACH		.		.
1430	642.5201 FIELD OFFICE TYPE C	1.000 EACH		.		.
1440	643.0100 TRAFFIC CONTROL (PROJECT) 01. 2810-06-70	1.000 EACH		.		.

CONTRACT: 20130312016 PROJECT(S): 2810-06-70 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1450	643.0300 TRAFFIC CONTROL DRUMS	8,980.000 DAY		.		.
1460	643.0420 TRAFFIC CONTROL BARRICADES TYPE III	4,499.000 DAY		.		.
1470	643.0500 TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS	93.000 EACH		.		.
1480	643.0600 TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER BASES	93.000 EACH		.		.
1490	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A	7,004.000 DAY		.		.
1500	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C	3,196.000 DAY		.		.
1510	643.0900 TRAFFIC CONTROL SIGNS	6,191.000 DAY		.		.
1520	643.1000 TRAFFIC CONTROL SIGNS FIXED MESSAGE	64.000 SF		.		.
1530	643.1050 TRAFFIC CONTROL SIGNS PCMS	100.000 DAY		.		.
1540	643.2000 TRAFFIC CONTROL DETOUR (PROJECT) 01. 2810-06-70	1.000 EACH		.		.
1550	643.3000 TRAFFIC CONTROL DETOUR SIGNS	2,240.000 DAY		.		.

CONTRACT: 20130312016 PROJECT(S): 2810-06-70 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1560	645.0111 GEOTEXTILE FABRIC TYPE DF SCHEDULE A	20.000 SY		.		.
1570	645.0120 GEOTEXTILE FABRIC TYPE HR	800.000 SY		.		.
1580	645.0140 GEOTEXTILE FABRIC TYPE SAS	70.000 SY		.		.
1590	646.0106 PAVEMENT MARKING EPOXY 4-INCH	38,108.000 LF		.		.
1600	646.0600 REMOVING PAVEMENT MARKINGS	2,160.000 LF		.		.
1610	646.0841.S PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH	3,721.000 LF		.		.
1620	646.0843.S PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH	1,074.000 LF		.		.
1630	646.0881.S PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 4-INCH	1,306.000 LF		.		.
1640	646.0883.S PAVEMENT MARKING GROOVED WET REFLECTIVE TAPE 8-INCH	1,515.000 LF		.		.
1650	647.0726 PAVEMENT MARKING DIAGONAL EPOXY 12-INCH	303.000 LF		.		.

CONTRACT: 20130312016 PROJECT(S): 2810-06-70 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1660	648.0100 LOCATING NO-PASSING ZONES	2.525 MI		.		.
1670	649.0200 TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH	4,645.000 LF		.		.
1680	649.0400 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH	3,257.000 LF		.		.
1690	649.0900 TEMPORARY PAVEMENT MARKING STOP LINE 12-INCH	23.000 LF		.		.
1700	649.1000 TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 12-INCH	46.000 LF		.		.
1710	650.4000 CONSTRUCTION STAKING STORM SEWER	77.000 EACH		.		.
1720	650.4500 CONSTRUCTION STAKING SUBGRADE **P**	7,093.000 LF		.		.
1730	650.5000 CONSTRUCTION STAKING BASE **P**	3,024.000 LF		.		.
1740	650.5500 CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER	346.000 LF		.		.
1750	650.5500 CONSTRUCTION STAKING CURB GUTTER AND CURB & GUTTER **P**	3,046.000 LF		.		.

CONTRACT: 20130312016 PROJECT(S): 2810-06-70 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1760	650.6000 CONSTRUCTION STAKING PIPE CULVERTS	12.000 EACH		.		.
1770	650.7000 CONSTRUCTION STAKING CONCRETE PAVEMENT **P**	4,069.000 LF		.		.
1780	650.8000 CONSTRUCTION STAKING RESURFACING REFERENCE **P**	13,089.000 LF		.		.
1790	650.8500 CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS (PROJECT) 01. 2810-06-70	LUMP	LUMP			.
1800	650.9910 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) 01. 2810-06-70	LUMP	LUMP			.
1810	650.9920 CONSTRUCTION STAKING SLOPE STAKES **P**	10,776.000 LF		.		.
1820	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH **P**	250.000 LF		.		.
1830	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH **P**	1,780.000 LF		.		.
1840	653.0140 PULL BOXES STEEL 24X42-INCH	17.000 EACH		.		.
1850	653.0905 REMOVING PULL BOXES	13.000 EACH		.		.

CONTRACT: 20130312016 PROJECT(S): 2810-06-70 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1860	654.0101 CONCRETE BASES TYPE 1	16.000 EACH		.		.
1870	654.0217 CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL	2.000 EACH		.		.
1880	655.0220 CABLE TRAFFIC SIGNAL 4-14 AWG **P**	1,640.000 LF		.		.
1890	655.0260 CABLE TRAFFIC SIGNAL 12-14 AWG **P**	3,665.000 LF		.		.
1900	655.0305 CABLE TYPE UF 2-12 AWG GROUNDED **P**	1,260.000 LF		.		.
1910	655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG **P**	2,210.000 LF		.		.
1920	655.0610 ELECTRICAL WIRE LIGHTING 12 AWG **P**	960.000 LF		.		.
1930	656.0200 ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 01. STH 164 & EDGEWOOD AVE	LUMP	LUMP			.
1940	656.0200 ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 02. STH 164 & CTH L	LUMP	LUMP			.
1950	657.0100 PEDESTAL BASES	16.000 EACH		.		.

CONTRACT: 20130312016 PROJECT(S): 2810-06-70 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1960	657.0420 TRAFFIC SIGNAL STANDARDS ALUMINUM 13-FT	8.000 EACH		.		.
1970	657.0430 TRAFFIC SIGNAL STANDARDS ALUMINUM 10-FT	8.000 EACH		.		.
1980	658.0110 TRAFFIC SIGNAL FACE 3-12 INCH VERTICAL	40.000 EACH		.		.
1990	658.0215 BACKPLATES SIGNAL FACE 3 SECTION 12-INCH	40.000 EACH		.		.
2000	658.0416 PEDESTRIAN SIGNAL FACE 16-INCH	16.000 EACH		.		.
2010	658.0500 PEDESTRIAN PUSH BUTTONS	16.000 EACH		.		.
2020	658.0600 LED MODULES 12-INCH RED BALL	24.000 EACH		.		.
2030	658.0605 LED MODULES 12-INCH YELLOW BALL	24.000 EACH		.		.
2040	658.0610 LED MODULES 12-INCH GREEN BALL	24.000 EACH		.		.
2050	658.0615 LED MODULES 12-INCH RED ARROW	16.000 EACH		.		.
2060	658.0620 LED MODULES 12-INCH YELLOW ARROW	32.000 EACH		.		.

CONTRACT: 20130312016 PROJECT(S): 2810-06-70 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2070	658.0625 LED MODULES 12-INCH GREEN ARROW	32.000 EACH		.		.
2080	658.0635 LED MODULES PEDESTRIAN COUNTDOWN TIMER 16-INCH	16.000 EACH		.		.
2090	658.5069 SIGNAL MOUNTING HARDWARE (LOCATION) 01. STH 164 & EDGEWOOD AVENUE	LUMP	LUMP			.
2100	658.5069 SIGNAL MOUNTING HARDWARE (LOCATION) 02. STH 164 & CTH L	LUMP	LUMP			.
2110	690.0150 SAWING ASPHALT	5,170.000 LF		.		.
2120	690.0250 SAWING CONCRETE	225.000 LF		.		.
2130	715.0415 INCENTIVE STRENGTH CONCRETE PAVEMENT	6,390.000 DOL	1.00000		6390.00	
2140	SPV.0060 SPECIAL 01. POLES TYPE 13	8.000 EACH		.		.
2150	SPV.0060 SPECIAL 02. CONC BASES TYPE 13 CONT SUPPLIED ANCHOR BOLTS & ANCHOR ROD TEMPLATE	8.000 EACH		.		.
2160	SPV.0060 SPECIAL 03. MONOTUBE ARMS 40-FT	8.000 EACH		.		.

CONTRACT: 20130312016 PROJECT(S): 2810-06-70 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2170	SPV.0060 SPECIAL 04. LUMINAIRE ARMS STEEL 15-FT	8.000 EACH		.		.
2180	SPV.0060 SPECIAL 05. LUMINAIRES UTILITY LED CATEGORY C	8.000 EACH		.		.
2190	SPV.0060 SPECIAL 06. RETAINING WALL END CAP	1.000 EACH		.		.
2200	SPV.0060 SPECIAL 07. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 2	17.000 EACH		.		.
2210	SPV.0060 SPECIAL 08. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 3	16.000 EACH		.		.
2220	SPV.0060 SPECIAL 09. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC WORDS	13.000 EACH		.		.
2230	SPV.0060 SPECIAL 10. ADJUSTING SANITARY SEWER MANHOLE CASTINGS	14.000 EACH		.		.
2240	SPV.0090 SPECIAL 01. TRAFFIC SIGNAL EMERGENCY VEHICLE PRE EMPTION (EVP) DETECTOR CABLE INSTALLED	1,565.000 LF		.		.
2250	SPV.0090 SPECIAL 02. SPLIT RAIL FENCE	88.000 LF		.		.
2260	SPV.0090 SPECIAL 03. HEAVY DUTY SILT FENCE	350.000 LF		.		.

CONTRACT: 20130312016 PROJECT(S): 2810-06-70 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2270	SPV.0090 SPECIAL 04. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC STOP BAR 18-INCH	540.000 LF		.		.
2280	SPV.0090 SPECIAL 05. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC CROSSWALK 6-INCH	1,296.000 LF		.		.
2290	SPV.0105 SPECIAL 01. INST VENDOR SUPPLIED TRAF SIG CABINET STH 164 & EDGEWOOD AVE	LUMP	LUMP			.
2300	SPV.0105 SPECIAL 02. INST VENDOR SUPPLIED TRAF SIG CABINET STH 164 & CTH L	LUMP	LUMP			.
2310	SPV.0105 SPECIAL 03. TRANSPT & INST STATE FURN AUTOSCOPE VIDEO DETECT SYS STH 164 & EDGEWOOD AVE	LUMP	LUMP			.
2320	SPV.0105 SPECIAL 04. TRANSPT & INST STATE FURN AUTOSCOPE VIDEO DETECT SYS STH 164 &CTH L	LUMP	LUMP			.
2330	SPV.0105 SPECIAL 05. EMERGENCY VEH PREEMPTION (EVP) DET HEAD INSTALLATION STH 164 & EDGEWOOD AVE	LUMP	LUMP			.
2340	SPV.0105 SPECIAL 06. EMERGENCY VEH PREEMPTION (EVP) DET HEAD INSTALLATION STH 164 & CTH L	LUMP	LUMP			.

CONTRACT: 20130312016 PROJECT(S): 2810-06-70 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2350	SPV.0105 SPECIAL 07. REMOVE TRAFFIC SIGNALS STH 164 & EDGEWOOD AVE	LUMP	LUMP			.
2360	SPV.0105 SPECIAL 08. CONCRETE PAVEMENT JOINT LAYOUT	LUMP	LUMP			.
	SECTION 0001 TOTAL					.
	TOTAL BID					.

PLEASE ATTACH SCHEDULE OF ITEMS HERE