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
Dodge	1390-04-96		STH 26 - Hartford STH 60 Relocation	STH 60

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

Proposal Guaranty Required, $ 100,000.00 Payable to: Wisconsin Department of Transportation	Attach Proposal Guaranty on back of this PAGE.
Bid Submittal Due Date: February 12, 2013 Time (Local Time): 9:00 AM	Firm Name, Address, City, State, Zip Code **SAMPLE** **NOT FOR BIDDING PURPOSES**
Contract Completion Time November 1, 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, borrow, common excavation, select crushed material, base aggregate dense, Structure B-14-198, culvert pipes and retaining walls R-14-17 and R-14-18.	
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

Article	Description	Page #
1.	General.	2
2.	Scope of Work.	2
3.	Prosecution and Progress.	2
4.	Traffic.	3
5.	Holiday Work Restrictions.	3
6.	Utilities.	3
7.	Other Contracts.	7
8.	Railroad Insurance and Coordination.	7
9.	Union Pacific Railroad Company Requirements.	10
10.	Information to Bidders, U.S. Army Corps of Engineers Section 404 Permit.	13
11.	Archaeological Cultural Resource Evaluation.	13
12.	Erosion Control.	13
13.	Temporary Shoring, Item 206.6000.S.	14
14.	QMP Base Aggregate.	15
15.	Base Aggregate Dense 1 1/4-Inch.	23
16.	Pipe Grates, Item 611.9800.S.	23
17.	Portable Changeable Message Sign, Item SPV.0045.01.	24
18.	Covering Inlets, Item SPV.0060.01.	32
19.	Removing Barricades Type III, Item SPV.0060.02.	32
20.	Fence Chain Link Polymer-Coated 6-Ft., Item SPV.0090.01.	33
21.	Railing Pipe Galvanized R-14-17, Item SPV.0105.01; Railing Pipe Galvanized R-14-18, Item SPV. 0105.02.	37
22.	Wall Concrete Panel Mechanically Stabilized Earth LRFD, Item SPV.0165.01.	39
23.	Geogrid Reinforcement, Item SPV.0180.01.	46

SPECIAL PROVISIONS

1. General.

Perform the work under this construction contract for Project 1390-04-96; STH 26 - Hartford Road, STH 60 Relocation, STH 60, Dodge 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, borrow, common excavation, select crushed material, base aggregate dense, Structure B-14-198, culvert pipes, retaining walls R-14-17 and R-14-18 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 department will not grant time extensions to the completion date specified for the following:

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

Conduct prosecution and progress meetings once a week.

4. Traffic.

Keep STH 26 and STH 60 open to all traffic during construction.

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

Maintain access to all private entrances and field entrances at all times for local residents, businesses, and emergency vehicles.

Do not park or store equipment, vehicles, or construction materials within 30 feet of the edge of the traffic lanes of any roadway during non-working hours, unless it is protected by the concrete barrier.

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 16, STH 26 and STH 60 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 Monday, July 8, 3013 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 provisions of Administrative Rule Trans. 220.

On this project the Administrative Rule Trans. 220 utility coordination process was followed.

There are underground and overhead utility facilities located within the project limits. The contractor shall coordinate their construction activities with a call to Diggers Hotline or a direct call to the utilities that have facilities in the area as required per statues. The contractor shall use caution to ensure the integrity of the underground facilities and shall maintain code clearances from overhead facilities at all times.

Frontier (Verizon) – Communication Lines
Frontier (Verizon) has underground facilities located within the project limits. Work will be done prior to construction.

S – STH 60

Station (Approximate location)	**Comments**
709+30 RT S	Remove Pedestal
707+00 RT S	Start inactive wire discontinue in place
712+00 RT S	End inactive wire discontinue in place
775+15 RT S	Start plow 36” deep to existing pedestal
777+50 RT S	End plow 36” deep at existing pedestal
775+15 RT S	Start boring 6 ft. deep Crossing both S and W
13+45 LT W	End boring 6 ft. deep Crossing both S and W

W – CTH W

Station (Approximate location)	**Comments**
13+45 LT 75’ W	Remove Pedestal
13+45 LT 250’ W	New Pedestal
13+45 LT W	Start plow 36” deep
4+00 RT T	End plow 36” deep

T – Temporary Road

Station (Approximate location)	**Comments**
4+00 RT T	Start boring 6ft. deep Crossing both T and TR
31+50 LT TR	End boring 6 ft. deep Crossing both T and TR

TR – Temporary Road

Station (Approximate location)	**Comments**
31+50 LT TR	Start plow 36” deep to existing pedestal
35+20 LT TR	End plow 36” deep at existing pedestal

TimeLine – Estimated construction time is 60 working days with an anticipated start date of January 2, 2013 with the work being completed before the start of construction.

Contact for Frontier (Verizon) Communications is Russell Ryan, 315 Oak Street, Oakfield, WI 53065, Office (920) 583-3275 or Cell (920) 737-9662.

We-Energies – Electric
We-Energies has underground and overhead facilities located within the project limits. Work will be done prior to construction.

Any facilities not explicitly identified as being relocated have been deemed to be not in conflict and will remain in place as is.

We-Energies erosion control permits for this project will require regularly scheduled inspections and maintenance be done until vegetation is established. Work will begin on the road project prior to this reestablishment. The permit cannot be closed out prior to the start of the road project. The requirements of the permit will be formally transferred to the WISDOT contractor, through the use of the WDNR Notice of Termination and a written notice mailed to the contractor, on the letting date of the project.

The WISDOT contractor will continue with the inspections and maintenance as required.

FK – Frontage Road

We-Energies will bore pit for underground cable outside slope intercept at approximately the following locations:

Station 17+51 LT 62’ FK
Station 17+47 RT 83’ FK

We-Energies will bore underground cable for Road FK (Frontage Road) crossing, to be 5’ min. depth at approximately the following locations:

From	To
Station 17+51 LT 62’ FK	Station 17+47 RT 83’ FK

TR – Temporary Road

Underground cable to be lowered to 5’ min depth at approximately the following locations:

From	To
Station 31+89 LT 44’ TR	Station 29+70 RT 49’ TR
Station 1+92 LT 68’ TR	Station 3+87 RT 39’ TR

W – CTH W

We-Energies will bore pit for underground cable outside slope intercept at approximately the following locations:

Station 13+90 LT 70’ W
Station 13+57 RT 55’ W

We-Energies will bore underground cable for CTH W crossing, to be 5’ min. depth at approximately the following locations:

From	To
Station 13+90 LT 70’W	Station 13+57 RT 55’ W

We-Energies will replace underground cable outside slope intercept and discontinue old cable at approximately the following locations:

From	To
Station 13+57 RT 55’W	Station 771+33 LT 65’ S

S – STH 60

We-Energies will bore pit for underground cable outside slope intercept at approximately the following locations:

Station 771+33 LT 65’ S
Station 776+13 RT 60’ S

We-Energies will bore underground cable 5’ min. depth below existing grade at approximately the following locations:

From	To
Station 771+33 LT 65’ S	Station 776+13 RT 60’ S

We-Energies has underground cable in fill area no conflict is anticipated. Hand digging may be required to pass by safely at approximate location of Station 779+80 RT S.

Contractor will contact We-Energies before removing any electrical underground cables, to verify that they have been discontinued and carry no electrical current. The contractor will not assume that unmarked facilities have been discontinued. At no time is it acceptable to push, pull, cut or drill an unmarked facility without explicit consent from We-Energies. Contractor will call the We-Energies 24 hour dispatch lines to arrange for this verification. We-Energies Electric Dispatch #(800) 662-4797

Timeline - Estimated construction required time 120 working days with an anticipated start date of January 2, 2013 with the work being completed before the start of construction.

Contact for We-Energies is, Dean Lenius, 500 S 116th St., West Allis, WI 53214-1000, (414) 659-3754.

7. Other Contracts.

The department plans on letting Project 1390-04-81, Watertown – STH 60 East Road (CTH Q – CTH J) for grading, structures, roadway aggregate and paving for STH 26 in March 2013. Project 1390-04-81 is located south of the limits of this project. Work on Project 1390-04-81 will occur concurrently with work under this project.

The department plans on letting Project 1390-04-82, Watertown – STH 60 East Road (CTH J – STH 60 East) for grading, structures, roadway aggregate and paving for STH 26 in November 2013 with an anticipated construction start date of April 2014. Project 1390-04-82 is located west of the limits of this project.

Coordinate with these projects.

8. Railroad Insurance and Coordination.

A Description
Comply with standard spec 107.17 for all work affecting Union Pacific Railroad Company property and any existing tracks.

A.1 Railroad Insurance Requirements
In addition to standard spec 107.26, provide railroad protective liability insurance coverage as specified in standard spec 107.17.3. Insurance is filed in the name of Union Pacific Railroad Company.

Notify evidence of the required coverage, and duration to John Venice Manager Special Projects – Industry & Public Projects Engineering Department at 101 North Wacker Drive, Chicago IL 60606, Telephone: (312) 777-2043, email jnvenice@up.com.

Include the following information on the insurance document:
Project 1390-04-96
Route Name STH 60, Dodge County

A.2 Work by Railroad
The railroad will perform the work described in this section, except for work described in other special provisions and will be accomplished without cost to the contractor. None.

A.3 Names and addresses of Railroad Representatives for Consultation and Coordination
Contact John Venice, Manager Special Projects – Industry & Public Projects Engineering Department, 101 North Wacker Drive – Suite 1920, Chicago, IL 60606, TELEPHONE (312) 777-2043, FAX (402) 233-2769, email jnvenice@up.com, for consultation on railroad requirements during construction.

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

A.4 Temporary Grade Crossing
If a temporary grade crossing is desired, submit a written request to the railroad representative named in A.3 several weeks prior to the time needed. Approval is subject to the discretion of the railroad. The department has made no arrangements for a temporary grade crossing.

A.5 Train Operation
Approximately 4 through freight trains operate daily through the construction site. Through freight trains operate at up to 50 mph. In addition to through movements there are 2 switching movements at slower speeds.

A.6 Temporary Clearances During Construction
Replace subparagraphs (3) 4.1 and (3) 4.2 of standard spec 107.17.1 with the following:

> Provide 12 feet 0 inches (3.6 m) plus 1.5 inches (38 mm) per degree of track curvature, measured horizontally from the track center line.
>
> Provide 21 feet 6 inches (6.6 m) plus compensation for super-elevated track, measured vertically above the top of the highest rails.

B Railroad Flagging
Arrange with the railroad for the flagging of trains and safety of railroad operations if clearances specified in standard spec 107.17.1 are not maintained during construction operations. The following conditions may also warrant flagging:

1. Cranes swinging or handling materials or equipment within 25 feet of the centerline of any track.
2. Construction operations that are in proximity of power lines or railroad signal and communication lines, underground cables, fuel oil facilities or pipe lines and which might result in fire or damage to such facilities, danger to railroad operations or danger to the public in the transaction of business on railroad premises.
3. Excavation, tunneling, blasting, pile driving, placing, or removing cofferdams or sheeting, or similar activities might cause the railroad's tracks or buildings to be undermined, heaved out of normal level, shifted out of alignment, or otherwise impaired.
4. Bridge painting activities including rigging of falsework, scaffolding or similar activities within 25 feet of the centerline of any track.
5. Deck removal activities within 25 feet of the centerline of any track.
6. Pouring of bridge decks in spans over an operated track.
7. At any other time in railroad representative's judgment, the contractor's work or operations constitute an intrusion into the track zone and create an extraordinary hazard to railroad traffic, and at any other time when flagging protection is necessary for safety to comply with the operating rules of the railroad.

Projects with concurrent activity may require more than one flagger.

Projects with heavy contractor activity within 25 feet of the centerline of any track or unusual or heavy impact on railroad facilities will normally require a full-time flagger.

The department and railroad will monitor operations for compliance with the above flagging requirements. Violations may result in removal from railroad property until arrangements to adhere to the flagging requirements are satisfied. If the railroad imposes additional flagging requirements beyond the above flagging requirements due to the previous violations, the contractor shall bear all costs of the additional flagging requirements.

C Flagging by Railroad– Railroad Does Not Pay Flagging Costs

C.1 General

Replace paragraph (3) of standard spec 107.17.1 with the following:

Comply with the railroad's rules and regulations regarding operations on railroad right-of-way. If the railroad's chief engineering officer requires, arrange with the railroad to obtain the services of qualified railroad employees to protect railroad traffic through the work area. Bear the cost of these services and make payment directly to the railroad. Notify the appropriate railroad representative as listed in section A.3 above, in writing, at least 5 business days before starting work near a track. Provide the specific time planned to start the operations.

C.2 Rates – Union Pacific

The following rates, reimbursement provisions, and excluded conditions will be used to determine the contractor's cost of flagging (if per diem is necessary, as determined by the Manager of Industry and Public Projects (MIPP), add $57 per day):

> $526 daily rate for an eight-hour day (including wages, labor surcharges, lodging, vehicle and mileage expenses),
>
> $1052 "Rest Time" or nightly rate for weekday overnight work for an eight-hour day (including wages, labor surcharges, lodging, vehicle and mileage expenses)
>
> $760 daily rate for an eight-hour day on Saturdays, Sundays, or holidays (including wages, labor surcharges, lodging, vehicle and mileage expenses)
>
> $1,520 "Rest Time" or nightly rate for weekend overnight work for an eight-hour day (including wages, labor surcharges, lodging, vehicle and mileage expenses)
>
> $88 per hour overtime rate for all time worked before or after the regular assigned eight hours on any day, or for a minimum three hour call on Saturdays, Sundays, or Holidays.

The flagger is required to set flags each day in advance of the contractor commencing work that will require flagging. The flagger must also remove the flags each day after the completion of work that required flagging. Any time worked before or after the minimum eight-hour flagging day to set or remove flags will be billed at the overtime rate. The contractor is responsible for knowing the requirements of the railroad for arranging and terminating flagging services and for the associated costs of those services.

C.3 Reimbursement Provisions
The actual cost for flagging will be billed by the railroad. After the completion of the work requiring flagging protection as provided in section B above, the department will reimburse 50% of the cost of such services up to the rates provided above based on paid railroad invoices, except for the excluded conditions enumerated below. In the event actual flagging rates exceed the rates stated above, the department will reimburse 100% of the portion of the rate that is greater than the rates stated above.

C.4 Excluded Conditions
The department will not reimburse any of the cost for additional flagging attributable to the following:

1. Additional flagging requirements imposed by the railroad beyond the flagging requirements provided in subsection B above due to violations by the contractor.
2. Temporary construction crossings arranged for by the contractor.

The contractor shall bear all costs of the additional flagging requirements for the excluded conditions.

C.5 Payment for Flagging
Railroads may issue progressive bills. Notify the railroad when the work is completed and request a final bill from the railroad. The railroad will issue a final bill. Promptly pay railroad-flagging bills, less any charges that may be in dispute. The department will pay for flagging reimbursement under the Railroad Flagging Reimbursement administrative item. The department will withhold flagging reimbursement until any disputed charges are resolved and the final bill is paid. No reimbursement for flagging will be made by the department if a violation of subsection B is documented.
107-034 (20110615)

9. Union Pacific Railroad Company Requirements.

A General
In addition to requirements of the standard specifications and other articles within these special provisions, comply with the following requirements of Union Pacific Railroad Company (UPRR).

B Request for Information / Clarification
All requests for information (RFI) involving work within UPRR right-of-way shall be in accordance to the procedures listed elsewhere in the special provisions. Submit all RFIs

to the engineer for submittal to UPRR. Allow four weeks for UPRR's review after receipt from the engineer.

C Plans / Specifications

Changes to the plans or specifications are subject to the approval of UPRR. Submit all change requests to the engineer. Allow four weeks for UPRR review time after receipt of a change request from the engineer.

D Construction and As-Built Submittals

Submit six sets of the following to the engineer. All design submittals shall be stamped and signed by a professional engineer registered in the State of Wisconsin. The engineer will submit four sets of each submittal, along with any review comments to UPRR. A satisfactory submittal review does not relieve the contractor of responsibility and liability The engineer and UPRR may review the submittals. If the engineer or UPRR finds a submittal unsatisfactory, make all required changes and resubmit it. A satisfactory submittal review does not relieve the contractor of responsibility and liability of complying with the plans, specifications and the special provisions and for the structural integrity and proper functioning of the item that is the subject of the submittal. Allow four weeks for UPRR's review time after receipt of a submittal from the engineer.

Item	Description of Submittal Item	Notes
1	Shoring Design and Details	
2	Falsework Design and Details	
3	Drainage Design Provisions	
4	Erection Diagrams and Sequence	
5	Demolition Diagram and Sequence	
6	Shop Drawings	Steel and concrete members.
7	Bearings	For all structures.
8	Concrete Mix Designs	For all structures.
9	Waterproofing Material Certifications and Installation Procedure	Waterproofing and protective boards.
10	Structural Steel Certifications	All fracture critical members and other members requiring improved notch toughness.
11	Fabrication and Test Reports	All fracture critical members and other members requiring improved notch toughness.
12	Welding Procedures and Welder Certification	AWS Requirements.
13	Foundation Construction Reports	Pile driving, drilled shaft construction, bearing pressure test reports for spread footings.
14	Compaction Testing Reports for Backfill at Abutments	Must meet 95% maximum dry density, Modified Proctor ASTM D1557 backfill at abutments.

Whenever work may affect the operations or safety of trains, the method of doing such work shall first be submitted to UPRRs designated representative for review. Review by UPRR shall not relieve the contractor from liability.

E Infringement on Minimum Clearances

Submit to the engineer requests for infringement upon the minimum horizontal or vertical clearance requirements of standard spec 107.17.1 (2) 4.. The engineer will submit the requests to UPRR's designated representative. Allow four weeks for UPRR's review time after receipt of a submittal from the engineer. Do not infringe upon the minimum clearances unless they are first approved in writing by UPRR.

F Approval of Details

Submit details of construction affecting UPRR tracks, structure, and right-of-way not included in the plans to the engineer for UPRR review before undertaking such work. Allow four weeks for UPRR's review after receipt from the engineer.

G Site Inspections by UPRR

UPRR may make site inspections at any time. Provide the engineer a schedule of anticipated dates for the following activities; the engineer will furnish the schedule to UPRR:

1. Pre-construction conference
2. Pile driving
3. Reinforcement and concrete placement for concrete work
4. Erection of superstructure
5. Placement of waterproofing
6. Completion of the bridge structure.

Update the schedule monthly, or more frequently if necessary, so that site visits may be scheduled.

H Walkways

Maintain an unobstructed continuous space suitable for trainman's use in walking along trains, extending to a line not less than 12 feet from the center line of track along the outer side of each exterior track of multiple tracks and on each side of single tracks. Before the close of each work day, remove any temporary impediments to walkways and track drainage encroachments or obstructions allowed during work hours while UPRR flagman service is provided. Construct walkways with railings over open excavation areas that are in close proximity of a track. Place railings not less than eight feet six inches horizontally from the center line of tangent track and not less than nine feet six inches horizontally from the center line of curved track.

I Construction Excavations

Construction excavations shall meet OSHA and American Railway Engineering and Maintenance-of-Way Association (AREMA) requirements and the UPRR "Guidelines for

Temporary Shoring" (GTS). The GTS is available for review from the Southwest Region's Railroad Coordinator at the department's Southwest Regional Office located at 2101 Wright Street Madison, Wisconsin 53704.

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 Knorr at 608-246-7965.
107-054 (20080901)

11. Archaeological Cultural Resource Evaluation.

Sites or locations beyond the right-of-way that are proposed for borrow sites, batch plant sites, waste sites or staging areas for this project are required to have an evaluation for archaeological significance. Contact Jim Becker, (608) 261-0137 or Lynn Cloud, (608) 266-0099 at the Bureau of Environment and Equity Services (BEES) at least 10 working days in advance to schedule an archaeological evaluation of any proposed borrow site, batch plant site, waste site or staging area.

If a potentially significant archaeological feature or material is discovered from the evaluation, the engineer will promptly notify the contractor to determine an appropriate course of action to be taken. Excavation shall not commence until authorized by the engineer.

Sites which have been previously excavated shall be exempt from these requirements.

12. Erosion Control.

Supplement standard spec 107.20 with the following:

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

Re-topsoil, seed, fertilize and mulch graded areas, as designated by the engineer, within 7 working days after grading is completed.

Perform grading and finishing operations in a continuous and timely manner in environmentally sensitive areas, which are all areas that drain to wetlands, stream crossings, tributaries or other sensitive areas. Place temporary or permanent erosion control measures in environmentally sensitive areas that have been stripped of topsoil and on which significant grading operations have not occurred for more than 14 calendar days. Multiple reinstallations of said temporary measures, as determined by the engineer,

will not be considered a reasonable alternative to accomplishing grading and finishing operations in a continuous and timely manner.

Do not disturb or store any materials including topsoil beyond the slope intercepts in wetland areas without approval from the engineer.

If dewatering is required, the dirty water removed shall be pumped into a settling basin before it is allowed to enter the live stream.

Stockpiled spoil material shall be placed on an upland site an adequate distance from the stream and any open water created by excavation. Silt fence shall be installed between the spoil pile and excavation site and between any disturbed area and the waterway. All disturbed areas shall be seeded and mulched as soon as possible following construction. The silt fence shall be left in place until the seeded area has produced sufficient grass cover to stabilize the area and thereby reduce the danger of site erosion.

13. Temporary Shoring, Item 206.6000.S.

A Description

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

B Materials

B.1 Shoring Design

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

C Construction

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

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

D Measurement

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

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
206.6000.S xx	Temporary Shoring	SF

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

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

206-005 (20110615)

14. 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)

15. Base Aggregate Dense 1 1/4-Inch.

Revise standard spec 305.2.2.1 as follows:

Use 1 ¼-Inch base that conforms to the following gradation requirements.

Percentage by weight passing

Sieve Size	Percentage of Mass Passing
1 1/4 inch	95 – 100
1 inch	---
3/4 inch	70 – 90
3/8 inch	45 – 75
No. 4	30 – 60
No. 10	20 – 40
No. 40	7 – 25
No. 200	2 - 12 [1], [3]

[1] Limited to a maximum of 8% for base placed between old and new pavement.

[3] 3 - 10 percent passing when base is ≥ 50% crushed gravel

16. Pipe Grates, Item 611.9800.S.

A Description

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

B Materials

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

Furnish pipe grates galvanized according to ASTM A123.

Furnish angles and brackets galvanized according to ASTM A123.

Furnish required hardware galvanized according to ASTM A153.

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

D Measurement
The department will measure Pipe Grates in units of work, where one unit is one grate completed and accepted.

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

ITEM NUMBER	DESCRIPTION	UNIT
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)

17. Portable Changeable Message Sign, Item SPV.0045.01.

A Description
(1) This special provision describes furnishing, maintaining installing, and operating 6 portable changeable message signs, 2 portable removable base stations (laptop notebooks), a dedicated telephone line, computer software, surge protection for system components, and operating manuals as hereinafter provided.

A.1 General
(1) During the life of this contract, provide 24 hour-a-day availability of equipment and forces to promptly restore or revise the Portable Changeable Message Signs. Provide the engineer with the name of the local individual, and one alternative contact, responsible for the maintenance and operation of the message signs.

(2) Upon verbal notification of a required sign message modification, complete the message revision within 5 minutes, except during non-working hours complete the message revision within 15 minutes. Upon verbal notification of a required sign modification involving moving, replacing or adding a message sign, complete the sign modification within 1 hour.

(3) The department reserves the right to coordinate all message sign revisions with the contractor based on actual traffic conditions. During non-working hours, respond to message sign requests as deemed necessary by the State Patrol.

(4) Program a master list of predetermined messages, provided by the department, into the message sign software. A unique identification number shall be assigned to each pre-determined message. The numbering system for the pre-approved messages shall be consistent on all the portable changeable message signs, base stations and personal laptop computer. Submit any special messages not on the master list, for approval to Jeff Gustafson, the Changeable Message Sign Coordinator at the SW Region, (608) 516-6400 prior to displaying the message on any message sign.

(5) Prior to delivery of the message signs to the project site, coordinate with Jeff Gustafson, the Changeable Message Sign Coordinator at the SW Region, (608) 516-6400 to allow at least ten working days for the inspection and approval of the Portable Changeable Message Signs.

(6) Supply portable changeable message signs that utilize a consistent computer software technology to operate all the message signs.

(7) Maintain and make all repairs on the message signs delivered to the project. Ensure that the message signs remain operational throughout the duration of the project. Wash the face of the message sign a minimum of once per month or as directed by the engineer.

(8) Provide two portable removable base stations. These base stations shall be laptop notebooks with the minimum requirements as listed in these specifications under B.6 Materials. The engineer will use one of the portable removable base stations. The contractor's 24-hour-a-day emergency contact will use the second portable removable base station.

(9) Provide the department an operating manual and instructions for the portable changeable message signs and base stations.

A.2 Pre-Approved Manufacturers

(1) To become pre-approved as a qualified vendor of Portable Changeable Message Signs, the vendor must initially submit the unit specifications to the department. If the department approves the specifications, the vendor may arrange a message sign demonstration with the department at which the operation and features of the unit shall be demonstrated. All demonstrations shall be coordinated with Jeff Gustafson, the Changeable Message Sign Coordinator at District 1, (608) 516-6400.

(2) The department has previously approved the following manufacturers:

a. ADDCO Incorporated
b. American Electronic Sign Company
c. American Signal Company
d. Display Solutions Incorporated
e. Precision Solar
f. Work Area Protection
g. Solar Tech

B Materials

(1) Furnish equipment that one person can easily transport and operate without assistance.

(2) Provide a complete Portable Changeable Message Sign and trailer that is painted highway safety orange, except the sign case, which shall be painted black. Each message sign shall have a unique identification number displayed on both sides of the trailer with lettering that has a minimum height of 6 inches. The message sign identification numbers shall be positioned on the trailer in such a manner to be visible to shoulder traffic. The identification numbers shall have a reflective coating visible during nighttime operations.

B.1 Sign Case

(1) The sign shall be capable of displaying a minimum of three lines of message text per message frame. Each line shall consist of a minimum of eight characters, equally spaced a minimum of three inches and a maximum of four and one-half inches apart. Characters shall be a minimum of seventeen inches high and a minimum of eleven inches wide and be legible from a minimum of 850 feet during both day and night conditions. The maximum sign width shall be eleven feet six inches.

(2) The sign display shall consist of either a continuous matrix of pixels or individual character modules consisting of smaller matrices of pixels. Each matrix forming a character shall consist of a minimum thirty-five pixels in a five horizontal pixel by seven vertical pixel arrangement. Each pixel shall consist of a high-intensity LED cluster. The LED lamps shall run at a minimum voltage to provide extended lamp life. Each pixel shall be either square in shape with a minimum of two-inch sides or round in shape with a minimum two-inch diameter. The driver board shall provide means for dimming the display. The entire message sign shall complete a message change within 100 milliseconds.

(3) The circuit boards used in the sign case shall be constructed of components readily available from at least two other sources. A schematic of the circuit boards shall be provided to the engineer.

(4) The sign housing shall be weatherproof and shall be constructed of aluminum. The front face shall be covered with either a one-piece, clear, non-glare, lexan panel, or individual one-piece, clear, non-glare, lexan panels.

B.2 Raise and Lower Mechanism

(1) The message sign shall have a vertical mast assembly constructed of structural steel tubing. The message sign shall include a built-in electric powered hydraulic pump capable of fully raising the sign within one minute. Each message sign shall also be equipped with a readily accessible manual lifting device. The message sign shall be capable of rising and locking at various heights. The bottom of the message sign shall be able to rise to a minimum height of seven feet zero inches above the ground.

(2) A means shall be provided to prevent tampering with the message sign when the sign is raised to any locked height. The message sign shall be capable of rotating 360 degrees atop the vertical mast assembly when raised to any locked height. The mast assembly shall have a mechanism for locking the message sign in place when it is extended. When extended, the message sign shall be capable of being locked at any display angle. A means shall be provided to prevent tampering with the display angle once the message sign angle is locked.

B.3 Controller

(1) Sign operations shall be at the direction and control of a programmable microprocessor (controller). The controller shall be furnished with a full size 101 key keyboard. The controller keyboard shall contain standard alphanumeric keys. The keyboard shall be capable of being used for operation of the controller in creating, storing and displaying additional sign messages. The controller shall be capable of storing a minimum of 200 messages (frames). The sign shall be capable of displaying from one to six messages in sequence. A minimum of 150 messages shall be preprogrammed and installed by the manufacturer. The controller shall also have the capacity for storage, recall and display of a minimum of 50 operator created messages. The controller shall be able to recall from memory, preview, and display message sequences at least six frames long. The controller shall be capable of storing a minimum of 25 message sequences that can be created by the operator using any combination of preprogrammed messages and user created messages.

(2) The controller shall allow the operator to vary the message flash rate and sequence rate in 1/4-second intervals or less with the flash rate extending from zero seconds to at least four seconds. The controller shall also allow the operator to generate a moving or flashing arrow symbol that shall be capable of being displayed on any line of a message while text is displayed on other lines of the message. The controller shall also allow the operator to generate a larger moving or flashing arrow symbol that shall be capable of being displayed on the entire sign face, using all three lines. Either of these message frames containing arrow symbols shall be capable of being included in a sequence. The controller shall allow the operator to flash (blink) selected lines of messages and include these messages within a message sequence.

(3) The controller shall be equipped with a display screen for previewing the actual sign message prior to displaying the message on the sign. The controller shall be removable for ease of replacement, service, or programming.

(4) Each controller shall be programmed with a password system that will deter unauthorized programming of the controller. The password system shall include at least two levels of security such that operators at one level may only change message sequences displayed using preprogrammed sequences and operators at a higher level may create and store messages or message sequences. Operators at the higher level shall also be capable of displaying message sequences.

(5) A back up battery shall supply power to the controller when the message sign is not in operation.

(6) The circuit boards used in the controller shall be constructed of components readily available from at least three other sources. Provide the engineer with a schematic of the circuit boards.

(7) Ambient light controlled continuous dimming, with a minimum range of one hundred percent to forty percent shall be provided for the sign display. A means for manually controlled dimming shall also be provided.

(8) The control panel shall have switches for raising and lowering the sign. Provide a night light for the control panel and controller screen and install it in the controller console cabinet.

(9) The Portable Changeable Message Sign shall be fully equipped to receive commands to change standard messages and to allow monitoring of sign operations through a cellular telephone connection at the sign unit, without rewiring the cabinet connections. Provide a modem that operates at a minimum speed of 33.6K BAUD. The controller shall be capable of receiving commands via cellular telephone from a personal computer based remote station. The controller shall be furnished with a standard RS-232 interface such that a laptop personal computer may be connected with the controller to exchange data. The controller shall also be equipped to connect to a standard telephone landline for remote control operation.

(10) The command protocol with which the controller communicates externally shall be of a standard format and be capable of being reconfigured. The command protocol with which the controller communicates via an RS-232 interface shall be a standard format and be capable of being reconfigured.

(11) A cellular phone unit shall be provided and installed in the message sign by the manufacturer.

(12) Provide and maintain a dedicated telephone line to the field office for the portable changeable message signs. Provide surge protection for all of the electronic components and telephone lines.

B.4 Power Source

(1) The solar Portable Changeable Message Sign shall run on a battery system using a solar charging system. The solar-powered battery charging system shall consist of an array of high-efficiency, single-crystal silicon cells mounted on top of the sign panel and a voltage regulator to prevent overcharging of the battery system. The system shall use deep-cycle batteries and shall include a voltage meter, ammeter and an hour meter. The hour meter will be capable of indicating the cumulative time that the message sign has been operational and displaying messages.

(2) The solar cells shall be capable of charging and maintaining the batteries at operational levels under all weather conditions experienced in Wisconsin. The solar array panel shall be capable of rotating 360 degrees atop the sign case and shall be capable of being locked in any position. The solar array panel shall either be tilted at an angle of 45 degrees relative to the horizon or shall be capable of tilting from 0 degrees to a minimum of 45 degrees and shall be capable of being locked in any position. A switch shall be provided to disconnect the solar power supply for safety during maintenance.

(3) The batteries shall be housed in a waterproof, heavy-duty housing which is equipped with necessary hardware to be locked using a padlock or build in lock. The batteries shall be of a standard size and type and be available from at least three different manufacturers. The housing that contains the batteries shall be capable of accommodating batteries from at least three different manufacturers. The batteries shall provide adequate back up power for the Changeable Message Sign to operate at full operation for 20 days having ambient air temperatures of 20 degrees Fahrenheit without any sun exposure to the solar array. Certification of the message sign's ability to operate for a period of 20 days without exposure to sunlight, as stated above, shall be provided by an independent laboratory. A switch shall be supplied to disconnect the battery supply for safety during maintenance.

(4) The sign shall also be equipped to receive and use external 110 volt alternating current as an alternate source of power.

(5) The sign shall also be equipped with a charging device which operates on 110 volt alternating current and that is capable of charging the deep-cycle battery system within 24 hours. The charging device shall automatically shut off when battery system is fully charged to prevent overcharging.

(6) The entire unit shall be equipped with an isolated ground circuit. The ground wires shall be connected to an isolated terminal block. The frame of the trailer shall not be a part of the ground system, except possibly for the alternating current charging and operating systems.

(7) All external wiring shall be single length with no splices and shall be protected from weather and obstructions encountered during transport.

(8) All break lines shall be protected from obstructions encountered during transport.

B.5 Trailer

(1) The highway trailer shall have a maximum width of eight feet six inches and shall be constructed of heavy-gauge, rectangular structural steel tubing, equipped with either screw-type or hydraulic leveling jacks, trailer tongue jack with wheel, fenders, surge brakes, trailer hitch coupling with safety chains and a rear bumper. The trailer shall have a straight axle and two fifteen-inch wheels and tires with a combined rated load capacity greater than the weight of the entire sign unit and trailer.

(2) The trailer shall be equipped with standard highway brake lights, turn signals, and hazard lights and shall be wired into a round, six-prong connector. All wires shall be single lengths with no splices. Separate rustproof metal cabinets shall enclose the battery system and the controller console. The cabinets shall be equipped with the necessary hardware to be locked using a padlock or built in lock. Exterior metal surfaces shall be painted federal orange. The doors and lids of the cabinets shall be capable of being locked in the open position to prevent accidental closure.

(3) The trailer shall include a 6,000 pound capacity surge brake actuator.

(4) The trailer hitch coupling shall be Class III with a minimum capacity of 5,000 pounds and shall provide for hookup to a two-inch ball type hitch. The coupling shall be capable of being tightened to the ball type hitch by hand turning a wheel. Heavy-duty safety chains with safety type hooks shall be provided and be attached to the trailer for use with the coupling and hitch assembly.

(5) The trailer shall be equipped with a means of preventing theft of the trailer.

(6) The trailer shall be equipped with heavy-duty, walk-on type fenders. A walk-on deck, a minimum of 18 inches in width, shall be provided on the trailer along both sides of the sign case. The decks shall be installed so that they are in front of and adjacent to both sides of the sign case when the sign case is locked in the transport mode. The walk-on decks shall be equal in length to the trailer. Non-slip treads shall be provided on these decks and on all trailer locations where service or maintenance standing or climbing will be required.

(7) The trailer shall contain at least four leveling jacks, as previously described, which will level the trailer on a 6:1 slope and support 5000 pounds each.

(8) The trailer shall have storage space for the leveling jacks when the jacks are not in use. When the leveling jacks are stored within the trailer, the jacks shall not protrude beneath the frame of the trailer. The trailer and sign shall be capable of withstanding wind gusts of up to 80 miles per hour when in operation with the sign raised to maximum height and the leveling jacks extended. The trailer shall also be equipped with a tongue jack that has a wheel. The tongue jack shall have a capacity greater than the tongue weight of the trailer.

(9) The trailer shall be capable of mounting or descending six-inch curb heights without the frame striking the curb.

(10) The trailer shall be legal for use on Wisconsin roads in accordance to State of Wisconsin statutes.

B.6 Laptop Personal Computer (Notebook)

B.6.1 Hardware

(1) Provide a laptop personal computer with the following minimum hardware requirements.

- IBM Compatible PC Pentium 200MHz Processor
- 64 MB of RAM
- 250 MB Free disk space
- 3 1/2-inch 1.44 MB diskette drive
- 24X CD ROM drive
- Mouse or other Windows compatible pointing device
- Color VGA (640 by 480 pixels or higher) or compatible screen display
- Internal or External Hayes compatible 56K modem

B.6.2 Software

(1) Provide a laptop personal computer with the following minimum software requirements.

- Windows 95, Windows 98 or greater
- With all of the hardware drivers installed and working properly

C Construction

(1) Initially place the message sign in accordance to the plans and as approved by the engineer. Provide the engineer with a written list of initial message sign locations.

(2) Install the message signs a minimum 30 feet and a maximum 50 feet the edge line of the existing travel lane. Install the message signs perpendicular to the travel lane and level the message sign. Install the message signs to provide a 900-foot line of sight to approaching vehicles as measured from the centerline of the roadway. Ensure that the installation of message signs does not impede emergency vehicle access along any existing shoulder within the project vicinity.

(3) Have a representative familiar with the operation and repair of the message signs available at the project site on the day the signs are to become operational. The representative shall remain available until all message signs are operating satisfactorily. Provide training to the engineer, as required, on operating, adjusting, and controlling the portable changeable message signs, base stations and personal laptop computer.

D Measurement

(1) The department will measure Portable Changeable Message Signs by the unit in use as directed by the engineer per day, acceptably completed.

(2) Any day in which the changeable message boards are not working properly for more than two hours will result in one day being deducted from the quantity measured for payment, plus an additional $500 that the contractor will be liable to the department. Improper operation of a Portable Changeable Message Sign shall include displaying an incorrect message or a message sign operating at an incorrect location. More than a single day deduction in payment can be assessed if multiple operational errors occur on

the project involving different Portable Changeable Message Signs on the same calendar day.

E Payment

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

ITEM NUMBER	DESCRIPTIION	UNIT
SPV.0045.01	Portable Changeable Message Sign	Day

(2) Payment is full compensation for furnishing, maintaining and installing the complete unit; and for furnishing all labor, tools, equipment, services, and incidentals necessary to complete the contract work.

18. Covering Inlets, Item SPV.0060.01.

A Description

This special provision describes furnishing and installing a steel plate to cover the open inlet structures after the grading work has been completed on STH 60. The covers shall remain in place until no longer needed.

B Materials

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

C (Vacant)

D Measurement

The department will measure Covering Inlets as each individual unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.01	Covering Manholes	Each

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

19. Removing Barricades Type III, Item SPV.0060.02.

A Description

Maintain and remove the traffic control barricades type III, as shown on the plan and as hereinafter provided

The barricades, legs, signs, and warning lights will become the property of Dodge County at the completion of the project

B (Vacant)

C Construction
The barricades, legs, signs and warning lights will become property of Dodge County. Carefully remove and stockpile all salvageable barricades, legs, signs, and warning lights at the Dodge County Highway Department Shop. Contact Brian Field at the Dodge County Highway Department (920) 386-3653, 48 hours prior to removing and delivering the barricades, legs, signs and warning lights.

D Measurement
The department will measure Removing Barricades Type III as each individual removed barricade, 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	Removing Barricades Type III	Each

Payment is full compensation for furnishing, removing and delivering the barricades, legs, signs and warning lights.

20. Fence Chain Link Polymer-Coated 6-Ft., Item SPV.0090.01.

A Description
This special provision describes furnishing and installing a new polymer-coated fence system on structures in accordance to the pertinent plan details, as directed by the engineer and as hereinafter provided. The color of all components in this fence system shall be the same and shall be as specified on the plans.

B Materials
All materials for this fence system shall be new stock, free from defects impairing strength, durability, and appearance. Fabric shall be produced by methods recognized as good commercial practice. Wire used in the manufacture of the fabric shall be capable of being woven into fabric without the polymer-coating cracking or peeling. Pipes used in framework shall be straight, true to section and free of defects. All burrs at the ends of pipes shall be removed before galvanizing. The polymer-coating shall be a dense impervious covering, applied without voids, tears or cuts that reveal the substrate. Excessive roughness, bubbles, blisters and flaking in the polymer-coating will be a basis for rejection.

B1 Fabric
Provide steel chain link fence fabric that conforms to the requirements of ASTM F668, Class 2b, a polymer-coating fused and adhered to wire that is zinc-coated. Provide fabric woven from 9-gage wire using plan specified mesh size, diamond pattern, with both the top and bottom selvages knuckled. The minimum breaking strength of the wire shall be

1290 lbs. The color of polymer-coating shall conform to the requirements of ASTM F934.

B2 Framework

Provide steel rails, posts and post sleeves conforming to the requirements of ASTM F1083, Standard Weight Pipe (Schedule 40) of the size (O.D.) and weight as shown on the plans. The minimum yield strength shall be 30,000 psi and the minimum tensile strength shall be 48,000 psi. These components shall be zinc-coated inside and outside by the hot-dip process as stated in ASTM F1083. Provide polymer-coating over zinc-coating that conforms to ASTM F1043. The color of polymer-coating shall conform to the requirements of ASTM F934, and match the color of the other fence components. Weld base plate to posts or post sleeves and complete any additional welding of components before galvanizing.

B3 Fittings

Provide end post caps, line post caps, top rail sleeves, rail ends, line rail clamps, brace bands, tension bands, tension bars, and tie wires that are steel and conform to the requirements of ASTM F626. Tie wires shall be round and 9-gage wire. These components (excluding tie wires) shall be zinc-coated by the hot-dip process as stated in ASTM F626. Provide polymer-coating over zinc-coating on components (excluding tie wires) that conforms to the requirements of ASTM F626. For tie wires, provide polymer-coating on wire that is zinc-coated using the same procedure as used for the wires in the fence fabric. End post caps and line post caps shall fit tightly over posts to prevent moisture intrusion. Supply dome style caps for end posts and loop type caps for line posts. The color of polymer-coating shall conform to the requirements of ASTM F934, and match the color of the other fence components.

B4 Bolts

All bolts are to be supplied with lock washers and nuts. Use galvanized steel bolts, nuts and washers per plan details.

B5 Tests

B5.1 Fabric and Tie Wire

Breaking Strength:	ASTM A370

Zinc-Coating Requirements

Weight of Zinc-Coating:	ASTM A90

Polymer-Coating Requirements

Thickness of Polymer-Coating:	ASTM F668
Adhesion:	ASTM F668
Accelerated Aging Test:	ASTM F668, D1499
Mandrel Bend Test:	ASTM F668

B5.2 Framework

Tensile and Yield Strength: ASTM E8

Zinc-Coating Requirements

Weight of Zinc-Coating: ASTM A90

Polymer-Coating Requirements

Thickness of Polymer-Coating: ASTM E376

Adhesion: ASTM F1043

Accelerated Aging Test: ASTM F1043, D1499

B5.3 Fittings

Zinc-Coating Requirements

Weight of Zinc-Coating: ASTM A90

Polymer-Coating Requirements

Thickness of Polymer-Coating: ASTM F626

Adhesion: ASTM F1043 (same test as for framework)

Accelerated Aging Test: ASTM F1043, D1499 (same test as for framework)

B6 Submittals

In addition to the Engineer, send submittals listed in this section to the name below for informational purposes:

David Nelson
WisDOT, Bureau of Structures
4802 Sheboygan Ave., Room 601
PO Box 7916
Madison, WI 53707

B6.1 Shop Drawings

Submit shop drawings showing the details of fence construction. Show the fence height, post spacing, rail location, and all dimensions necessary for the construction of the chain link fence. Label the end posts, line posts, rails, post sleeves, top rail sleeves, bolts and fittings. State the polymer-coating type used on the fabric, framework and fittings and the Class of coating used on the fabric. State the color of polymer-coating to be used on the fence components. For the fabric, state the wire gage, mesh size, and type of selvages used. For the framework, state the size (O.D.) and unit weight for the posts and rails. For the fittings, state the size for top rail sleeves, brace bands, tension bands, tension bars, line rail clamps, size and type of bolts, and the tie wire gage. State the material type used for fabric, framework, and fittings. Also give the breaking strength for the fabric wire and the tensile and yield strength properties for the framework.

B6.2 Specification Compliance

Submit certification of compliance with material specifications. Provide material certification and test documentation for fabric, framework, fittings and hardware that shows that all materials meet or exceed the specifications of this contract and the tests in B5. This document shall provide the name, address and phone number of the manufacturer, and the name of a contact person.

C Construction

C1 Delivery, Storage and Handling

Deliver material to the site in an undamaged condition. Upon receipt at the job site, all materials shall be thoroughly inspected to ensure that no damage occurred during shipping or handling and condition of materials is in conformance with these specifications. If polymer-coating is damaged, contractor shall repair or replace components as necessary to the approval of the engineer at no additional cost to the Owner. Carefully store material off the ground to ensure proper ventilation and drainage and to provide protection against damage caused by ground moisture. Handle all polymer-coated material with care.

C2 Touch-up and Repair

For minor damage caused by shipping, handling or installation to polymer-coated surfaces, touch-up the finish in conformance with the manufacturer's recommendations. Provide touch-up coating such that repairs are not visible from a distance of 6-feet. If damage is beyond repair, the fencing component shall be replaced at no additional cost to the Owner. The contractor shall provide the engineer with a copy of the manufacturer's recommended repair procedure and materials before repairing damaged coatings.

C3 General

Install the chain link fence in accordance to ASTM F567 and the manufacturer's instructions. The contractor shall provide staff that is thoroughly familiar with the type of construction involved and materials and techniques specified. Chain link fabric shall be installed on the side of the posts indicated on the plans. Fabric shall be attached to the end posts with tension bars and tension bands. It shall be attached to rails, and posts without tension bands, with tie wires. The fabric shall be installed and pulled taut to provide a smooth and uniform appearance free from sag, without permanently distorting the fabric diamond or reducing the fabric height. Install top rail to pass through line post caps and form a continuous brace between end posts. Minimum length of top rail between splices shall be 20-feet. Splice top rail at joints with sleeves for a rigid connection. Locate splices near ¼ point of post spacing. Heads of bolts shall be on the side of the fence adjacent to pedestrian traffic.

D Measurement

The department will measure Fence Chain Link Polymer-Coated 6-Ft. by the linear foot, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.01	Fence Chain Link Polymer-Coated 6-Ft.	LF

Payment is full compensation for fabricating, galvanizing and polymer-coating all fence components, and transporting to jobsite; and for erecting components to create a polymer-coated fence system, including any touch-up and repairs.

21. Railing Pipe Galvanized R-14-17, Item SPV.0105.01; Railing Pipe Galvanized R-14-18, Item SPV. 0105.02.

A Description

This special provision describes fabricating, galvanizing, painting and installing railing in accordance to standard spec 506, 513 and 517 and the plan details, as directed by the engineer, and as hereinafter provided.

B Materials

All materials for railing shall be new stock, free from defects impairing strength, durability and appearance. Railing assemblies shall be galvanized and receive a two-coat paint system. Bubbles, blisters and flaking in the coating will be a basis for rejection.

B1 Coating System

B1.1 Galvanizing

After fabrication, blast clean steel railing assemblies per SSPC-SP6 and galvanize according to ASTM A123. Vent holes shall be drilled in members as required to facilitate galvanizing and drainage. Location and size of vent holes are to be shown on the shop drawings. All burrs at component edges, corners and at holes shall be removed and sharp edges chamfered before galvanizing. Condition any thermal cut edges before blast cleaning by shallow grinding or other cleaning to remove any hardened surface layer. Remove all evident steel defects exposed in accordance to AASHTO M 160 prior to blast cleaning. Lumps, projections, globules, or heavy deposits of galvanizing, which will provide surface conditions that when painted, will produce unacceptable aesthetic and/or visual qualities, will not be permitted.

B1.2 Two-Coat Paint System

After galvanizing, paint all exterior surfaces of steel railing assemblies and inside of rail elements at field erection and expansion joints as hereinafter provided. All galvanized surfaces to be painted shall be cleaned per SSPC-SP1 to remove chlorides, sulfates, zinc salts, oil, dirt, organic matter and other contaminants. The cleaned surface shall then be brush blast cleaned per SSPC-SP16 to create a slight angular surface profile per manufacturer's recommendation for adhesion of the tie coat. Blasting shall not fracture the galvanized finish or remove any dry film thickness. After cleaning, apply a tie coat from an approved coating system that is specifically intended to be used on a galvanized surface, per manufacturer's recommendations. The tie coat shall etch the galvanized rail and prepare the surface for the top coat. Apply a top coat per manufacturer's recommendations, matching the specified color shown on the plans. Use a preapproved top coat that is resistant to the effects of the sun and is suitable for a marine environment. The tie and top coats should be of contrasting colors, and come from the same manufacturer.

Ensure that the paint manufacturer reviews the process to be used for surface preparation and application of the paint coating system with the paint applier. The review shall include a visit to the facility performing the work if requested by the paint manufacturer. Provide written confirmation, from the paint manufacturer to the engineer, that the review

has taken place and that issues raised have been addressed before beginning coating work under the contract.

Use one of the qualified paint manufacturers and products given below. An equivalent system may be used with the written approval of the engineer.

Manufacturer	Coat	Products	Dry Film Minimum Thickness (mils)	Min. Time[1] Between Coats (hours)
Sherwin Williams 1051 Perimeter Drive Suite 710 Schaumburg, IL 60173 (847) 330-1562	Tie	Recoatable Epoxy Primer B67-5 Series / B67V5	2.0 to 4.0	6
	Top	Acrolon 218 HS Polyurethane, B65-650	2.0 to 4.0	NA
Carboline 350 Hanley Industrial St. Louis, MO 63144 (314) 644-1000	Tie	Rustbond Penetrating Sealer	1	36
	Tie	FC	4.0 to 6.0	10
	Tie	Carboguard 60	4.0 to 6.0	1
	Top	Carboguard 635 Carbothane 133 LH(satin)	4	NA
Wasser Corporation 4118 B Place NW Suite B Auburn, WA 98001 (253) 850-2967	Tie	MC-Ferrox B 100	3.0 to 5.0	8
	Top	MC-Luster 100	2.0 to 4.0	NA

[1] Time is dependent on temperature and humidity. Contact manufacturer for more specific information.

B2 Shop Drawings

Submit shop drawings showing the details of railing construction. Show the railing height post spacing, rail location, weld sizes and locations and all dimensions necessary for the construction of the railing. Show location of shop rail splices, field erection joints and expansion joints. State the name of the paint manufacturer and the product name of the tie coat and top coat used along with the color. State the size and material type used for all components. Also show the size and location of any vent or drainage holes provided.

C Construction

C1 Delivery, Storage and Handling

Deliver material to the site in an undamaged condition. Upon receipt at the job site, all materials shall be thoroughly inspected to ensure that no damage occurred during shipping or handling and conditions of materials is in conformance with these specifications. If coating is damaged, contractor shall repair or replace railing assemblies to the approval of the engineer at no additional cost to the Owner. Carefully store the material off the ground to ensure proper ventilation and drainage. Exercise care so as not to damage the coated surface during railing installation. No field welding, field cutting or drilling will be permitted without the approval of the engineer.

C2 Touch-up and Repair

For minor damage caused by shipping, handling or installation to coated surfaces, touch-up the surface in conformance with the manufacturer's recommendations. If damage is excessive, the railing assembly shall be replaced at no additional cost to the Owner. The contractor shall provide the engineer with a copy of the manufacturer's recommended repair procedure and materials before repairing damaged coatings.

D Measurement

The department will measure Railing Pipe Galvanized R-14-17 and Railing Pipe Galvanized R-14-18 as a single lump sum unit for each structure where railing is satisfactorily furnished and installed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.01	Railing Pipe Galvanized R-14-17	LS
SPV.0105.02	Railing Pipe Galvanized R-14-18	LS

Payment is full compensation for fabricating, galvanizing, painting, transporting, and installing the railing, including any touch-up and repairs.

22. Wall Concrete Panel Mechanically Stabilized Earth LRFD, Item SPV.0165.01.

A Description

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

B Materials

B.1 Proprietary Mechanically Stabilized Earth Concrete Panel Wall Systems

The supplied wall system must be from the department's approved list of concrete panel mechanically stabilized earth wall systems.

Proprietary wall systems may be used for this work, but must conform to the requirements of this specification and be pre-approved for use by the department's Bureau of Structures, Structures Design Section. The department maintains a list of pre-approved systems of retaining walls. To be eligible for use on this project, a system must have been pre-approved and added to that list prior to the bid opening date. The name of the pre-approved proprietary wall system selected shall be furnished to the engineer within 25 days after the award of contract. The location of the plant manufacturing the concrete panels shall be furnished to the engineer at least 14 days prior to the start of panel production.

To receive pre-approval, the retaining wall system must comply with all pertinent requirements of this provision. Applications for pre-approval may be submitted at any time. Applications must be prepared in accordance to the requirements of Chapter 14 of the department's LRFD Bridge Manual. Information and assistance with the pre-approval process can be obtained by contacting the Structures Design Section in Room 601 of the Hill Farms State Transportation Building in Madison or by calling (608) 266-8494.

B.2 Design Requirements

It is the responsibility of the contractor to supply a design and supporting documentation as required by this special provision, for review by the department, to show the proposed wall design is in compliance with the design specifications. Four copies of the following shall be submitted to the engineer for review and acceptance no later than 60 days from the date of notification to proceed with the project.

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

The design shall be in compliance with the AASHTO LRFD Bridge Design Specifications 5th Edition 2010, (AASHTO LRFD) with latest interim specifications for Mechanically Stabilized Earth Walls, WisDOT's current Standard Specifications for Highway and Structure Construction (Standard Specifications), Chapter 14 of the WisDOT LRFD Bridge Manual and standard engineering design procedures as determined by the department. Loads, load combinations, load and resistance factors shall be as specified in AASHTO LRFD Section 11. The associated resistance factors shall be defined in accordance to Table11.5.6-1 LRFD.

Design and construct the walls in accordance to the lines, grades, heights and dimensions shown on the plans, as herein specified, and as directed by the department. Where walls or wall sections intersect with an included angle of 130 degrees or less, a vertical corner

element separate from the standard panel face shall abut and interact with the opposing standard panels. The corner element shall have ground reinforcement connected specifically to that panel and shall be designed to preclude lateral spread of the intersecting panels. If the wall is installed in front of a bridge abutment or wing, it shall also be designed to resist the applied abutment/bridge lateral forces specified on the contract plans.

Walls parallel to supporting highway traffic shall be designed for the effects of highway surcharge loading equivalent of 2 feet soil surcharge weight or 240 psf. The design shall also consider the traffic barrier impact where applicable. Walls that do not carry highway traffic shall be designed for a live load surcharge of 100 psf in accordance to Chapter 14 of the WisDOT LRFD Bridge Manual or as stated on the plans.

A maximum value of the angle of internal friction of the wall backfill material used for design shall be assumed to be 30 degrees without a certified report of tests. If a certified report of tests yields an angle of internal friction greater than 30 degrees, the larger test value may be used for design, up to a maximum value of 36 degrees.

An external stability check at critical wall stations showing Capacity Demand Ratios (CDR) for sliding, eccentricity, and bearing checks is performed by the department or it's consultant and is provided on the wall plans.

The design of the Wall Concrete Panel Mechanically Stabilized Earth by the contractor shall consider the internal and compound stability of the wall mass in accordance to AASHTO LRFD 11.10.6. The internal stability shall include soil reinforcement pullout, soil reinforcement rupture, and panel-reinforcement connection failure at each soil reinforcement level. The design shall be performed using the Simplified Method or Coherent Gravity Method. Calculations for factored stresses and resistances shall be based upon assumed conditions at the end of the design life. Compound stability shall be computed for the applicable strength limits.

Facing panels shall meet the design requirements of AASHTO LRFD 11.10.2.3. The Facing panels shall also be designed to resist compaction stresses that occur during the wall erection. The minimum thickness of the Facing panel shall be 5.5 inches. The surface area of a standard single panel cannot exceed 60 square feet. The maximum height of a standard panel shall be 5 feet. The top and bottom panels may exceed 5 foot in height based on site topography subject to the approval by the Structures Design Section. The design of the steel reinforcement within the panels shall be based on one-way bending action. Design the wall panels and joints between panels to accommodate a maximum differential settlement of 1 foot over a 100-foot length, unless the plans indicate other.

The minimum length of soil reinforcement measured from the back face of the wall shall be equal to 0.7 the wall height or as shown on the plan. In no case shall this length be less than 8 feet. The soil reinforcement length shall be the same from the bottom to the top of the wall. The soil reinforcement shall extend a minimum of 3.0 feet beyond the

theoretical failure plane in all cases. The maximum vertical spacing of soil reinforcement layers shall be 31 inches. The uppermost layer of the reinforcement shall be located a minimum of six inches below the bottom of an overlying slab, footing or top of the wall. The upper layers of the soil reinforcement shall also be checked to verify that they have sufficient tensile resistance against traffic barrier impact where applicable.

All soil reinforcement steel required for the reinforced soil zone shall be connected to the face panels. The reinforcement and the reinforcement/facing connection strength shall be designed to resist maximum factored reinforcement loads in accordance to AASHTO LRFD Section 11.10.6. The nominal long term design strength in steel reinforcement and connections shall be based upon assumed conditions at the end of the design life.

Soil reinforcement shall be prefabricated into single or multiple elements before galvanizing. Soil reinforcement shall be fabricated or designed to avoid piling, drainage structures or other obstacles in the fill without field modifications. Cutting or altering of the basic structural section of either the strip or grid at the site is prohibited unless approved by the Structures Design Section. A minimum clearance of 3" shall be maintained between any obstruction and reinforcement unless otherwise approved. Splicing steel reinforcement is not allowed unless approved by the Structures Design Section.

MSE facing panels shall be installed on concrete leveling pads. The minimum cross section of the leveling pad shall be 6-inches deep by 1-foot wide. Potential depth of frost penetration at the wall location shall not be considered in designing the wall for depth of leveling pad.

Submit the following to the engineer for review: complete design calculations, explanatory notes, supporting materials, specifications, and detailed plans and shop drawings for the proposed wall system. Sample analyses and hand output shall be submitted to verify the output by the software. The design calculations and notes shall clearly indicate the Capacity to Demand Ratios (CDR) for all internal stabilities as defined in AASHTO LRFD.

The wall submittal package shall be submitted electronically to the engineer and Structures Design Section. Submit all required information no later than 30 days prior to beginning construction of the wall. The detailed plans and shop drawings shall include all details, dimensions, quantities and cross-sections necessary to construct the walls.

B.3 Wall System Components

Materials furnished for wall system components under this contract shall conform to the requirements of this specification. All certifications related to material and components of the wall systems specified in this subsection shall be submitted to the engineer.

B.3.1 General

The walls shall have modular precast concrete face panels produced by a wet cast process, and have cast-in-place concrete pads or footings. The concrete panels shall have a minimum strength of 4000 psi at 28 days. The panel edges shall be configured so as to conceal the joints. The detail shall be a shiplap, tongue and groove or other detail adequate to prevent vandalism or ultraviolet light damage to the backside of the wall joint covering. Joints between panels shall be no more than 0.75 inch. Use full wall height slip joints at points of differential settlement when detailed on the plan. Horizontal joints must be provided with a compressible bearing material to prevent concrete to concrete contact.

A minimum of two bearing pads shall be used per panel. The allowable bearing stress shall not exceed 900 psi. The bearing pads shall be either preformed EPDM rubber conforming to ASTM D-2000, Grade 2, Type A, Class A with a minimum Durometer Hardness of 80 or high- density polyethylene pads with a minimum density of 0.034 lb/in^3 in accordance to ASTM 1505. An 18-inch wide geotextile shall be used on the backface of the wall panels to cover all panel joints. The geotextile shall meet the physical requirements stated in subsection 645.2.4 of the standard specifications for Geotextile Fabric, Type DF, Schedule B, except that the grab tensile strength shall be a minimum of 180 pounds in both the machine and cross-machine directions. The geotextile shall be attached with a standard construction adhesive suitable for use on concrete surfaces and cold temperatures. The adhesive shall be applied to the panels, not to the geotextile.

All steel portions of the wall system exposed to earth shall be galvanized. All soil reinforcement and attachment devices shall be carefully inspected to ensure they are true size and free from defects that may impair the strength and durability.

Use a wall leveling pad that consists of poured concrete masonry, Grade A as given in standard spec 501. The minimum embedment to the top of the leveling pad shall be as shown on the plan. Step the leveling pad to follow the general slope of the ground line. The leveling pad's steps shall keep the bottom of the wall within one half the panel heights of the minimum embedment i.e. the minimum embedment plus up to one half the height of one panel. Additional embedment may be detailed but will not be measured for payment.

B.3.2 Backfill

Furnish and place backfill for mechanically stabilized earth concrete panel walls as shown on the plans and as hereinafter provided.

Provide and use backfill that consists of natural sand or a mixture of sand with gravel, crushed gravel or crushed stone. It shall not contain foundry sand, bottom ash, blast furnace slag or other potentially corrosive material.

Provide material conforming to the following gradation requirements.

SieveSize	Percentage by Weight Passing
1 inch	100
No. 40	0 - 60
No. 200	0 - 15

The material shall have a liquid limit not greater than 25, as per AASHTO T89, and a plasticity index not greater than 6, as per AASHTO T90.

In addition, backfill material shall meet the following requirements.

Test	Method	Value
pH	AASHTO T-289	5 – 10.0
Sulfate content	AASHTO T-290	200 ppm max.
Chloride content	AASHTO T-291	100 ppm max.
Electrical Resistivity	AASHTO T-288	3000 ohm/cm min.
Organic Content	AASHTO T-267	1.0% max.
Angle of Internal Friction	AASHTO T-236	30 degrees min.

Prior to placement of the backfill, obtain and furnish to the engineer a current 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.

C Construction

C.1 Excavation and Backfill

Excavation will encompass the preparation of the foundation for the leveling pad and the reinforcing strips in accordance to standard spec 206. The volume of excavation covered is limited to the width of the reinforced mass and to the depth of the leveling pad unless shown or noted otherwise on the plan. At the end of each working day, provide good temporary drainage such that the backfill shall not become contaminated with run-off soil or water if it should rain. Do not stockpile or store materials or large equipment within 10 feet of the back of the wall.

Compact all backfill behind the wall as specified in standard spec 207.3.6.

Backfill placement shall closely follow the erection of each course of panels. Compact the backfill to 95.0% of maximum density as determined by AASHTO T-99, Method C. Compaction of backfill within 3 feet of the back face of the wall should be accomplished using lightweight compaction devices. Use of heavy compaction equipment or vehicles should be avoided within 3 feet of the panels.

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 feet of vertical wall height, per 200 feet length of wall, or major portion thereof. A minimum of one test for every 2-foot of vertical wall height is required. Test sites will be selected using ASTM Method D3665. Deliver documentation of all compaction testing results to the engineer at the time of testing. The cost of compaction testing shall be considered incidental to the cost of the wall.

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. Bending of MSE reinforcement that result in a kink in the reinforcement shall not be allowed. If skewing of the reinforcement is required due to obstruction in the reinforced fill, the maximum skew angle shall not exceed 15 degrees from the normal position unless a greater skew angle is shown on the plans. The adequacy of the skewed reinforcement in such a case shall be addressed by supporting calculations.

C.2 Panel Tolerances

As backfill material is placed behind a panel, maintain the panel in its proper inclined position according to the supplier specifications and as approved by the engineer. The supplier shall specify the back batter so that the final position of the wall is vertical. Vertical tolerances and horizontal alignment tolerances shall not exceed ¾-inch when measured along a 10-foot straight edge. The maximum allowable offset in any panel joint shall be ¾-inch. The overall vertical tolerance of the wall (plumbness from top to bottom) shall not exceed ½-inch per 10 feet of wall height. Erect the precast face panels to ensure that they are located within 1 inch from the contract plan offset at any location to ensure proper wall location at the top of the wall. Provide a ¾-inch joint separation between all adjacent face panels to prevent direct concrete-to-concrete contact. Maintain this gap by the use of bearing pads and/or alignment pins. Failure to meet this tolerance may cause the engineer to require the contractor to disassemble and re-erect the affected portions of the wall. In addition, imperfect molding, honeycombing, cracking or severe chipping of panels shall be cause of panel rejection.

C.3 Geotechnical Information

Geotechnical data to be used in the design of the wall is given on the wall plan. After completing wall excavation of the entire reinforced soil zone, notify the department and allow the Regional Soils Engineer two working days to review the foundation.

D Measurement

The department will measure Wall Concrete Panel Mechanically Stabilized Earth 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 and computed using the plan dimensions. 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
SPV.0165.01	Wall Concrete Panel Mechanically Stabilized Earth LRFD	SF

Payment is full compensation for supplying a design and shop drawings; preparing the site, including all necessary excavation and disposal of materials; supplying all necessary wall components to produce a functional system including cap and copings; constructing the retaining system and drainage system; providing backfill, backfilling, compacting, and for performing compaction testing. Parapets, railings, abutment bodies and other items above the wall cap or coping will be paid for separately. Vehicle barrier and its support will be paid separately.

Any required topsoil, fertilizer, seeding or siding and mulch will be paid for at the contract unit price of topsoil, fertilizer, seeding or sodding and mulch, respectively.

23. Geogrid Reinforcement, Item SPV.0180.01.

A Description

This special provision describes furnishing and installing geogrids for subgrade stabilization, base reinforcement, or pavement structure applications in accordance to the plans, standard spec 645, and as hereinafter provided.

B Materials

Provide geogrid that consists of either single or joined multiple layers of a uniform rectangular grid of bonded, formed, or fused polymer tensile strands crossing with a nominal right angle orientation. The polymer shall consist of polyester, polypropylene, polyamide, or polyetheylene. The grid shall maintain dimensional stability during handling, placing, and installation. The geogrid shall be insect, rodent, mildew, and rot resistant. Minimum geogrid width shall be 6.0 feet.

Provide geogrid that complies with the following physical properties:

Test	**Method**	**Value** [(1)]
Tensile Strength at 5% Strain, Both Principal Directions (lb/ft)	ASTM D 4595 [(2)]	450 min.
Flexural Rigidity Both Principal Directions (mg-cm)	ASTM D 1388 [(3)]	150,000 min.
Aperture Area (in^2)	Inside Measurement [(4)]	5.0 max.
Aperture Dimension (in)	Inside Measurement [(4)]	0.5 min.

(1) All numerical values represent minimum/maximum average roll values, i.e. the average minimum test results on any roll in a lot should meet or exceed the minimum specified value.

(2) The tensile strength (T) of a joined multi-layered geogrid shall be computed using the following equation:

$$T = n(f)t$$

where

n = the number of individual layers in the joined multi-layered geogrid,

t = the tensile strength of a single layer of geogrid as determined using testing method ASTM D4595, and

f = reduction factor based on the number of layers comprising the multi-layered system and determined by the equation f=1.00 - [0.04(n - 1)].

(3) Values shall be determined by Option "A" (Cantilever Test) of testing method ASTM D1388 using test specimens that are 36 inches ±0.04 inch long. Test specimen widths for differing geogrids shall be variable and equal to 1 element plus ½ the aperture width on both sides of that element. An element is defined as the minimum number of parallel strands that form a distinguishable repeating pattern.

(4) Aperture Area and Aperture Dimension for joined multi-layer geogrids shall be determined based on measurement of a single layer of the geogrid.

Protect the geogrid from ultraviolet radiation and from damage due to shipping and handling. Keep the geogrid dry until it is installed. The geogrid rolls shall be clearly marked to identify the material contained.

Deliver a sample of the geogrid material to the engineer at least 10 days prior to its incorporation into the work. At the same time, furnish a manufacturer's Certified Report of Test or Analysis that verifies that the geogrid delivered for use on the work meets the above requirements. Samples of geogrid for test purposes will be obtained from the job site for each 10,000 square yards or portions thereof used on the contract.

C Construction

Prior to placement of the geogrid, bring the indicated placement surface to the required lines, grades, and dimensions as shown on the plans. Smooth and shape the surface to eliminate any rocks, clods, roots, or other items that may cause damage to the geogrid during placement or covering.

Place the geogrid on the prepared surface at the locations and to the limits as shown on the plans. After placement, pull the geogrid taut and secure it using pins, clips, staples, or other devices to prevent movement or displacement. Place parallel strips of geogrid with a minimum overlap of 6 inches. Lap butt joints between roll ends a minimum of 12 inches. Fasten all lapped sections together by using ties, straps, clips, or other devices to develop a secure joint that meets the approval of the engineer. No vehicles or construction equipment shall be permitted to operate directly on the geogrid.

Cover small rips, tears, or defects in the geogrid with an additional section of geogrid; secure the additional geogrid in place so that it overlaps the damaged area by at least 3 feet in all directions. Remove and replace geogrid sections with large rips, tears, defects, or other damage at the direction of the engineer. All costs to repair or replace damaged or defective geogrid shall be the responsibility of the contractor.

After placement, cover the geogrid to the indicated depth with the type of material required on the plans or in the special provisions. Placing, spreading, and compacting of this material shall comply with the applicable sections of the standard specifications or special provisions except that the initial lift of material placed on the geogrid must be at least 4 inches. Place, spread, and compact the required backfill material so that the geogrid is not displaced or damaged. The engineer may require changes in equipment and/or operations to prevent such damage or displacement.

D Measurement

The department will measure Geogrid Reinforcement by the square yard of surface area upon which the geogrid has been placed, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0180.01	Geogrid Reinforcement	SY

Payment is full compensation for furnishing, transporting, and installing the geogrid; furnishing and installing all devices and materials necessary to join or secure the geogrid in place.

ADDITIONAL SPECIAL PROVISION 4

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

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

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

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

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

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

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

ADDITIONAL SPECIAL PROVISIONS 5

Fuel Cost Adjustment

A Description

Fuel Cost Adjustments will be applied to partial and final payments for work items categorized in Section B as a payment to the contractor or a credit to the department. ASP-5 shall not apply to any force account work.

B Categories of Work Items

The following items and Fuel Usage Factors shall be used to determine Fuel Cost Adjustments:

(1) Earthwork.		Unit	Gal. Fuel Per Unit
205.0100	Excavation Common	CY	0.23
205.0200	Excavation Rock	CY	0.39
205.0400	Excavation Marsh	CY	0.29
208.0100	Borrow	CY	0.23
208.1100	Select Borrow	CY	0.23
209.0100	Backfill Granular	CY	0.23
350.0102	Subbase	CY	0.28
350.0104	Subbase	Ton	0.14
350.0115	Subbase 6-Inch	SY	0.05
350.0120	Subbase 7-Inch	SY	0.05
350.0125	Subbase 8-Inch	SY	0.06
350.0130	Subbase 9-Inch	SY	0.07
350.0135	Subbase 10-Inch	SY	0.08
350.0140	Subbase 11-Inch	SY	0.09
350.0145	Subbase 12-Inch	SY	0.09

C Fuel Index

A Current Fuel Index (CFI) in dollars per gallon will be established by the Department of Transportation for each month. The CFI will be the price of No. 2 fuel oil, as reported in U.S. Oil Week, using the first issue dated that month. The CFI will be the average of prices quoted for Green Bay, Madison, Milwaukee and Minneapolis.

The base Fuel Index (BFI) for this contract is $2.90 per gallon.

D Computing the Fuel Cost Adjustment

The engineer will compute the ratio CFI/BFI each month. If the ratio falls between 0.85 and 1.15, inclusive, no fuel adjustment will be made for that month. If the ratio is less than 0.85 a credit to the department will be computed. If the ratio is greater than 1.15 additional payment to the contractor will be computed. Credit or additional payment will be computed as follows:

(1) The engineer will estimate the quantity of work done in that month under each of the contract items categorized in Section B.

(2) The engineer will compute the gallons of fuel used in that month for each of the contract items categorized in Section B by applying the unit fuel usage factors shown in Section B.

(3) The engineer will summarize the total gallons (Q) of fuel used in that month for the items categorized in Section B.

(4) The engineer will determine the Fuel Cost Adjustment credit or payment from the following formula:

$$FA = \left(\frac{CFI}{BFI} - 1 \right) x\ Q\ x\ BFI$$

(plus is payment to contractor; minus is credit to the department)

Where	FA	=	Fuel Cost Adjustment (plus or minus)
	CFI	=	Current Fuel Index
	BFI	=	Base Fuel Index
	Q	=	Monthly total gallons of fuel

E Payment

A Fuel Cost Adjustment credit to the department will be deducted as a dollar amount each month from any sums due to the contractor. A Fuel Cost Adjustment payment to the contractor will be made as a dollar amount each month.

Upon completion of the work under the contract, any difference between the estimated quantities and the final quantities will be determined. An average CFI, calculated by averaging the CFI for all months that fuel cost adjustment was applied, will be applied to the quantity differences. The average CFI shall be applied in accordance with the procedure set forth in Section D.

ADDITIONAL SPECIAL PROVISION 6
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

501.2.5.5 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.

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.

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)

701.4.2 Verification Testing

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

(2) The department will sample randomly at locations independent of the contractor’s QC tests and use separate equipment and laboratories. The department will conduct a minimum of one verification test for each 5 contractor QC tests unless specific QMP provisions specify otherwise.

715.3.1.3 Department Verification Testing

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

(1) The department will perform verification testing as specified in 701.4.2 except as follows:

- Air content, slump, and temperature: a minimum of 1 verification test per lot.
- Compressive strength: a minimum of 1 verification test per lot.

Errata

Make the following corrections to the 2012 edition of the standard specifications:

107.22 Contractor's Responsibility for Utility Facilities, Property, and Services

Correct errata by eliminating references to the department. Costs are determined by statute.

(3) If the contractor damages or interrupts service, the contractor shall notify the utility promptly. Coordinate and cooperate with the utility in the repair of the facility. Determine who is responsible for repair costs according to Wisconsin statutes 66.0831 and 182.0175(2).

506.2.6.5.2 Pad Construction

Correct errata by changing ASTM A570 to ASTM A1011.

(4) For the internal steel plates use rolled mild steel conforming to ASTM A36, or ASTM A1011 grade

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512.3.3 Painting

Correct errata by changing 511.3.5 to 550.3.11.3.

(1) Paint permanent steel sheet piling as specified for painting steel piling in 550.3.11.3.

513.2.2.8 Toggle Bolts

Correct errata by changing r ASTM A570 to ASTM A1011.

(1) Use toggle bolts made of steel, conforming to the plans. Make the assembly from the material specified below:

Toggle bolt and pin	Cold finished steel heat-treated Brinell 311-363 ASTM A354.
Toggle washer	Hot rolled steel ASTM A1011. Manufacturer's standard washer.
Spacer nut	Grade 1213, ASTM A108. Cold finished steel heat-treated ASTM A325.

660.2.1 General

Correct errata by changing section 511 to 550.

(1) Furnish materials conforming to the following:

Concrete	section 501
Concrete bridges	section 502
Luminaires	section 659
Steel piling	section 550
Steel reinforcement	section 505

660.3.2.3 Pile Type Foundations

Correct errata by changing section 511 to 550.

(1) Drive piles as specified in for steel piling in section 550.

701.3 Contractor Testing

Correct errata by changing 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
II. Payroll Requirements
III. Postings at the Site of the Work
IV. Affidavits
V. Wage Rate Redistribution
VI. Additional Classifications

I. WAGE RATES, HOURS OF LABOR AND PAYMENT OF WAGES

The schedule of "Minimum Wage Rates" attached hereto and made a part hereof furnishes the prevailing wage rates that have been determined pursuant to Section 103.50 of the Wisconsin Statutes. These wage rates are the minimum required to be paid to the various laborers, workers, mechanics and truck drivers employed by contractors and subcontractors on the construction work embraced by the contract and subject to prevailing hours and wages under Section 103.50, Stats. If necessary to employ laborers, workers, mechanics or truck drivers whose classification is not listed on the schedule, they shall be paid at rates conformable to those listed for similar classifications. Apprentices shall be paid at rates not less than those prescribed in their state indenture 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
DODGE 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	29.06	15.16	44.22
Cement Finisher	29.35	15.05	44.40
Electrician	37.25	14.68	51.93
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	28.00	11.15	39.15
Pavement Marking Operator	27.87	14.95	42.82
Piledriver	29.56	15.16	44.72
Roofer or Waterproofer	28.38	6.69	35.07
Teledata Technician or Installer	24.50	13.19	37.69
Tuckpointer, Caulker or Cleaner	34.30	15.03	49.33
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
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.			

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
	$	$	$
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	26.77	18.90	45.67
Future Increase(s): Add $2/hr on 6/1/12; Add $2/hr on 6/1/13; Add $1.75/hr on 6/1/14. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr for work on projects involving temporary traffic control setup, for lane and shoulder closures, when work under artificial illumination conditions is necessary as required by the project provisions (including prep time prior to and/or cleanup after such time period).			
Pavement Marking Vehicle	23.84	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	26.92	13.45	40.37
Future Increase(s): Add $1.60/hr on 6/1/2012: Add $1.70/hr on 6/1/2013; Add $1.60/hr on 6/1/2014. Premium Pay: Add $.10/hr for topman, air tool operator, vibrator or tamper operator (mechanical hand operated), chain saw operator and demolition burning torch laborer; Add $.15/hr for bituminous worker (raker and luteman), formsetter (curb, sidewalk and pavement) and strike off man; Add $.20/hr for blaster and powderman; Add $.25/hr for bottomman; Add $.35/hr for line and grade specialist; Add $.45/hr for pipelayer. DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr for work on projects involving temporary traffic control setup, for lane and shoulder closures, when work under artificial illumination conditions is necessary as required by the project provisions (including prep time prior to and/or cleanup after such time period).			
Asbestos Abatement Worker	23.96	12.88	36.84
Landscaper	26.92	13.45	40.37
Future Increase(s): Add $1.60/hr on 6/1/12; Add $1.70/hr on 6/1/13; Add $1.60/hr on 6/1/14. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr for work on projects involving temporary traffic control setup, for lane and shoulder closures, when work under artificial illumination conditions is necessary as required by the project provisions (including prep time prior to and/or cleanup after such time period).			
Flagperson or Traffic Control Person	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	11.71	28.80
Railroad Track Laborer	23.96	0.25	24.21

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY $	HOURLY FRINGE BENEFITS $	TOTAL $
HEAVY EQUIPMENT OPERATORS			
Crane, Tower Crane, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 176 Ft or Over; Crane, Tower Crane, Pedestal Tower or Derrick, With or Without Attachments, With a Lifting Capacity of Over 100 Tons, Self-Erecting Tower Crane With a Lifting Capacity Of Over 4,000 Lbs., Crane With Boom Dollies; Traveling Crane (Bridge Type). Future Increase(s): Add $2/hr on 6/1/12; Add $2/hr on 6/1/13; Add $1.75/hr on 6/1/14. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr for work on projects involving temporary traffic control setup, for lane and shoulder closures, when work under artificial illumination conditions is necessary as required by the project provisions (including prep time prior to and/or cleanup after such time period).	34.22	18.90	53.12
Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of 130,000 Lbs. or Over; Caisson Rig; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 175 Ft or Under; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With or Without Attachments, With a Lifting Capacity of 100 Tons or Under, Self-Erecting Tower Crane With A Lifting Capacity Of 4,000 Lbs., & Under; Dredge (NOT Performing Work on the Great Lakes); Licensed Boat Pilot (NOT Performing Work on the Great Lakes); Pile Driver. Future Increase(s): Add $2/hr on 6/1/12; Add $2/hr on 6/1/13; Add $1.75/hr on 6/1/14. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr for work on projects involving temporary traffic control setup, for lane and shoulder closures, when work under artificial illumination conditions is necessary as required by the project provisions (including prep time prior to and/or cleanup after such time period).	33.72	18.90	52.62
Air Track, Rotary or Percussion Drilling Machine &/or Hammers, Blaster; Asphalt Heater, Planer & Scarifier; Asphalt Milling Machine; Asphalt Screed; Automatic Subgrader (Concrete); Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of Under 130,000 Lbs., Backhoe (Mini, 15,000 Lbs. & Under); Bituminous (Asphalt) Plant & Paver, Screed; Boatmen (NOT Performing Work on the Great Lakes); Boring Machine (Directional, Horizontal or Vertical); Bridge (Bidwell) Paver; Bulldozer or Endloader; Concrete Batch Plant, Batch Hopper; Concrete Breaker (Large, Auto, VIbratory/Sonic, Manual or Remote); Concrete Bump Cutter, Grinder, Planing or Grooving Machine; Concrete Conveyor System; Concrete Laser/Screed; Concrete Paver (Slipform); Concrete Pump, Concrete Conveyor (Rotec or Bidwell Type); Concrete Slipform Placer Curb & Gutter Machine; Concrete Spreader & Distributor; Crane (Carry Deck, Mini) or Truck Mounted Hydraulic Crane (10 Tons or Under); Crane WIth a Lifting Capacity of 25 Tons or Under; Forestry Equipment, Timbco, Tree Shear, Tub Grinder, Processor; Gradall (Cruz-Aire Type); Grader or Motor Patrol; Grout Pump; Hydro-Blaster (10,000 PSI or Over); Loading Machine (Conveyor); Material or Stack Hoist; Mechanic or Welder; Milling Machine; Post Hole Digger or Driver; Roller (Over 5 Ton); Scraper (Self Propelled or Tractor Drawn) 5 cu yds or More Capacity; Shoulder Widener; Sideboom; Skid Rig; Stabilizing or Concrete Mixer (Self-Propelled or 14S or Over); Straddle Carrier or Travel Lift; Tractor (Scraper, Dozer, Pusher, Loader); Tractor or Truck Mounted Hydraulic Backhoe; Trencher (Wheel Type or Chain Type); Tube Finisher; Tugger (NOT Performing Work on the Great Lakes); Winches	33.22	18.90	52.12

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
	$	$	$
& A- Frames. Future Increase(s): Add $2/hr on 6/1/12; Add $2/hr on 6/1/13; Add $1.75/hr on 6/1/14. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr for work on projects involving temporary traffic control setup, for lane and shoulder closures, when work under artificial illumination conditions is necessary as required by the project provisions (including prep time prior to and/or cleanup after such time period).			
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).	33.22	18.90	52.12
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	9.87	34.26

CONTRACT: 20130212016 PROJECT(S): 1390-04-96 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 CONTRACT ITEMS					
0010	201.0105 CLEARING	16.000 STA		.		.
0020	201.0205 GRUBBING	16.000 STA		.		.
0030	203.0100 REMOVING SMALL PIPE CULVERTS	2.000 EACH		.		.
0040	205.0100 EXCAVATION COMMON	6,900.000 CY		.		.
0050	206.1000 EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 01. B-14-198	LUMP	LUMP			.
0060	206.3000 EXCAVATION FOR STRUCTURES RETAINING WALLS (STRUCTURE) 01. R-14-17	LUMP	LUMP			.
0070	206.3000 EXCAVATION FOR STRUCTURES RETAINING WALLS (STRUCTURE) 02. R-14-18	LUMP	LUMP			.
0080	206.6000.S TEMPORARY SHORING	690.000 SF		.		.
0090	208.0100 BORROW	811,000.000 CY		.		.

CONTRACT: 20130212016 PROJECT(S): 1390-04-96 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
0100	209.0100 BACKFILL GRANULAR	390.000	CY	.		.	
0110	210.0100 BACKFILL STRUCTURE	380.000	CY	.		.	
0120	213.0100 FINISHING ROADWAY (PROJECT) 01. 1390-04-96	1.000	EACH	.		.	
0130	214.0100 OBLITERATING OLD ROAD	5.000	STA	.		.	
0140	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH	23,600.000	TON	.		.	
0150	305.0130 BASE AGGREGATE DENSE 3-INCH	840.000	TON	.		.	
0160	312.0110 SELECT CRUSHED MATERIAL	83,700.000	TON	.		.	
0170	502.0100 CONCRETE MASONRY BRIDGES	297.000	CY	.		.	
0180	502.3200 PROTECTIVE SURFACE TREATMENT	554.000	SY	.		.	
0190	503.0137 PRESTRESSED GIRDER TYPE I 36W-INCH	623.000	LF	.		.	
0200	505.0405 BAR STEEL REINFORCEMENT HS BRIDGES	7,090.000	LB	.		.	

CONTRACT: 20130212016 PROJECT(S): 1390-04-96 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
0210	505.0605 BAR STEEL REINFORCEMENT HS COATED BRIDGES	31,550.000 LB		.		.
0220	506.2605 BEARING PADS ELASTOMERIC NON-LAMINATED	14.000 EACH		.		.
0230	506.4000 STEEL DIAPHRAGMS (STRUCTURE) 01. B-14-198	12.000 EACH		.		.
0240	516.0500 RUBBERIZED MEMBRANE WATERPROOFING	28.000 SY		.		.
0250	520.0118 CULVERT PIPE CLASS III 18-INCH	62.000 LF		.		.
0260	520.1018 APRON ENDWALLS FOR CULVERT PIPE 18-INCH	6.000 EACH		.		.
0270	522.0112 CULVERT PIPE REINFORCED CONCRETE CLASS III 12-INCH	299.000 LF		.		.
0280	522.0124 CULVERT PIPE REINFORCED CONCRETE CLASS III 24-INCH	722.000 LF		.		.
0290	522.0130 CULVERT PIPE REINFORCED CONCRETE CLASS III 30-INCH	278.000 LF		.		.
0300	522.0324 CULVERT PIPE REINFORCED CONCRETE CLASS IV 24-INCH	170.000 LF		.		.
0310	522.0330 CULVERT PIPE REINFORCED CONCRETE CLASS IV 30-INCH	332.000 LF		.		.

CONTRACT: 20130212016 PROJECT(S): 1390-04-96 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
0320	522.0536 CULVERT PIPE REINFORCED CONCRETE CLASS V 36-INCH	200.000 LF		.		.
0330	522.1012 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 12-INCH	5.000 EACH		.		.
0340	522.1024 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 24-INCH	16.000 EACH		.		.
0350	522.1030 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 30-INCH	14.000 EACH		.		.
0360	522.1036 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 36-INCH	2.000 EACH		.		.
0370	523.0119 CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CLASS HE-III 19X30-INCH	32.000 LF		.		.
0380	523.0519 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE HORIZONTAL ELLIPTICAL 19X30-INCH	2.000 EACH		.		.
0390	550.0020 PRE-BORING ROCK OR CONSOLIDATED MATERIALS	240.000 LF		.		.
0400	550.1100 PILING STEEL HP 10-INCH X 42 LB	825.000 LF		.		.

CONTRACT: 20130212016 PROJECT(S): 1390-04-96 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
0410	604.0400 SLOPE PAVING CONCRETE	36.000 SY		.		.
0420	606.0200 RIPRAP MEDIUM	170.000 CY		.		.
0430	608.0312 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH	150.000 LF		.		.
0440	611.3230 INLETS 2X3-FT	3.000 EACH		.		.
0450	611.9800.S PIPE GRATES	8.000 EACH		.		.
0460	612.0406 PIPE UNDERDRAIN WRAPPED 6-INCH	785.000 LF		.		.
0470	614.0150 ANCHOR ASSEMBLIES FOR STEEL PLATE BEAM GUARD	4.000 EACH		.		.
0480	618.0100 MAINTENANCE AND REPAIR OF HAUL ROADS (PROJECT) 01. 1390-04-96	1.000 EACH		.		.
0490	619.1000 MOBILIZATION	1.000 EACH		.		.
0500	624.0100 WATER	18,200.000 MGAL		.		.
0510	625.0500 SALVAGED TOPSOIL	178,000.000 SY		.		.

CONTRACT: 20130212016 PROJECT(S): 1390-04-96 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
0520	627.0200 MULCHING	82,000.000 SY		.		.
0530	628.1104 EROSION BALES	2,000.000 EACH		.		.
0540	628.1504 SILT FENCE	33,800.000 LF		.		.
0550	628.1520 SILT FENCE MAINTENANCE	33,800.000 LF		.		.
0560	628.1905 MOBILIZATIONS EROSION CONTROL	12.000 EACH		.		.
0570	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL	7.000 EACH		.		.
0580	628.2004 EROSION MAT CLASS I TYPE B	96,000.000 SY		.		.
0590	628.7504 TEMPORARY DITCH CHECKS	3,500.000 LF		.		.
0600	628.7555 CULVERT PIPE CHECKS	147.000 EACH		.		.
0610	629.0210 FERTILIZER TYPE B	780.000 CWT		.		.
0620	630.0120 SEEDING MIXTURE NO. 20	4,800.000 LB		.		.

CONTRACT: 20130212016 PROJECT(S): 1390-04-96 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	630.0200 SEEDING TEMPORARY	1,600.000 LB		.		.
0640	630.0300 SEEDING BORROW PIT	12,760.000 LB		.		.
0650	633.5200 MARKERS CULVERT END	43.000 EACH		.		.
0660	642.5201 FIELD OFFICE TYPE C	1.000 EACH		.		.
0670	643.0100 TRAFFIC CONTROL (PROJECT) 01. 1390-04-96	1.000 EACH		.		.
0680	643.0300 TRAFFIC CONTROL DRUMS	14,460.000 DAY		.		.
0690	643.0453 TRAFFIC CONTROL BARRICADES PERMANENT TYPE III	28.000 EACH		.		.
0700	643.0900 TRAFFIC CONTROL SIGNS	4,579.000 DAY		.		.
0710	645.0130 GEOTEXTILE FABRIC TYPE R	500.000 SY		.		.
0720	650.4000 CONSTRUCTION STAKING STORM SEWER	3.000 EACH		.		.
0730	650.4500 CONSTRUCTION STAKING SUBGRADE	13,650.000 LF		.		.

CONTRACT: 20130212016 PROJECT(S): 1390-04-96 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
0740	650.5000 CONSTRUCTION STAKING BASE	13,650.000 LF		.		.
0750	650.6000 CONSTRUCTION STAKING PIPE CULVERTS	20.000 EACH		.		.
0760	650.6500 CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 01. B-14-198	LUMP	LUMP			.
0770	650.6500 CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 02. R-14-17	LUMP	LUMP			.
0780	650.6500 CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 03. R-14-18	LUMP	LUMP			.
0790	650.9910 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) 01. 1390-04-96	LUMP	LUMP			.
0800	650.9920 CONSTRUCTION STAKING SLOPE STAKES	13,650.000 LF		.		.
0810	715.0502 INCENTIVE STRENGTH CONCRETE STRUCTURES	2,970.000 DOL	1.00000		2970.00	
0820	SPV.0045 SPECIAL 01. PORTABLE CHANGEABLE MESSAGE SIGN	28.000 DAY		.		.
0830	SPV.0060 SPECIAL 01. COVERING INLETS	3.000 EACH		.		.

CONTRACT: 20130212016 PROJECT(S): 1390-04-96 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
0840	SPV.0060 SPECIAL 02. REMOVING BARRICADES TYPE III	28.000 EACH		.		.
0850	SPV.0090 SPECIAL 01. FENCE CHAIN LINK POLYMER-COATED 6-FT	391.000 LF		.		.
0860	SPV.0105 SPECIAL 01. RAILING PIPE GALVANIZED R-14-17	LUMP	LUMP			.
0870	SPV.0105 SPECIAL 02. RAILING PIPE GALVANIZED R-14-18	LUMP	LUMP			.
0880	SPV.0165 SPECIAL 01. WALL CONCRETE PANEL MECHANICALLY STABILIZED EARTH LRFD	9,240.000 SF		.		.
0890	SPV.0180 SPECIAL 01. GEOGRID REINFORCEMENT	135,000.000 SY		.		.
	SECTION 0001 TOTAL					.
	TOTAL BID					.

PLEASE ATTACH SCHEDULE OF ITEMS HERE