HIGHWAY WORK PROPOSAL

Proposal Number: 1 Ø

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

COUNTY	STATE PROJECT ID	FEDERAL PROJECT ID	PROJECT DESCRIPTION	HIGHWAY
Milwaukee	1100-33-70		Zoo Freeway Good Hope Road Interchange	USH 41

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, $ 20,000.00 Payable to: Wisconsin Department of Transportation	Attach Proposal Guaranty on back of this PAGE.
Bid Submittal Due Date: August 13, 2013 Time (Local Time): 9:00 AM	Firm Name, Address, City, State, Zip Code **SAMPLE** **NOT FOR BIDDING PURPOSES**
Contract Completion Time Twenty-four (24) Working Days	
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 Concrete pavement, concrete curb and gutter, storm sewer, lighting, sign support S-40-974, FTMS.	
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)

March 2010

LIST OF SUBCONTRACTORS

Section 66.0901(7), Wisconsin Statutes, provides that as a part of the proposal, the bidder also shall submit a list of the subcontractors the bidder proposes to contract with and the class of work to be performed by each. In order to qualify for inclusion in the bidder's list a subcontractor shall first submit a bid in writing, to the general contractor at least 48 hours prior to the time of the bid closing. The list may not be added to or altered without the written consent of the municipality. A proposal of a bidder is not invalid if any subcontractor and the class of work to be performed by the subcontractor has been omitted from a proposal; the omission shall be considered inadvertent or the bidder will perform the work personally.

No subcontract, whether listed herein or later proposed, may be entered into without the written consent of the Engineer as provided in Subsection 108.1 of the Standard Specifications.

Name of Subcontractor	Class of Work	Estimated Value

DECEMBER 2000

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

Instructions for Certification

1. By signing and submitting this proposal, the prospective contractor is providing the certification set out below.

2. The inability of a person to provide the certification required below will not necessarily result in denial of participation in this covered transaction. The prospective contractor shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective contractor to furnish a certification or an explanation shall disqualify such person from participation in this transaction.

3. The certification in this clause is a material representation of fact upon which reliance was placed when the department determined to enter into this transaction. If it is later determined that the contractor knowingly rendered an erroneous certification in addition to other remedies available to the Federal Government the department may terminate this transaction for cause or default.

4. The prospective contractor shall provide immediate written notice to the department to whom this proposal is submitted if at any time the prospective contractor learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

5. The terms "covered transaction," "debarred," "suspended," "ineligible," "lower tier covered transaction," "participant," "person," "primary covered transaction," "principal," "proposal," and "voluntarily excluded," as used in this clause, have the meanings set out in the Definitions and Coverage sections of the rules implementing Executive Order 12549. You may contact the department to which this proposal is being submitted for assistance in obtaining a copy of those regulations.

6. The prospective contractor agrees by submitting this proposal that, should this contract be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department entering into this transaction.

7. The prospective contractor further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," which is included as an addendum to PR-1273 - "Required Contract Provisions Federal Aid Construction Contracts," without

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

8. The contractor may rely upon a certification of a prospective subcontractor/materials supplier that it is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A contractor may decide the method and frequency by which it determines the eligibility of its principals. Each contractor may, but is not required to, check the Disapproval List (telephone # 608/266/1631).

9. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of a contractor is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

10. Except for transactions authorized under paragraph 6 of these instructions, if a contractor in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department may terminate this transaction for cause or default.

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

(1) The prospective contractor certifies to the best of its knowledge and belief, that it and its principals:

(a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;

(b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements or receiving stolen property;

(c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offense enumerated in paragraph (1)(b) of this certification; and

(d) Have not within a three-year period preceding this proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

(2) Where the prospective contractor is unable to certify to any of the statements in this certification, such prospective contractor shall attach an explanation to this proposal.

Special Provisions

Table of Contents

SPECIAL PROVISIONS

1. General.

Perform the work under this construction contract for Project 1100-33-70, Zoo Freeway, City of Milwaukee, Good Hope Road Interchange, Milwaukee 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 constructing an additional ramp lane, concrete pavement, concrete curb and gutter, storm sewer, lighting, and all incidental items necessary to complete the work as shown on the plans and included in the proposal and contract.
104-005 (20090901)

3. Prosecution and Progress.

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

Provide the time frame for construction of the project within the 2014 construction season to the engineer in writing within a month after executing the contract but at least 14 calendar days before the preconstruction conference. Assure that the time frame is consistent with the contract completion time. Upon approval, the engineer will issue the notice to proceed within ten calendar days before the beginning of the approved time frame.

To revise the time frame, submit a written request to the engineer at least two weeks before the beginning of the intended time frame. 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 contractor shall schedule and conduct weekly progress meetings. Hold the meetings at the field office. Be prepared to discuss the work schedule. Subcontractors shall be in attendance at the weekly progress meetings.

There may be multiple mobilizations for such items as: traffic control, signing items, topsoil, seeding, drainage items and other incidental items related to the staging. No additional payment will be made by the department for said mobilizations.

Do not place construction equipment or materials for storage on the southwest side of the on-ramp to avoid unintentional impacts to the wetlands.

Keep open travel lanes free from mud, sand, and other construction debris at all times.

Maintain a minimum 3:1 slope between the roadway and adjacent excavation if a drop off exists between the travel lane and work zone.

Definitions
The following definitions apply to this contract for ramp work restrictions:

Peak Hours
5:30 AM – 8:00 PM Monday, Tuesday, Wednesday, Thursday
5:30 AM – 11:00 PM Friday

Weekend Peak Hours
7:30 AM – 7:00 PM Saturday, Sunday

Weekend Off-Peak Hours
7:00 PM – 11:00 PM Saturday
7:00 PM – 9:30 PM Sunday

Weekday Off-Peak Hours
8:00 PM – 9:30 PM Monday, Tuesday, Wednesday, Thursday

Night Time Hours
9:30 PM – 5:30 AM (Sunday PM to Monday AM, Monday PM to Tuesday AM, Tuesday PM to Wednesday AM, Wednesday PM to Thursday AM, Thursday PM to Friday AM)
11:00 PM – 7:30 AM (Friday PM to Saturday AM, Saturday PM to Sunday AM)

Full Freeway and Ramp Closure Hours
11:00 PM – 4:30 AM (Sunday PM to Monday AM, Monday PM to Tuesday AM, Tuesday PM to Wednesday AM, Wednesday PM to Thursday AM, Thursday PM to Friday AM)

Freeway and Ramp Work Restrictions
Single-lane ramp and freeway closures are limited to weekday off-peak and night time hours and to weekend off-peak and night time hours.

Full closure and detouring of the ramp will be restricted to Full Ramp Closure Hours. Provide signed detour routes, as shown in the plans that are fully open and free of construction during all full ramp closures.

All lane closures shall be in accordance to the standard detail drawings (SDD) and have the approval of the engineer and Region Work Zone Engineer.

Definitions
The following definitions apply to this contract for local street work restrictions:

Peak Hours

7:00 AM – 10:00 AM	Monday, Tuesday, Wednesday, Thursday, Friday
3:00 PM - 7:00 PM	Monday, Tuesday, Wednesday, Thursday, Friday
11:00 AM – 8:00 PM	Saturday
1:00 PM – 5:00 PM	Sunday

Off-Peak Hours

10:00 AM – 3:00 PM	Monday, Tuesday, Wednesday, Thursday, Friday
7:00 PM – 7:00 AM	Monday, Tuesday, Wednesday, Thursday
7:00 PM – 11:00 AM	Friday PM to Saturday AM
8:00 PM – 1:00 PM	Saturday PM to Sunday PM
5:00 PM – 7:00 AM	Sunday PM to Monday AM

Local Street Work Restrictions
Single-lane closures on Good Hope Road are limited to off-peak hours. Two lanes shall be available to Good Hope Road traffic during Peak Hours.

All lane closures shall be in accordance to the standard detail drawings (SDD) and have the approval of the engineer.

Advance Notification
Provide the engineer with a schedule of lane closures for the following week by noon on Thursday of the previous week. In addition, provide the following minimum advance notification to the engineer for incorporation into the Wisconsin Lane Closure System.

Lane Closures	3 business days
Ramp Closings	7 calendar days

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

Closures
The following three stages for construction are anticipated. Additional construction staging concepts are shown in the plans and described below.

Construction will be performed under traffic on Good Hope Road and the freeway on-ramp.

Stage 1:
Close the left lane of the eastbound-southbound on-ramp during off-peak hours from Station 58+00E to Station 63+50E. Close the right lane of eastbound Good Hope Road during off-peak hours. Perform pavement removal, curb and gutter removal, and removal of existing lighting and ramp meter facilities. Construct storm sewer, concrete pavement, ands concrete curb and gutter, and other incidental items necessary to complete the work as shown on the plans.

The width of all traffic lanes will be kept at a minimum of 12 feet wide.

Stage 1A
Close the eastbound-southbound and westbound-southbound on-ramps during full freeway closure hours. Perform pavement removal and curb and gutter removal between Station 55+10E and Station 58+00E. Construct storm sewer, concrete pavement, concrete pavement replacement, concrete curb and gutter, and other incidental items necessary to complete the work as shown on the plans.

Stage 2:
Close the right lane of the eastbound-southbound on ramp during off-peak hours from Station 60+50E to Station 63+50E. Perform pavement removal, and curb and gutter removal from Station 61+00E to Station 62+05E. Construct storm sewer, concrete pavement, concrete curb and gutter and other incidental items necessary to complete the work as shown on the plans.

The width of all traffic lanes will be kept at a minimum of 12 feet wide.

Other Contracts
Coordinate your work in accordance to standard spec 105.5

Modifications to the traffic control plan may be required by the engineer to be safe and consistent with adjacent work by others.

The following contracts are anticipated to be under construction within the time period of this contract, unless otherwise indicated:

Contract ID 2010-10-70, Appleton Avenue (USH 41) resurfacing from W. Capitol Drive to N. 107th St. The WisDOT contact is Asad Khan at (262) 548-5663; asad.khan@dot.wi.gov.

Contract ID 2030-09-70, Mayfair Road 9STH 100) resurfacing from Burleigh Street to Silver Spring Drive. The WisDOT contact is Tom Lazcano at (262) 574-5437; tom.lazcano@dot.wi.gov.

Work
Keep the on-ramp and Good Hope Road open to traffic during construction as shown on the plans.

Place roadway signing as detailed on the plans and in conformance with the Manual of Uniform Traffic Control Devices (MUTCD).

Do not deliver and store materials and equipment within open travel lanes or open side roads during any stage of construction. Temporary lane closures and/or halting of traffic within open roadways requires flaggers.

During work hours, keep construction vehicles within the work zone to an absolute minimum when adjacent to a live traffic lane. Do not park or store any equipment, vehicles, or construction materials during nonworking hours within 24 feet of the edge of a live traffic lane.

Equip all contractor-owned construction vehicles and equipment, including workers' vehicles working for the contractor, with at least one flashing yellow light. Activate the flashing light when vehicles or equipment are operated in, parked in close proximity to, or when entering and exiting live lanes of traffic. Place the flashing yellow light at a location that provides visibility from all directions.

4. Holiday Work Restrictions.

Do not perform work on, nor haul materials of any kind along or across any portion of the highway carrying USH 41 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 23, 2014 to 6:00 AM Tuesday, May 27, 2014 for Memorial Day;
- From noon Thursday, July 3, 2014 to 6:00 AM Monday, July 7, 2014 for Independence Day.
- From noon Friday, August 29, 2014 to 6:00 AM Monday, September 1, 2014 for Labor Day.

5. Utilities.

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

There are utility facilities within the construction limits of this project. Coordinate construction activities with a call to Diggers Hotline or a direct call to the utilities for the underground facilities in the area, as required per statutes. Take all required precautions when working within 18-inches of underground utilities. Use caution to maintain the

integrity of underground utilities and maintain OSHA code clearances from aerial facilities at all times. Additional detailed information regarding the location of relocated utility facilities is available in the work plan provided by each utility company or on the permits issued to them. View these documents at the Regional Office during normal working hours.

WisDOT Lighting has various facilities located throughout the project limits. Lighting facilities will be relocated under this construction ID 1100-33-70.
Contact: Mr. Matt Pfeifer at (414) 266-1154.

WisDOT STOC has facilities located within the project limits. The ramp meter will be reconstructed under this construction ID 1100-33-70.
Contact: Mr. Jeff Madson at (414) 225-3723.

WE Energies Electric has facilities within the vicinity of the project, but there are no facilities within the project limits. No adjustments are planned. No conflicts are anticipated.
Contact: Mr. Dan Sande at (414) 221-4578; Construction Field Contact: Mr. Leonard Wilson at (414) 944-5690 (mobile: (414) 588-6674).
24-hour dispatch number: (800) 662-4797

WE Energies Gas has facilities within the vicinity of the project, but there are no facilities within the project limits. No adjustments are planned. No conflicts are anticipated.
Contact: Mr. Dan Sande at (414) 221-4578; Construction Field Contact: Mr. Dennis Sinjakovic at (414) 540-5715 (mobile: (262)-391-4268).
24-hour dispatch number: (800) 261-5325

6. Erosion Control.

Supplement standard spec 107.20 as follows:

Provide the ECIP fourteen (14) calendar days prior to the pre-construction conference. Provide one (1) copy of the ECIP to WisDOT and one copy of the ECIP to the WDNR Liaison (Ms. Kristina Betzold, 2300 N Martin Luther King Jr Dr., Milwaukee, WI 53212; Kristina.betzold@wisconsin.gov) Pursue operations in a timely and diligent manner, continuing all construction operations methodically from the initial removals and topsoil stripping operations through the subsequent grading, paving, and re-topsoiling to minimize the period of exposure to possible erosion. Do not implement the ECIP until it has been approved by the department.

Re-topsoil of graded areas, as designated by the engineer, immediately after grading is completed within those areas. Seed, fertilize, and mulch/erosion mat top-soiled areas, as designated by the engineer, within five calendar days after placement of topsoil. If graded areas are left exposed for more than 14 calendar days, seed those areas with temporary seed.

When performing roadway cleaning operations, the contractor shall use equipment having vacuum or water spray mechanism to eliminate the dispersion of dust. If vacuum equipment is employed, it shall have suitable self-contained particulate collectors to prevent discharge from the collection bin into the atmosphere.

Stockpile excess material or spoils on upland areas away from wetlands, floodplains and waterways. Stockpiled soil shall be protected against erosion. If stockpiled material is left for more than 14 calendar days, seed the stockpile with temporary seed.

Replace standard spec 107.20(3) with the following:

The contractor shall prepare and submit an erosion control implementation plan (ECIP) for the project including borrow sites, material disposal sites, dust control, and dewatering in accordance to Chapter TRANS 401 requirements. The erosion control implementation plan shall supplement information shown on the plans and shall not reproduce it. The erosion control implementation plan will identify how the contractor intends to implement the project's erosion control plan

7. 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)

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

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

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

Department-furnished Items
Ramp Meter Controller
Loop Emulation Cards
Microwave Detector Assembly
Dynamic Message Sign Controller Cabinet

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

9. Intelligent Transportation System – General.

A Description

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

Unusual aspects of this project include:

- The project includes working on cables and equipment that are carrying data between roadside equipment and the WisDOT Traffic Operations Center (TOC). This work must be done in a way that minimizes communication outages for the existing equipment.
- Some of the equipment to be installed will be furnished by the department. Make a reasonable effort to discover defects in that equipment prior to installing it.

A.1 Surge Protection

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

B Materials

B.1 General

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

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

B.2 Outdoor Equipment

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

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

B.3 Custom Equipment

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

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

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

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

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

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

B.4 Environmental Conditions

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

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

- **Duty Cycle:** Continuous.
- **Electromagnetic Radiation**: The equipment shall not be impaired by ambient electrical or magnetic fields, such as those caused by power lines, transformers, and motors. The equipment shall not radiate signals that adversely affect other equipment.
- **Electrical Power:**
  - **Operating power**: The equipment shall operate on 120 volts, 60 Hz, single-phase unless otherwise specified. It shall conform to its specified performance requirements when the input voltage varies from 89 to 135 volts and the frequency varies + 3 Hz.
  - **High frequency interference**: The equipment operation shall be unaffected by power supply voltage spikes of up to 150 volts in amplitude and ten microseconds duration.
  - **Line voltage transients**: The equipment operation shall be unaffected by voltage transients of plus or minus 20 percent of nominal line voltage for a maximum duration of 50 milliseconds. Equipment in the field shall meet the power service transient requirements of NEMA Standard TS-2 when connected to the surge protectors in the cabinets.
- **Temperature and Humidity:**
  - **Field equipment**: Equipment in the field shall meet the temperature and humidity requirements of NEMA Standard TS-2. Liquid crystal displays shall be undamaged by temperatures as high as 165 degrees F, and shall produce a usable display at temperatures up to 120 degrees F.

  - **Equipment in Controlled Environments** shall operate normally at any combination of temperatures between 50 degrees F and 100 degrees F, and humidity's between 5 percent and 90 percent, non-condensing, and with a temperature gradient of 9 degrees F per hour.

B.5 Patch Cables and Wiring

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

B.6 Surge Protection

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

- The protectors shall suppress a peak surge current of up to 10K amps.

- The protectors shall have a response time less than one nanosecond.

- The protector shall clamp the voltage between the two wires at a voltage that is no more than twice the peak signal voltage, and clamp the voltage between each wire and ground at 50 volts.

- The first stage of protection shall be a three-element gas discharge tube, and the second stage shall consist of silicon clamping devices.

- The protector shall also contain a resettable fuse (PTC) to protect against excessive current.

- There shall be no more than two pairs per protector.

- It shall be possible to replace the protector without using tools.

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

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

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

C Construction

C.1 Communication Vaults

All openings in communication vaults must be cored or blocked out at time of fabrication, or cored at time of placement. Where multi-cell or standard nonmetallic conduit is terminated at manholes, the coring or boxout shall be no larger than 6 inches in diameter or 6 inches square respectively for each conduit. Where multi-cell, directional bore or nonmetallic conduit special is terminated at manholes, a boxout of no more than 14 inches by 6 inches high by 3 inches deep positioned at 90 degrees will be allowed.

C.2 Thread Protection

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

C.3 Cable Installation

When new cables are to be installed into conduits containing existing cables, remove the existing cables and reinstall the existing cables simultaneously with the new cables. Take every precaution necessary to protect the existing cables. In the event of avoidable damage to the existing cables, replace all damaged cables, in-kind, at no additional expense to the department. When cables are pulled into conduit, use a cable pulling lubricant approved by the cable manufacturer. Submit documentation supporting manufacturer approval of the lubricant to the engineer.

When cables are installed in conduit before the proper installation of bushings or bell ends on the conduit or without the use of cable lubricant, the cables will be paid at 50 percent of the contract unit price if testing shows no damage to the cables. Replace all cables which testing shows to be damaged at no cost to the department.

C.4 Wiring

Every conductor, except a conductor contained entirely within a single piece of equipment, must terminate either in a connector or on a terminal block. Provide and install the connectors and terminal blocks where needed, without separate payment. Approved splice kits shall be used instead of connectors and terminal blocks for underground power cable splices.

Permanently label and key connectors to preclude improper connection. The labeling method(s) must be approved by the engineer prior to use.

Terminal blocks must be affixed to panels that permanently identify the block and what wire connects to each terminal. This may be accomplished by silk screening or by installing a laminated printed card under the terminal block, with the labels on portions of the card that extend beyond the block. Installation of terminal blocks by drilling holes in the exterior wall of the cabinet is not acceptable.

Use barriers to protect personnel from accidental contact with all dangerous voltages.

Do not install conductors carrying AC power in the same wiring harness as conductors carrying control or communication signals.

Arrange wiring, including fiber optic pigtails, so that any removable assembly can be removed without disturbing wiring that is not associated with the assembly being removed.

Communication and control cables may not be spliced underground, except where indicated on the plans.

Cables in the Traffic Operations Center or in communication hubs, that are not contained within a single cabinet, shall have at least 10 feet of slack.

C.5 System Operations
If the contractor's operations interrupt Intelligent Transportation Systems (ITS) service, notify the engineer immediately and restore service within 24 hours. Repair all damaged facilities to the condition existing before the interruption. If service is not restored within 24 hours, the department may restore service to any operating device and deduct restoration costs from payments due the contractor.

C.6 Surge Protection
Arrange the equipment and cabinet wiring to minimize the distance between each conductor's point of entry and its protector. Locate the protector as far as possible from electronic equipment. All wiring between the surge protectors and the point of entry shall be free from sharp bends.

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

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

10. Freeway Lighting Systems.

General
Append standard spec 651, 652, 653, 654, 655, 656, 657 and 659 as follows.

Wet Location Splices
Modify standard spec 655.3.1 as follows:

Wet location splices are not anticipated on this project and not shown in the plans. In the event that the engineer allows wet location splices, make pull box splices with engineer approved epoxy kit.

Branch Circuit Tagouts
Any circuit that the contractor does not personally tag out at the disconnect shall be considered live, and will be subject to being activated by another person with no notice to the contractor. Make tagouts with manufactured tags, and endorse them with the date and the name of the contractor. Clear tagouts at the end of the workday.

Shop Locations
Materials indicated to be returned to the department shall be hauled to one of the following two locations:

- Milwaukee County Grounds, 10191 West Watertown Plank Road, Wauwatosa, as directed by Mr. Pat Stoetzel, (414) 750-5306.
- State Electrical Shop at 935 South 60th street, West Allis, as directed by Mr. Mike Prebish, (414) 266-1170.

Arrange pickups and deliveries three days in advance and during regular business hours (Monday – Thursday 7:00 AM to 3:45 PM).

Corrosion Protection
Corrosion protection measures described in standard spec 657.3.1 and 657.3.5 are invoked for breakaway transformer bases and aluminum light poles.

Wire Networks
Where two or more wire networks pass through a pull point, tag each circuit network (i.e. A/B/N and C/D/N) with approved all-weather tags.

At each pull point or access point, indicate the line side bundle with a lap of blue tape.

Lighting Pull Box Covers
This provision modifies the standard detail drawing for pull boxes and thereby both the standard items and SPV pay item for pull boxes. Lighting pull box covers shall read "LIGHTING".

11. Nighttime Work Lighting-Stationary.

A Description
Provide portable lighting as necessary to complete nighttime work. Nighttime operations consist of work specifically scheduled to occur after sunset and before sunrise.

B (Vacant)

C Construction
C.1 General
This provision shall apply when providing, maintaining, moving, and removing portable light towers and equipment-mounted lighting fixtures for nighttime stationary work operations, for the duration of nighttime work on the contract.

At least 14 days prior to the nighttime work, furnish a lighting plan to the engineer for review and acceptance. Address the following in the plan:

1. Layout, including location of portable lighting – lateral placement, height, and spacing. Clearly show on the layout the location of all lights necessary for every aspect of work to be done at night.

2. Specifications, brochures, and technical data of all lighting equipment to be used.

3. The details on how the luminaires will be attached.

4. Electrical power source information.

5. Details on the louvers, shields, or methods to be employed to reduce glare.

6. Lighting calculations. Provide illumination with average to minimum uniformity ratio of 5:1 or less throughout the work area.

7. Detail information on any other auxiliary equipment.

C.2 Portable Lighting

Provide portable lighting that is sturdy and free standing and does not require any guy wires, braces, or any other attachments. Furnish portable lighting capable of being moved as necessary to keep up with the construction project. Position the portable lighting and trailers to minimize the risk of being impacted by traffic on the roadway or by construction traffic or equipment. Provide lightning protection for the portable lighting. Portable lighting shall withstand up to 60 mph wind velocity.

If portable generators are used as a power source, furnish adequate power to operate all required lighting equipment without any interruption during the nighttime work. Provide wiring that is weatherproof and installed according to local, state, federal (NECA and OSHA) requirements. Equip all power sources with a ground-fault circuit interrupter to prevent electrical shock.

C.3 Light Level and Uniformity

Position (spacing and mounting height) the luminaires to provide illumination with an average to minimum uniformity ratio of 5:1 or less throughout the work area.

Illuminate the area as necessary to incorporate construction vehicles, equipment, and personnel activities.

C.4 Glare Control

Design, install, and operate all lighting supplied under these specifications to minimize or avoid glare that interferes with all traffic on the roadway or that causes annoyance or discomfort for properties adjoining the roadway. Locate, aim, and adjust the luminaires to provide the adequate level of illumination and the specified uniformity in the work area without the creation of objectionable glare.

Provide louvers, shields, or visors, as needed, to reduce any objectionable levels of glare. As a minimum, ensure the following requirements are met to avoid objectionable glare on the roadways open to traffic in either direction or for adjoining properties:

1. Aim tower-mounted luminaires, either parallel or perpendicular to the roadway, so as to minimize light aimed toward approaching traffic.

2. Aim all luminaires such that the center of beam axis is no greater than 60 degrees above vertical (straight down).

If lighting does not meet above-mentioned criteria, adjust the lighting within 24 hours.

C.5 Continuous Operation
Provide and have available sufficient fuel, spare lamps, generators, and qualified personnel to ensure that the lights will operate continuously during nighttime operation. In the event of any failure of the lighting system, discontinue the operation until the adequate level of illumination is restored. Move and remove lighting as necessary.

D (Vacant)

E Payment
Costs for furnishing a lighting plan, and for providing, maintaining, moving, and removing portable lighting, tower mounted lighting, and equipment-mounted lighting required under this special provision are incidental to the contract.
643-010 (20100709)

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

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

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

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

C Construction

C.1 General

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

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

C.2 Groove Depth

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

C.3 Groove Width – Longitudinal Markings

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

C.4 Groove Position

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

C.5 Groove Cleaning

C.5.1 Concrete

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

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

C.5.2 New Asphalt

Groove pavement five or more days after paving.

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

C.5.3 Existing Asphalt
Check for structural integrity in supporting grooving operations. If the structural integrity of the asphalt pavement is inadequate to support grooving operations, immediately notify the engineer.

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

C.6 Tape Application
Apply the tape when both the air and surface temperature are 40 degrees F and rising.

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

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

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

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

1) For the remainder counties:

- Apply either adhesive.

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

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

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

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

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

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

13. Install Conduit Into Existing Item, Item 652.0700.S.

A Description
This special provision describes installing proposed conduit into an existing manhole, pull box, junction box, communication vault, or other structure.

B Materials
Use type, size, and number of conduits as shown in the plan and, as provided and paid for under other items in this contract. Furnish backfill material, topsoil, fertilizer, seed, and mulch conforming to the requirements of pertinent provisions of the standard specifications.

C Construction
Expose the outside of the existing structure without disturbing existing conduits or cabling. Drill the appropriate sized hole for the entering conduit(s) at a location within the structure without disturbing the existing cabling and without hindering the installation of new cabling within the installed conduit. Fill void area between the drilled hole and conduit with an engineer-approved filling material to protect against conduit movement and entry of fill material into the structure. Tamp backfill into place.

D Measurement
The department will measure Install Conduit Into Existing System by the unit, acceptably installed. Up to five conduits entering a structure per entry point into the existing structure will be considered a single unit. Conduits in excess of five, or conduits entering at significantly different entry points into the existing pull box, manhole, or junction box will constitute multiple units of payment.

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

ITEM NUMBER	DESCRIPTION	UNIT
652.0700.S	Install Conduit Into Existing Item	Each

Payment is full compensation for excavating, drilling holes; furnishing and installing all materials, including bricks, coarse aggregate, sand, bedding, and backfill; for excavating and backfilling; and for furnishing and placing topsoil, fertilizer, seed, and mulch in disturbed areas; for properly disposing of surplus materials; and for making inspections.
652-070 (20100709)

14. Removing Advance Flasher Assemblies Type 1, Item 676.9001.S.

A Description
Remove advance flasher assemblies at the locations shown on the plan. Rewire and disconnect all wiring in the control cabinet as necessary and properly dispose of materials, according to the pertinent provisions of standard spec 204 and as hereinafter provided.

B Materials
Dispose of all materials resulting from removing the Advance Flasher Assemblies including but not limited to poles, break-a-way bases, signal assemblies, bulbs, and wire off the job site.

C Construction
Do not remove existing advance flasher assemblies until proper disconnects and wiring changes in the controller cabinet have been made.

Where an existing advance flasher assembly is mounted to a light pole, remove all signal hardware including wire, conduit, signal assemblies and mounts. Where existing conduit has been installed under concrete sidewalk or roadway, do not remove buried conduit unless directed otherwise by the engineer or unless it is not possible to install new wire through the existing conduit.

D Measurement
The department will measure Removing Advance Flasher Assemblies (Type) by the unit, acceptably removed.

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

ITEM NUMBER	DESCRIPTION	UNIT
676.9001.S	Removing Advance Flasher Assemblies, Type 1	Each

Payment is full compensation for removing advanced flasher assemblies; for rewiring, as necessary; for disconnecting wiring as necessary in the controller cabinet; and for properly disposing of all materials.

Removal of concrete bases and signs associated with this item will be measured and paid for separately.
676-900 (20100630)

15. Removing Luminaires, Item SPV.0060.01; Removing Lighting Units, Item SPV.0060.02.

A Description
The work under these items shall consist of removing luminaires or lighting units. A lighting unit is defined as the luminaire(s), luminaire arm(s), pole, and breakaway feature. Lamp Disposal will be measured and paid separately.

B (Vacant)

C Construction
Store and safeguard any lighting units shown in the plans to be salvaged and re-installed. Else, return materials in good condition to the owner. Dispose of damaged or refused items off the site.

D Measurement
The department will measure Removing Luminaires and Removing Lighting Units by each individual unit, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.01	Removing Luminaires	Each
SPV.0060.02	Removing Lighting Units	Each

Payment is full compensation for removing, delivering, and disposing of materials.

16. Lamp Disposal High Intensity Discharge, Item SPV.0060.03.

A Description
This special provision describes packaging, palletizing, and returning HID (metal halide; mercury vapor and high-pressure sodium) lamps removed under this contract to the department at the South 60th Street, West Allis, location.

B Vacant

C Construction
Lamps that the contractor turns in to the department will be considered the property of the department for proper future disposal. The contractor will have no further obligation for their disposal. The department will reject improperly packaged lamps.

Deliveries to the department shall be prearranged. Deliveries shall be consolidated into a truckload or more, except that where all the lamps removed under a contract measure less than a truckload, all shall be delivered as one load at one time.

Pack intact lamps in the packaging of the new lamps used to replace the old lamps, or packaging affording the equivalent protection. Deliver in full, closed, stackable cartons with the name of the contractor, the number and type/ wattage of lamps clearly written on each carton.

Pack broken lamps into minimum 6 mil plastic bags, which in turn shall be placed inside sturdy cardboard boxes or the equivalent, with the number of lamps clearly marked on each box. Mark the outer packaging "broken lamps". The department will reject metal containers.

Deliver all broken lamps, as noted above. The department will not pay broken lamps above a level of ten percent of the total number in the contract. Deliver broken lamps above the ten percent level to the department for no compensation.

If palletized, cartons shall be piled no more than two high and shall be secured with shrink-wrap to prevent shifting or falling loads. Label the pallets by the number and type/ wattage of lamps, and the name of the contractor.

The department will reject any lamps not removed as part of a contract pay item or otherwise required under this contract.

D Measurement

The department will measure Lamp Disposal High Intensity Discharge by each individual unit delivered to the department properly packaged. This payment will be in addition to payment for the work under which the lamps are removed from service.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.03	Lamp Disposal High Intensity Discharge	Each

Payment is full compensation for packaging, palletizing and delivering lamps without breakage.

17. Removing Distribution Centers, Item SPV.0060.04.

A Description

The work under this item shall consist of removing electrical services and distribution centers. The department will issue the demolition request to WE-Energies. Removal of the concrete bases will be measured and paid separately.

B (Vacant)

C Construction
Coordinate with the utility for the permanent disconnection of electrical service. Any utility fees will be paid by the department.

Dispose of materials off the site.

D Measurement
The department will measure Removing Distribution Centers by each individual unit, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.04	Removing Distribution Centers	Each

Payment is full compensation for removal and haul of the cabinets; and for utility coordination.

18. Pull Boxes Steel 24x42-Inch Grounded, Item SPV.0060.05.

A Description
This special provision describes pull boxes similar to the standard pull box item of the same size, modified for Grounded Neutral wiring systems.

B Materials
Conform to materials requirements for standard pull box items in standard spec 653.

C Construction
Conform to construction requirements for standard pull box items. In addition, drive a 5/8-inch x 8-foot grounding electrode at the bottom of the pull box. Bond the grounded neutral ("white") conductors, and the canister, frame and cover grounds to the grounding electrode with an exothermic weld.

D Measurement
The department will measure Pull Boxes Steel 24x42-Inch Grounded by each individual unit, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.05	Pull Boxes Steel 24x42-Inch Grounded	Each

Payment will be on the same basis as standard pull box items in standard spec 653.

19. Lighting Distribution Centers, Item SPV.0060.06.

A Description

The work under this item shall consist of furnishing and installing 100 Ampere 240/480 VAC lighting distribution centers, as shown in the plans. To the extent possible, provide components from the same manufacturer. Conform to standard spec 651.2(4) regarding listed components. Electrical service, service entrance conductors, and concrete control cabinet base will be measured and paid separately. Two NEMA decals per installation, one for the meter pedestal and one for the cabinet door, to read DANGER 480 VOLTS, will each be paid as Plaques Sequence Identification.

B Materials

B.1 General

Furnish, deliver and install Lighting Control Cabinet 240/480 VAC from the department Qualified Product List to the project site. Notify the department lighting engineer, Mr. Matt Pfeifer, (414) 750-2836 for approval before installation.

B.2 Contactors

The contactors shall be electrically held, specification grade, two-pole, with 30A contacts. Provide 1" high engraved plaque above each contactor indicating the circuit number in ½" text as appropriate.

B.3 Photocell

Provide photocell receptacle to accommodate NEMA twist-lock photocell. Provide openings on the side and back of housing to allow proper photocell operation. Cabinet door should open south.

B.4 HOA Switch

Provide a hand-off-auto switch that is accessible without opening dead-front door.

B.5 Panelboards

Provide a specification grade panelboard interior, Square D type NQ or equal. The panel shall be rated, sized, and configured as indicated on the attached drawings. Provide copper bus bars and copper ground and neutral bus bars. Provide thermal-magnetic circuit breakers that clearly indicate ON, OFF, or TRIPPED position in the panel.

Provide a separate or back-fed main circuit breaker.

B.6 Enclosures

The cabinet shall be of NEMA Type 3R rainproof construction and shall be UL listed as "Enclosed Industrial Control Equipment" (UL 508A). External construction shall comply with UL50 requirements. Cabinet dimensions shall be as indicated on the attached drawings.

Cabinet exterior shall be fabricated from 1/8” clear anodized 5052-H32aluminum.

All fasteners, latches and hardware shall be of stainless steel and all hinges shall be continuous piano type. No fasteners except sealing screws shall be removable by external access.

All edges and corners on both exterior and interior must be rounded and smooth to prevent injuries.

The distribution equipment compartment shall be behind an external lockable door with standard #2 key locking mechanism. A door keeper shall be provided to keep the door in the open position. Electrical equipment shall be located behind an internal dead-front door with a quarter turn securing latch and hinged to open a minimum of 120 degrees. The dead-front door shall be hinged on the same side as the customer door.

A metal print pocket shall be located on the inside of the customer door large enough to hold all circuit directories and instructions in a clear plastic 8”x10” weatherproof sleeve.

The cabinet mounting bolts shall not be externally accessible. Cabinet can be mounted to a concrete base with use of stainless steel anchors.

Cabinet shall be rated for operation at 22k minimum AIC amps interrupting. Series rating is acceptable.

All distribution and control equipment shall be factory wired using 600 volt wire.

Cabinet dimensions shall be as indicated on the attached drawings.

B.7 Field Wiring Termination Blocks

Provide quantity of channel mount NEMA rated, box lug, single terminal blocks as indicated on plans that are capable of holding #12 to #2 wire for power, neutral, and grounding connections. The terminal blocks shall be mounted on a mounting channel with end anchors and an end barrier. Each terminal block shall have a label indicating the appropriate circuit number, neutral (‘N’) or ground (‘G’) wire connected to block; handwritten numbers and letters are not acceptable means of identification.

B.8 Surge Protection Devices (SPD)

SPD for 240V or 240/480V Power: Install a Type 1 SPD on distribution panelboard on the load side of a dedicated 2-pole, 30A circuit breaker.

SPDs shall be UL Listed and labeled to UL 1449 Third Edition. SPDs shall be posted on VZCA at UL.com.

The following ratings shall not be exceeded on any mode of protection:

- Short Circuit Current Rating (SCCR): 200kA or the available short circuit current, whichever is greater
- Nominal Discharge Current Rating (In): 20kA
- Voltage Protection Rating (VPR): 700V
- Maximum Continuous Operating Voltage (MCOV): 150V
- Peak surge current rating: 50kA per phase (sum of L-N plus L-G)

SPD's SPDs shall include directly connected MOVs exceeding 32mm in diameter from L-N and either L-G, N-G, or both. SPD shall at a minimum be rated as NEMA 1.

The acceptable Lighting Control Cabinet Manufactures are as follows (or approved equal):

- Milbank Manufacturing
- Povolny Specialties
- State Manufacturing Corporation

B.9 Control Equipment

The stepdown transformer shall be 1.5KVA, single phase, 60Hz, encapsulated, NEMA 1 rated and UL listed. The primary voltage shall be 240V and secondary voltage shall be 120V with 5% tapping. The transformer shall be capable of mounting inside the cabinet.

SPST, 20 amp switch for the door shall be single pole single throw type heavy duty, temper resistant, rated for 125V, UL listed.

The incandescent lighting fixture shall be enclosed and gasketed with 60Watt, 120V lamp, UL listed.

Control breaker shall be 15 amp, single pole 120V, bolt on, UL listed. The circuit breaker shall have 10K AIR rating at 120V, terminal for minimum wire size 14 AWG and maximum wire size 8 AWG.

Timer switch shall be astronomical microprocessor-based with 2-channels. Timer switch shall be UL listed, 120V or 240V as shown on the plans. The timer switch shall be form manufacturer TORK MODEL DZS200 or approved equal.

C Construction

Use a UL 508 Listed Panel Builder to assemble the lighting control cabinet. Assemble the lighting control cabinet with all of its electrical components, wiring and parts in a neat and orderly fashion and as shown on the plans. Pretest the cabinet prior to shipment to the site. Panel Builder shall apply UL label inside cabinet.

Mount all equipment to panel in enclosure. Train the cables in straight horizontal and vertical directions, and parallel next to, and adjacent to other cables whenever possible. Install wiring in slotted raceway between terminal strip, contactor and panelboard. Secure all remaining wiring using screw attachment type straps; adhesive type will not be allowed.

Surge arresters shall be installed to allow LED indicator(s) to be readily visible when viewing inside of cabinet. Connect the surge arresters as indicated on the plans.

D Measurement

The department will measure Lighting Distribution Centers as each individual unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.06	Lighting Distribution Centers	Each

Payment is full compensation for furnishing and delivery and installation of the lighting control cabinet.

20. Luminaires Utility LED-C, Item SPV.0060.07; Luminaire Utility LED-D, Item SPV.0060.08.

A Description

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

B Materials

Furnish Luminaires Utility LED-C and LED-D from the department qualified product list. Luminaires shall conform to applicable portions of standard spec 659.2.2 and the WisDOT Specifications for LED Roadway Luminaires. The luminaire housing shall be all aluminum with factory finished durable corrosion and UV resistant gray powder-coated or anodized aluminum finish. Housing access shall be tool-free. The luminaire/arm mounting configuration shall fit the specified pole fitter being used per the plan. The luminaire shall be UL listed, IP 66 rated.

LED lamps shall be in the 4000K (+/- 300K) color temperature range with a minimum of 70 CRI. A NEMA sized “Category Label” label shall be fixed to the bottom of the luminaire and be visible from a passing vehicle.

The luminaire shall be equipped with a voltage-sensing LED driver, to accommodate 120-277V and 480 V with 90% power factor and THD 20% max at full load. Surge protection shall be provided and tested in accordance to the specifications. The luminaire

shall also be equipped with a quick-disconnect plug for connecting the pole riser wires to the terminal block. A strain relief shall retain the pole riser wires within the luminaire.

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

C Construction

Under the bid item Luminaires Utility LED- C and LED-D, furnish and install luminaires and all necessary miscellaneous accessories and hardware to complete the installation of the luminaires.

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

Three single-conductor No. 12 stranded wires shall be used to connect the luminaires to their respective branch conductors in the pole base. Each luminaire feeder wire shall be protected by one 5-amp fuse. Fuses and fuse holders shall be as per the details in the Plan.

All exposed threaded equipment mounting hardware shall be stainless steel.

The contractor shall coat all threaded stainless steel hardware and dissimilar metal, threaded hardware with an approved zinc-based anti-seize compound (Loctite or Jet-Lube prior to assembly.

There shall be a sticker placed on the bottom of the luminaire to clearly identify the WisDOT Luminaire Category A, B, C, or D as applicable. The sticker should be visible from to a person standing on the ground.

D Measurement

The department will measure Luminaires Utility LED-C and Luminaires Utility LED-D as each individual lighting unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.07	Luminaires Utility LED-C	Each
SPV.0060.08	Luminaires Utility LED-D	Each

Payment is full compensation for furnishing and installing all materials, including luminaire, accessories, hardware and fittings necessary to install the luminaire workable first class condition.

21. Concrete Control Cabinet Bases Special, Item SPV.0060.09.

A Description
This special provision describes furnishing and installing concrete control cabinet bases special, as shown in the plans.

B Materials
Materials shall confirm pertinent requirements of standard spec 654.2.

C Construction
Construction shall confirm pertinent requirement of standard spec 654.3. The concrete base size shall be as shown on the plans.

D Measurement
The department will measure Concrete Control Cabinet Bases, Special by each individual unit installed, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.09	Concrete Control Cabinet Bases, Special	Each

Payment is full compensation as described in standard spec 654.5(2).

22. Removing Ramp Meter Controller, Item SPV.0060.10.

A Description
This special provision describes removing an existing 170 style ramp meter controller from and existing 170 style cabinet and disposing of the controller appropriately off the project site.

B Materials
Associated materials are existing and include an existing 170 style cabinet, a 170 style cabinet, and the wiring connections and terminations in the cabinet.

C Construction
Prior to beginning any work at the site inspect the cabinet and ramp meter facilities for condition. Note any pre-existing damage with the engineer. Once work has begun on the site any damage noted will be assumed to be caused by the contractor and repairs will be made at no expense to the department.

Disconnect the controller from any existing communications media, input cards, power supplies, relays, or other equipment. Then remove the mechanical connections between the cabinet and rack or cabinet and remove the controller from the cabinet.

Dispose of the controller, and any associated miscellaneous parts not needed for the later reinstallation of a new controller, appropriately off of the project site.

D Measurement
The department will measure Removing Ramp Meter Controller by each individual removed unit, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.10	Removing Ramp Meter Controller	Each

Payment is full compensation for removing the ramp meter controller and disposing of it appropriately off the project site.

23. Removing Ramp Control Signal Assembly Sidemount, Item SPV.0060.11.

A Description
This special provision describes removing an existing sidemount ramp control signal assembly.

B Materials
Materials included in sidemount ramp control signal assemblies are:

1. Traffic signal standards.
2. Pedestal bases for traffic signal use.
3. Vehicular traffic signal heads.
4. Signal mounting brackets.
5. Sign mounting brackets.
6. Enforcement signal displays.

C Construction
Remove sidemount ramp control signal assemblies at the locations shown in the plans, or as directed by the engineer. Salvage the signal assemblies for the department to pick up, or dispose of them properly as directed by the engineer.

All work shall be in accordance to the applicable requirements of standard spec 655, 656, 657, and 658, the Wisconsin Electrical Code, these special provisions, and the details shown in the plans.

Salvage and store all removed materials for pickup by the department. Coordinate with the engineer on a schedule to have the removed items picked up. Maintain all materials in a condition suitable for reutilization. Replace all items damaged during construction operations.

Electrical work under this item shall be completed by a journeyman electrician or be completed under the supervision of a journeyman electrician. Legal status or standing as a journeyman electrician shall be certified or otherwise documented to the engineer before any electrical work may begin.

D Measurement

The department will measure Removing Ramp Control Signal Assembly Sidemount by each individual removed unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.11	Removing Ramp Control Signal Assembly Sidemount	Each

Payment is full compensation for removal and storage of the ramp control signal assembly; disconnecting all wiring connections; removing all conduit connections; for any necessary restoration, including backfill, topsoil, and seeding.

24. Ramp Closure Gates Hardwired 28-FT, Item SPV.0060.12; Ramp Closure Gates Hardwired 40-FT, Item SPV.0060.13.

A Description

This special provision describes providing freeway on-ramp closure gates on type 5 steel luminaire poles, and furnishing and delivering spare gate arms and flashers.

B Materials

B.1 General

Provide five user manuals and a listing of vendors and contact information for each manufactured component including flasher electrical components.

The engineer may allow alternate components equal to the manufactured components this special provision specifies. The engineer may require modification of the plan details to accommodate alternates. If the contractor provides an alternate arm and/or mounting adaptor, the engineer will reject that alternate if the contractor cannot demonstrate, to the engineer's satisfaction, that the department can easily remove and replace the arms.

B.2 Components

Furnish one Poles Type 5-Steel designed to carry twin 15-foot luminaire arms and conforming to standard spec 657 and with dimensions for acceptable installation of the ramp gate hardware as shown on the detail. Ensure a contiguous pole by eliminating the hand hole near base of pole, thus allowing uninhibited mounting of the gate pivot assembly.

Furnish galvanized steel nuts and galvanized bolts conforming to ASTM A307 except where designated as high strength (HS) conform to ASTM A325. For the ramp closure gate locking mechanism, furnish a handle nut to fit on a ¾" bolt (B&B Roadway Part Number 0605P0539 or approved equal).

Furnish grade A36 steel for the gate supports, gate pivot assembly, and associated hardware that is all galvanized after fabrication by either a mechanical or hot-dip process. Grind welded connections, rough edges, and burrs smooth before galvanizing to ensure a finished appearance. Ensure that the galvanized coating conforms to ASTM A 153.

Provide aluminum/fiberglass gate arms of the nominal length the bid item indicates and conforming to plan dimensions. Cover gate arms on two sides with alternating red and white shop-applied type H reflective sheeting conforming to standard spec 637. Also provide a shear pin base that is the manufacturer's "permanent pivot" style. Obtain components from:

B&B Roadway
15191 Hwy 243
Russellville, AL 35654
Tel: (888) 560-2060

Gate arm: model MU605

Furnish a worm gear winch with a single line vertical lift capacity of 2000 lbs. Ensure that the winch has hardened steel gears, a handgrip, permanently lubricated bearings, a reinforced arc-welded reel assembly, and mounting plate. Ensure that the winch can be mounted to the winch mount plate shown on the construction details and the handgrip can be operated without conflict with the pole or ramp gate assembly. Furnish a 2 inch outdoor rated, rot resistant polyester strap for the connection between the worm gear winch and the gate arm pivot assembly.

Furnish hardwire power system and connections conforming to the following:

1. **Cabinet**
   Furnish cabinet assemblies, power wire terminal strips, and power supplies for the on-ramp closure gate systems.

   The cabinet shall be the following dimensions: 9-inches wide, 15-inches high, and 5-inches deep.

   Minimum wall thickness of the aluminum castings shall be 3/16-inch.

   Cabinet body shall have a cast rain hood over the top of the door opening.

   Door shall be manufactured to accept a Corbin No. 2 lock.

Hinges shall consist of 3/6-inch diameter pins in cast hinge bosses that allow door to swing no less than 180º when open.

Cabinet shall be capable of being field prepared for top, bottom, or rear mounting and wire entrance holes.

Set screws shall be stainless steel.

Assembly shall be water resistant by the door flange in full contact with and compressing a neoprene gasket held by an adhesive to a groove cast into the cabinet body.

The cabinets shall consist of a cabinet body, door, and latch cast from aluminum alloy 319 or approved equivalent, and a Corbin No. 2 lock. The cast shall be free of voids, pits, dents, molding sand, and excessive foundry grinding marks. All radii shall be smooth and intact. Exterior and interior surfaces shall be smooth and cosmetically acceptable, free of molding fins, cracks, and other blemishes.

The aluminum shall meet the following minimum requirements:

- Yield Strength – 18 ksi
- Tensile Strength – 27 ksi
- Brinell Hardness – 70
- Elongation (% in 2 inches) – 2

The assembly shall have an alodine conversion coating to provide corrosion resistance and a proper base for paint adhesion.

Furnish a stainless steel or anodized steel mounting adapter plate to mount the cabinet to a pole with stainless steel banding straps.

2. **Power Converter**
   Furnish the cabinet with a 120 VAC to 12 VDC power converter.

   Furnish the cabinet with a 10 position terminal block for the 12 VDC power distribution. Power wire terminal strips 10 position feed-through terminal blocks UL-recognized for No. 22 AWG wire through No. 16 AWG wire and UL-rated for 15 amps. The terminals shall be tin-plated brass with brass clips and clamps.

Furnish gate flasher assemblies conforming to the following:

1. A 2-conductor connector, rated 12 volts at 5 amps minimum.

2. A 2-amp weather resistant in-line fuse and fuse holder.

3. Wiring harness made from 6-conductor 14 AWG stranded insulated control cable.

4. A 12-V flasher controller, capable of providing LED flashers with 5% to 100% duty cycle at a one-second pulse repetition rate.

5. A 4-conductor male/female electrical connector pair, 10 amp capacity for each connection, weather resistant, and mounted to allow rapid gate arm replacement.

6. A 5-amp mercury switch with less than 3 ohms "on" resistance and a 20- to 30-degree activation angle. Mount the switch on the gate arm to activate the flashers when the gate arm is lowered more than 45 degrees from vertical.

7. Furnish red LED flashers meeting the requirements of the MUTCD and/or AREMA standards for hue and brightness.

Power consumption	0.45 amp @ 10.5 V
Life expectancy	100,000 hrs
Directionality	0-degree cone orthogonal to face of flasher
Compliance temperature	-40° C to +70° C

Furnish electrical wires with jackets conforming to the following color scheme throughout the ramp closure gate system:

- Hot = Black or Red
- Neutral = White
- Ground = Green

Furnish structure identification plaques per WisDOT Standard Detail Drawing 12A4.

Furnish a 4-digit combination padlock (Master Lock Model 175DLH or approved equal) for the purpose of preventing unauthorized use of the ramp closure gate system.

C Construction

C.1 Ramp Closure Gates

Under the Ramp Closure Gates bid items, provide ramp closure gate at the locations the plans show. Apply corrosion protection material from the department's approved products list to the interface between the aluminum base and steel pole. The engineer may direct adjustment of the gate arm assembly to ensure the correct vertical and angular orientation of the completed closure gate.

Install cabinet with power supply, flasher controller, and other components. Connect the 120 VAC to 12 VDC power supply to the circuit breaker in the breaker disconnect box. Connect the 120 VAC to 12 VDC power supply to the 10-position terminal block and connect the 12 VDC components to the terminal block.

Connect the 12 VDC terminal strip to the wiring harness through the female side of a 2-terminal polarized electrical connector. Connect male side of this connector to the flasher controller and the female side of a weatherproof polarized 4-conductor electrical connector.

Attach the male side of the 4 conductor electrical connector, mercury switch, wiring harness and the three LED flasher units to the portion of the flasher assembly mounted on the breakaway portion of the gate arm. Adjust mercury switch so that as the gate arm is lowered to a maximum of 45 degrees from the vertical, the gate flasher assembly is energized, and the LEDs begin to flash. Ensure that when the gate arm is raised to a minimum of 15 degrees from vertical, the mercury switches the gate flasher assembly off.

Install structure identification plaques per WisDOT Standard Detail Drawing 12A4.

C.2 Furnishing Gate Arms
Under the Ramp Closure Gate Arms Stockpile bid items, furnish and deliver spare arms of the nominal length the bid item indicates conforming to B.2(4) of this special provision. Deliver spare gate arms to an address provided by:

* No stockpile items with this contract.

C.3 Furnishing Flashers
Under the Ramp Closure Gate Flasher Stockpile bid item, furnish and deliver spare gate flasher assemblies conforming to B.2(7) of this special provision. Deliver spare gate arms to an address provided by:

* No stockpile items with this contract.

D Measurement
The department will measure Ramp Closure Gates Hardwired (Size) as each individual installation, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.12	Ramp Closure Gate Hardwired 28-FT	Each
SPV.0060.13	Ramp Closure Gate Hardwired 40-FT	Each

Payment for the Ramp Closure Gate Hardwired is full compensation for providing ramp closure gates including support poles, gate arm assemblies, guides and collars, gate arms, cabinets, wiring and power converters, and gate flashers.

25. Pavement Marking Grooved Preformed Thermoplastic Symbols, Item SPV.0060.14; Pavement marking Grooved Preformed Thermoplastic Stop Line 24-inch, Item SPV.0090.01.

A Description

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

B Materials

Furnish preformed thermoplastic pavement marking and sealant material, if required, from the department's approved products list.

C Construction

C.1 General

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

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

C.2 Groove Depth

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

C.3 Groove Width – Linear Markings

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

C.4 Groove Position

Position the groove edge in accordance to the plan details.

C.4.1 Linear Marking

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

C.4.2 Special Marking

Groove a box around the special marking up to 4 inches from the perimeter of the special marking.

C.5 Groove Cleaning

C.5.1 Concrete

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

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

C.5.2 New Asphalt

Groove pavement 5 or more days after paving. Use a high-pressure air blower with at least 185 ft^3/min air flow and 90 psi air pressure to clean the groove.

C.5.3 Existing Asphalt

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

C.5.2 Asphalt

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

C.6 Preformed Thermoplastic Application

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

Application of the preformed thermoplastic in the groove without sealant will be as follows:

- May 1 to September 30, both dates inclusive – the Southeast Region and the ozone non-attainment or maintenance Northeast Region counties of Sheboygan, Manitowoc, Kewaunee, and Door.
- June 1 to August 31 – the Southwest Region, and the Northeast, North Central, and Northwest Regions except for the ozone non-attainment or maintenance Northeast Region counties of Sheboygan, Manitowoc, Kewaunee, and Door.

Application of the preformed thermoplastic in the groove with sealant materials will be as follows:

- October 1 to April 30, both dates inclusive – the Southeast Region and the ozone non-attainment or maintenance Northeast Region counties of Sheboygan, Manitowoc, Kewaunee, and Door.
- September 1 to May 31, both dates inclusive – the Southwest Region and the Northeast, North Central, and Northwest Regions, except for the ozone non-attainment or maintenance Northeast Region counties of Sheboygan, Manitowoc, Kewaunee, and Door.

The sealant must be wet.

D Measurement

The department will measure Pavement Marking Grooved Preformed Thermoplastic by each individual unit, acceptably completed, or in length by the linear foot of tape, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.14	Pavement Marking Grooved Preformed Thermoplastic Symbols	Each
SPV.0090.01	Pavement Marking Grooved Preformed Thermoplastic Stop Line 24-Inch	LF

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

26. Lighting System Integrator, Item SPV.0105.01.

A Description

These special provisions describe coordinating lighting with various parties; record keeping, and documentation. Where the department is responsible for freeway lighting operation, maintenance, or utility locates on existing systems or systems overlapping project boundaries, the contractor's freeway lighting integrator will serve as the contractor's liaison to the department's electrical operations unit.

B Personnel Qualifications

Assign personnel experienced in underground utility construction and department lighting specifications and practices.

C Construction

At any one time during the project, the contractor shall assign one individual person as the freeway lighting integrator.

The freeway lighting integrator shall:

- Familiarize himself with the location and nature of existing lighting circuits. This familiarity shall include the extent of any lighting system that overlaps project limits.
- Maintain a file of applicable permits or licenses issued to the contractor, and convey copies to the engineer.
- Keep with him at all times a contact list of affected lighting personnel.
- Maintain a record of tagouts and the clearance of tagouts.
- Interface with department electrical personnel to determine how contract limits might affect maintenance or operation of existing systems.
- Maintain ongoing contact with the department's Diggers' Hotline Coordinator to ensure that each of the two persons knows that all requested utility locates are marked in the field by the appropriate party. The intent here is to assure coordination. This special provision does not transfer additional utility locating responsibilities to the contractor, beyond those responsibilities already assigned to him by other provisions of the contract.
- Inform the department of any lighting outages, including outside the project limits where a lighting system crosses the project boundary.
- Maintain in any format real-time records of existing, removed and new lighting facilities. Include utility service extensions. Additional required records will include temporary connections and their ultimate removal.
- Maintain records of tests, including: "meg" tests, amperage draw per circuit leg, voltage reading at the disconnect, and voltage reading at the furthest pole per circuit leg. Convey these records at time of acceptance or partial acceptance.
- At the time of acceptance or partial acceptance, convey as-built drawings in both the following formats: plan redlines and .dgn electronic. Include utility service extensions.
- Secure copies of operators manuals, tear sheets, etc. as may be provided by manufacturers of some lighting materials, and convey a minimum of three sets to the department.
- Work with the engineer to notify department electrical personnel of acceptance or partial acceptance.
- Perform related duties as may be needed to ensure continuity of freeway lighting during construction, and orderly transfer upon completion.

D Measurement

The department will measure Lighting System Integrator as one complete lump sum unit of work, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.01	Lighting System Integrator	LS

Payment is full compensation for personnel costs; and for all required coordination, record-keeping, and documentation.

ADDITIONAL SPECIAL PROVISION 4

Payment to First-Tier Subcontractors

Within 10 calendar days of receiving a progress payment for work completed by a subcontractor, pay the subcontractor for that work. The prime contractor may withhold payment to a subcontractor if, within 10 calendar days of receipt of that progress payment, the prime contractor provides written notification to the subcontractor and the department documenting the reasons for withholding payment.

The prime contractor may also withhold retainage from payments due subcontractors. Reduce the total amount retained from all first-tier subcontractors to no more than the department retains within 10 calendar days of the department releasing retainage.

Payment to Lower-Tier Subcontractors

Ensure that subcontracting agreements at all tiers provide prompt payment and release of retainage rights to lower-tier subcontractors that parallel those granted first-tier subcontractors in this provision.

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

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

104.4 Requests for Information

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

(1) Either the department or the contractor may request information that the other party must provide in order for the requesting party to fulfill its contract obligations. The requesting party shall submit requests for information (RFI) on department form DT2502 either in hard copy or via email. RFI must conform to the following:

- Be of reasonable scope.
- Explain why a response is necessary to fulfill contract obligations.
- Provide a requested response time, which must be reasonable in relation to its scope.

106.1 General

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

106.1.1 Materials

(1) Provide materials conforming to the contract. Use new products and materials for items permanently incorporated into the work unless the contract specifies or allows otherwise. Use materials the contract specifies unless the engineer authorizes substitutes under 108.8. Monitor construction operations to identify potential nonconforming materials and prevent their incorporation into the work.

(2) All materials are subject to the engineer's approval before incorporation into the work. The engineer may inspect or test all materials at any time during their preparation, storage, and use. Notify the engineer of the proposed source of materials before delivering those materials to the project site. If the engineer requests, provide samples of material and access to facilities that the engineer needs to assess the acceptability of all materials. The department will, on request, share with the contractor available information on a source or material. The department will maintain a web-based list of approved aggregate sources. Aggregate producers must provide test results as required in the department policy for aggregate source approval to have their source approved and to keep that approval over time.

(3) For fabricated components, the materials and the fabricator are subject to the department's approval before delivery of those components to the project site. The engineer may require the contractor to obtain components from another department-approved source if the department determines a fabricator's product does not conform to the contract.

(4) Do not incorporate materials into the work until the engineer approves those materials. However, the contractor may request permission to incorporate materials not already approved. The engineer will grant this permission only if the contractor can provide convincing evidence that the engineer will subsequently find those materials conforming. Incorporation of materials before approval is at the contractor's risk and permission to do so does not imply that the department will subsequently approve those materials.

(5) Except as required under the contract, ensure that products incorporated into the work, either temporarily or permanently, do not display advertising or messages not directly related to the manufacturer, properties, or function of those products; or advertising or messages in violation of state statutes

106.1.2 Designated Materials Person

(1) Designate one person, either a member of the contractor's own organization or acting as an agent for the contractor responsible for the following:

- Communicating contract sampling and testing requirements to subcontractors at all tiers.
- Reporting out-of-specification test results to the department as soon as the information is available.

- Providing certified reports of test or analysis and manufacturers' certificates of compliance from subcontractors at all tiers and maintaining certification records as specified in 106.3.3.2.

(2) Ensure that the contractor-designated materials person submits materials information required under the contract to a person the engineer designates. Ensure that the contractor-designated materials person communicates with their department counterpart weekly.

106.3.4.3.1 General

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

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

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

107.17.3 Railroad Insurance Requirements

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

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

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

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

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

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

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

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

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

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

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

460.2.8.3.1.4 Department Verification Testing Requirements

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

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

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

501.2.1 Portland Cement

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

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

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

501.2.5.5 Sampling and Testing

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

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

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

[1] As modified in CMM 8-60.

501.2.6 Fly Ash

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

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

501.3.1.1.1 Air-Entrained Concrete

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

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

501.3.1.3.2 Special Restrictions

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

(1) If using coarse aggregate composed primarily of igneous or metamorphic materials, provide concrete for concrete pavement, approach slabs, barrier, surface drains, driveways, alleys, sidewalks, curb, gutter, and curb & gutter as follows:

Grade A, A-FA, A-S, and A-T :	If using type II portland cement, or if using Type IL blended cement where the base portland cement meets Type II chemical requirements.
Grade A-IS and A-IP :	If using type I/II blended portland cement.
Grade A-S2 :	If placing by a slip-formed process and using type II portland cement.
Grade C, C-FA, C-S, C-IS, and C-IP :	If using types I or III portland cement.

503.2.2 Concrete

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

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

506.3.22 Shop Inspection

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

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

506.5 Payment

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

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

507.2.2.1 General

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

(4) Ensure that there are no unsound knots or knot holes. Also ensure that there are no tight knots of a diameter exceeding one-quarter of the greater dimension at the point where they occur. Measure a knot by taking its diameter at right angles to the length of the timber. Ensure that the sum of sizes of all

knots in any one-foot length does not exceed 2 times the size of the largest allowed single knot. The engineer will treat cluster knots as if they were a single knot. A cluster knot is 2 or more knots grouped together, with the fibers of the wood deflected around the entire unit.

512.3.1 Driving and Cutting Off

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

512.3.1.1 General

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

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

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

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

512.3.1.2 Driving System

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

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

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

512.3.1.3 Cut-Offs

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

518.2.1 General

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

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

526.3.3 Temporary Structures

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

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

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

614.2.5 Wood Posts and Offset Blocks

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

614.2.5 Posts and Offset Blocks

614.2.5.1 Wood Posts and Offset Blocks

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

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

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

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

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

TABLE 614-1 PROPERTIES FOR WOOD POSTS AND BLOCKS

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

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

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

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

614.2.5.2 Steel Posts

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

614.2.5.3 Plastic Offset Blocks

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

614.3.1 General

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

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

(2) Apply 2 coats of wood preservative to cut surfaces of wood components. Use the same preservative originally used to treat that component or use a 2-percent solution of copper naphthenate conforming to AWPA Standard P8 or P36.

614.3.2.1 Installing Posts

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

(4) Cut post tops to the finished elevation the plans show.

628.2.13 Rock Bags

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

(1) Furnish rock bags made of a porous, ultraviolet resistant, high-density polyethylene or geotextile fabric that will retain 70% of its original strength after 500 hours of exposure according to ASTM D4355 and a minimum in-place filled size of 18-inches long by 12-inches wide by 6-inches high. Ensure that the fabric conforms to the following:

TEST REQUIREMENT	METHOD	VALUE
Minimum Tensile	ASTM D4632	
Machine direction		70 lb minimum
Cross direction		40 lb minimum
Elongation	ASTM D4632	
Machine direction		20% minimum
Cross direction		10 % min
Puncture	ASTM 4833	65 lbs minimum
Minimum Apparent Opening		0.0234 inches (No. 30 sieve)
Maximum Apparent Opening		0.0787 inches (No. 10 sieve)

639.2.1 General

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

(2) For grout use fine aggregate conforming to 501.2.5.3 and type I, IL, IS, or IP cement.

649.3.1 General

Replace paragraphs three and four with the following effective with the March 2013 letting:

(3) For pavements open to all traffic, apply centerline and no-passing barrier line markings as follows:

- On intermediate pavement layers, including milled surfaces, on the same day the pavement is placed or milled.
- On the upper layer of pavement, on the same day the pavement is placed unless the contractor applies permanent marking on the same day the pavement is placed.

If weather conditions preclude same-day application, apply as soon as weather allows. Do not resume next-day construction operations until these markings are completed unless the engineer allows otherwise.

(4) If required to apply no passing zone temporary pavement marking, reference the beginning and end of all existing no-passing barrier lines. Apply temporary no-passing barrier lines at those existing locations. If the contract contains the Locating No-Passing Zones bid item, relocate permanent no-passing zones as specified in section 648.

701.4.2 Verification Testing

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

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

715.2.3.1 Pavements

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

(2) Provide a minimum cement content of 565 pounds per cubic yard, except if using type I, IL, or III cement in a mix where the geologic composition of the coarse aggregate is primarily igneous or metamorphic materials, provide a minimum cement content of 660 pounds per cubic yard.

715.3.1.3 Department Verification Testing

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

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

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

Errata

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

102.12 Public Opening of Proposals

Correct 102.12(1) errata by changing htm to shtm in the web link.

(1) The department will publicly open proposals at the time and place indicated in the notice to contractors. The department will post the total bid for each proposal on the Bid Express web site beginning at 9:30 AM except as specified in 102.8. If a proposal has no total bid shown, the department will not post the bid. After verification for accuracy under 103.1, the department will post bid totals on the department's HCCI web site.

http://roadwaystandards.dot.wi.gov/hcci/bid-letting/index.shtm

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

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

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

204.3.2.2 Removing Items

Correct errata by changing the reference from 490.3.2 to 490.3.

(5) Under the Removing Asphaltic Surface Milling bid item, remove and dispose of existing asphaltic pavement or surfacing by milling at the location and to the depth the plans show. Mill the asphaltic pavement or surfacing as specified for milling salvaged asphaltic pavement in 490.3.

501.2.9 Concrete Curing Materials

Correct errata by changing AASHTO M171 to ASTM C171.

(4) Furnish polyethylene-coated burlap conforming to ASTM C171 for white burlap-polyethylene sheets.

506.2.6.5.2 Pad Construction

Correct errata by changing ASTM A570 to ASTM A1011.

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

512.3.3 Painting

Correct errata by changing 511.3.5 to 550.3.11.3.

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

513.2.2.8 Toggle Bolts

Correct errata by changing ASTM A570 to ASTM A1011.

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

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

614.2.1 General

Correct errata by changing the discontinued AASHTO M298 to ASTM B695.

(4) Furnish steel nuts conforming to ASTM A563, washers conforming to ASTM F436, grade 1, and bolts conforming to ASTM A307. Ensure that the nuts, washers, and bolts are either hot-dip coated according to AASHTO M232 class C or mechanically coated according to ASTM B695 class 50.

643.3.1 General

Correct errata by eliminating the word "continuously".

(6) Review all traffic signs and control devices furnished and erected for location, position, visibility, adequacy, and manner of use under specific job conditions immediately after each setup and at least once every 24 hours and more frequently as necessary, to ensure all the signs and control devices are in compliance with this section. Review the signs and devices from the same direction that approaching traffic views them.

660.2.1 General

Correct errata by changing section 511 to 550.

(1) Furnish materials conforming to the following:

Concrete	section 501
Concrete bridges	section 502
Luminaires	section 659

Steel piling ..... section 550
Steel reinforcement..... section 505

660.3.2.3 Pile Type Foundations

Correct errata by changing section 511 to 550.

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

701.3 Contractor Testing

Correct errata by updating AASHTO T141 to AASHTO R60 and changing AASHTO T309 to ASTM C1064.

(1) Perform contract required QC tests for samples randomly located according to CMM 8-30. Also perform other tests as necessary to control production and construction processes, and additional testing enumerated in the contractor's quality control plan or that the engineer directs. Use test methods as follows:

TABLE 701-2 TESTING STANDARDS

TEST	TEST STANDARD
Washed P 200 analysis	AASHTO T11[1]
Sieve analysis of fine and coarse aggregate	AASHTO T27[1]
Aggregate moisture	AASHTO T255[1]
Sampling freshly mixed concrete	AASHTO R60
Air content of fresh concrete	AASHTO T152[2]
Concrete slump	AASHTO T119[2]
Concrete temperature	ASTM C1064
Concrete compressive strength	AASHTO T22
Making and curing concrete cylinders	AASHTO T23
Standard moist curing for concrete cylinders	AASHTO M201

[1] As modified in CMM 8-60.

[2] As modified in CMM 8-70.

ADDITIONAL SPECIAL PROVISION 7

A. Reporting 1st Tier and DBE Payments During Construction

1. Comply with reporting requirements specified in the department's Civil Rights Compliance, Contractor's User Manual, Sublets and Payments.
2. Report payments to all DBE firms within 10 calendar days of receipt of a progress payment by the department or a contractor for work performed, materials furnished, or materials stockpiled by a DBE firm. Report the payment as specified in A(1) for all work satisfactorily performed and for all materials furnished or stockpiled.
3. Report payments to all first tier subcontractor relationships within 10 calendar days of receipt of a progress payment by the department for work performed. Report the payment as specified in A(1) for all work satisfactorily performed.
4. All tiers shall report payments as necessary to comply with the DBE payment requirement as specified in A(2).
5. Require all first tier relationships, DBE firms and all other tier relationships necessary to comply with the DBE payment requirement in receipt of a progress payment by contractor to acknowledge receipt of payment as specified in A(1), (2), (3) and (4).
6. All agreements made by a contractor shall include the provisions in A(1), (2), (3), (4) and (5), and shall be binding on all first tier subcontractor relationships and all contractors and subcontractors utilizing DBE firms on the project.

B. Costs for conforming to this special provision are incidental to the contract.

ADDITIONAL SPECIAL PROVISION 9
Electronic Certified Payroll Submittal

(1) Use the department's Civil Rights Compliance System (CRCS) to submit certified payrolls electronically. Details are available online through the department's highway construction contractor information (HCCI) site on the Labor, Wages, and EEO Information page at: http://roadwaystandards.dot.wi.gov/hcci/labor-wages-eeo/index.shtm

(2) Ensure that all tiers of subcontractors, as well as all trucking firms, submit their weekly certified payrolls electronically through CRCS. These payrolls are due within seven calendar days following the close of the payroll period. Every firm providing physical labor towards completing the project is a subcontractor under this special provision.

(3) Upon receipt of contract execution, promptly make all affected firms aware of the requirements under this special provision and arrange for them to receive CRCS training as they are about to begin payrolls. The department will provide training either in a classroom setting at one of our regional offices or by telephone. Contact Tess Mulrooney at 608-267-4489 to schedule the training.

(4) The department will reject all paper submittals of forms DT-1816 and DT-1929 for information required under this special provision. All costs for conforming to this special provision are incidental to the contract.

(5) Firms wishing to export payroll data from their computer system into CRCS should have their payroll coordinator send several sample electronic files to Tess two months before a payroll needs to be submitted. Not every contractor's payroll system is capable of producing export files. For details, see pages 17-22 of the CRCS System Background Information manual available online on the Labor, Wages, and EEO Information page at: http://roadwaystandards.dot.wi.gov/hcci/labor-wages-eeo/crc-basic-info.pdf

APRIL 2013

BUY AMERICA PROVISION

All steel and iron materials permanently incorporated in this project shall be domestic products and all manufacturing and coating processes for these materials from smelting forward in the manufacturing process must have occurred within the United States. Coating includes epoxy coating, galvanizing, painting and any other coating that protects or enhances the value of a material subject to the requirements of Buy America. The exemption of this requirement is the minimal use of foreign materials if the total cost of such material permanently incorporated in the product does not exceed one-tenth of one percent (1/10 of 1%) of the total contract cost or $2,500.00, whichever is greater. For purposes of this paragraph, the cost is that shown to be the value of the subject products as they are delivered to the project. The contractor shall take actions and provide documentation conforming to CMM 2-28.4 to ensure compliance with this “Buy America” provision.

http://roadwaystandards.dot.wi.gov/standards/cmm/cm-02-28.pdf#cm2-28.4

Upon completion of the project certify to the engineer, in writing using department form WS4567, that all steel, iron, and coating processes for steel or iron incorporated into the contract work conform to these "Buy America" provisions. Attach a list of exemptions and their associated costs to the certification form. Department form WS4567 is available at:

http://roadwaystandards.dot.wi.gov/standards/forms/hidden/ws4567.doc

Effective with September 2004 Letting

WISCONSIN DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS AND TRANSPORTATION FACILITIES

SUPPLEMENTAL REQUIRED CONTRACT PROVISIONS

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

The schedule of "Minimum Wage Rates" attached hereto and made a part hereof furnishes the prevailing wage rates that have been determined pursuant to Section 103.50 of the Wisconsin Statutes. These wage rates are the minimum required to be paid to the various laborers, workers, mechanics and truck drivers employed by contractors and subcontractors on the construction work embraced by the contract and subject to prevailing hours and wages under Section 103.50, Stats. If necessary to employ laborers, workers, mechanics or truck drivers whose classification is not listed on the schedule, they shall be paid at rates conformable to those listed for similar classifications. Apprentices shall be paid at rates not less than those prescribed in their state indenture contacts.

While the wage rates shown are the minimum rates required by the contract to be paid during its life, this in not a representation that labor can be obtained at these rates. It is the responsibility of bidders to inform themselves as to the local labor conditions and prospective changes or adjustments of wage rates. No increase in the contract price shall be allowed or authorized on account of the payment of wage rates in excess of those listed herein.

Pursuant to Section 103.50 of the Wisconsin Statutes, the prevailing hours of labor have been determined to be up to 10 hours per day and 40 hours per calendar week Monday through Friday. If any laborer, worker, mechanic or truck driver is permitted or required to work more than the prevailing number of hours per day or per calendar week on this contract, they shall be paid for all hours in excess of the prevailing hours at a rate of at least one and one-half (1 1/2) times their hourly rate of pay. All work on Saturday, Sunday and the following holidays is to be paid at time and a half: (1) January 1, (2) the last Monday in May, (3) July 4, (4) the first Monday in September, (5) the fourth Thursday in November, (6) December 25, (7) the day before if January 1, July 4 or December 25 falls on a Saturday and (8) the day following if January 1, July 4 or December 25 falls on a Sunday.

All laborers, workers, mechanics and truck drivers shall be paid unconditionally not less often than once a week. Persons who own and operate their own trucks must receive the prevailing truck driver rate for the applicable type of truck (i.e. 2 axle, 3 or more axle, articulated, eculid or dumptor) he or she operates, plus an agreed upon amount for the use of his or her truck. Every owner-operator MUST be paid separately for their driving and for the use of their truck.

For those projects subject to the requirements of the Davis-Bacon Act, the Secretary of Labor will also have determined "Minimum Wage Rates" for work to be performed under the contract. These rates are, for all or most of the labor, worker, mechanic or truck driver classifications, identical to those established under Section 103.50 of the Wisconsin Statutes. In the event the rates are not identical, the higher of the two rates will govern.

II. PAYROLL REQUIREMENTS

All contractors and subcontractors must submit weekly Certified Payrolls and Compliance Statement verifying that all laborers, workers, mechanics and truck drivers working on the project have been paid the prevailing wage rates for all work performed under the contract required by Section 103.50 of the Wisconsin Statutes.

III. POSTINGS AT THE SITE OF THE WORK

In addition to the required postings furnished by the Department, the contractor shall post the following in at least one conspicuous place at the site of work:

a. "NOTICE TO EMPLOYEES," which provides information required to be posted by the provisions of Section 103.50 of the Wisconsin Statutes.

b. A copy of the State of Wisconsin Minimum Wages Rates. (Four pages.)

c. A copy of the contractor's Equal Employment Opportunity Policy.

d. On any project involving federal aid, in addition to the furnished postings, the contractor shall post a copy of the "Davis-Bacon Act, Minimum Wage Rates". (Three pages.)

IV. WAGE RATE REDISTRIBUTION

The amount specified as the hourly basic rate of pay and the amount(s) specified as the fringe benefit contribution(s), for all classes of laborers, workers, mechanics or truck drivers may be redistributed, when necessary, to conform to those specified in any applicable collective bargaining agreement, provided that both parties to such agreement

request and receive the approval for any such redistribution from both the Department of Transportation and the Department of Workforce Development prior to the implementation of such redistribution.

V. ADDITIONAL CLASSIFICATIONS

Any unlisted laborer or mechanic classification that is needed to perform work on this project, and is not included within the scope of any of the classifications listed in the application prevailing wage rate determination, may be added after award only if all of the following criteria have been met:

1. The affected employer(s) must make a written request to WisDOT Central Office to utilize the unlisted classification on this project.

2. The request must indicate the scope of the work to be performed by the unlisted classification and must indicate the proposed wage/fringe benefit package that the unlisted classification is to receive.

3. The work to be performed by the unlisted classification must not be performed by a classification that is included in the applicable prevailing wage rate determination.

4. The unlisted classification must be commonly employed in the area where the project is located.

5. The proposed wage/fringe benefit package must bear a reasonable relationship to those set forth in the applicable prevailing wage rate determination.

6. The request should be made prior to the actual performance of the work by the unlisted classification.

7. DWD must approve the use of the unlisted classification and the proposed wage/fringe benefit package. USDOL also must approve the use of the unlisted classification and the proposed wage/fringe benefit package on federal aid projects.

8. WisDOT and DWD may amend the proposed wage/fringe benefit package, as deemed necessary, and may set forth specific employment ratios and scope of work requirements in the approval document.

The approved wage/fringe benefit package shall be paid to all laborers, workers, mechanics or truck drivers performing work within the scope of that performed by the unlisted classification, from the first day on which such work is performed. In the event that work is performed by the unlisted classification prior to approval, the wage/fringe benefit package to be paid for such work must be in conformance with the wage/fringe

benefit package approved for such work. Under this arrangement a retroactive adjustment in wages and/or fringe benefits may be required to be made to the affected laborers, workers, mechanics or truck drivers by the affected employer(s).

ANNUAL PREVAILING WAGE RATE DETERMINATION
FOR ALL STATE HIGHWAY PROJECTS
MILWAUKEE COUNTY

Compiled by the State of Wisconsin - Department of Workforce Development
for the Department of Transportation
Pursuant to s. 103.50, Stats.
Issued on May 1, 2013

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

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

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

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

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

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY $	HOURLY FRINGE BENEFITS $	TOTAL $
Bricklayer, Blocklayer or Stonemason	35.58	19.20	54.78
Carpenter	32.93	19.81	52.74
Future Increase(s): Add $.75/hr on 6/3/2013. Add $1.25/hr on 6/2/2014. 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.			
Cement Finisher	30.69	17.53	48.22
Future Increase(s): Add $1.87 on 6/1/13; Add $1.87 on 6/1/14; Add $1.87 on 6/1/15; Add $1.75 on 6/1/16. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.40/hr when the Wisconsin Department of Transportation or responsible governing agency requires that work be performed at night under artificial illumination with traffic control and the work is completed after sunset and before sunrise.			
Electrician	31.54	21.14	52.68
Fence Erector	28.00	4.50	32.50
Ironworker	31.31	21.99	53.30
Line Constructor (Electrical)	31.29	15.34	46.63
Painter	29.22	16.69	45.91
Pavement Marking Operator	29.22	16.69	45.91
Piledriver	29.56	23.86	53.42
Roofer or Waterproofer	29.40	15.05	44.45
Teledata Technician or Installer	24.65	15.67	40.32
Tuckpointer, Caulker or Cleaner	34.35	11.13	45.48
Underwater Diver (Except on Great Lakes)	37.45	19.45	56.90
Heavy Equipment Operator - ELECTRICAL LINE CONSTRUCTION ONLY	29.64	17.06	46.70
Light Equipment Operator -ELECTRICAL LINE CONSTRUCTION ONLY	30.60	14.64	45.24
Premium Pay: DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year’s Day, Memorial Day,			

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
	$	$	$
Independence Day, Labor Day, Thanksgiving Day & Christmas Day.			
Heavy Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	25.94	13.57	39.51
Light Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	24.08	12.96	37.04
Groundman - ELECTRICAL LINE CONSTRUCTION ONLY	21.75	11.90	33.65
TRUCK DRIVERS			
Single Axle or Two Axle	33.22	18.90	52.12
Three or More Axle	23.31	17.13	40.44
Future Increase(s): Add $1.85/hr on 6/1/2013.			
Premium Pay: DOT PREMIUM: Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day.			
Articulated, Euclid, Dumptor, Off Road Material Hauler	27.77	19.90	47.67
Future Increase(s): Add $2/hr on 6/1/13; Add $1.75/hr on 6/1/14.			
Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr night work premium. See DOT's website for details about the applicability of this night work premium at: http://roadwaystandards.dot.wi.gov/hcci/labor- wages- eeo/ index. shtm.			
Pavement Marking Vehicle	23.84	14.90	38.74
Shadow or Pilot Vehicle	33.22	18.90	52.12
Truck Mechanic	22.50	16.19	38.69
LABORERS			
General Laborer	25.39	18.40	43.79
Future Increase(s): Add $1.70/hr on 6/1/2013; Add $1.60/hr on 6/1/2014.			
Premium Pay: Add $.15/hr for air tool operator, joint sawer and filler (pavement), vibrator or tamper operator (mechanical hand operated), chain saw operator and demolition burning torch laborer; Add $.35/hr for bituminous worker (raker and luteman), formsetter (curb, sidewalk and pavement) and strike off man; Add $.50/hr for line and grade specialist; Add $.65/hr for blaster and powderman; Add $2.01/hr for topman; Add $2.46/hr for bottomman; Add $3.23/hr for pipelayer. / DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr for work on projects involving temporary traffic control setup, for lane and shoulder closures, when work under artificial illumination conditions is necessary as required by the project provisions (including prep time prior to and/or cleanup after such time period).			
Asbestos Abatement Worker	18.00	0.00	18.00
Landscaper	25.39	18.40	43.79
Future Increase(s): Add $1.70/hr on 6/1/13; Add $1.60/hr on 6/1/14.			
Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr for work on projects involving temporary traffic control setup, for lane and shoulder closures, when work under artificial illumination conditions is necessary as required by the project provisions (including prep time prior to and/or cleanup after such time period).			
Flagperson or Traffic Control Person	21.88	18.40	40.28
Future Increase(s): Add $1.70/hr on 6/1/2013; Add $1.60/hr on 6/1/2014.			
Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year’s Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr when the Wisconsin Department of Transportation or responsible governing agency requires that work be performed at night under artificial illumination with traffic control and the work is completed after sunset and before sunrise.			

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
	$	$	$
Fiber Optic Laborer (Outside, Other Than Concrete Encased)	17.24	15.03	32.27
Railroad Track Laborer	14.50	3.53	18.03
HEAVY EQUIPMENT OPERATORS			
Crane, Tower Crane, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 176 Ft or Over; Crane, Tower Crane, Pedestal Tower or Derrick, With or Without Attachments, With a Lifting Capacity of Over 100 Tons, Self-Erecting Tower Crane With a Lifting Capacity Of Over 4,000 Lbs., Crane With Boom Dollies; Traveling Crane (Bridge Type). Future Increase(s): Add $2/hr on 6/1/13; Add $1.75/hr on 6/1/14. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr night work premium. See DOT's website for details about the applicability of this night work premium at: http://roadwaystandards.dot.wi.gov/hcci/labor- wages- eeo/ index. shtm.	35.22	19.90	55.12
Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of 130,000 Lbs. or Over; Caisson Rig; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 175 Ft or Under; Crane, Tower Crane, Portable Tower, Pedestal Tower or Derrick, With or Without Attachments, With a Lifting Capacity of 100 Tons or Under, Self-Erecting Tower Crane With A Lifting Capacity Of 4,000 Lbs., & Under; Dredge (NOT Performing Work on the Great Lakes); Licensed Boat Pilot (NOT Performing Work on the Great Lakes); Pile Driver. Future Increase(s): Add $2/hr on 6/1/13; Add $1.75/hr on 6/1/14. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr night work premium. See DOT's website for details about the applicability of this night work premium at: http://roadwaystandards.dot.wi.gov/hcci/labor- wages- eeo/ index. shtm.	34.72	19.90	54.62
Air Track, Rotary or Percussion Drilling Machine &/or Hammers, Blaster; Asphalt Heater, Planer & Scarifier; Asphalt Milling Machine; Asphalt Screed; Automatic Subgrader (Concrete); Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of Under 130,000 Lbs., Backhoe (Mini, 15,000 Lbs. & Under); Bituminous (Asphalt) Plant & Paver, Screed; Boatmen (NOT Performing Work on the Great Lakes); Boring Machine (Directional, Horizontal or Vertical); Bridge (Bidwell) Paver; Bulldozer or Endloader; Concrete Batch Plant, Batch Hopper; Concrete Breaker (Large, Auto, VIbratory/Sonic, Manual or Remote); Concrete Bump Cutter, Grinder, Planing or Grooving Machine; Concrete Conveyor System; Concrete Laser/Screed; Concrete Paver (Slipform); Concrete Pump, Concrete Conveyor (Rotec or Bidwell Type); Concrete Slipform Placer Curb & Gutter Machine; Concrete Spreader & Distributor; Crane (Carry Deck, Mini) or Truck Mounted Hydraulic Crane (10 Tons or Under); Crane WIth a Lifting Capacity of 25 Tons or Under; Forestry Equipment, Timbco, Tree Shear, Tub Grinder, Processor; Gradall (Cruz-Aire Type); Grader or Motor Patrol; Grout Pump; Hydro-Blaster (10,000 PSI or Over); Loading Machine (Conveyor); Material or Stack Hoist; Mechanic or Welder; Milling Machine; Post Hole Digger or Driver; Roller (Over 5 Ton); Scraper (Self Propelled or Tractor Drawn) 5 cu yds or More Capacity; Shoulder Widener; Sideboom; Skid Rig; Stabilizing or Concrete Mixer (Self-Propelled or 14S or Over); Straddle Carrier or Travel Lift; Tractor (Scraper, Dozer, Pusher, Loader); Tractor or Truck Mounted Hydraulic Backhoe; Trencher (Wheel Type or Chain Type);	34.22	19.90	54.12

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY $	HOURLY FRINGE BENEFITS $	TOTAL $
Tube Finisher; Tugger (NOT Performing Work on the Great Lakes); Winches & A- Frames. Future Increase(s): Add $2/hr on 6/1/13; Add $1.75/hr on 6/1/14. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr night work premium. See DOT's website for details about the applicability of this night work premium at: http://roadwaystandards.dot.wi.gov/hcci/labor- wages- eeo/ index. shtm.			
Belting, Burlap, Texturing Machine; Broom or Sweeper; Compactor (Self-Propelled or Tractor Mounted, Towed & Light Equipment); Concrete Finishing Machine (Road Type); Environmental Burner; Farm or Industrial Type Tractor; Fireman (Asphalt Plant, Pile Driver & Derrick NOT Performing Work on the Great Lakes); Forklift; Greaser; Hoist (Tugger, Automatic); Jeep Digger; Joint Sawer (Multiple Blade); Launch (NOT Performing Work on the Great Lakes); Lift Slab Machine; Mechanical Float; Mulcher; Power Subgrader; Robotic Tool Carrier (With or Without Attachments); Roller (Rubber Tire, 5 Ton or Under); Self Propelled Chip Spreader; Shouldering Machine; Skid Steer Loader (With or WIthout Attachments); Telehandler; Tining or Curing Machine. Future Increase(s): Add $2/hr on 6/1/13; Add $1.75/hr on 6/1/14. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr night work premium. See DOT's website for details about the applicability of this night work premium at: http://roadwaystandards.dot.wi.gov/hcci/labor- wages- eeo/ index. shtm.	33.96	19.90	53.86
Air Compressor (&/or 400 CFM or Over); Air, Electric or Hydraulic Jacking System; Augers (Vertical & Horizontal); Automatic Belt Conveyor & Surge Bin; Boiler (Temporary Heat); Concrete Proportioning Plant; Crusher, Screening or Wash Plant; Generator (&/or 150 KW or Over); Heaters (Mechanical); High Pressure Utility Locating Machine (Daylighting Machine); Mudjack; Oiler; Prestress Machine; Pug Mill; Pump (3 Inch or Over) or Well Points; Rock, Stone Breaker; Screed (Milling Machine); Stump Chipper; Tank Car Heaters; Vibratory Hammer or Extractor, Power Pack. Future Increase(s): Add $2/hr on 6/1/13; Add $1.75/hr on 6/1/14. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr night work premium. See DOT's website for details about the applicability of this night work premium at: http://roadwaystandards.dot.wi.gov/hcci/labor- wages- eeo/ index. shtm.	33.67	19.90	53.57
Fiber Optic Cable Equipment.	20.00	7.88	27.88
Work Performed on the Great Lakes Including Diver; Wet Tender or Hydraulic Dredge Engineer.	37.45	19.45	56.90
Work Performed on the Great Lakes Including 70 Ton & Over Tug Operator; Assistant Hydraulic Dredge Engineer; Crane or Backhoe Operator; Hydraulic Dredge Leverman or Diver's Tender; Mechanic or Welder.	37.45	19.45	56.90
Work Performed on the Great Lakes Including Deck Equipment Operator or Machineryman (Maintains Cranes Over 50 Tons or Backhoes 115,000 Lbs. or More); Tug, Launch or Loader, Dozer or Like Equipment When Operated on a Barge, Breakwater Wall, Slip, Dock or Scow, Deck Machinery.	27.75	19.15	46.90
Work Performed on the Great Lakes Including Deck Equipment Operator, Machineryman or Fireman (Operates 4 Units or More or Maintains Cranes 50 Tons or Under or Backhoes 115,000 Lbs. or Under); Deck Hand, Deck Engineer or Assistant Tug Operator; Off Road Trucks-Great Lakes ONLY.	27.75	19.15	46.90

CONTRACT: 20130813010 PROJECT(S): 1100-33-70 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
	SECTION 0001 ROADWAY ITEMS ALT GROUP 000					
0010	204.0100 REMOVING PAVEMENT	427.000 SY		.		.
0020	204.0120 REMOVING ASPHALTIC SURFACE MILLING	93.000 SY		.		.
0030	204.0150 REMOVING CURB & GUTTER	440.000 LF		.		.
0040	204.0165 REMOVING GUARDRAIL	65.000 LF		.		.
0050	204.0195 REMOVING CONCRETE BASES	4.000 EACH		.		.
0060	204.0210 REMOVING MANHOLES	1.000 EACH		.		.
0070	204.0220 REMOVING INLETS	9.000 EACH		.		.
0080	204.0245 REMOVING STORM SEWER (SIZE) 01. 12-INCH	66.000 LF		.		.
0090	204.0245 REMOVING STORM SEWER (SIZE) 02. 15-INCH	15.000 LF		.		.
0100	204.0245 REMOVING STORM SEWER (SIZE) 03. 18-INCH	15.000 LF		.		.

CONTRACT: 20130813010 PROJECT(S): 1100-33-70 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS		UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0110	205.0100 EXCAVATION COMMON	417.000	CY	.		.	
0120	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH	234.000	TON	.		.	
0130	415.0080 CONCRETE PAVEMENT 8-INCH	681.000	SY	.		.	
0140	415.1080 CONCRETE PAVEMENT HES 8-INCH	19.000	SY	.		.	
0150	416.0610 DRILLED TIE BARS	370.000	EACH	.		.	
0160	416.0620 DRILLED DOWEL BARS	80.000	EACH	.		.	
0170	416.1715 CONCRETE PAVEMENT REPAIR SHES	18.000	SY	.		.	
0180	416.1725 CONCRETE PAVEMENT REPLACEMENT SHES	253.000	SY	.		.	
0190	455.0105 ASPHALTIC MATERIAL PG58-28	1.100	TON	.		.	
0200	455.0605 TACK COAT	2.000	GAL	.		.	
0210	460.1103 HMA PAVEMENT TYPE E-3	20.000	TON	.		.	

CONTRACT: 20130813010 PROJECT(S): 1100-33-70 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0220	520.8000 CONCRETE COLLARS FOR PIPE	4.000 EACH		.		.
0230	601.0409 CONCRETE CURB & GUTTER 30-INCH TYPE A	603.000 LF		.		.
0240	601.0452 CONCRETE CURB & GUTTER INTEGRAL 30-INCH TYPE D	80.000 LF		.		.
0250	608.0312 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH	93.000 LF		.		.
0260	608.0315 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 15-INCH	17.000 LF		.		.
0270	608.0318 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 18-INCH	14.000 LF		.		.
0280	611.0530 MANHOLE COVERS TYPE J	2.000 EACH		.		.
0290	611.0660 INLET COVERS TYPE WM	9.000 EACH		.		.
0300	611.2004 MANHOLES 4-FT DIAMETER	2.000 EACH		.		.
0310	611.3004 INLETS 4-FT DIAMETER	2.000 EACH		.		.
0320	611.3225 INLETS 2X2.5-FT	7.000 EACH		.		.

CONTRACT: 20130813010 PROJECT(S): 1100-33-70 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0330	611.8110 ADJUSTING MANHOLE COVERS	1.000 EACH		.		.
0340	614.0200 STEEL THRIE BEAM STRUCTURE APPROACH	21.000 LF		.		.
0350	614.0345 STEEL PLATE BEAM GUARD SHORT RADIUS	38.000 LF		.		.
0360	614.0390 STEEL PLATE BEAM GUARD SHORT RADIUS TERMINAL	1.000 EACH		.		.
0370	614.2300 MGS GUARDRAIL 3	148.000 LF		.		.
0380	614.2610 MGS GUARDRAIL TERMINAL EAT	1.000 EACH		.		.
0390	614.2620 MGS GUARDRAIL TERMINAL TYPE 2	1.000 EACH		.		.
0400	619.1000 MOBILIZATION	1.000 EACH		.		.
0410	620.0300 CONCRETE MEDIAN SLOPED NOSE	15.000 SF		.		.
0420	625.0100 TOPSOIL	334.000 SY		.		.
0430	625.0500 SALVAGED TOPSOIL	1,112.000 SY		.		.

CONTRACT: 20130813010 PROJECT(S): 1100-33-70 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0440	628.1504 SILT FENCE	856.000 LF		.		.
0450	628.1520 SILT FENCE MAINTENANCE	428.000 LF		.		.
0460	628.1905 MOBILIZATIONS EROSION CONTROL	2.000 EACH		.		.
0470	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL	2.000 EACH		.		.
0480	628.2008 EROSION MAT URBAN CLASS I TYPE B	1,283.000 SY		.		.
0490	628.7015 INLET PROTECTION TYPE C	6.000 EACH		.		.
0500	628.7020 INLET PROTECTION TYPE D	8.000 EACH		.		.
0510	628.7504 TEMPORARY DITCH CHECKS	30.000 LF		.		.
0520	628.7555 CULVERT PIPE CHECKS	1.000 EACH		.		.
0530	629.0205 FERTILIZER TYPE A	1.000 CWT		.		.
0540	630.0130 SEEDING MIXTURE NO. 30	26.000 LB		.		.

CONTRACT: 20130813010 PROJECT(S): 1100-33-70 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0550	630.0200 SEEDING TEMPORARY	8.000 LB		.		.
0560	634.0618 POSTS WOOD 4X6-INCH X 18-FT	21.000 EACH		.		.
0570	637.0202 SIGNS REFLECTIVE TYPE II	266.750 SF		.		.
0580	637.0402 SIGNS REFLECTIVE FOLDING TYPE II	30.000 SF		.		.
0590	638.2602 REMOVING SIGNS TYPE II	17.000 EACH		.		.
0600	638.3000 REMOVING SMALL SIGN SUPPORTS	14.000 EACH		.		.
0610	641.8100 OVERHEAD SIGN SUPPORT (STRUCTURE) 01. S-40-974	LUMP	LUMP			.
0620	642.5001 FIELD OFFICE TYPE B	1.000 EACH		.		.
0630	643.0200 TRAFFIC CONTROL SURVEILLANCE AND MAINTENANCE (PROJECT) 01. 1100-33-70	28.000 DAY		.		.
0640	643.0300 TRAFFIC CONTROL DRUMS	2,770.000 DAY		.		.
0650	643.0420 TRAFFIC CONTROL BARRICADES TYPE III	159.000 DAY		.		.

CONTRACT: 20130813010 PROJECT(S): 1100-33-70 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0660	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A	318.000 DAY		.		.
0670	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C	419.000 DAY		.		.
0680	643.0800 TRAFFIC CONTROL ARROW BOARDS	23.000 DAY		.		.
0690	643.0900 TRAFFIC CONTROL SIGNS	772.000 DAY		.		.
0700	643.0910 TRAFFIC CONTROL COVERING SIGNS TYPE I	10.000 EACH		.		.
0710	643.1050 TRAFFIC CONTROL SIGNS PCMS	20.000 DAY		.		.
0720	643.2000 TRAFFIC CONTROL DETOUR (PROJECT) 01. 1100-33-70	1.000 EACH		.		.
0730	643.3000 TRAFFIC CONTROL DETOUR SIGNS	140.000 DAY		.		.
0740	646.0106 PAVEMENT MARKING EPOXY 4-INCH	1,724.000 LF		.		.
0750	646.0126 PAVEMENT MARKING EPOXY 8-INCH	370.000 LF		.		.
0760	646.0600 REMOVING PAVEMENT MARKINGS	1,113.000 LF		.		.

CONTRACT: 20130813010 PROJECT(S): 1100-33-70 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0770	646.0841.S PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH	38.000 LF		.		.
0780	646.0843.S PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH	375.000 LF		.		.
0790	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	770.000 LF		.		.
0800	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH	785.000 LF		.		.
0810	652.0615 CONDUIT SPECIAL 3-INCH	100.000 LF		.		.
0820	652.0700.S INSTALL CONDUIT INTO EXISTING ITEM	2.000 EACH		.		.
0830	652.0800 CONDUIT LOOP DETECTOR	313.000 LF		.		.
0840	653.0135 PULL BOXES STEEL 24X36-INCH	3.000 EACH		.		.
0850	653.0905 REMOVING PULL BOXES	4.000 EACH		.		.
0860	654.0101 CONCRETE BASES TYPE 1	1.000 EACH		.		.

CONTRACT: 20130813010 PROJECT(S): 1100-33-70 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0870	654.0105 CONCRETE BASES TYPE 5	3.000 EACH		.		.
0880	654.0108 CONCRETE BASES TYPE 8	1.000 EACH		.		.
0890	655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG	20.000 LF		.		.
0900	655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG	160.000 LF		.		.
0910	655.0260 CABLE TRAFFIC SIGNAL 12-14 AWG	475.000 LF		.		.
0920	655.0305 CABLE TYPE UF 2-12 AWG GROUNDED	275.000 LF		.		.
0930	655.0610 ELECTRICAL WIRE LIGHTING 12 AWG	225.000 LF		.		.
0940	655.0620 ELECTRICAL WIRE LIGHTING 8 AWG	1,280.000 LF		.		.
0950	655.0630 ELECTRICAL WIRE LIGHTING 4 AWG	3,280.000 LF		.		.
0960	655.0640 ELECTRICAL WIRE LIGHTING 1 AWG	36.000 LF		.		.
0970	655.0700 LOOP DETECTOR LEAD IN CABLE	2,710.000 LF		.		.

CONTRACT: 20130813010 PROJECT(S): 1100-33-70 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0980	655.0800 LOOP DETECTOR WIRE	1,156.000 LF		.		.
0990	656.0200 ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 01. HL-40-WG	LUMP	LUMP			.
1000	656.0200 ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 02. HL-40-HP	LUMP	LUMP			.
1010	657.0210 TRANSFORMER BASES BREAKAWAY 15-17 INCH BOLT CIRCLE	1.000 EACH		.		.
1020	657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE	3.000 EACH		.		.
1030	657.0322 POLES TYPE 5-ALUMINUM	1.000 EACH		.		.
1040	657.0380 POLES TYPE E	1.000 EACH		.		.
1050	657.0720 LUMINAIRE ARMS TRUSS TYPE 6-INCH CLAMP 20-FT	1.000 EACH		.		.
1060	659.0802 PLAQUES SEQUENCE IDENTIFICATION	95.000 EACH		.		.
1070	670.0100 FIELD SYSTEM INTEGRATOR	LUMP	LUMP			.

CONTRACT: 20130813010 PROJECT(S): 1100-33-70 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1080	670.0200 ITS DOCUMENTATION	LUMP	LUMP			.
1090	674.0200 CABLE MICROWAVE DETECTOR	530.000 LF		.		.
1100	674.0300 REMOVE CABLE	725.000 LF		.		.
1110	675.0100 INSTALL CONTROLLER RAMP METER PROCESSOR ASSEMBLY	1.000 EACH		.		.
1120	675.0300 INSTALL MOUNTED CONTROLLER MICROWAVE DETECTOR ASSEMBLY	1.000 EACH		.		.
1130	676.0100 SIGNAL ASSEMBLY RAMP CONTROL SIDEMOUNT	2.000 EACH		.		.
1140	676.0105 SIGNAL ASSEMBLY RAMP CONTROL OVERHEAD	2.000 EACH		.		.
1150	676.0300 SIGNAL ASSEMBLY ADVANCE FLASHER TYPE 1	1.000 EACH		.		.
1160	676.9001.S REMOVING ADVANCE FLASHER ASSEMBLIES TYPE 1	1.000 EACH		.		.
1170	690.0250 SAWING CONCRETE	1,070.000 LF		.		.
1180	SPV.0060 SPECIAL 01. REMOVING LUMINAIRES	14.000 EACH		.		.

CONTRACT: 20130813010 PROJECT(S): 1100-33-70 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1190	SPV.0060 SPECIAL 02. REMOVING LIGHTING UNITS	1.000 EACH		.		.
1200	SPV.0060 SPECIAL 03. LAMP DISPOSAL HIGH INTENSITY DISCHARGE	15.000 EACH		.		.
1210	SPV.0060 SPECIAL 04. REMOVING DISTRIBUTION CENTERS	1.000 EACH		.		.
1220	SPV.0060 SPECIAL 05. PULL BOXES 24X42-INCH GROUNDED	3.000 EACH		.		.
1230	SPV.0060 SPECIAL 06. LIGHITING DISTRIBUTION CENTERS	2.000 EACH		.		.
1240	SPV.0060 SPECIAL 07. LUMINAIRES LED CATEGORY C	10.000 EACH		.		.
1250	SPV.0060 SPECIAL 08. LUMINAIRES LED CATEGORY D	5.000 EACH		.		.
1260	SPV.0060 SPECIAL 09. CONCRETE CONTROL CABINET BASES, SPECIAL	2.000 EACH		.		.
1270	SPV.0060 SPECIAL 10. REMOVING RAMP METER CONTROLLER	1.000 EACH		.		.
1280	SPV.0060 SPECIAL 11. REMOVING RAMP CONTROL SIGNAL ASSEMBLY SIDEMOUNT	2.000 EACH		.		.

CONTRACT: 20130813010 PROJECT(S): 1100-33-70 FEDERAL ID(S): N/A

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1290	SPV.0060 SPECIAL 12. RAMP CLOSURE GATES HARDWIRED 28-FT	1.000 EACH		.		.
1300	SPV.0060 SPECIAL 13. RAMP CLOSURE GATE HARDWIRED 40-FT	1.000 EACH		.		.
1310	SPV.0060 SPECIAL 14. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC SYMBOLS	4.000 EACH		.		.
1320	SPV.0090 SPECIAL 01. PAVEMENT MARKING GROOVED PRE FORMED THERMOPLASTIC STOP LINE 24-INCH	40.000 LF		.		.
1330	SPV.0105 SPECIAL 01. LIGHTING SYSTEM INTEGRATOR	LUMP	LUMP			.
	SECTION 0001 TOTAL					.
	TOTAL BID					.

PLEASE ATTACH SCHEDULE OF ITEMS HERE