HIGHWAY WORK PROPOSAL

Proposal Number: Ø 5

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

COUNTY	STATE PROJECT ID	FEDERAL PROJECT ID	PROJECT DESCRIPTION	HIGHWAY
Milwaukee	2265-08-70	WISC 2014 001	27th Street City of Milwaukee Howard Avenue to Union Pacific Railroad	STH 241

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

Proposal Guaranty Required, $ 100,000.00 Payable to: Wisconsin Department of Transportation	Attach Proposal Guaranty on back of this PAGE.
Bid Submittal Due Date: January 14, 2014 Time (Local Time): 9:00 AM	Firm Name, Address, City, State, Zip Code **SAMPLE** **NOT FOR BIDDING PURPOSES**
Contract Completion Time November 15, 2014	
Assigned Disadvantaged Business Enterprise Goal 15 %	This contract is exempt from federal oversight.

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

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

Subscribed and sworn to before me this date _____

(Signature, Notary Public, State of Wisconsin)

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

(Date Commission Expires)

Notary Seal

(Bidder Signature)

(Print or Type Bidder Name)

(Bidder Title)

For Department Use Only

Type of Work

Remove existing roadway, concrete pavement, associated grading, base aggregate, concrete curb and gutter, sidewalk and driveway approaches, storm sewer, conduit and pavement marking. bridge and culvert rehabilitations to include railing replacement, concrete surface repairs, rubberized membrane, and slope paving replacement.

Notice of Award Dated	Date Guaranty Returned

PLEASE ATTACH
PROPOSAL GUARANTY HERE

Effective with November 2007 Letting

PROPOSAL REQUIREMENTS AND CONDITIONS

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

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

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

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

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

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

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

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

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

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

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

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

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

Effective with August 2007 Letting

BID PREPARATION

Preparing the Proposal Schedule of Items

A General

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

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

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

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

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

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

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

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

B Submitting Electronic Bids

B.1 On the Internet

(1) Do the following before submitting the bid:

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

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

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

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

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

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

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

Bidder Name

BN00

Proposals: 1, 12, 14, & 22

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

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

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

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

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

C Waiver of Electronic Submittal

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

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

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

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

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

PROPOSAL BID BOND

Wisconsin Department of Transportation

DT1303 1/2006

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

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

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

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

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

PRINCIPAL

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

(Signature and Title)

(Company Name)

(Signature and Title)

(Company Name)

(Signature and Title)

(Company Name)

(Signature and Title)

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

(Signature of Attorney-in-Fact)

NOTARY FOR PRINCIPAL

(Date)

State of Wisconsin)
) ss.
_____ County)

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

(Signature, Notary Public, State of Wisconsin)

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

(Date Commission Expires)

Notary Seal

NOTARY FOR SURETY

(Date)

State of Wisconsin)
) ss.
_____ County)

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

(Signature, Notary Public, State of Wisconsin)

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

(Date Commission Expires)

Notary Seal

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

CERTIFICATE OF ANNUAL BID BOND

Wisconsin Department of Transportation

DT1305 8/2003

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

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

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

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

(Signature of Authorized Contractor Representative) (Date)

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

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SPECIAL PROVISIONS

1. General.

Perform the work under this construction contract for Project 2265-08-70, 27th Street – City of Milwaukee Howard Avenue to Union Pacific Railroad, STH 24, 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, 2014 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 (20130615)

2. Scope of Work.

The work under this contract shall consist of remove existing roadway, concrete pavement, associated grading, base aggregate, concrete curb and gutter, sidewalk and driveway approaches, storm sewer, conduit and pavement marking. bridge and culvert rehabilitations to include railing replacement, concrete surface repairs, rubberized membrane, and slope paving replacement, and all incidental items necessary to complete the work as shown on the plans and included in the proposal and contract.
104-005 (20090901)

3. Prosecution and Progress.

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

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

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

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

The department will not grant time extensions to the completion date specified for the following:

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

No extra cost will be allowed for "cold weather protection", if needed.

Arrange weekly construction/progress meetings to apprise all sub-contractors and work being done by others of current status of project.

Once work has started on the contract, work continually until the contract work is complete. The contract will not be considered complete until all items on the contract are completed, including seeding and roadway finishing. If you desire to work on Saturday, Sunday, or nationally recognized legal holidays, obtain approval from the engineer at least 24 hours in advance. If scheduling changes after approval has been obtained, the engineer must be notified as soon as possible, but not later than 12:00 PM.

Take special precautions to avoid damage to all existing utility facilities in the proximity of the construction area.

Maintain all pedestrian access to adjacent properties, businesses, and at bus stops. Provide gravel access at crosswalks where necessary, or as directed by the engineer. Provide adequate temporary sidewalk and bridging between the curb and right-of-way line over freshly paved concrete or other obstructions on the sidewalk area at entrances to buildings as directed by the engineer. The cost of bridging shall be included in the unit bid price for concrete sidewalk 5-Inch. Base aggregate for construction of temporary sidewalks for pedestrian access will be paid under the bid item Base Aggregate Dense 1¼-Inch.

Access shall include provisions for mail service, utility meter reading and garbage pickup.

DTM and/or GPS Information

Digital design file information/existing surface data, including design surface DTMs and/or coordinate system GPS information will not be available for this project. As such, machine grading will not be possible.

During construction operations, ramp sawed joints at intersecting streets with asphaltic surface material between the existing pavement surface and the adjacent milled surface, as directed by the engineer, to permit the safe passing of vehicles. The cost of the materials, labor, and equipment necessary to install such ramps is to be paid under bid item 465.0110, Asphaltic Surface Patching.

Lay out all transverse joints on this project, including intersections. The engineer will approve joint layout. Joint spacing must not exceed 15 feet, as shown on the standard detail drawing. Place joints at end-of-radii, center line and flange line extended, all zero face

driveway openings for depressed driveways and, when feasible, at all manholes, catch basins or inlets, and water valve boxes. Include the cost of all jointing and dowel baskets in the unit bid price for concrete pavement.

Inform property owners at least 48 hours prior to removing a driveway approach that serves that property. Schedule sidewalk removal and replacement so that the time lapse between the removal and the replacement is minimal.

When performing the roadway cleaning operations, use equipment having vacuum or water-spray mechanisms to eliminate the dispersion of dust. If using vacuum equipment, it must have suitable, self-contained particulate collectors to prevent discharge from collecting bin into the atmosphere.

Utilize the use of steel plates at locations where sewer work is across the entire width of the roadway.

Private utilities will be responsible for adjusting their manholes in conjunction with the paving contractor's operations. Please allow adequate time for utility companies to respond.

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

Store drums, buckets and other containers related to construction operations in a secure area to prevent vandalism, spills, and unwanted dumping. If an abandoned container is discovered on the project site, notify the WDNR at (800) 943-0003.

Do not disturb or store equipment or materials in the median. Any damage to the median or city forestry objects shall be repaired or replaced by City of Milwaukee forces and be deducted from money due to the contractor according to the requirements set forth in the Article "Preserving Trees, Shrubs, and Planting Areas for the City of Milwaukee Forestry Division.

Plate all trenches within the roadway resulting from construction activities that are not fully backfilled prior to the end of each construction work day, or as directed by the engineer. Steel plates shall be suitable for carrying vehicles and shall be in addition to the barricades and traffic control devices required for lane closure and traffic control. Cost for steel plates shall be included in the unit bid price for the related underground bid items that are under construction at each location.

Migratory Birds

Swallow and other migratory birds' nests have been observed on or under the existing bridge. All active nests (when eggs or young are present) of migratory birds are protected under the federal Migratory Bird Treaty Act.

The nesting season for swallows and other birds is usually between May 1 and August 30. Either prevent active nests from becoming established, or apply for a depredation permit from the US Fish and Wildlife Service for work that may disturb or destroy active nests. The need for a permit may be avoided by removing the existing bridge structure prior to nest occupation by birds, or clearing nests from all structures before the nests become active in early spring. As a last resort, prevent birds from nesting by installing a suitable netting device on the remaining structure prior to nesting activity. Include the cost for preventing nesting in the cost of Removing Old Structure Over Waterway with Minimal Debris.

Construction Staging

The reconstruction of South 27th Street between West Howard Avenue and the Union Pacific Railroad will be undertaken in two major stages as shown on the traffic control plans and described below. Stage 1 will include all major work items on the west side of South 27th Street (southbound traffic lanes) including adjacent median work. Stage 2 will include all major work items on the east side of the South 27th Street (northbound traffic lanes) including adjacent median work.

All driveway construction will be done with High Early Strength Concrete to ensure minimal disruption to business owners.

Place pavement gaps at the following locations in order to maintain access to properties located along the project at all times:

Stage 2

- Station 16+50 RT
- Station 18+50 RT
- Station 22+50 RT (include the outside curb lane from Station 22+00 to Station 22+75 RT)
- Station 32+40 RT
- Station 37+50 RT (include the outside curb lane from Station 36+35 to Station 37+75 RT)
- Station 43+60 RT
- Station 48+75 RT (include the outside curb lane from Station 48+30 to Station 50+00 RT)
- Station 51+10 RT (include the outside curb lane from Station 51+00 to Station 52+17 RT)
- Station 55+00 RT (include the outside curb land from Station 54+95 to Station 55+50 RT)
- Station 57+60 RT

- Station 62+55 RT
- Station 64+55 RT

Stage 1

- Station 16+50 LT (include the outside curb lane from Station 16+00 to Station 17+00 LT)
- Station 18+75 LT (include the outside curb lane from Station 18+50 to Station 18+90 LT)
- Station 22+50 LT (include the outside curb lane from Station 21+25 to Station 22+75 LT)
- Station 26+25 LT
- Station 62+75 LT
- Station 64+60 LT

Include all concrete paving costs associated with staging operations under Bid Item 415.0085 Concrete Pavement 8 ½-Inch. The staging of concrete paving operations at an intersection (if necessary) will not be considered to be a pavement gap.

Place concrete driveways at the following locations one-half the opening width at a time:

Stage 2

- Station 16+32 RT, CVS Pharmacy
- Station 18+40 RT, American Freight Furniture and Mattress
- Station 22+05 RT, Wildenberg's Mobil Home Park
- Station 22+50 RT, South Towne Center
- Station 36+40 RT, Firestone
- Station 37+40 RT, Goodyear
- Station 43+55 RT, Associated Bank
- Station 48+30 RT, Valvoline
- Station 48+60 RT, Valvoline
- Station 48+80 RT, Bank Mutual
- Station 50+00 RT, Bank Mutual
- Station 51+15 RT, Taco Bell
- Station 55+00 RT, Strip Mall Access
- Station 55+50 RT, Ned's Pizza

- Station 57+15 RT, Chipotle
- Station 57+65 RT, Chipotle
- Station 64+85 RT, Cousins Subs

Stage 1

- Station 16+00 LT, Plaza 27
- Station 17+00 LT, CarX
- Station 18+15 LT, Used Car Dealership
- Station 18+85 LT, Denny's Restaurant
- Station 21+25 LT, Entrance to Retirement Community
- Station 26+00 LT, Kohl's Department Store/Pick-n-Save
- Station 62+70 LT, Leon's Custard
- Station 64+85 LT, Einstein Bagels

During Stage 1, St. Luke's driveway at Station 71+75 LT, will be completely closed and rebuilt during which time access will be achieved via construction staging at the intersection of West Kinnickinnic River Parkway.

During Stage 2, Maynard Steel will have both of its driveways at Station 78+60 RT and Station 80+10 RT rebuilt one driveway at a time. At least one of these two driveways must be open 24 hours per day, 7 days per week. This will be facilitated via construction staging at the intersection of West Dakota Street.

Complete Stage 1 work prior to commencing work on the northbound lanes of South 27th Street. Do not reopen the southbound lanes or switch traffic until completing the following work in the southbound direction between the west existing right-of-way and the center of the existing median: all concrete and asphalt pavement work, concrete curb and gutter up to the radius return in the median or as shown on the plans, all concrete sidewalk work on the west side of South 27th Street, all landscaping adjacent to substantially complete areas including the median, and any temporary pavement markings, and traffic control devices necessary for switching traffic control to Stage 2.

Complete Stage 2 work prior to reopening South 27th Street to normal traffic operations in both directions. Do not reopen the northbound lanes or switch traffic until completing the following work in the northbound direction between the east existing right-of-way and the center of the existing median: all concrete and asphalt pavement work, concrete curb and gutter up to the radius return in the median or as shown on the plans, all concrete sidewalk work on the east side of South 27th Street, all landscaping adjacent to substantially complete areas including the median, and any temporary pavement markings, and traffic control devices necessary for switching traffic back to fully-open, normal operations.

Sidewalk Construction
The sidewalk adjacent to the roadway pavement work must either remain in place through the duration and be replaced after, or be removed and replaced prior to undertaking the adjacent roadway pavement work to ensure adequate pedestrian access while vehicular access to properties is restricted.

Milwaukee County Department of Parks, Recreation, and Culture (DPRC) and Milwaukee Metropolitan Sewerage District (MMSD)
The areas adjacent to B-40-0058, outside of the South 27th Street right-of-way, are owned by the MMSD. Please contact Mr. Delbert Dettmann at (414) 225-2275 or ddettmann@mmsd.com, prior to the preconstruction meeting, to obtain a permit for access to these areas.

The areas adjacent to B-40-0438, outside of the South 27th Street right-of-way, are owned by the DPRC. Additionally, West Kinnickinnic River Parkway is owned by the DPRC. Please contact Mr. Kevin Haley at (414) 257-6242 or kevin.haley@milwcnty.com, prior to the preconstruction meeting, to obtain a permit for access to these areas.

4. Traffic.

Undertake traffic control for Project 2265-08-70 in accordance to the traffic control plans and in accordance to standard spec 643 and/or as approved by the engineer, except as hereinafter modified.

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

Provide 24 hours-a-day availability of equipment and forces to expeditiously restore lights, signs, or other traffic control devices that are damaged or disturbed, in accord with standard spec 643.3.1(6). The cost to maintain and restore the above items shall be considered incidental to the item as bid and no additional payment will be made.

Supply the name and telephone number of a local contact person for traffic control repair prior to or at the preconstruction conference.

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

In order to maintain access to the area during construction the project will staged as follows:

Stage 1
Close southbound lanes of South 27th Street from West Howard Avenue to the Union Pacific Railroad bridge. Traffic will continue to operate on the northbound lanes, of the roadway, with a minimum of one 12-foot lane of traffic, in each direction. Parking on South 27th Street will be prohibited, at all times, during this stage of construction.

Stage 2
Close northbound lanes of South 27th Street from West Howard Avenue to The Union Pacific Railroad bridge. Traffic will continue to operate on the southbound lanes, of the roadway, with a minimum of one 12-foot lane of traffic, in each direction. Parking on South 27th Street will be prohibited, at all times, during this stage of construction.

In order to provide access to businesses on South 27th Street, the following intersections shall remain open to 4-way traffic at all times, during both stages:

- West Howard Avenue
- West Morgan Avenue
- West Oklahoma Avenue

During all construction operations, maintain adequate turning provisions for vehicles, including buses and trucks, at the intersections that are to remain open.

Local access to residences and businesses within the project area shall be maintained to the maximum extent possible. No residential or commercial drive approach shall be closed without sufficient notice given to the occupants of the premise to remove their vehicles prior to removal or closing of the drive approach access. Reasonable access to abutting business locations shall be maintained at all times.

On-street parking will not be allowed during construction.

In the event where emergency vehicles and equipment which provide fire, police, and rescue service for the public need access to properties, the contractor shall cooperate to the fullest extend in accommodating emergency access in the shortest possible time.

All construction vehicles and equipment entering or leaving traffic lanes shall yield to through traffic.

The City of Milwaukee will provide all posting of no parking restrictions, necessary to facilitate construction operations. Contact Mr. James Brown at (414) 286-3276, three working days prior to the start of construction.

When an area of the roadway is temporarily closed to traffic, sign and delineate the portion of the roadway that is to remain open, in accordance to Part 6 of the Manual on Uniform Traffic Control Devices (MUTCD), and the WisDOT manual titled “Guidelines for Construction, Maintenance, and Utility Operations”.

5. Holiday Work Restrictions.

Do not perform work on, nor haul materials of any kind along or across any portion of the highway carrying South 27th Street (STH 241) 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 Tuesday, September 2, 2014 for Labor Day.

107-005 (20050502)

6. Utilities.

This contract does not come under the provision of Administrative Rule Trans 220.
107-065 (20080501)

The City of Milwaukee has notified the department that the following operations necessary for the construction of new facilities and/or adjustment of existing facilities will be coordinated with the contractor's construction operations by each representative utility unless otherwise noted. Coordinate construction activities with a call to Digger's Hotline or a direct call to the utilities that have facilities in the area as required by statutes. Use caution to ensure the integrity of underground facilities and maintain code clearances from overhead facilities at all times.

The project contains numerous utility manholes located within the construction area. The utility companies have been advised of the requirement to coordinate adjusting their manhole covers, in conjunction with the contractor's operations. Provide a minimum of 10 days advance notice to each manhole owner, before commencing construction operation over affected manholes. In addition, provide 10 days advance notice so utilities may set their covers to match final pavement elevations.

Note: Bidders are advised to contact each utility company listed in the plans prior to preparing their bid to obtain current information on the status of each utility company's work required in association with the project. Existing trees, street light poles, hydrants and utility poles are to remain in place during construction. Conduct an on-site visit prior to bidding to determine any special measures required for proper clearance between the trees, hydrants, poles, other utilities and any other physical structures and the paving equipment. All bidders shall be capable of providing zero clearance behind the curb to accommodate existing obstructions at no additional cost to the project.

During paving operations keep all manholes accessible to utility companies for emergencies.

A City of Milwaukee

A.1 Water

Bridge Work
There is no proposed work within the bridge project area.

Culvert Work
There is no proposed work within the culvert project area.

Road Work
The City of Milwaukee has water facilities located within the entire project area. There is no proposed mainline water utility work, in conjunction with this project.

The following are approximate locations, where either a catch basin or a storm lateral is above a water main, and will require water main protection:

Station 16+55, 55’ LT	Station 40+15, 60’ RT	Station 60+00, 55’ RT
Station 19+55, 55’ LT	Station 40+20, 80’ LT	Station 60+05, 38’ RT
Station 23+10, 55’ LT	Station 40+55, 60’ LT	Station 72+15, 30’ LT
Station 26+40, 55’ LT	Station 43+25, 58’ LT	Station 75+20, 13’ LT
Station 28+70, 55’ LT	Station 46+80, 61’ RT	Station 75+55, 30’ LT
Station 31+75, 59’ LT	Station 47+00, 47’ RT	Station 79+00, 16’ LT
Station 35+85, 70’ LT	Station 50+10, 47’ RT	Station 80+40, 25’ RT
Station 36+60, 50’ LT	Station 53+75, 35’ RT	Station 83+75, 25’ LT
Station 38+75, 58’ LT	Station 59+70, 65’ RT	Station 84+25, 20’ LT

See special provision SPV.0060.14 for further information on water main protection requirements.

Water service boxes, gate valve boxes and manholes will be adjusted by the contractor.

During construction, any questions related to these items shall be directed to Mr. Anthony Kotecki, (414) 286-2433 office or (414) 708-3886.

A.2 Sanitary Sewer

Bridge Work
There is no proposed work within the bridge project area.

Culvert Work
There is no proposed work within the culvert project area.

Road Work
The City of Milwaukee has sanitary sewer facilities located within the entire project area. On the west side of the roadway there is a proposed relay of approximately 970 LF of mainline sanitary sewer, located from Station 67+30 to Station 73+40, and Station 80+00 to Station 83+60. All sewer relay work is to be done in conjunction with this project.

Sanitary sewer manhole covers will be adjusted by the contractor. In addition, any needed sanitary manhole seals will also be installed by the contractor.

During construction, any questions related to these items shall be directed to Mr. Anthony Kotecki, (414) 286-2433 office or (414) 708-3886.

A.3 Storm Sewer

Bridge Work
There is no proposed work within the bridge project area.

Culvert Work
There are two City of Milwaukee storm sewers which connect to the structure at the existing south abutment of Structure B-40-058. A 36-inch sewer is located near the center of the south abutment, and a 21-inch storm sewer is located at the east end of the south abutment. The 21-inch storm sewer connects to the structure at Station 34+03.9/48.0 RT and 36-inch storm sewer connects at Station 34+59.0/49.0 LT. These storm sewer connections through the south abutment shall remain in place and must be protected during construction.

Five existing inlets within the project limits are addressed as follows; inlets at Station 34+04.4/59.6 RT and Station 35+22/98.0 LT shall be abandoned and the openings through the top deck of the structure shall be permanently capped, inlets at Station 34+79/23.0 LT, Station 35+9.7/61.6 LT, and Station 34+83.2/80.3 LT shall be re-connected with new inlets and drains. During construction the drains shall be capped by the contractor. After application of the membrane and backfill three new inlets shall be installed. See standard specifications and drainage tables for inlet types to be installed as part of this contract. These inlets connect directly into the top or side of the structure utilizing existing openings. The inlet piping shall be replaced along with the inlets. The permanently capped inlets shall be removed flush with the top surface of the box culvert to facilitate installation of the sheet membrane. Contractor is to place backfill at the location of existing inlets following removal and placement of membrane waterproofing.

The contractor is to complete all work associated with the installation, removal and capping of storm sewer inlets, sewer connecting pipe, and manholes, as detailed in the plans, special provisions, and standard specifications provided as part of this contract.

Road Work
The City of Milwaukee has storm sewer facilities located within the entire project area. On the west side of the roadway there is a proposed relay of approximately 1,375 LF of

mainline storm sewer, located from Station 67+25 to Station 76+50, and Station 79+00 to Station 83+50. All sewer relay work is to be done in conjunction with this project.

Where indicated on the plans, storm sewer manholes and catch basins will be installed, repaired or reconstructed, and covers adjusted, all by the paving contractor. The contractor's work also includes new storm laterals.

During construction, any questions related to these items shall be directed to Mr. Anthony Kotecki, (414) 286-2433 office or (414) 708-3886.

A.4 Underground Conduit and Communications (TES)

City of Milwaukee CUC is presently occupying TE&ES conduit that is approximately 7 feet west of the transit line, and is utilizing a TE&ES manhole (Station 34+93.9/7.1 LT).

The DOT contractor shall give at least 14 days notice to the City of Milwaukee Underground Conduit Operations prior to removing the conduit over the structure to allow city forces to re-route their circuits. The DOT contractor shall remove the conduit over the structure to allow for the installation of the proposed membrane. The DOT contractor must saw cut the conduit prior to removal to avoid damaging the remaining conduit as shown on the plans.

After the structure is repaired within each respective Stage and the fill is placed to sub-grade level, permanent CUC facilities will be installed within the project limits. The installation of conduit into existing manhole is shown in bid item SPV.0060.49 Installing Conduit Into Existing Manhole. The installation of this new conduit is part of the paving contract shown in bid items SPV.0090.06 through SPV.0090.12 X-Duct Cement Encased, 4-Inch Rigid Nonmetallic Conduit DB-60. Adjusting existing TE&ES manhole covers as part of this project and as shown in the bid item SPV.0060.48 Adjusting TE&ES Manhole Cover. Notify Ms. Karen Rogney at (414) 286-3243 at least 10 working days in advance of completion of each manhole adjustment, for inspection and acceptance of work performed. The contractor will receive no payment until the above work is approved by City of Milwaukee Underground Conduit Operations.

A.5 Forestry

The City of Milwaukee has underground irrigation located within the medians, along the entire project corridor. There is no proposed utility work, in conjunction with this project. All needed work will be done before construction starts.

Caution should be used when working in the medians, to prevent any damages to the irrigation system. Any damages will be repaired by City of Milwaukee, and the cost, at the discretion of the City of Milwaukee, will be billed directly to the contractor or credited against the contract costs.

In the event of damage, contact Mr. Andrew Witczak, immediately at (414) 708-3795 or (414) 803-7392.

During construction, any questions related to these items shall be directed to Mr. Andrew Witczak.

A.6 Street Lighting

Bridge Work
There is no proposed work within the bridge project area.

Culvert Work
There are existing street lighting facilities within the project area. Before construction starts street lighting personnel will install overhead facilities within the project area of the roadway. After the structure is repaired within the Stage I (west side) limits and the fill is placed to sub-grade level, contact Street Lighting field operations so conduits for permanent lighting facilities may be installed by street lighting personnel.

Street Lighting personnel will need ten working days to install the overhead on the west side of the structure. Once the west side of the structure is finished street lighting personnel will remove the overhead from the west side of the structure. Likewise ten working days are needed by the Street Lighting crews to install the overhead on the east side of the structure. After the structure is repaired within the Stage II (east side) limits and the fill is placed to sub-grade level, contact Street Lighting field operations so pipes for permanent lighting facilities may be installed by Street Lighting personnel.

Road Work
The City of Milwaukee has street lighting facilities, both above and underground, running throughout the project city limits. Street lighting personnel will install temporary overhead facilities and relocate permanent facilities, as needed, before roadway construction starts. During and after roadway construction, City of Milwaukee street lighting forces will install permanent lighting facilities. Contractor is responsible to remove light pole concrete base after the aluminum pole is removed from the base.

Street Lighting has a substation located at approximately Station 32+87; 95.0’ RT. **THIS SUBSTATION WILL REMAIN IN SERVICE DURING CONSTRUCTION AND MUST BE PROTECTED**. In addition, there will be a new substation being constructed at approximately Station 33+05; 85.0’RT and Station 67+40; 74.0’RT. These two sites have to remain open and clear from any construction material.

Before any excavation or removals happen around or near the substation, contact Mr. George Berdine at (414) 286-5943 office, or (414) 708-4245 cell; Mr. Dennis Miller at (414) 286-5942 office, or (414) 708-4251 cell; or Mr. Thomas Hughes at (414) 286-3457 office, or (414) 708-3175 cell. If Mr. Miller, Mr. Berdine, or Mr. Hughes is not available, then contact the electric services dispatcher at (414) 286-5944.

The contractor must keep the area behind the curb free from over pour and other debris. If city crews have to remove any over pour, debris or sharp backfill from behind the curb

and dispose of it, in order to install street lighting facilities without damaging them, the contractor will be held responsible for this work.

If the contractor requests the relocation of any street lighting facilities, permanent or temporary for his convenience, he will be responsible for all costs incurred by street lighting personnel fulfilling his request.

Any questions regarding the design of the lighting system are to be directed to street lighting engineering. Contact Mr. Eng-Kie Lee at (414) 286-2174.

The engineer and/or contractor shall keep the street lighting construction supervisors informed of the status of the roadway construction. Contact Mr. George Berdine at (414) 286-5943 office, (414) 708-4245 cell; Mr. Dennis Miller at (414) 286-5942 office, or (414) 708-4251 cell; or Mr. Thomas Hughes at (414) 286-3457 office or (414) 708-3175. If Mr. Miller, Mr. Berdine, or Mr. Hughes is not available, then contact the electric services dispatcher at (414) 286-5944 or (414) 286-3015 after hours.

A.7 City of Milwaukee's Traffic Signals and Signs Section

Bridge Work
There is no proposed work within the bridge project area.

Culvert Work
The signals at the intersection of West Loomis Road and South 27th Street will be replaced. The TE&ES work on this project will be staged construction. The city's Traffic and Lighting Design Unit personnel will install temporary overhead facilities. After the structure is repaired within each respective Stage limit and the fill is placed to sub-grade level, contact city's Traffic and Lighting Design Unit personnel so conduit for permanent lighting facilities may be installed within the project limits. Conduit, vaults, bases, and Monotube structures will be installed by the roadway paving contractor.

Road Work
Has facilities located within the limits of the project.

Specified PVC conduit, vaults, bases, and monotube mast arm structures are to be installed by the contractor as part of this project.

Prior to construction, any needed pole, signal standard and control cabinet relocations; and temporary traffic signal work will be completed by City of Milwaukee forces as part of a Local Force Account (LFA) contract that is related to the project.

Provide a 10-working day advance notice to Mr. Al Nichols of the City of Milwaukee's Traffic Signal Field Operations at (414) 286-3687 office or (414) 708-5148 mobile to coordinate the installation of traffic signal materials. Coordinate all Traffic Signal Operations with Mr. Joseph Blakeman, of the City of Milwaukee's Traffic Engineering at (414) 286-8070, as well as any city traffic signal concerns.

B City of Greenfield
Storm inlet work by the paving contractor.

C We Energies – Electric

Bridge Work
There is no proposed work within the bridge project area.

Culvert Work
There is no proposed work within the culvert project area.

Road Work
We Energies-Electric has 17 manhole covers that will be adjusted, in conjunction with the roadway construction. Provide Mr. Christopher Schulz at (414) 944-5553, chris.schulz@we-energies.com with at least ten working days advance notice, to coordinate the work activities. There is no proposed mainline work.

D We Energies – Gas

Bridge Work
There is no proposed work within the bridge project area.

Culvert Work
We Energies (Gas) have two gas mains buried in the overburden above the structure. They are located on the east (72.9 RT) and west (104.2 LT to 113.6 LT) sides of the structure. The existing mains will be abandoned and not be replaced. These mains will be purged of any gas. It will be the responsibility of the structure contractor to remove and dispose of the pipe. No hazardous material is present in the two gas mains. Two week notice is required for coordination prior to the start of construction; call Mr. Paul Osmanski of We Energies at (414) 315-1278.

Road Work
We Energies—Gas has underground facilities that will be relocated and/or abandoned, prior to the start of the roadway construction. In addition, We Energies – Gas will complete any necessary valve and stop box adjustments during construction. To coordinate any needed adjustments, provide Mr. Thomas Minesal at (414) 944-5755, thomas.minesal@we-energies.com, with an advance notice of at least five working days.

E AT&T

Bridge Work
Before the start of construction AT&T will remove existing Transite material from their ducts, which run under the existing bridge, and replace with new fiberglass duct. During the deck replacement work they will protect and support their ducts. It is suspected that Transite material will be encountered, in the proposed excavation areas behind the

abutments. The contractor must coordinate with AT&T to remove the material. AT&T will be responsible for obtaining a separate approved hazardous abatement contractor for the handling, transporting and disposal of the hazardous materials. To coordinate the activities, contact Mr. Mark Eder, (262) 896-7434 office and Ms. Debi Sorvino, (262) 970-8496 with advance notice of at least five working days.

Culvert Work
Before the start of construction AT&T will bore under the culvert and install nine new ducts, which will connect to a new manhole at Station 31+50, 52' RT and existing ducts at Station 37+50. During construction the existing nine vacant fiber ducts, between Station 31+50 and Station 37+50, will be removed by AT&T. To coordinate the activities, contact Mr. Mark Eder, (262) 896-7434 with advance notice of at least five working days.

Road Work
There are twenty manholes that will require adjustment work, to be done in conjunction with construction. At storm lateral crossings, any needed adjustments will be done in conjunction with construction. To coordinate the activities, contact Mr. Mark Eder, (262) 896-7434 with advance notice of at least five working days.

F Milwaukee Metropolitan Sewerage District (MMSD)

Bridge Work
This is a rehabilitation project, and is not a structure replacement project. There is no conflict with existing MMSD facilities and no impacts to the stream channel or restrictions in flow. Prior to the preconstruction meeting the contractor shall obtain a right of entry permit from Milwaukee Metropolitan Sewage District. In addition, if required the contactor will also obtain a restoration bond, prior to the preconstruction meeting. Notify MMSD as least ten (10) working days prior to construction. Contact Mr. Larry Anderson (landerson@mmsd.com) at (414) 225-2241.

Contact Mr. Robert Rebitski at (414) 225-2214 of MMSD at least three working days prior to each of the activities of commencing demolition, forming and pouring the new structure deck, and sand blasting the girders. Ensure that construction debris does not damage or block the 72" combined outfall at the North East quadrant of structure.

Culvert Work
Contact Mr. Robert Rebitski at (414) 225-2214 of MMSD at least three working days prior to the commencement of the concrete surface repair, at the west side of the culvert interior. Ensure that construction activities do not damage the culvert pipes.

Road Work
MMSD has one manhole at Station 21 + 65 that will be reconstructed by the contractor in coordination with paving operations. Contact Mr. Larry Anderson at (414) 225-2241 at least three working days prior to the reconstruction work. See the MMSD manhole reconstruction detail for more information. MMSD has existing manholes that will be

adjusted by MMSD staff. Contact Mr. Robert Rebitski at (414) 225-2214 at least five working days advance notice, to arrange for all adjustments.

G Midwest Fiber Network (MWFN)

Bridge Work
There is no proposed work within the bridge project area.

Culvert Work
Midwest Fiber Networks (MWFN) has fiber optic cable buried (68' LT) in the overburden above the structure within the project limits. Refer to MWFN temporary relocation plan of these facilities located within the project limits during the duration of the rehabilitation project. The MWFN temporary relocation plan entails exposing the existing MWFN facilities and installing the MWFN facilities in temporary overhead at approximately 68' LT. Contact Mr. James Hagen (414) 286-3696, james.hagen@milwaukee.gov for a copy of the MWFN relocation plans. When area will be ready for temporary relocation the DOT contractor is to provide seven working days advance notice to the MWFN contractor at (414) 349-7071. When area will be ready for permanent relocation the DOT contractor is to provide seven working days advance notice to the MWFN contractor at (414) 349-7071. The MWFN planning and design manager, Mr. Richard Trgovec, can be reached at (414) 672-5612. Upon completion of the structure rehabilitation project Stage I, and after the fill is placed to sub-grade level, permanent MWFN facilities may be reinstalled within the limits of the project.

Road Work
There is no proposed work within the remaining project area.

If necessary, contact Mr. Richard Trgovec, (414) 672-5612 office, (414) 349-2979 cell, rtrgovec@midwestfibernetworks.com on all matters concerning MWFN facilities.

H Time Warner Cable

Bridge Work
No utility in project area.

Culvert Work
No utility in project area.

Road Work
There is no proposed work within the remaining project area.

I TW Telecom
TW Telecom has underground fiber optic facilities in the portion of the project limits, bounded by West Oklahoma Avenue and the Union Pacific Railroad. They have not proposed to do any work within the project limits.

If necessary, contact Mr. John Cottrell, (414) 908-1011, john.cottrell@twtelecom.com on all matters concerning TW Telecom facilities.

7. Additional Utility Work Done By Others.

Removing Signs
Give the city ten business days advance notice of his schedule for beginning work in areas where city signs are to be removed. The city's contact for coordination of this work is Mr. Kevin Antczak, City of Milwaukee, at (414) 286-3236.

8. Erosion Control.

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.

Provide the ECIP 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; WDNR Southeast Region Headquarter; 2300 N. Dr. Martin Luther King Jr. Dr.; Milwaukee, WI 53212*). 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 5 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.

9. Erosion Control Structures.

Within seven calendar days after the commencement of work on the bridge superstructure and box culvert, place all permanent erosion control devices, including riprap, erosion

mat, ditch checks, seed, fertilizer, mulch, soil stabilizer, or any other item required by the contract or deemed necessary by the engineer. These devices shall be in place in the area under the bridge, at the box culvert, and on both sides of the roadway, from the waterway to a point 100-feet behind the backwall of the abutment and end walls of the box culvert. Within said limits, place these devices to a height equivalent to the calculated water elevation resulting from a storm that occurs on the average of once every two years (Q2) as shown on the plan, or as directed by the engineer. Prior to initial construction operations, place turbidity barriers, silt screens, and other temporary erosion control measures as shown on the plans, and remove them after the permanent erosion control devices are in place unless directed otherwise by the engineer.

In the event that construction activity does not disturb the existing ground below the Q2 elevation, the above timing requirements for permanent erosion control shall be waived.

10. Environmental Protection – Archaeological Site.

There is an un-catalogued burial site (47MI14/BMI-0093 (Indian Fields) that extends into the project area. ESS will need to petition WHS to work within the burial site boundaries.

Burial Site location: As currently recorded in WHPD, the site location is described as bordered by the Kinnickinnic River on the west and south site location has been heavily urbanized, and now lies in the vicinity of West Montana Street, south of West Forest Home (former Layton Avenue/Hales Corners Road) and south of the Chicago and Northwestern Railroad tracks" and as the SE ¼ of Section 12 in T6N R21E. The GIS-USGS mapping layer shows the site as extending over a large area including a length of the current STH 241 (27th Street) project area between the north project terminus (RR structure) and W. Dakota Street.

As such, a qualified archaeologist is required to monitor the construction related ground disturbing activities, in the specified area.

The WisDOT Department of Environmental Services Section (ESS) will provide the archaeologist, Contact James Becker at (608) 261-0137 or Lyn Cloud at (608) 266-0099, at least 10 working days prior to working in the area, to arrange for a qualified archaeologist to be present.

11. Public Convenience and Safety.

Revise standard spec 107.8(6) as follows:

Check for and comply with all local ordinances governing the hours of operation, of construction equipment. Do not operate any motorized construction equipment from 9:00 PM until 7:00 AM, unless prior written approval is obtained from the engineer.

Upon request the City of Milwaukee's Department of Neighborhood Services (DNS), will issue a construction noise variance, to work outside of the hours listed above.

Department of Neighborhood Services
4001 South 6th Street
(414) 286-2268

12. Coordination with Businesses.

The contractor shall arrange and conduct a meeting between the contractor, the department, local officials and business people to discuss the project schedule of operations including vehicular and pedestrian access during construction operations. Hold the first meeting prior to the start of work under this contract and hold two meetings per month thereafter.
108-060 (20030820)

13. Notice to Contractor – Potential Lead-Based Paint.

Lead based paint has likely been applied to the existing structure railing. Use appropriate and adequate health and safety measures to protect site workers from an unsafe exposure to residual lead and to avoid a lead release into the surrounding environment during demolition.

14. Notice to Contractor – Notification of Demolition and/or Renovation.

Mr. John Roelke, License Number AII-119523, inspected Structure B-40-058 for asbestos on January 14, 2013. No regulated Asbestos Containing Material (RACM) was found on this structure. A copy of the inspection report is available from Mr. Kavodas McRath at (414) 286-2381.

15. Notice to Contractor – Emerald Ash Borer.

Clearing and Grubbing
This applies to projects in the emerald ash borer (EAB) quarantined zones to include the following counties:

Brown	Crawford	Fond du Lac,	Kenosha,
La Crosse	Milwaukee	Ozaukee	Racine
Sheboygan	Vernon	Washington	Waukesha

Supplement standard spec 151-1.3 for airport construction, with the following:

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

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

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

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

Note that blue ash twigs are 4-sided. All other Wisconsin ash trees have round stems.

Also, Mountain ash (Sorbus americana and S. decora) is not a true ash and is not susceptible to EAB infestation.

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

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

ATCP 21.17 Emerald ash borer; import controls and quarantine.
Importing or Moving Regulated Items from Infested Areas; Prohibition.

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

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

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

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

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

- The emerald ash borer, Agrilus planipennis Fairmaire in any living stage.
- Ash trees.
- Ash limbs, branches, and roots.
- Ash logs, slabs or untreated lumber with bark attached.
- Cut firewood of all non-coniferous species.
- Ash chips and ash bark fragments (both composted and uncomposted) larger than one inch in diameter.
- Any other item or substance that may be designated as a regulated item if a DATCP pest control official determines that it presents a risk of spreading emerald ash borer and notifies the person in possession of the item or substance that it is subject to the restrictions of the regulations.

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

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

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

With the written permission of the engineer, chipped material may be buried on site within the airport property as directed by the engineer in accordance to standard spec 201.3(14).

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

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

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

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

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

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

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

Burning is optional if in compliance with standard spec 201.3.

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

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

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

Anyone moving firewood or ash products from the state or these counties is subject to state and federal fines up to $1,000.00. All fines are the responsibility of the contractor.

Obtain updated quarantine information at the DNR Firewood Information Line at (800) 303-WOOD.

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

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

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

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

16. Notice to Contractor – Restoration within Right-of-Way.

Excavation and restoration for installation of sidewalk will be limited to 9 inches, beyond the back (high side) of the sidewalk, unless otherwise shown on the plans. This includes installation of sod lawn. Contractor must stay within right-of-way unless a construction permit has been obtained.

17. Notice to Contractor – Work without a Construction Permit.

All work including the removal and replacement of sidewalk and sod must be done within the right-of-way, unless construction permit authority has been obtained, to work on private property abutting the project.

18. Notice to Contractor – Survey.

The contractor shall adhere to the provisions contained herein as it relates to the survey work necessary to stake out and construct all portions of this contract.

Perform all survey work required to stake out and construct the work under this contract, subject to the engineer's approval.

Digital design file information/existing surface data, including design surface DTMs and/or coordinate system GPS information will not be available for this project.

All survey work necessary to stake out and construct all portions of this project will be paid for under the staking bid items designated in this contract.

19. Clearing and Grubbing.

Perform this work in accordance to the requirements of standard spec 201, except as hereinafter modified.

Modify standard spec 201.4.3 as follows:

The department will measure Clearing and Grubbing by the square yard acceptably completed within the designated limits. The horizontal area calculated will be based on the limitations as shown on the plans and follow the guidelines outlined in standard spec 201.3. The department will measure outside the right-of-way limits, inside the acquired easements. The department will include areas not only containing brush, shrubs, and vegetation, but shall also include areas containing trees and stumps of 3-inch diameter or greater.

20. Removing Old Structure Over Waterway With Minimal Debris Station 77+37.79, Item 203.0600.S.01.

Conform to standard spec 203 as modified in this special provision.

Add the following to standard spec 203:

203.3.6 Removals Over Waterways and Wetlands

203.3.6.2 Removing Old Structure Over Waterway with Minimal Debris

(1) Remove the existing Structure B-40-438 over the Kinnickinnic River in large sections and conforming to the contractor's approved structure removal and clean-up plan. During superstructure removal, prevent all large pieces and minimize the number of small pieces from entering the waterway or wetland. Remove all reinforcing steel, all concrete, and all other debris that falls into the waterway or wetland. The contractor may leave limited amounts of small concrete pieces scattered over the waterway floor or wetland only if the engineer allows.

(2) Submit a structure removal and clean-up plan as part of the erosion control implementation plan required under standard spec 107.20. Do not start work under the structure removal and clean-up plan without the department's written approval of the plan. Include the following information in the structure removal and clean-up plan:
Methods and schedule to remove the structure.
Methods to control potentially harmful environmental impacts.
Methods for superstructure removal that prevent all large pieces and minimize the number of small pieces from entering the waterway or wetlands.
Methods to control dust and contain slurry.
Methods for removing piers and abutments. If blasting in water, include restrictions that regulatory agencies and the contract require.
Methods for cleaning the waterway or wetlands.

(3) If stockpiling spoil material, place it on an upland site an adequate distance from the waterway, wetland, or any open water created by excavation. Install silt fence between the spoil pile and the waterway, wetland, or excavation site.

Add the following Removing Old Structure bid item to standard spec 203.5.1:

ITEM NUMBER	DESCRIPTION	UNIT
203.0600.S.01	Removing Old Structure Over Waterway With Minimal Debris Station 77+37.79	LS

203-020 (20080902)

21. Removing Old Structure Over Waterway With Minimal Debris Station 34+50.57, Item 203.0600.S.02.

Conform to standard spec 203 as modified in this special provision.

Revise standard spec 203.1 as follows:

This section describes the removal of the existing slope pavement located at the Southeast and northeast corner of the structure, the removal of the railing, and the removal of concrete at the wing walls, headwall, and structure parapets necessary for installation of the new structure railing.

Revise standard spec 203.3.4(2) as follows:

Carefully remove railing on the east and west side for salvage to avoid damage. Place salvaged materials in neat piles outside construction limits but within the right-of-way, at locations the engineer approves. Stockpile materials designated for salvage at locations the engineer approves without contaminating with dirt or foreign matter. Contact Mr. Richard Lacy (414) 286-5504 or (414) 708-3207 of the City of Milwaukee when materials are ready for pick-up.

Add the following to standard spec 203:

203.3.6 Removals Over Waterways and Wetlands

203.3.6.2 Removing Old Structure Over Waterway with Minimal Debris

(1) Remove the existing slope paving, railing and concrete at the wing walls and structure parapets necessary for installation of the new structure railing for B-40-058 over the Southeast Branch of the Kinnickinnic River conforming to the contractor's approved structure removal and clean-up plan. During removal, prevent all large pieces and minimize the number of small pieces from entering the waterway or wetland. Remove all reinforcing steel, all concrete, and all other debris that falls into the waterway or wetland. The contractor may leave limited amounts of small concrete pieces scattered over the waterway floor or wetland only if the engineer allows.

(2) Submit a structure removal and clean-up plan as part of the erosion control implementation plan required under standard spec 107.20. Do not start work under the structure removal and clean-up plan without the department's written approval of the plan. Include the following information in the structure removal and clean-up plan:

- Methods and schedule to remove the structure.
- Methods to control potentially harmful environmental impacts.
- Methods for superstructure removal that prevent all large pieces and minimize the number of small pieces from entering the waterway or wetlands.
- Methods to control dust and contain slurry.
- Methods for removing piers and abutments. If blasting in water, include restrictions that regulatory agencies and the contract require.
- Methods for cleaning the waterway or wetlands.

(3) If stockpiling spoil material, place it on an upland site an adequate distance from the waterway, wetland, or any open water created by excavation. Install silt fence between the spoil pile and the waterway, wetland, or excavation site.

Add the following Removing Old Structure bid item to standard spec 203.5.1:

ITEM NUMBER	DESCRIPTION	UNIT
203.0600.S.02	Removing Old Structure Over Waterway With Minimal Debris Station 34+50.57	LS

22. Removing Concrete Surface Partial Depth, Item 204.0109.S.

A Description
This special provision describes removing a portion of the concrete surfaces as shown on the plans according to standard spec 204, and as hereinafter provided.

B (Vacant)

C Construction
C.1 Equipment
Use a machine that provides a surface finish acceptable to the engineer. Shroud the machine to prevent discharge of any loosened material into adjacent work areas or live traffic lanes.

Use a machine that is equipped with electronic devices that provide accurate depth, grade and slope control, and acceptable dust control system.

C.2 Methods
Remove existing concrete to the depths as shown on the plan by grinding, planing, chipping, sawing, milling, or by using other methods approved by the engineer.

Perform the removal operation in such a manner as to preclude damage to the remaining pavement and results in a reasonable uniform plane surface free of excessive large scarification marks and having a uniform transverse slope.

The sequence of removal operations shall be such that no exposed longitudinal joints 2 inches or more in depth remain during non-working hours. Windrowing or storing of the removed material on the roadway will only be permitted in conjunction with a continuous removal and pick-up operation. During non-working hours, clear the roadway of all materials and equipment.

The removed pavement shall become the property of the contractor. Properly dispose of it according to standard spec 204.3.1.3.

D Measurement
The department will measure Removing Concrete Surface Partial Depth in area by the square foot of surface area removed.

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

ITEM NUMBER	DESCRIPTION	UNIT
204.0109.S	Removing Concrete Surface Partial Depth	SF

Payment is in full compensation for removing the concrete; and for disposing of materials.
204-041 (20080902)

23. Preserving Trees, Shrubs, and Planting Areas for the City of Milwaukee Forestry Division.

Replace standard spec 205.3.15 with the following:

The following requirements apply to all trees, shrubs, planters, and medians located within the project area, which are NOT marked for removal.

General
All cutting for the removal of sod and soil in order to establish a finished grade within 4 feet of existing trees must be done manually if necessary.

No construction equipment, cars, trucks, and/or materials shall be parked or stored on any median or tree border on this project or adjacent roadways.

Root foundations must remain adequate to withstand heavy windstorms.

Root systems of street trees may not be cut for the installation of any type of cable by the contractor or city department. Contact the forestry division at (414) 286-2428 for directional boring specifications.

The contractor will be responsible for excessive damage to the roots, trunks, and branches of all street trees. This responsibility may include the cost of any special treatment deemed necessary by the engineer to ensure survival of trees, or may include removal of trees at the contractor's cost.

Refrain from placing or storing any construction materials, sand, soil, or any other materials on the surface of the soil within the root zone of existing city street trees. Additionally, assure that no construction chemicals, tank rinsates, or petroleum products are deposited with the root zones of the trees. Root zone is defined as that area within the dripline of trees.

The contractor, prior to removal and/or replacement of sidewalk and/or curb and gutter, and driveways adjacent to all trees, shall review work operations with the engineer and/or Mr. Jim Kringer, forestry supervisor, at (414) 708-2428.

Cover exposed tree roots with mulch and water from a period immediately following curb and gutter removal, until the area is backfilled following construction.

The following 41 trees are to be removed by the contractor:

1" Maple at Station 17+07 Median
1" Maple at Station 17+44 Median
8" Maple at Station 18+39 Median
9" Maple at Station 18+64 Median
10" Flowering Crab at Station 19+73 Median
8" Elm at Station 21+37 Median
10" Flowering Crab at Station 24+92 Median
3" Locust at Station 39+07 Median
12" Ash at Station 42+56 Median
13" Ash at Station 45+90 Median
4" Maple at Station 47+40 Median
1" Oak at Station 47+62 Median
8" Maple at Station 49+37 Median
1" Maple at Station 49+59 Median
5" Maple at Station 49+82 Median
1" Maple at Station 53+89 Median
1" Maple at Station 54+08 Median
1" Maple at Station 55+32 Median
15" Locust at Station 63+97 Median
4" Elm at Station 70+25 RT
4" Elm at Station 70+75 LT
11" Elm at Station 70+87 LT
8" Elm at Station 71+14 RT
5" Elm at Station 71+45 RT
12" Elm at Station 72+00 RT
7" Elm at Station 72+54 RT
12" Maple at Station 72+54 LT
9" Elm at Station 73+23 RT
1" Maple at Station 73+27 Median
10" Elm at Station 73+79 RT
1" Maple at Station 73+57 Median
9" Elm at Station 74+29 LT
8" Elm at Station 74+43 RT
5" Elm at Station 74+69 LT

1” Maple at Station 54+33 Median

1” Maple at Station 55+54 Median

17” Locust at Station 57+18 Median

10” Locust at Station 63+39 Median

1” Elm at Station 75+09 Median

5” Locust at Station 80+80 Median

1” Locust at Station 81+26 Median

The contractor shall place 18 new trees as directed by the City of Milwaukee Forestry Division in accordance to the Planting – Streetscape Data Table

The proposed locations are as follows:

Station 19+65 Median	Station 57+62 Median
Station 21+84 Median	Station 57+88 Median
Station 37+61 Median	Station 58+13 Median
Station 44+36 Median	Station 60+29 Median
Station 44+56 Median	Station 61+07 Median
Station 47+90 Median	Station 63+94 Median
Station 54+88 Median	Station 73+28 Median
Station 55+36 Median	Station 80+80 Median
Station 55+61 Median	Station 81+27 Median

A Sidewalk Construction

The root system on the walk side of the tree shall be cut not deeper than 9 inches below the finished grade of the new walks, and not more than 5 inches from the edge of the new walk. Roots in the walk area shall be removed only to a depth of 9 inches below finished grade of the new walk.

Sidewalks are to be removed, and roots cut, by use of hand implements only.

Carriage Walk Construction

When constructing or replacing carriage walks, roots shall not be cut by means of using mechanical root cutting machines. If root removal is essential to carriage walk replacement, roots shall be manually cut with hand implements. Roots shall be removed not deeper than 9 inches below the finished grade of the new carriage walk.

Curb, Gutter, and Road Construction

The root system on the curb side shall be cut not more than 2 inches behind the back edge of the new curb, and not more than 18 inches in depth when constructing the new curb and gutter.

The root system on the curb side shall not be cut; 1) a 0-inch clearance slip or integral form paver can be used or 2) gap and hand form using ¼-inch steel plate for the following trees:

Station 72+55 W/S Station 74+24 W/S Station 74+72 W/S

When constructing or replacing driveways or driveway approaches; roots shall not be cut by means of mechanical root cutting machines. If root removal is essential to driveway replacement, roots shall be manually cut with hand implements.

Exposed tree roots shall be covered with mulch and watered from a period immediately following curb and gutter removal, until the area is backfilled following construction.

General
Use caution during the construction process to avoid damage to the roots, trunks, and branches of all street trees. Damage caused to any street tree or irrigation system will be repaired by the City of Milwaukee's Forestry Division and the costs of repair, rejuvenation, and/or value lost will be billed to the contractor or credited against the contract at the option of the city. If any of the irrigation system is damaged immediately contact Mr. Andrew Witczak at (414) 708-3795 or (414) 803-7392, andywitczak@yahoo.com for repair. Any and all questions regarding the irrigation system can be directed to Mr. Witczak.

At locations where the contractor has not complied with the forestry special requirements stated in the special provisions above, and the maximum clearance was exceeded or a thin form was not used, a minimum credit to the city of $50.00 per location will be taken. The credit will increase in proportion to the excess distance beyond clearance allowed. The credit will be $50.00 for each 2-inch increment or part thereof in excess of the initial clearance allowed. Any damage to the tree's structure totaling 15 percent of the trees value will be billed on a prorata basis. If, in the opinion of the City of Milwaukee's Forestry Division, the tree has been damaged to the point that it warrants removal, the credit that will be taken will be equal to $100.00 per inch diameter of the tree. A field measurement will be taken to determine the tree size.

24. Bus Shelters.

Clear Channel Outdoor has four bus shelters, located at the northwest corner of South 27th Street and West Morgan Avenue (Stage 1), southeast corner of South 27th Street and West Ohio Avenue (Stage 2), southwest corner of South 27th Street and West Oklahoma Avenue (Stage 1), and the northwest corner of South 27th Street and West Oklahoma Avenue (Stage 1).

Contact Mr. David Jasenski at (262) 506-9031, david.jasenski@clearchannel.com a minimum of two weeks (ten working days) in advance of commencing each stage of construction, to remove shelters.

Contact Mr. Jasenski as soon as it is okay to replace the shelters.

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

A Description

A.1 General

This special provision describes excavating, loading, hauling, and disposing of petroleum contaminated soil at a DNR licensed facility. The closest DNR licensed landfill facilities that can bioremediate this soil once excavated are:

Veolia Environmental Services Emerald Park Landfill
10629 S. 124th St.
Muskego, Wisconsin 53150
(414) 529-1360

Waste Management Metro Landfill
10712 S. 124th St.
Franklin, WI 53132
(414) 529-6180

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

A.2 Notice to the Contractor – Contaminated Soil and Groundwater Locations

The department and others completed testing for soil and groundwater contamination for locations within this project where excavation is required. Testing indicated that petroleum-contaminated soil and groundwater is present at the following locations as shown on the plans:

- Station 16+20 to 17+10, from approximately 30 feet left of reference line to project limits left, from approximately 2 to 5 feet bgs. Soil is contaminated with GRO, DRO, PVOCs, naphthalene, and lead. Approximately 50 cubic yards (approximately 80 tons at an estimated 1.7 tons per cubic yard) of soil will be excavated from this area for the installation of new storm sewer will require bioremediation.
- Station 57+00 to 59+00, from approximately 15 feet right of reference line to project limits right, from approximately 1 to 8 feet bgs. Approximately 100 cubic yards (approximately 170 tons at an estimated 1.7 tons per cubic yard) of soil will be excavated from this area for the installation of new storm sewer will require bioremediation.

- Station 65+50 to 66+50, from reference line to 100 feet right, from approximately 4 to 8 feet bgs. Approximately 100 cubic yards (approximately 170 tons at an estimated 1.7 tons per cubic yard) of soil will be excavated from this area for the installation of storm sewer and traffic signals will require bioremediation. Contaminated groundwater is also present at this location. Groundwater is contaminated with VOCs and metals (arsenic, barium, and lead) here also.

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

A.3 Notice to the Contractor – Contaminated Soil Beyond the Construction Limits

A review of available information for the construction corridor indicates that contaminated soil is or may be present beyond the construction limits at the locations listed below:

- Station 17+25 to 18+45, beyond project limits left,
- Station 30+10 to 32+50, beyond project limits left, and,
- Station 63+10 to 64+70, beyond project limits right.

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

No active groundwater monitoring wells were observed within the construction limits. If active groundwater monitoring wells are encountered during construction, notify engineer and protect them to maintain their integrity. The environmental consultant will determine if monitoring wells need to be maintained. For monitoring wells that do need to be maintained, adjust the wells that do not conflict with structures or curb and gutter to be flush with the final grade. For wells that conflict with the previously mentioned items or if monitoring wells are not required to be maintained, they will be abandoned by others.

If dewatering is required at the above locations, conduct the dewatering in accordance to Section C below. No active groundwater monitoring wells were observed within the construction limits; if any are encountered during construction, notify engineer and protect them to maintain their integrity.

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

Name:	Mr. Mike Cape, P.G.
Address:	141 NW Barstow Street, PO Box 798, Waukesha, WI 53187-0798
Phone:	(262) 548-5930
Fax:	(262) 548-6891
E-mail:	michael.cape@dot.wi.gov

A.4 Coordination

Coordinate work under this contract with the environment consultant:

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

The role of the environmental consultant will be limited to:

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

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

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

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

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

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

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

B (Vacant)

C Construction
Supplement standard spec 205.3 with the following:

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

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

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

If dewatering is required in area of known contamination, water generated from dewatering activities may contain petroleum VOCs and/or metals. Based on the limited groundwater testing performed in the Phase 2.5 investigation, the water generated may meet the effluent limits specified in “Contaminated Groundwater from Remedial Action Operations” (WPDES Permit No. WI-0046566-5), Table 3.1 once standard construction sediment removal is employed. Notify the engineer of any dewatering activities, and obtain any permits necessary to discharge water. Provide copies of such Permit to the engineer. Ensure continuous dewatering and excavation safety at all times. Provide, operate, and maintain adequate pumping equipment and drainage and disposal facilities.

Meet any requirements and pay any costs for obtaining and complying with such permit use. Follow all applicable legislative statutes, judiciary decisions, and regulations of the State of Wisconsin.

Costs associated with excavation dewatering in the contaminated area are considered incidental to this pay item. The Wisconsin Department of Transportation will be the generator of regulated solid waste from this construction project.

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

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

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

Payment is full compensation for excavating, segregating, loading, hauling, and disposal of contaminated soil; obtaining solid waste collection and transportation service operating licenses; assisting in the collection soil samples for field evaluation; and dewatering of soils prior to transport, if necessary. No additional payment will be made for tipping fees associated with the disposal of contaminated soil.
205-003 (20080902)

26. Excavation for Structures Culverts (B-40-058).

Conform to standard spec 206 as modified in this special provision.

Revise standard spec 206.1 as follows:

This section describes excavating fill on the culvert after the roadway is removed and exposing the top of the wing walls for concrete railing.

27. Construction Trenches.

Upon completion of the normal workday and when work is not in progress, plate all trenches within the roadway resulting from construction activities, which are not fully backfilled, with steel plates suitable for carrying a vehicle as directed by the engineer. Plating is in addition to the barricades and traffic control devices required for lane closure or traffic control. Cost of steel plates shall be included in the bid prices for the related bid items that are under construction.

28. Removing Concrete Driveway Approaches.

The removal of concrete driveway approaches shall be included in, and measured and paid for under the item Removing Concrete Sidewalk.

29. Backfill Structure.

Amend standard spec 210 to include the following:

Delete standard spec 210.2.1 and replace with the following:

The material shall consist of sand, a mixture of sand and gravel, crushed stone, or other fragmented mineral material. The maximum size of any material shall be such 100 percent passes a 75 mm sieve and not less than 25 percent by weight passes a 4.75 mm sieve. Of the material passing the 4.75 mm sieve, not more than 75 percent passes a 0.425 mm sieve, not more than 15 percent passes a 0.150 mm sieve, and not more than 8 percent passes a 0.75 mm sieve.

Provide and place the backfill material on top of culvert for structure (B-40-058), behind all the wing walls, and at the removed catch basin location at the east side of the structure.

Place and compact Backfill Structure as specified in standard spec 206.3.13.

30. Inspection of City of Milwaukee Drainage Facilities.

Notify the City of Milwaukee construction section at least three working days in advance of performing drainage facilities construction. Contact Mr. Roger Reed at (414) 286-3896, City of Milwaukee Construction Supervisor. Drainage facilities include storm sewers and combined flow sewers.

31. Temporary Sidewalks, Crosswalks, and Driveway Approaches.

Construct and maintain, in satisfactory condition, temporary sidewalks, crosswalks, and driveways at locations specified by the engineer. Construct temporary sidewalks, crosswalks, and driveways of base aggregate dense 1¼-inch to dimensions determined by the engineer.

Base aggregate for construction of the temporary sidewalks, crosswalks, and driveways will be paid for under the item Base Aggregate Dense 1¼-Inch. Cost of labor and equipment necessary to place and remove the temporary sidewalks, crosswalks, and driveways shall be included in the contract unit price for Base Aggregate Dense 1¼-Inch.

32. Pedestrian and Bicycle Accommodations in Temporary Work Zone.

The contractor shall provide and maintain fully accessible, safe, and direct passage for pedestrians and bicycles, through the temporary work zone, which must be fully compliant with access requirements for people with disabilities, as specified in the American with Disabilities Act. All traffic control devices used to provide and maintain safe access, must be fully consistent with specifications for traffic control devices included in the Manual on Uniform Traffic Control Devices. Specific locations for pedestrian and bicycle access accommodations are to be maintained during construction, per direction of the City of Milwaukee construction supervisor and the field inspector.

33. 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)

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

Replace standard spec 305.2.2.1(2) with the following:

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

35. Base Aggregate Open Grade – Item 310.0115.

All work and materials necessary to install base aggregate open grade in the bioswales, as shown on the plans, shall be included in the unit bid price.

The base aggregate open grade material shall be crushed washed stone, with a porosity of 40%.

36. Concrete Pavement 8 1/2-Inch and 7-Inch.

Construct 8 1/2-Inch and 7-Inch, Non-Reinforced, Doweled Concrete Pavement in accordance with the requirements in standard spec 415 except as hereinafter modified.

All doweled transverse joints on this project, including intersections, shall be laid out by the contractor and approved by the engineer. The joint spacing shall not exceed 15 feet as shown in the standard detail drawing and shall be placed at end-of-radii, center line and flange line extended, all zero-face driveway openings for depressed driveways and when feasible at all manholes, catch basins on inlets, and water valve boxes. The cost of all jointing shall be included in the unit bid price for concrete pavement.

37. Temporary Roadway Maintenance.

Perform all temporary roadway maintenance required in the open lanes of the existing roadway. Respond within two hours of any call for maintenance. The cost of this work, such as repairing potholes during construction, shall be included in the bid item 465.0110, Asphaltic Surface Patching.

38. Protection of Concrete.

Supplement standard spec 415.3.16 as follows:

Provide for a minimum of one concrete finisher to remain on the project site after final finishing of all concrete surfaces until such time as the concrete has hardened sufficiently to resist surface scarring caused by foot prints, handprints, or other type of imprint, malicious or otherwise. Finisher must actively and continuously patrol on foot the newly placed concrete and repair any damage to the surface that might be sustained as described above.

Include the cost for providing the finisher(s), the necessary equipment, and materials in the contract unit price for each concrete item.

39. Concrete Identification Stamping.

Stamp ends of all monolithic Portland cement concrete surfaces with a stamp bearing the contractor's name and the year of construction. Make all letters 2 inches in height.

Include the cost of this work in the contract unit price for other Portland cement concrete items and no additional payment will be made.

Place the concrete on a moist foundation, deposit to the required depth, and consolidate and spade sufficiently to bring the mortar to the surface, after which strike it off and float with a wooden float. Before the mortar is set, steel trowel, and brush the surface.

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

A Description

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

(2) Profile the final riding surface of all mainline pavements**.** Include auxiliary lanes in Category I and II segments; crossroads with county, state or U.S. highway designations greater than 1500 feet in continuous length; bridges, bridge approaches; and railroad crossings. Exclude roundabouts and pavements within 150 feet of the points of curvature of roundabout intersections.

(3) The engineer may direct straightedging under standard spec 415.3.10 for pavement excluded from localized roughness under C.5.2 (1); for bridges; and for roundabouts and pavements within 150 feet of the points of curvature of roundabout intersections. Other surfaces being tested under this provision are exempt from straightedging requirements.

B (Vacant)

C Construction

C.1 Quality Control Plan

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

1. An organizational chart with names, telephone numbers, current certifications and/or titles, and roles and responsibilities of all quality control personnel.
2. The process by which quality control information and corrective action efforts will be disseminated to the appropriate persons. Include a list of recipients, the communication means that will be used, and action time frames.
3. The methods and timing used for monitoring and/or testing ride quality throughout the paving process. Also indicate the approximate timing of acceptance testing in relation to the paving operations.
4. The segment locations of each profile run used for acceptance testing.
5. Traffic Control Plan

C.2 Personnel

(1) Have a profiler operator, certified under the department's highway technician certification program (HTCP), operate the equipment, collect the required data, and analyze the results using the methods taught in the HTCP profiling course. Ensure that an HTCP-certified profiler operator supervises data entry into the material records system (MRS).

C.3 Equipment

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

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

(2) Unless the engineer and contractor mutually agree otherwise, arrange to have a calibrated profiler available when paving the final riding surface.

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

C.4 Testing

C.4.1 Run and Reduction Parameters

(1) Enter the equipment-specific department-approved filter settings and parameters given in the approved profilers list on the department's QMP ride web site.

http://roadwaystandards.dot.wi.gov/standards/qmp/profilers.pdf

C.4.2 Contractor Testing

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

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

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

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

(4) Treat partial segments as independent segments.

The department will categorize each standard or partial segment as follows:

Segments with a Posted Speed Limit of 55 MPH or Greater	
Category	**Description**
HMA I	Asphalt pavement with multiple opportunities to achieve a smooth ride. The following operations performed under this contract are considered as opportunities: a layer of HMA, a leveling or wedging layer of HMA, and diamond grinding or partial depth milling of the underlying pavement surface.
HMA II	Asphalt pavement with a single opportunity to achieve a smooth ride.
HMA III	Asphalt pavement segments containing any portion of a bridge, bridge approach, railroad crossing, or intersection. An intersection is defined as the area within the points of curvature of the intersection radii.
PCC II	Concrete pavement.
PCC III	Concrete pavement segments containing any portion of a bridge, bridge approach, railroad crossing, intersection or gap. An intersection is defined as the area within the points of curvature of the intersection radii.

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

C.4.3 Verification Testing

(1) The department may conduct verification testing (QV) to validate the quality of the product. A HTCP certified profiler operator will perform the QV testing. The department will provide the contractor with a listing of the names and telephone numbers of all verification personnel for the project.

(2) The department will notify the contractor before testing so the contractor can observe the QV testing. Verification testing will be performed independent of the contractor's QC work using separate equipment from the contractor's QC tests. The department will provide test results to the contractor within 1 business day after the department completes the testing.

(3) The engineer and contractor will jointly investigate any testing discrepancies. The investigation may include additional testing as well as review and observation of both the department's and contractor's testing procedures and equipment. Both parties will document all investigative work.

(4) If the contractor does not respond to an engineer request to resolve a testing discrepancy, the engineer may suspend production until action is taken. Resolve disputes as specified in C.6.

C.4.4 Documenting Profile Runs

(1) Compute the IRI for each segment and analyze areas of localized roughness using the ProVAL software. Also, the contractor shall prepare the ProVAL Ride Quality Module Reports, showing the IRI for each segment and the areas of localized roughness exceeding an IRI of 200 in/mile. Use ride quality module report as follows:

	Fixed Interval	Continuous (Localized Roughness)
Base-length	500'	25'
Threshold	140"/Mile	200"/Mile

The ProVAL software is available for download at:

http://www.roadprofile.com.

(2) As part of the profiler software outputs and ProVAL reports, document the areas of localized roughness. Field-locate the areas of localized roughness prior to the engineer's assessment for corrective actions. Document the reasons for areas excluded and submit to the engineer.

(3) Within 5 business days after completing profiling of the pavement covered under this special provision, unless the engineer and contractor mutually agree to a different timeline, submit the electronic ProVAL project file containing the .ppf files for each profiler acceptance run data and Ride Quality Module Reports, in .pdf format using

the department's Materials Reporting System (MRS) software available on the department's web site:

http://www.atwoodsystems.com/mrs

Notify the engineer when the Profiler Acceptance Run data and the Ride Quality Report have been submitted to the MRS system.

C.5 Corrective Actions

C.5.1 General

(1) Analyze the data from the PROVAL reports and make corrective action recommendations to the department. The department will independently assess whether a repair will help or hurt the long-term pavement performance before deciding on corrective action. Correct the ride as the engineer directs in writing.

C.5.2 Corrective Actions for Localized Roughness

(1) Apply localized roughness requirements to all pavements, including HMA III, PCC III, HMA IV, and PCC IV; except localized roughness requirements will not be applied to pavements within 25 feet of the following surfaces if they are not constructed under this contract: bridges, bridge approaches, or railroad crossings. The department may direct the contractor to make corrections to the pavement within the 25-foot exclusionary zones.

(2) The engineer will review each individual wheel track for areas of localized roughness. The engineer will assess areas of localized roughness within 5 business days of receiving notification that the reports were uploaded. The engineer will analyze the report documenting areas that exceed an IRI of 200 in/mile and do one of the following for each location:

1. Direct the contractor to correct the area to minimize the effect on the ride.
2. Leave the area of localized roughness in place with no pay reduction.
3. Except for HMA IV and PCC IV segments, assess a pay reduction as follows for each location in each wheel path:

Localized Roughness IRI (in/mile)	**Pay Reduction[1] (dollars)**
> 200	(Length in Feet) x (IRI –200)

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

(3) The engineer will not direct corrective action or assess a pay reduction for an area of localized roughness without independent identification of that area as determined by physically riding the pavement. For corrections, use only techniques the engineer approves.

(4) Re-profile corrected areas to verify that the IRI is less than 140 in/mile after correction. Submit a revised ProVAL ride quality module report to the reference documents section of the MRS for the corrected areas to validate the results.

C.5.3 Corrective Actions for Excessive IRI

(1) If an individual segment IRI exceeds 140 in/mile for HMA I, HMA II, and PCC II pavements after correction for localized roughness, the engineer may require the contractor to correct that segment. Correct the segment final surface as follows:

HMA I:	Correct to an IRI of 60 in/mile using whichever of the following methods as approved by the engineer: Mill and replace the full lane width of the riding surface excluding the paved shoulder. Continuous diamond grinding or fine-tooth milling the full lane width, if required, of the riding surface including adjustment of the paved shoulders.
HMA II:	Correct to an IRI of 85 in/mile using whichever of the following methods as approved by the engineer: Mill and replace the full lane width of the riding surface excluding the paved shoulder. Continuous diamond grinding or fine-tooth milling of the full lane width, if required, of the riding surface including adjustment of the paved shoulders
PCC II:	Correct to an IRI of 85 in/mile using whichever of the following methods as approved by the engineer: Continuous diamond grinding of the full lane width, if required, of the riding surface including adjustment of the paved shoulders. Conform to sections C.1 through C.4 of Concrete Pavement Continuous Diamond Grinding Special provision contained elsewhere in the contract. Remove and replace the full lane width of the riding surface.

(2) Re-profile corrected segments to verify that the final IRI meets the above correction limits and there are no areas of localized roughness. Enter a revised ProVAL ride quality module report for the corrected areas to the reference documents section of the MRS. Segments failing these criteria after correction are subject to the engineer's right to adjust pay for non-conforming work under standard spec 105.3.

C.6 Dispute Resolution

(1) The engineer and contractor should make every effort to avoid conflict. If a dispute between some aspect of the contractor's and the engineer's testing program does occur, seek a solution mutually agreeable to the project personnel. The department

and contractor may review the data, examine data reduction and analysis methods, evaluate testing procedures, and perform additional testing.

(2) If the project personnel cannot resolve a dispute and the dispute affects payment or could result in incorporating nonconforming pavement, the department will use third party testing to resolve the dispute. The department's Quality Assurance Unit, or a mutually agreed on independent testing company, will provide this testing. The engineer and contractor will abide by the results of the third party tests. The party in error will pay service charges incurred for testing by an independent tester. The department may use third party tests to evaluate the quality of questionable pavement and determine the appropriate payment.

D Measurement

(1) The department will measure Incentive IRI Ride by the dollar, adjusted as specified in E.2.

E Payment

E.1 Payment for Profiling

(1) Costs for furnishing and operating the profiler, documenting profile results, and correcting the final pavement surface are incidental to the contract. The department will pay separately for engineer-directed corrective action performed within the 25-foot exclusionary zones under C.5.2 as extra work.

E.2 Pay Adjustment

(1) The department will pay incentive for ride under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
440.4410.S	Incentive IRI Ride	DOL

(2) Incentive payment is not limited, either up or down, to the amount the schedule of items shows.

(3) The department will administer disincentives for ride under the Disincentive IRI Ride administrative item.

(4) The department will not assess disincentive on HMA III or PCC III segments. Incentive pay for HMA III and PCC III segments will be according to the requirements for the category of the adjoining segments.

(5) The department will adjust pay for each segment based on the initial IRI for that segment. If corrective action is required, the department will base disincentives on the IRI after correction for pavement meeting the following conditions:

All Pavement:	The corrective work is performed in a contiguous, full lane width section 500 feet long, or a length as agreed with the engineer.
HMA Pavements:	The corrective work is a mill and inlay or full depth replacement and the inlay or replacement layer thickness conforms to standard spec 460.3.2.
Concrete Pavements:	The corrective work is a full depth replacement and conforms to standard spec 415.

(6) The department will adjust pay for 500-foot long standard segments nominally one wheel path wide using equation "QMP 1.04" as follows:

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

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

HMA IV and PCC IV	
Initial IRI (inches/mile)	**Pay Adjustment[1] [2] (dollars per standard segment)**
< 35	250
≥ 35 to < 45	1125-(25xIRI)
≥ 45	0

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

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

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

440-010 (20130615)

41. Drilled Tie Bars.

Perform the work under this item in accordance to the requirements of standard spec 416.3.6 and as hereinafter provided.

Install pavement tie bars at locations where the new 8½-inch concrete pavement abuts existing concrete pavement. Space tie bars 3 feet center-to-center and install on a skew horizontally. Alternate the direction of the skew after every two bars.

42. Tack Coat.

Revise standard spec 455.2.5 by adding the following:

Apply the diluted tack coat between all layers of asphaltic surfacing and between existing pavement and new asphaltic surfacing.

43. Asphaltic Surface.

Use asphalt cement material type AC with a performance-graded designation of PG 64-22 for Asphaltic Surface.

Salvaged or reclaimed asphaltic pavement materials may be incorporated into the asphaltic mixture in amounts up to 25 percent for lower layers and 20 percent for upper layers without a change in PG grade. If greater amounts of salvaged or reclaimed asphaltic material are incorporated into the asphaltic mixture, the added asphaltic material shall be one PG grade lower, unless the contractor or supplier testing indicates that the resultant blend meets the PG grade originally specified in the contract.

The finished asphaltic concrete pavement may be accepted using nuclear density testing.

Perform work under this item in accordance to the requirements of standard spec 460, except as hereinafter modified.

When the asphaltic surface has cooled to a temperature of 140° F or less, paint with hot asphalt cement or heat to the point of softening with an infra-red joint heater, the edges of the longitudinal joints before work is resumed. When the joint becomes distorted, trim the edges of the joint to line and heat with an infra-red joint heater before resuming work.

Lap previously laid material a minimum of 3 inches and leave the material sufficiently high to allow for compaction. Offset the longitudinal junction in each course from the previous course by a minimum of 6 inches.

44. Concrete Aggregates.

Modify standard spec 501 as follows:

A Size Requirements
Supplement standard spec 501.2.5.4.4, subsection (4) with the following:

Course aggregate for Concrete Grade A must consist entirely of size No. 1 when used in curb, curb and gutter, driveways, sidewalks or steps.

45. Concrete Masonry Bridges.

Perform this work in accordance to standard spec 502, except as otherwise provided in the plans or hereinafter provided.

The exterior face of the concrete slabs, walks, curbs, wing wall caps and all surfaces of light pole base shall receive a sack-rubbed surface finish.

Supplement standard spec 501.3.1.3 as follows:

The grade of concrete used in the superstructure shall be Grade A-FA or A-S. The chosen grade is to be used for all components of the superstructure.

46. Expansion Device, Structure B-40-0438.

A Description
This special provision describes furnishing and installing an expansion device in accordance to standard spec 502, as shown on the plans, and as hereinafter provided.

B Materials
The minimum thickness of the polychloroprene strip seal shall be ¼-inch for non-reinforced elastomeric glands and 1/8-inch for reinforced glands. Furnish the strip seal gland in lengths suitable for a continuous one-piece installation at each individual expansion joint location. Provide preformed polychloroprene strip seals that conform to the requirements ASTM D3542, and have the following physical properties:

Property Requirements	**Value**	**Test Method**
Tensile Strength, min.	2000 psi	ASTM D412
Elongation @ Break, min	250%	ASTM D412
Hardness, Type A, Durometer	60 ± 5 pts.	ASTM D2240
Compression Set, 70 hours @212˚F, max.	35%	D395 Method B Modified
Ozone Resistance, after 70 hrs. at 100˚F under 20% Strain with 100 pphm ozone	No Cracks	ASTM D1149 and D518 Method A
Mass Change in Oil 3 after 70 hr. 212˚F Mass Change, max.	45%	ASTM D471

Install the elastomeric strip seal gland with tools recommended by the manufacturer, and with a lubricant adhesive conforming to the requirements of ASTM D4070.

The manufacturer and model number shall be one of the following approved strip seal expansion device products:

	Model Number Strip Seal Gland Size*		
Manufacturer	**4-Inch**	**5-Inch**	**6-Inch**
D.S. Brown	SSA2-A2R-400	SSA2-A2R-XTRA	SSA2-A2R-XTRA
R.J. Watson	RJA-RJ400	RJA-RJ500	RJA-RJ600
Watson Bowman Acme	A-SE400	A-SE500	A-SE800
Commercial Fabricators	A-AS400	-----	-----

*Expansion device strip seal gland size requirement of 4" shall be as shown on the plans.

Furnish manufacturer's certification for production of polychloroprene represented showing test results for the cured material supplied, and certifying that it meets all specified requirements.

The steel extrusion or retainer shall conform to ASTM designation A 709 grade 36 steel. After fabrication, steel shall be galvanized conforming to the requirements ASTM A123.

Manufacturer's certifications for adhesive and steel shall attest that the materials meet the specification requirements.
502-020 (20110615)

47. Removing Bearings, B-40-0438, Item 506.7050.S.01.

A Description
This special provision describes raising the girders and removing the existing bearings, as shown on the plans and as hereinafter provided.

B (Vacant)

C Construction
Raise the structure's girders and remove the existing bearings as shown in the plans

Obtain prior approval from the engineer for the method of jacking the girders and of supporting them as required.

D Measurement
The department will measure Removing Bearings B-40-0438 by the unit for each bearing removed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
506.7050.S.01	Removing Bearings, B-40-0438	Each

Payment is full compensation for raising the bridge girders; and for removing the old bearings.

Cost of furnishing and installing the bearings will be paid for under separate bid items.
506-035 (20130615)

48. Epoxy Injection Crack Repair, Item 509.9025.S; Cored Holes 2-Inch Diameter, Item 509.9026.S.

A Description

Repair structural cracks in the pier using the epoxy injection method, and core 2-inch diameter core samples from a crack in the concrete structure that has been repaired using the epoxy injection method, according to standard spec 509, as shown on the plans, as directed by the engineer, and as hereinafter provided.

B Materials

Furnish epoxy injection material that is insensitive to the presence of water and is composed of a two-component epoxy resin designed specifically for structurally re-bonding cracks in Portland cement concrete. The epoxy injection material shall conform to the following physical properties at 77 degrees F:

	Unmixed		**Mixed**
	Component A (Resin)	Component B (Catalyst)	
Weight per gallon, lbs	9.15 ±0.1	8.2 ±0.1	9.15 ±0.1
Viscosity, cps	500-700	120-160	275-350
Specific Gravity, g/cc	1.128 ±0.012	0.984 ±0.012	1.099 ±0.012
Color Straw	Straw	Straw	Straw
Shelf Life (closed containers)	2 years	2 years	---
Solids by Weight	---	---	100%
Pot Life (200 gram mass)	---	---	12-15 mins.
Mixing Ratio (by weight)	80%	20%	---
Mixing Ratio (by volume)	78%	22%	---
Bond Strength	---	---	2000 psi min
Shrinkage Resistance	---	---	ASTM C883
Thermal Compatibility	---	---	ASTM C884

Furnish surface seal material for confining the injected epoxy resin in the cracks that meets the following requirements:

- Adequate strength to hold the injection fittings firmly in place to resist injection pressures and prevent leakage during injection
- Non-sag consistency
- Insensitive to the presence of water
- Controlled cure time
- Two-component epoxy resin
- 100% solids by weight
- Applicable to wet surfaces
- Viscosity should be paste

C Construction

C.1 Injection Equipment

Use equipment to meter and mix the two-epoxy resin components and to inject the mixture into the cracks. The equipment shall be portable and have positive displacement type pumps equipped with an interlock to provide positive ration control of exact proportions of the two components at the nozzle. Use electric or air powered pumps that provide in-line metering and mixing.

Use injection equipment that has automatic pressure control capable of discharging the mixture at any present pressure up to 160 psi (±5 psi), and is equipped with a manual pressure control override.

The equipment shall have the capability of maintaining the volume ratio for the mixture prescribed by the manufacturer of the epoxy resin material within a tolerance of ±5% by volume at any discharge pressure up to 160 psi.

The injection equipment shall be equipped with sensors on both the Component A and B reservoirs that will automatically stop the machine when only one component is being pumped to the mixing head.

C.2 Surface Area Preparation

Clean the surface areas adjacent to cracks of all dirt, dust, grease, oil, efflorescence, or other foreign matter, which may be detrimental to adhesion of the surface seal material. Acids and corrosives will not be permitted for cleaning.

Install injection ports along the cracks on both faces of the pier at intervals of 4 to 10 inches, or as appropriate to accomplish full penetration of the injection resin. Center the injection ports over the cracks and secure in place using surface seal material. Where possible, install the injection ports over the widest areas of the cracks.

Apply the surface seal material to the face of the crack between the entry ports. For known through cracks, apply the surface seal material to both faces of the member.

Before proceeding with the injection operation, allow sufficient time to elapse for the surface seal material to gain adequate strength.

C.3 Epoxy Injection

Install the epoxy injection resin according to the manufacturer's instructions.

During installation, in general, limit pressures to 35 psi at the point of entry into the crack.

On vertical cracks, start the injection at the lowest point and continue upward along the crack. While injecting, resin should flow to and out of the next higher port. When this flow is established, cap the lower port and continue the injection until all ports have been injected and flow has been established between them.

On horizontal cracks, follow the same procedures used for vertical cracks; start the injection at one end and continue the injection in succession along the crack until all ports have been injected and flow has been established between them.

C.4 Finishing and Clean-Up

When cracks are completely filled, cure the epoxy resin for a sufficient length of time so that when the surface seal is removed, there is no draining or runback of the epoxy material from the cracks. Grind, or use other appropriate method, to remove surface seal material, excess epoxy material, and injection ports. No epoxy material shall extend beyond the plane of the surfaces of the in-situ concrete.

C.5 Core Sampling

To determine if the crack injection is complete, obtain two 2-inch diameter core samples from the repaired pier. Take the cores to the depth of the element or at least 12 inches. Take the cores at locations selected by the engineer. The engineer will have the option of increasing or decreasing the number of cores taken.

The injection shall be considered complete if more than 90% of the crack void, to 12 inches deep, is filled with the epoxy resin in each of the samples taken. If the injection is incomplete, re-injection and additional cores may be required.

Repair the core holes left in the member using one of the two following methods:

1. Fill core holes with an epoxy mortar consisting of one part epoxy injection resin to four parts clean, dry, bagged fine aggregate mixed by volume. Match the finish repair to the surrounding surface.
2. Fill core holes with an epoxy mortar consisting of one part epoxy gel to one part clean, dry, bagged fine aggregate mixed by volume. Match the finish repair to the surrounding surface.

D Measurement
The department will measure Epoxy Injection Crack Repair in length by the linear foot crack, acceptably repaired.

The department will measure Cored Holes 2-Inch Diameter as each individual cored hole as approved by the engineer and acceptably completed. Additional cores taken as required by the engineer after re-injection (due to incomplete injection) will not be measured for payment. Additional cores taken by the contractor that are not ordered by the engineer will not be measured for payment.

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

ITEM NUMBER	DESCRIPTION	UNIT
509.9025.S	Epoxy Injection Crack Repair	LF
509.9026.S	Cored Holes 2-Inch Diameter	Each

Payment is full compensation for furnishing and placing the epoxy sealant, including any cleaning before and after injection; coring samples of the work; inspecting the core samples; and for repairing the core holes left in the member.
509-025 (20100709)

49. Protective Surface Treatment.

This special provision describes application of protective surface treatment to all top surfaces of the structure deck, curb (including vertical face), sidewalk surfaces (including outside vertical face), and underside of sidewalk overhang to deck overhang (1'-5").

50. Sheet Membrane Waterproofing for Top Slab B-40-0058, Item 516.0610.S.01.

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

B Materials
B.1 Waterproofing System
The membrane shall consist of a cold-applied, self-adhering membrane incorporating a heat resistant woven or non-woven fabric or fiberglass reinforcing laminated in between layers of polymer modified bitumen or SBS modified rubberized asphalt. The membrane shall have a release film, polyester or polyethylene on the down side and may have a thin spun bonded open weave polyester fabric on the up side; yet will permit driving rubber-tired trucks, pavers and other construction vehicles on the membrane covered deck slab without injury to the membrane.

Provide a composite sheet membrane with the following properties:

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

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

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

B.2 Materials Certification

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

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

C Construction

C.1 Application Methods

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

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

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

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

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

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

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

To form a bond with the primed slab, remove the release film from the membrane on the tacky side while the membrane is rolled face down. Apply the membrane using hand methods or by using mechanical applicators. Overlap a minimum of 2.5 inches at the edges of each strip and overlap the membrane in such a manner to provide a shingling

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

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

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

C.2 Where Not Overlaying the Membrane Directly with Asphaltic Concrete

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

D Measurement

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

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
516.0610.S.01	Sheet Membrane Waterproofing for Top Slab B-40-0058	SY

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

51. Structure Repainting General.

A General

A.1 Inspection

On all structures in this contract, notify the engineer of any missing or broken bolts or nuts, any missing or broken rivets, or of any cracks or flaws in the steel members while cleaning or painting.

A.2 Date Painted

At the completion of all painting work, stencil in black paint or contrasting color paint the date of painting the structure. The numbers shall be three inches (75 mm) in height and shall show the month and year in which the painting was completed: e.g., 11-14 (November 2014). On each structure painted, stencil the date at two locations. On truss structures, stencil the date on the cover plates of end posts near and above the top of the railings at the oncoming traffic end. On steel girder structures, stencil the date on the **inside** of the outside stringers at the abutments. The date on grade separation structures shall be readable when going under the structure or at some equally visible surface near the ends of the structure, as designated by the engineer.

A.3 Graffiti Removal

Remove any graffiti on concrete abutments, piers, pier caps, parapet railings, slope paving or any other location at the direction of the engineer. Use a brush sandblast to remove graffiti.

The above work will not be measured and paid for separately, but will be considered incidental to other items in the contract.

B (Vacant)

C Construction

C.1 Repainting Methods

Do not perform blasting, cleaning and painting on days of high winds. Prevailing winds in excess of 15 mph (25 km/hr) shall be considered high winds.

Prior to final acceptance, completely clean and free from spent abrasive and other waste materials resulting from the contractor's operation the structure deck surfaces, gutter lines,

drains, curbs, structure seats, pier caps, slope paving, roadway below, and all structural members and assemblies.

Place the final field coat of paint on the exterior of the exterior beams as a continuous painting operation. Stop at splices, vertical stiffeners or other appropriate locations so that lap marks are not evident or noticeable.

C.2 Inspection
Supplement standard spec 105.9 as follows:

Furnish, erect and move scaffolding and other appropriate equipment to permit the inspector the opportunity to closely observe all affected surfaces. The scaffolding, with appropriate safety devices, shall meet the approval of the engineer.
517-005 (20030820)

52. Preparation and Coating of Top Flanges B-40-0438, Item 517.0900.S.01.

A Description
This special provision describes thoroughly cleaning and coating the top surface and edges of the top flanges, removing loose paint, rust, mill scale, dirt, oil, grease, or other foreign substances until the specified finish is obtained.

B (Vacant)

C Construction
In accordance to SSPC SP-10, blast clean to a near white finish the top surface and edges of the top flanges that have no paint on them, and paint them with one coat of an approved zinc rich primer. No collection of blast waste material is required.

In accordance to SSPC SP-2 or SP-3, clean all areas of rust and loose paint on the top surface and edges of the top flanges, which have paint on them, by wire brushing, grinding or other mechanical means. Wash the top surface and edges of the top flanges and give them one coat of an approved zinc-rich primer.

Where plans call for the cleaning of other painted structural steel including hanger assemblies, bearings, field splices, and connections, clean areas of loose paint and rust by wire brushing, grinding, or other mechanical means as necessary and in accordance to SSPC SP-2, SP-3, or SP-11. Sound paint need not be removed with the exception of an area 12-inches on either side of hanger assembly centerlines. Clean this area to base metal in accordance to SSPC SP-10, or SP-11.

In accordance to SSPC SP-2, or SP-3, thoroughly clean by wire brushing, grinding or other mechanical means as necessary the surface area of exposed steel members that are to be imbedded in the new concrete, and wash and give one coat of an approved zinc rich primer to these areas.

Furnish and erect tarpaulins or other materials to collect all of the spent paint containing material resulting from blasting or hand and power tool cleaning and coating. Minimize dust during all clean-up activities. Collect and store waste material at the end of each work day or more often if needed. Store waste materials in provided hazardous waste containers. Lock and secure all waste containers at the end of each work day. Cover the container(s) at all times except when adding or removing waste material. Store the containers in an accessible and secured area, not located in a storm water runoff course, flood plain or exposed to standing water. Transportation and disposal of such waste material will be the responsibility of the department.

Damage to existing painted surfaces as a result of construction operations, shall be restored to the approval of the engineer at the contractor's expense.

D Measurement

The department will measure Preparation and Coating of Top Flanges (Structure), completed in accordance to the contract and accepted, as a single complete lump sum unit of work for each structure.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
517.0900.S.01	Preparation and Coating of Top Flanges B-40-0438	LS

Payment is full compensation for preparing and cleaning the designated surfaces; furnishing and applying the coating.

517-010 (20100709)

53. Concrete Staining B-40-0438, Item 517.1010.S.01; and B-40-0058, Item 517.1010.S.02.

A Description

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

B Materials

B.1 Mortar

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

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

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

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

B.2 Concrete Stain

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

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

C Construction

C.1 General

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

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

C.2 Preparation of Concrete Surfaces

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

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

C.3 Staining Concrete Surfaces

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

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

The color of the stain shall match H&C Shield Plus Chert by Sherwin-Williams. Tint the base coat to match the finish coat; the two coats shall be compatible with each other.

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

C.4 Test Areas

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

C.5 Surfaces to be Coated.

Apply concrete stain to the surfaces in accordance to the plan.

D Measurement

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

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
517.1010.S.01	Concrete Staining B-40-0438	SF
517.1010.S.02	Concrete Staining B-40-0058	SF

Payment is full compensation for furnishing and applying the two coat system; for preparing the concrete surface; and for preparing the sample panels.

54. Concrete Staining Multi-Color B-40-0058, Item 517.1015.S.01.

A Description

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

B Materials

B.1 Mortar

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

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

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

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

B.2 Concrete Stain

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

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

C Construction

C.1 General

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

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

C.2 Preparation of Concrete Surfaces

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

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

C.3 Staining Concrete Surfaces

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

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

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

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

C.4 Test Areas

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

Contractor's concrete stain specialist shall submit photos of previous project in which a similar stone pattern and staining application was performed for approval by the engineer.

Contractor's concrete stain specialist shall provide instruction training for two city maintenance personnel to demonstrate surface preparation, application, and maintenance procedures as part of this bid item.

Concrete staining is temperature and concrete age sensitive. Staining not completed in the fall, before temperatures drop, shall be completed in the spring, once temperatures have risen, at no additional cost to the department.

C.5 Surfaces to be Coated.

Apply concrete stain to the surfaces in accordance to the plan.

D Measurement

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

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
517.1015.S.01	Concrete Staining Multi-Color B-40-0058	SF

Payment is full compensation for furnishing and applying the coloring system; for preparing the concrete surface; and for constructing and staining the sample panels.

55. Architectural Surface Treatment B-40-0058, Item 517.1050.S.01.

A Description

Construct a concrete masonry architectural surface treatment on the exposed concrete surfaces of the structure, as detailed in the plans and as hereinafter provided. Provide the engineer a sample of the stone panel detail for approval two weeks prior to the commencing with this work. Provide an ashlar stone pattern with multi-color stain with a natural earth tone look with a blended multi-color stain for each stone.

B Materials

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

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

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

Form Liner Pattern: Ashlar stone pattern, stone size varies 8-inch to 16-inch on parapet application, 1½-inch maximum relief on the exterior face and a ½-inch maximum relief on the interior face (roadway side). A larger relief is to be used on the exterior face of the parapet than on the interior face of the parapet wall. Submit sample and photos of similar applications for approval.

C Construction

C.1 Equipment

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

C.2 Form Liner Preparation

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

Apply form release per manufacturer's recommendations.

C.3 Form Liner Attachment

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

C.4 Surface Finishing
Ensure that the textured surface is free of laitance; sandblasting is not permitted.

Grind or fill pouring blemishes.

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

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

ITEM NUMBER	DESCRIPTION	UNIT
517.1050.S.01	Architectural Surface Treatment B-40-0058	SF

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

56. Structure Repainting Recycled Abrasive Structure B-40-0438, Item 517.1800.S.01.

A Description
This special provision describes surface preparation and painting of the metal surfaces in accordance to the manufacturer's recommendations and as hereinafter provided.

A.1 Areas to be Cleaned and Painted
All structural metal surfaces of:

1. Structure B-40-438 27,700 SF.

Areas are approximate and given for informational purposes only. Determine full extent of painting work and quantity prior to bid.

B Materials
B.1 Coating System
Furnish a complete coating system from the department’s approved list. The color for the finish coating material shall match the color number shown below in accordance to Federal Standard Number 595B, as printed in 1989. Supply the engineer with the product data sheets before any coating is applied. The product data sheets shall indicate the mixing and thinning directions, the recommended spray nozzles and pressures, and the minimum drying time between coats.

Finish Color: 14062

The color of the primer must be such that a definite contrast between it and the color of the blasted steel is readily apparent. There shall be a color contrast between all subsequent coats

for the paint system selected. Submit color samples of the primer to the engineer for approval.

C Construction

C.1 Surface Preparation

Prior to blast cleaning, solvent clean all surfaces to be coated in accordance to SSPC-SP1. A No. 10 Near White Blast Cleaning according to Steel Structures Painting Council Specification Ten will be required on all metal surfaces to be painted. Prime the same day all metal surfaces receiving a No. 10 blast or re-blast before application.

The steel grit and any associated equipment brought to the site and used for blast cleaning shall be clean. Remove immediately dirty grit or equipment brought to the site at no expense to the department. Furnish an abrasive that has a gradation such that it will produce a uniform surface profile between 1 to 3 mils on the steel surface, as measured with extra profile course Testex Replica Tape. Use a minimum air pressure for abrasive blasting, measured at the nozzle, of 90 psi.

The abrasive blasting and recovery system shall be a completely integrated self-contained system for abrasive blasting and recovery. It shall be an open blast and recovery system that will allow no emissions from the recovery operation. The recovery equipment shall be such that the amount of contaminants in the clean recycled steel grit shall be less than 1 percent by weight.

Remove by grinding all fins, tears, slivers and burred or sharp edges that are present on any steel member, or that appear during the blasting operation, and re-blast the area to give a 1 to 3 mils surface profile.

Remove all spent material and paint residue from steel surfaces with a good commercial grade vacuum cleaner equipped with a brush-type cleaning tool, and hand wipe the steel surfaces with a clean soft cloth. The airline used for surface preparation shall have an in-line water trap and the air shall be free of oil and water as it leaves the airline.

Take care to protect freshly coated surfaces from subsequent blast cleaning operations. Thoroughly wire brush damaged primed surfaces with a non-rusting tool, or if visible rust occurs, re-blast to a near white condition. Clean and re-prime the brushed or blast cleaned surfaces within the time recommended by the manufacturer.

C.2 Coating Application

Apply paint in accordance to the manufacturer's recommendations in a neat workmanlike manner. Paint application shall normally be by airless spray.

The engineer may allow the use of conventional spray equipment after satisfactory demonstration by the contractor of the proper technique and handling of that equipment.

Mix the paint or coatings in accordance to the manufacturer's directions to a smooth lump-free consistency. After mixing and during application, continuously stir the paint or coating under constant slow speed agitation by use of a jiffy mixer.

Prior to applying the prime coat, stripe with primer all edges, rivet and bolt heads, nuts and washers by either brush or spray application.

Remove all dry spray by vacuuming, wiping, or sanding if necessary.

If the application of the coating at the required thickness in one coat produces runs, bubbles, or sags; apply a "mist-coating" in multiple passes of the spray gun; separate the passes by several minutes. Where excessive coating thickness produces "mud-cracking", remove such coating back to soundly bonded coating and re-coat the area to the required thickness.

The resultant paint film shall be smooth and uniform, without skips or areas of excessive paint.

The coating is supplied for normal use without thinning. If in cool weather it is necessary to thin the coating for proper application, thin in accordance to the manufacturer's recommendations.

During surface preparation and coating application the ambient and steel temperature shall be between 39 degrees F and 100 degrees F. The steel temperature shall be at least 5 degrees F above the dew point temperature. (This requires the steel to be dry and free of any condensation or ice regardless of the actual temperature of the steel.) The relative humidity shall not exceed 85%.

Paint thickness shall be as follows:

Dry Film Thickness	
Prime Coat	3 mils min.
Intermediate Coat	3 mils
Top Coat	3 mils

Time to recoat shall be according to the manufacturer's recommendations.

The dry film thickness will be determined by use of a magnetic film thickness gage. The gage shall be calibrated for dry film thickness measurement in accordance to SSPC-PA 2. Dry film thickness in each area measured will be based on an average of three gage readings, after calibration of the gage to account for surface profile of the bare steel as a result of surface preparation.

D Measurement

The department will measure Structure Repainting Recycled Abrasive (Structure), completed in accordance to the contract and accepted, as a single complete unit of work.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
517.1800.S.01	Structure Repainting Recycled Abrasive Structure B-40-0438	LS

Payment is full compensation for preparing and cleaning the designated surfaces; furnishing and applying the paint; and for providing the listed equipment.
517-050 (20050502)

57. Labeling and Disposal of Waste Material.

The EPA ID number for this Structure B-40-438 is WIR000146431.

Presently, the state has an exclusive mandatory use contract with a private waste management contractor to transport and dispose of hazardous waste.

The state's waste management contractor shall furnish and deliver appropriate hazardous waste containers and site-specific labels to each structure site. The provided containers shall be placed at pre-selected drop-off and pick-up points at each structure site, and these locations shall be determined at the preconstruction conference. The custody of the containers and labels shall be the responsibility of the painting contractor while they are at the job site.

Report all reportable spills and discharges in accordance to the contingency plan.

Labels are site-specific. Check the labels to ensure that the project ID, structure number, and EPA ID match the structure generating the waste. Apply a label to each drum when it is opened for the first time. Fill in the date on the label the first day material is accumulated in the drum. The following page is an example of a properly filled-in label.

During paint removal operations, continuously monitor and notify the project inspector of the status of waste generation and quantity stored so that timely disposal can be arranged.
517-055 (20100709)

HAZARDOUS WASTE
WW-5257580999-001-01-0

STORAGE LABEL

DOT SHIPPING DESCRIPTION

RQ, HAZARDOUS WASTE, SOLID, n.o.s.,
(LEAD), 9, NA3077, III, (D008)

Enter the date that waste materials were first placed into the container

HAZARDOUS WASTE – FEDERAL LAW PROHIBITS IMPROPER DISPOSAL. IF FOUND, CONTACT THE NEAREST POLICE OR PUBLIC SAFETY AUTHORITY OR THE U.S. ENVIRONMENTAL PROTECTION AGENCY.

DATE ACCUMULATED: 07/01/2005

WISC DOT BRIDGE # B-29-53/54
I-94 OVER CTH H
PROJECT # 5882-03-70
CAMP DOUGLAS, WI 54618 (608)963-0871

GENERATOR EPA ID
WIR000121103

Project ID Number on label must match the Project Number assigned by the WIDOT

Bridge Number and Address on label must match specific bridge from which waste was generated.

EPA ID Number on label is specific to the bridge from which the waste is generated.

58. Negative Pressure Containment and Collection of Waste Materials, Structure B-40-0438, Item 517.4500.S.01.

A Description

This special provision describes providing a dust collector to maintain a negative air pressure in the enclosure; furnishing and erecting enclosures as required to contain, collect and store waste material resulting from the preparation of steel surfaces for painting, and repainting, including collection of such waste material, and the labeling and storage of waste material in approved hazardous waste containers, all as hereinafter provided.

B (Vacant)

C Construction

Erect an enclosure to completely enclose (surround) the blasting operations. The ground, slope paving, or roadway cannot be used as the bottom of the enclosure unless approved by the engineer. So that there are no visible emissions to the air or ground or water, design, erect, operate, maintain and disassemble the enclosures in such a manner to effectively contain and collect dust and waste materials resulting from surface preparation and paint over spray. Where bulkheads are required, construct them of plywood and properly seal them. Suspend all enclosures over water from the structure or as approved by the engineer.

Construct the enclosure of flexible materials such as tarpaulins or of rigid materials such as covered plywood, or of a combination of flexible and rigid materials. Systems manufactured and provided by Eagle Industries, Detroit Tarps, or equal, are preferred. The tarpaulins shall be lined, either as part of the tarp system or have a separate plastic lining. Maintain all materials free of tears, cuts or holes. The vertical sides of the enclosure shall extend from the bottom of the deck down to the level of the ground, slope paving, roadway, work platform or barge where used for structures over water, and shall be fastened securely to those levels to prevent the wind from lifting them. Bulkheads are required between beams to enclose the blasting area as approved by the engineer. Where bulkheads are required, construct them of plywood and properly seal them. To prevent spent materials and paint over spray from escaping the enclosed area, overlap and fasten together all seams. Place groundcovers under all equipment prior to operations or as approved by the engineer.

To allow proper cleaning, inspection of structures or equipment, and painting, provide safe adequate artificial lighting in areas where natural light is inadequate.

Provide a dust collector so that there are no visible emissions outside of the enclosure and so that a negative air pressure inside the enclosure is maintained. The dust collector shall be sized to maintain the minimum air flow based on the cross-sectional area of the enclosure.

A combination of positive air input and negative air pressure may be needed to maintain the minimum airflow within the enclosure.

Filter all air exhausted from the enclosure to create a negative pressure within the enclosure so as to remove all hazardous and other particulate matter.

As a safety factor for structures over water, provide for scum control. Effectively contain the scum that forms on the water and does not sink in place from moving upstream or downstream by the use of floating boom devices.

If in the use of floating boom devices the scum tends to collect at the devices, contain, collect, store the scum, and do not allow it to travel upstream or downstream beyond the devices. Remove the scum at least once a day or more often if needed.

Collect and store at the structure site for disposal all waste material or scum collected by this operation, or any that may have fallen onto the ground tarps. Collect and store all waste material and scum at the end of each workday or more often if needed. Storage shall be in provided hazardous waste containers. Label each container as it is filled, using the labels provided by the Hazardous Waste Disposal contractor. Check the label and ensure that the project ID, structure number and EPA ID match the structure. Fill in the generation date when the first material is placed in the container. Secure all containers at the end of each workday. Keep the containers covered at all times except to add or remove waste material. Store the containers in an accessible and secured area, not located in a storm water runoff course, flood plain, or exposed to standing water.

In a separate operation, recover the recyclable abrasive for future application, and collect the paint and/or corrosion particles for disposal. Sand is not an acceptable abrasive.

D Measurement

The department will measure Negative Pressure Containment and Collection of Waste Materials (Structure), completed in accordance to the contract and accepted, as a single complete unit of work for each structure designated in the contract.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
517.4500.S.01	Negative Pressure Containment and Collection of Waste Materials, Structure B-40-0438	LS

Payment is full compensation for designing, erecting, operating, maintaining, and disassembling the containment devices; providing negative pressure exhaust ventilation; collecting, labeling, and for storing spent materials in provided hazardous waste containers.

59. Portable Decontamination Facility, Item 517.6001.S.

A Description

This special provision describes furnishing and maintaining weekly or more often if needed, a single unit portable decontamination facility as hereinafter provided.

B Materials
Supply adequate heating equipment with the necessary fuel to maintain a minimum temperature of 68° F in the facility.

The portable decontamination facility shall consist of a separate "Dirty Room", "Shower Room" and "Clean Room". The facility shall be constructed so as to permit use by either sex. The facility shall have adequate ventilation.

The "Dirty Room" shall have appropriately marked containers for disposable garments, clothing that requires laundering, worker shoes, and any other related equipment. Each container shall be lined with poly bags for transporting clothing, or for disposal. Benches shall be provided for personnel.

The "Shower Room" shall include self-contained individual showering stalls that are stable and well secured to the facility. Provide showers with a continuous supply of potable hot and cold water. The wastewater must be retained for filtration, treatment, and/or for proper disposal.

The "Clean Room" shall be equipped with secure storage facilities for street clothes and separate storage facilities for protective clothing. The lockers shall be sized to store clothing, valuables and other personal belongings for each worker. Benches shall be provided for personnel.

Supply a separate hand wash facility, either attached to the decontamination facility or outside the containment.

C Construction
Properly contain, store, and dispose of the wastewater.

D Measurement
The department will measure Portable Decontamination Facility 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
517.6001.S	Portable Decontamination Facility	Each

Payment is full compensation for furnishing and maintaining a portable decontamination facility.
517-060 (20050502)

60. Finishing Concrete Surfaces B-40-0438.

Delete the third, fourth and fifth sentences of the first paragraph of standard spec 602.3.2.3 and replace with the following:

Place the concrete on a moist foundation, deposit to the required depth, and consolidate and space sufficiently to bring the mortar to the surface, after which strike it off and float with a float. Before the mortar is set, steel trowel and brush the surface.

61. Street Lighting Conduit Box-Outs.

The labor associated with construction of the 30-inch x 36-inch concrete sidewalk box outs shown on the lighting conduit plans for street light poles, signal standards, and/or conduit junction boxes will be paid for under bid item 602.0410, Concrete Sidewalk 5-Inch.

62. Adjusting Manhole Covers.

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

Make manhole cover adjustments as shown in plans, construction detail drawings or otherwise directed by the engineer. The costs for adjusting manholes by the contractor will be paid under the appropriate bid items.

Each utility owner, at their own cost, will adjust their utility company manholes.
Adjustment of manholes in asphaltic areas, including sawing and patching materials used, are incidental to bid item Adjusting Manhole Covers.

Revise standard spec 611.3.7 by deleting the last paragraph.

Set the manhole frames so that they comply with the surface requirements of standard spec 450.3.2.9. At the completion of the paving, a 6-foot straightedge shall be placed over the centerline of each manhole frame parallel to the direction of traffic. A measurement shall be made at each side of the frame. The two measurements shall be averaged. If this average is greater than ⅝ inches, reset the manhole frame to the correct plane and elevation. If this average is ⅝ inches or less but greater than ⅜ inches, the manhole frame shall be allowed to remain in place but shall be paid for at 50 percent of the contract unit price.

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

63. Pipe Underdrain 6-Inch, Item 612.0106.

All work shall be done in accordance to standard spec 612 and consists of providing polyvinylchloride drainage pipe underdrain (6-inch). All work and materials necessary to install the pipe underdrains in the bioswales shall be included in the unit bid price. The work shall include but not be limited to installation of pipe underdrain (6-inch), connections to the pipe underdrain unperforated (6-inch) or to inlets, end caps on all end pieces, and all tees, wyes, fittings necessary.

The pipe should have 3/8-inch perforations, spaced at 6-inch centers, with a minimum of 4 holes per row. It shall be laid just under the bedding layer but shall not be wrapped with geotextile fabric. A two foot wide section of geotextile fabric shall be placed on top of and centered on the pipe. The fabric shall extend 1-foot beyond the ends.

64. Pipe Underdrain Unperforated 6-Inch, Item 612.0206.

All work shall be done in accordance to standard spec 612 and and consists of materials necessary to install the Pipe Underdrain Unperforated 6-Inch) shall be included in the unit bid price.

The underdrain shall be laid on class "C" bedding. The contractor shall be required to manage all flows during construction and the reconnection to the storm inlets. The cost of any bypassing and pumping flow around the project shall be included in the unit bid price.

The work shall include but not limited to coring new connections to existing or new storm inlets, making all connections to the new pipe underdrain (6-inch), and all tees, wyes, fittings necessary to connect and construct the underdrain.

65. Fence Chain Link Salvaged 4-Feet (B-40-058).

Conform to standard spec 616 as modified in this special provision.

Revise standard spec 206.1 as follows:

This section describes removing and re-installing chain link fence at the northeast and southeast wing walls as necessary for installation of the new structure railing.

66. Landmark Reference Monuments, Item 621.0100.

Locate and install the monuments at the direction of the City of Milwaukee, Infrastructure Services Division's Construction Section.

Replace standard spec 621.2 with the following:

Use monuments provided by the Southeast Wisconsin Regional Planning Commission (SEWRPC) that consist of precast concrete with a brass cap. Notify the engineer at least

one week prior to needing the monuments. The engineer will contact Mr. John Washburn of the SEWRPC, (262) 547-6721, to arrange for the delivery of the monuments to the project.

Replace standard spec 621.3.2.1(2) with the following:

Provide, at the discretion of the engineer, a 2-foot diameter by 3-foot deep hole (box out) backfilled with base aggregate dense at the location of the monument until after paving is complete at which time the monument can be reset and the surrounding pavement can be placed.

Place the monuments so that the top elevation of the monuments shall be approximately 1 inch below the finished pavement surface or flush with the ground surface in unpaved areas. Place the monuments so that the caps are oriented in the cardinal direction (read from due south). Place the monuments so that the actual point of reference is centered on the location marks on the cap.

Replace standard spec 621.5(2) with the following:

Payment for the Landmark Reference Monuments is full compensation for furnishing all excavating; placing the precast monument; placing and compacting backfill material; and for properly disposing of surplus materials.

67. Dust Control Implementation Plan.

A Description

Develop, update, and implement a detailed Dust Control Implementation Plan (DCIP) for all land-disturbing construction activities and associated impacts both within the project site boundaries and outside the project site boundaries. This article also specifies contract bid items the contractor shall incorporate into their DCIP.

B (Vacant)

C Construction

C.1 General

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

Submit a DCIP to the engineer for review at least 14 calendar days before the preconstruction conference. Coordinate with the department, if requested, to resolve DCIP related issues before the preconstruction conference. The department will either approve the DCIP or request revisions. Do not initiate any land-disturbing activities without the department's approval of the DCIP.

C.2 Dust Control Implementation Plan Contents

Develop a DCIP tailored to the specific needs of the project. Consider potential impacts to businesses and residences adjacent to the job site. Describe in detail all land disturbing, dust generating activities. Identify strategies to prevent, mitigate, and collect excess dust. Establish clear lines of communication with the engineer to ensure that all dust control issues can be dealt with promptly.

The DCIP shall include, but not be limited to, all of the following:

1. A single contact person with overall responsibility for the DCIP development as well as surveillance and remediation of job related dust. Include the following:
    - Name, firm, address, and working-hours phone number.
    - Non-working-hours phone number.
    - Email address.
2. Individual contact persons and their respective areas of responsibility. Include the following:
    - Name, firm, address, and working-hours phone number.
    - Non-working-hours phone number.
    - Email address.
3. A site map locating project features, the job site boundaries, all ingress and egress points, air intakes and other dust-sensitive areas, and all public and private paved surfaces within and immediately adjacent to the job site. Show where specific land disturbing, dust generating activities will occur and, to the extent possible, where the contractor plans to employ various dust control or prevention strategies.
4. A matrix showing, for each anticipated land disturbing, dust generating activity, the following:
    - Preventive measures that will be employed.
    - The applicable contact person.
    - The contractor's timetable and/or surveillance measures used to determine when remediation is required.
    - The specific dust control and remediation measures that will be employed. List the specific contract bid items that will be used for payment. Also indicate costs that are incidental to the contract.
    - Both maintenance and cleanup schedules and procedures.
    - How excess and waste materials will be disposed of.
5. A description of how off-site impacts will be monitored and dealt with.

C.3 Updating the Dust Control Implementation Plan

Update the DCIP throughout the term of the contract as the engineer directs. Obtain the engineer's approval for all DCIP alterations. Also obtain the engineer's approval for DCIP routine adjustments for weather, job conditions, or emergencies that will have an impact on payment under the bid items listed in the approved DCIP.

C.4 Dust Control Deficiencies

Correct engineer identified dust control deficiencies within the time the engineer specifies. The engineer will allow from 30 minutes to 24 hours from the time the engineer notifies the contractor in writing of the deficiency. Deficiencies include, but are not limited to, actions or lack of actions resulting in excessive dust, failing to comply with the contractor's dust control implementation plan or associated special provisions, and failing to properly maintain equipment.

D Measurement

The department will measure the various bid items associated with dust control as specified in the applicable measurement subsections of either the standard specifications or other contract special provisions. The department will not measure work performed under a DCIP alteration unless the engineer specifically approves that alteration.

Measurement under the DCIP shall include following contract bid item:

623.0200 Dust Control Surface Treatment

The department will measure work completed under other existing contract bid items if approved as a part of the DCIP. The department will consider new bid items to the contract if proposed under the DCIP. The department will not measure work required under the DCIP that is not included in contract bid items.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
623.0200	Dust Control Surface Treatment	SY

All costs associated with the development and updating of the DCIP are incidental to the contract. The department will pay separately for the work required to implement the actions approved in the DCIP under the contract bid items approved as a part of the DCIP. All other costs associated with work approved under the DCIP are incidental to the contract.

If the contractor fails to correct a dust control deficiency within the specified time, the department will deduct $5,000 per day from payments due the contractor for each calendar day, or fraction of a day, that the deficiency exists. The department will assess time beginning with contractor notification and ending when the engineer accepts the correction. After expiration of the specified time for correction, the engineer may correct, or have a third party, correct the deficiency. In addition to the $5,000 per day deduction, the department will deduct costs of this correction from payments due the contractor.

68. Mulching.

All contract mulch shall be provided in accord to standard spec 627 and shall consist of shredded hardwood bark that meets the requirements of standard spec 632.2.6.

69. Furnishing and Planting Plant Materials.

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

Furnish all plants which have been grown within the states of Wisconsin, Minnesota, or the parts of Iowa and/or Michigan located within Zone 5 of the "Plant Hardiness Zone Map" produced by the United States Department of Agriculture, Miscellaneous Publication No. 1475 issued January 1990; unless otherwise approved by the engineer.

70. Landscape Planting Surveillance and Care Cycles.

If the care specialist fails to perform any of the required care cycles as specified in standard spec 632.3.19.1, the department will assess daily damages in the amount of $500.00 to cover the cost of performing the work with other forces. The department will assess these damages for each day the requirements of the care cycle remain incomplete, except when the engineer extends the required time period.
632-005 (20070510)

71. Bioswale Maintenance and Surveillance.

While undertaking the requirements outlined in standard spec 632.3.19.1, the contractor is to:

- Remove all trash and leaves.
- Clean off any overflow structure to prevent from clogging.

72. Traffic Control.

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

Permanently label each barricade, sign or other traffic control device with the name and telephone number for 24-hour emergency service, printed in letters at least ¾ inches in height.

No operation may proceed until all traffic control devices for such work are in the proper location.

During the life of this contract, provide 24 hour-a-day availability of equipment and forces to promptly restore barricades, lights, signs or other traffic control devices that are damaged or disturbed. In no case may any barricade, light, sign or other traffic control device be out of service for more than 2 hours. The cost to maintain and restore the above items is incidental to the bid item Traffic Control and no additional payment will be made therefore.

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

Provide the City of Milwaukee Police Department and the engineer a current telephone number with which the contractor or his representative can be contacted during non-working hours in the event a safety hazard develops.

Mask out all traffic control signs and have flags removed when not in use.

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

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

Park or store equipment and materials only at work sites approved by the engineer.

Do not disturb, remove, or obliterate any traffic control signs, advisory signs, shoulder delineators, or beam guard in place along the traveled roadways without the approval of the engineer.

Install appropriate advance and intermediate warning signs of standard design. Install the signs at locations indicated on the plan and at locations as directed by the engineer in accordance to Part VI of the Manual of Uniform Traffic Control Devices. Sign shape, message and color must be in accordance to Part VI of the Manual of Uniform Traffic Control Devices.

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

A Description

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

B Materials

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

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

C Construction

C.1 General

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

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

C.2 Groove Depth

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

C.3 Groove Width – Longitudinal Markings

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

C.4 Groove Position

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

C.5 Groove Cleaning

C.5.1 Concrete

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

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

C.5.2 New Asphalt

Groove pavement five or more days after paving.

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

C.5.3 Existing Asphalt

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

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

C.6 Tape Application

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

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

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

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

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

2) For the remainder counties:

   · Apply either adhesive.

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

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

D Measurement

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

E Payment

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

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

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

74. Slope Paving Concrete.

As herein modified, slope paving limits are shown on the slope paving plan. Avoid construction during any rain event. Remove construction debris to area above 100 year high water elevation at end of each work day. Providing, drilling and installation of epoxy masonry anchors into existing slope paving is included in this item

75. Construction Staking.

Supplement standard spec 650 with the following:

- Stake each plan grade so that the form-setters and inspector can check the grade and alignment.
- Item 650.4000 includes staking for the adjustment of TES manhole covers.

76. Construction Staking Structure Layout.

Supplement standard spec 650 with the following:

- Stake each plan grade so that the form-setters and inspector can check the grade and alignment.
- Mark the construction stakes with the respected cut or fill measurements for each plan grade.

77. Construction Staking Electrical Installations 2265-08-70, Item 650.8500.01.

The work under this item shall be performed in accordance to the requirements of standard spec 650, and as shown in the plans.

The traffic poles, bases and vaults are stationed to the center. See drawing details for any additional information.

78. General Requirements for Electrical Work.

Append standard spec 651.3.3(3) with the following:

Request a signal inspection of the completed signal installation to the engineer at least five working days prior to the time of the requested inspection. Notify the department's

Electrical Field Unit at (414) 266-1170 to coordinate the inspection. The department's Region Electrical personnel will perform the inspection.

79. Conduit Rigid Nonmetallic Schedule 40 2½-Inch B-40-0438.

A Description
Perform the work in accordance to the pertinent requirements of standard spec 652, and as hereinafter provided.

This work consists of furnishing and installing two 2 ½ - inch dia. conduit in the east and west sidewalks of the main structure, located at one foot and four feet from the curb.

B Materials
Furnish schedule 40 polyvinyl chloride (PVC) conduit. Conduit will be accepted on the basis of the manufacturer's Certificate of Compliance and Field Inspection by the engineer upon delivery to the project.

PVC conduit and fittings shall conform to the requirements of Standard Specifications for Smooth-Wall Poly (Vinyl Chloride) (PVC) Conduit and Fittings for Underground Installation, ASTM Designation: F512 (latest edition).

C Construction

1. Placing of Duct. Inspect all ducts before placing to see that the bores are clean and free from mud, sand, etc. Only ducts with a smooth bore, free from burrs, rough projections etc. shall be used. Smooth off burrs or other rough areas found in the duct that are likely to damage cable by rasping or scraping.

2. Install a standard box adapter on all ducts at pull-box access points.

3. Install a standard expansion coupling on all ducts at all bridge expansion locations as indicated on the plans.

4. Place end caps on all ducts terminating outside of the abutments and tape caps in place.

5. Furnish $^{3}/_{8}$" diameter pull rope.

6. Inspection. Contact Dennis Miller at (414) 286-5942 office, (414) 708-4251 cell, to arrange for the inspection of the conduit both prior to the bridge deck pour and prior to the sidewalk pour.

D Measurement
The department will measure Conduit Rigid Nonmetallic Schedule 40 2 ½ - Inch by the linear foot, measured along the centerline of conduit.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
652.0230	Conduit Rigid Nonmetallic Schedule 40 2 ½ -Inch B-40-0438	LF

Payment is full compensation for providing the conduit, conduit bodies and fittings; for expansion fittings and caps; and for making inspections.

80. Conduit Rigid Nonmetallic Schedule 40 1 ½-Inch, Item 652.0220; Schedule 40 2-Inch, Item 652.0225; Schedule 40 2 ½-Inch, Item 652.0230; Schedule 40 3-Inch, Item 652.0235.

This work consists of furnishing and installing PVC conduits in accordance to standard spec 652, and as shown in the plan details.

Locations of the conduits where they are required are identified in the plans. However, installation will require integration with existing field conditions. Appropriate adjustment on conduit locations may be made if the field conditions are such that the pipes cannot be installed at the specified locations. Any relocation of greater than 5 feet must be approved by the engineer.

Plan changes must be approved by the City of Milwaukee Electric Services Supervisor. The primary contacts are Mr. Dennis Miller, Street Lighting Supervisor (414) 286-5942 office, (414) 708-4251 mobile; or Mr. George Berdine, Street Lighting Supervisor (414) 286-5943 office, (414) 708-4245 mobile.

81. Conduit Special 2-Inch, Item 652.0605; Conduit Special 2 ½-Inch, Item 652.0610.

These works consist of furnishing and installing rigid nonmetallic schedule 40 (PVC) conduits in accordance to standard spec 652, and as shown in the plan details.

Locations of the conduits where they are required are identified in the plans. However, installation will require integration with existing field conditions. Appropriate adjustment on conduit locations may be made if the field conditions are such that the pipes cannot be installed at the specified locations. Any relocation of greater than 5 feet must be approved by the engineer.

Plan changes must be approved by the City of Milwaukee Electric Services Supervisor. The primary contacts are Mr. Dennis Miller, Street Lighting Supervisor (414) 286-5942 office, (414) 708-4251 mobile; or Mr. George Berdine, Street Lighting Supervisor (414) 286-5943 office, (414) 708-4245 mobile.

82. Conduit Loop Detector, Item 652.0800; Loop Detector Slots, Item 652.0900.

This work consists of furnishing and installing PVC conduits in accordance to standard spec 652, and as shown in the plan details.

Locations of the conduits where they are required are identified in the plans. However, installation will require integration with existing field conditions. Appropriate adjustment on conduit locations may be made if the field conditions are such that the pipes cannot be installed at the specified locations. Any relocation of greater than 5 feet must be approved by the engineer.

Plan changes must be approved by the City of Milwaukee Electric Services Supervisor or Traffic Engineer. The primary contacts are Mr. Al Nichols, Traffic Operations Dispatch, (414) 286-3687 office, (414) 708-5148 mobile; or Mr. Joseph Blakeman, Traffic Control Engineer III, (414) 286-8070.

Provide three sets of as-built plan sets to City of Milwaukee Electric Services Supervisor or engineer upon completion of conduit installation.

83. Concrete Base Type 10, Item 654.0110.

B Materials
Modify standard spec 654.2 as follows:

Contractor shall supply templates, anchor rods, nuts, and washers for installation as shown on the plans.

84. Electrical Service Meter Breaker Pedestal STH 241 and Howard Ave., Item 656.0200.01.

Append standard spec 656.2.3 with the following:

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

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

Install the cabinet base and meter breaker pedestal first, so the electrical utility company can install the service lateral. Install a 3” conduit from the point of service from the utility to the meter breaker pedestal. Finish grade the service trench, replace topsoil that is lost or contaminated with other materials, fertilize, seed, and mulch all areas that are disturbed by the electrical utility company.

Append standard spec 656.5(3) with the following:

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

85. Traffic Signals, General.

All traffic signal work shall be in accordance to the State of Wisconsin Department of Transportation Standard Specifications for Highway and Structure Construction, 2014 edition, the plans, and these special provisions.

Note that the failure to comply with the state standards and specifications may result in the cost of corrections to be made at the contractor's expense. Also, any additional disruption of State-owned facilities shall be repaired or relocated as needed at the contractor's expense.

Notify the department's Electrical Field Unit at (414) 266-1170 at least three weeks prior to the beginning of the traffic signal work.

86. Traffic Signal Mounting Hardware.

Replace standard spec 658.2.1 (2) with the following:

Use an approved type of pole or standard vertical mounting brackets/clamps for signal faces from an approved manufacturer. Pedestrian traffic signal heads mounted in the median shall use federal yellow aluminum side of pole 2-way upper and lower arm assemblies providing 16 ½-inch center to center spacing.

87. Pedestrian Signal Face 16-Inch.

Append standard spec 658.2.3.1 with the following:

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

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

88. LED Modules Pedestrian Countdown Timer 16-Inch.

Append standard spec 658.2.3.2 (1) with the following:

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

89. Pedestrian Push Buttons, Item 658.0500.

Append standard spec 658.2.5 with the following:

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

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

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

90. Traffic Signal Faces.

Append standard spec 658.3.2 with the following:

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

91. Temporary Traffic Signals for Intersections, Intersection of STH 241 and Howard Avenue, Item 661.0200.01.

Append standard spec 661.2.1 with the following:

(1) The contractor shall furnish and install all temporary traffic signal equipment as shown on the plans. The signal controller shall be capable of operating with a non-intrusive detection system. All wood poles shall be plumb and level. All engineering requested timing changes shall be coordinated with the DOT electrical field unit at (414) 266-1170.

(3) Contractor shall use existing underground electric service and meter breaker pedestal for the operation of the Temporary Traffic Signal. The department will pay for all Energy Costs for the operation of the Temporary Traffic Signal.

Furnish and install a generator to operate the Temporary Traffic Signal for the time required to switch the existing Permanent Traffic Signal over to the Temporary Traffic Signal as well as the time required to switch the Temporary Traffic Signal back over to the existing Permanent Traffic Signal.

Contractor shall contact the local electrical utility at least four days prior to making the switch from the existing Permanent Traffic Signal to the Temporary Traffic Signal. The

contractor shall contact the local electrical utility at least four days prior to making the switch from the Temporary Traffic Signal back to the existing Permanent Traffic Signal.

(5) Contractor shall furnish a non-intrusive traffic detection system capable of operating as shown in the temporary signal plans.

Append standard spec 661.2.1.2(3) with the following:

For the non-intrusive vehicle detection system cable, furnish all necessary cables and wiring per the manufacturer's recommendations. Furnish and install any necessary in-line repeaters due to required cable lengths. The cable must be suitable for aerial applications if installed on the temporary traffic signal span wire.

Append standard spec 661.3.1 with the following:

(2) Request a signal inspection of the complete temporary traffic signal installation. Make this request to the engineer at least five working days before the requested inspection. Notify the department's Electrical Field Unit at (414) 266-1170 to coordinate the inspection. The department's Region Electrical personnel will perform the inspection.

(4) Install non-intrusive vehicle detection system. Install any interface boards, card racks, and other necessary equipment in the signal cabinet. Mount the detection devices on the wood poles per the manufacturer's recommendations. Mounting hardware shall be supplied with each detection device to allow the device to be attached to a pole with standard stainless steel strapping bands. The vehicle detection zones shall be set near the vicinity and within the approximate distance from the stop bar as shown on the plans.

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

(6) It shall be the contractor's responsibility to relocate the detection device(s) to a suitable location if construction activities and/or construction staging changes impede the detector operation.

(7) The non-intrusive detection system, as shown in the traffic signal construction staging plans, shall be complete in place, tested, and in full operation during each stage and sub-stage of construction.

Append standard spec 661.3.1.2 with the following:

(7) Feed all non-intrusive vehicle detection cables to vehicle detectors.

(8) All cables associated with the non-intrusive vehicle detection system shall be routed to the cabinet. Each lead shall be appropriately marked as to which street or avenue it is associated.

Append standard spec 661.3.1.4 with the following:

(4) Maintain all non-intrusive vehicle detection zones as the plans show. Vehicle detection zones shall be checked on a bi-weekly basis to ensure that they are working and/or are aimed properly with the construction staging. Periodic adjustment of the vehicle detection zones may be required due to changes in traffic control, staging, or other construction operations.

(5) Ensure that the non-intrusive vehicle detection system stays in clean working order. Periodic cleaning of the vehicle detectors and other equipment may be required due to dirt and dust build-up.

Revise standard spec 661.5 with the following:

(2) Payment for the Temporary Traffic Signals for Bridges, Temporary Traffic Signals for Intersections, and Temporary Ramp Meter bid items is full compensation for providing, operating, maintaining, and repairing the complete temporary installation, including non-intrusive vehicle detection system; and for removal. Payment also includes the following:

1. Furnishing and installing replacement equipment, if necessary.
2. Maintaining and changing all non-intrusive vehicle detection zones to match the plans, traffic control, and construction staging.
3. Relocating vehicle detectors due to construction activities, if required.
4. Checking and/or adjusting all non-intrusive vehicle detection zones on a bi-weekly basis.
5. Periodically cleaning all non-intrusive vehicle detection equipment, if required.
6. For drilling holes; furnishing and installing all materials, including bricks, and coarse aggregate; for excavation, bedding, and backfilling, including any sand or other required materials; furnishing and placing topsoil, fertilizer, seed, and mulch in disturbed areas; for properly disposing of surplus materials; for making inspections; and for furnishing all labor, tools, equipment, and incidentals necessary to complete the work.

92. Deep Concrete Surface Repair, Item SPV.0025.01.

A Description

This special provision describes concrete surface repair as needed which is beyond the 6-inch deep concrete surface repair if encountered during the regular concrete surface repair of the delaminated portion of the deck , abutments, wing walls or piers as shown on the plans. Provide additional steel reinforcement and concrete masonry anchors as needed.

B Materials
Provide concrete and steel reinforcement in accordance to standard specs 502 and 505 and these special provisions. Concrete shall match the color of the existing concrete being patched. Use high strength epoxy coated steel reinforcement.

Provide masonry anchors as needed in accordance to standard spec 502 and these special provisions.

C Construction
Perform work in accordance to the applicable requirements of the standard specifications in general, and standard specs 501, 502, 505, and 509 in particular, except as modified herein or shown on the plans. Before starting the repair, conduct a survey of the concrete surfaces and mark areas requiring repair for engineer's inspection. Notify the engineer 48 hours in advance of the inspection. Remove concrete only from locations approved by the engineer. Do not remove more than 6 inches of concrete unless specifically shown on the plans or approved by the engineer. This bid item will be used only if the depth of deteriorated concrete is more than 6 inches in depth. Define the limits of removal on the exposed surface with 1-inch deep saw cut. Remove concrete in such a way that removal pertaining to each bid item is bounded by straight lines. Establish horizontal and vertical controls to serve as a reference for measuring the thickness of concrete removed.

D Measurement
The department will measure Deep Concrete Surface Repair by the cubic foot acceptably completed, measured as the exposed surface area, following removal. The depth of removal will be measured as the distance from the existing surface to the prepared final surface minus 6 inches to find the actual volume of the Deep Concrete Surface Repair. Each repair area or volume will be measured only once for payment purposes, irrespective of the number of operations for removing the concrete from that area.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0025.01	Deep Concrete Surface Repair	CF

Payment is full compensation for removing unsound concrete; blast cleaning and providing additional reinforcement as necessary; furnishing and placing concrete; and for furnishing all scaffolding, formwork. Furnishing and placing reinforcement and masonry anchors will be paid for separately. Concrete surface repairs up to 6 inches in depth will be paid for separately.

93. Planting Soil, Item SPV.0035.01.

A Description
Furnish special soil at areas designated on the plan and at the direction of the engineer to help promote future plant and tree growth. See Planting - Streetscape plans for locations.

B Materials

B.1 General

Provide soil that is natural, fertile, and friable constituting the "A" horizon from naturally well drained areas. Provide soil that is not excessively acidic or alkaline with no toxic substances that may be harmful to plant growth. Provide soil without subsoil admixtures free from clay clods, stones, roots, or similar substances one inch or more in diameter, debris, or other objects that may be a hindrance to planting operations.

B.2 Technical Specifications

Required Soil Texture: USDA Sandy Loam approximating the following particle distribution:

Description		Average Diameter
Gravel	Trace	>2.0 mm
Very Coarse Sand	40-65%	1.0-2.0 mm
Coarse Sand	40-65%	0.5-1.0 mm
Medium Sand	40-65%	0.25-0.5 mm
Fine Sand	10-20%	0.10-0.25 mm
Very Fine Sand	10-20%	0.05-0.10 mm
Silt	10-15%	0.002-0.05 mm
Clay	10-20%	<0.002 mm

Required Soluble Salt Level: less than 844 ppm

Required Percent Organic Matter: 4-8%, by weight

Required Soil pH: 5.5-6.5

Conduct a physical analysis to include the following information:

a. Percent organic matter by weight.
b. Bulk density, expressed in g/cm^3.

Conduct a chemical analysis to include the following information:

a. Soil pH.
b. Nutrient content of the following nutrients, expressed in unit/area.
    1. Available Phosphorus
    2. Potassium
    3. Calcium
    4. Magnesium
    5. Manganese
c. Soluble Salt Level

B.3 Verification

Provide a Certification of Materials Conformance from the soil vendor stating that the soils provided meet or exceed the criteria listed above. In addition, provide written verification of the following chemical constituents: Soil pH, available phosphorus, potassium, calcium, magnesium, manganese, and soluble salt level. The certification

provided must be on company letterhead, year current and be notarized. Forward all copies of planting soil mix conformance documents to Milwaukee Landscape Architect, Scott Baran, at 841 N. Broadway, RM 619, Milwakuee WI 53202, for approval. The department/City of Milwaukee reserves the right to sample and test soils placed on the project under the item Planting Soil.

Perform all soil mixing at the contractor's yard using appropriate soil mixing and shredding equipment of sufficient capacity to assure proper quality control. Do not mix soils at the project site unless suitable portable equipment has been approved by the city's landscape architect prior to the operation taking place.

C (Vacant)

D Measurement
The department will measure Planting Soil as quantity of soil in cubic yards, acceptably completed with the appropriate documentation.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0035.01	Planting Soil	CY

Payment is full compensation for furnishing and placing the planting soil; and for providing documentation to the landscape architect that the planting soil meets specifications.

94. Engineered Soil, Item SPV.0035.02.

A Description
Furnish engineered soil at areas designated on the Planting – Bioswales plans and at the direction of the engineer.

B Materials
B.1 Technical Specifications
The soil mixture shall consist of a mixture of silica sand, topsoil and compost. The mix shall be designed to approximate the following percentages by volume.

Engineered Soil Component	Percentage Composition (by volume)
Silica Sand	50
Topsoil (sandy loam or loamy sand)	25
Compost	25

Compost for Bioretention Basin -the compost shall meet the requirements of the Wisconsin Department of Natural Resources' (WDNR) technical standard 1004, bioretention for infiltration and WDNR specifications 100, Compost.

Sand for Bioretention Basin – the sand shall be USDA course sand (0.02 to 0.04 inch diameter), pre-washed to remove clay and silt particles, and well-drained or dried prior to mixing. Calcium carbonated, dolomitic sand, and other substitutions are not allowed. Sand shall meet astm c-33.

Topsoil Material – all required topsoil material shall meet the following criteria: USDA classified sandy loam or loamy sand texture. The contractor shall furnish the topsoil from local sources or from areas having similar soil characteristics to that found at project site and approved by the engineer and shall be from naturally, well-drained sites where topsoil occurs in a depth of not less than 4 inches; do not obtain from bogs or marshes. The area shall have been treated for weeds for at least one year or topsoil shall be free of plants or plant parts such as bermuda grass, quack grass, johnson grass, mugwort, poison ivy, canada thistle and reasonably free of wood and other extraneous matter. The topsoil textural class shall be approved by the owner.

The engineered soil mixture shall have a pH between 5.5 and 6.5 and have adequate nutrient content to meet plant growth requirement.

B.2 Verification
Test samples shall be provided upon request to the city and at a rate designated by the engineer. Testing shall be in accordance to the methods prescribed in ASTM D 2974 and ASTM D 2976.

C Construction
All engineered soil shall extend at a slope 5:1 from the middle of the beds to the edges.

The engineered soil shall include the removal of existing vegetation, native soil and providing all labor, equipment, and materials to supply, mix, and install the engineered soil, which includes sand, compost and topsoil. Engineered soil shall be underlined by a 4-inch bedding layer. Payment for this line item shall be on a per cubic yard basis. Measurement will be made based on in place quantities as measured by the engineer.

The contractor shall provide at least one person who shall be present at all times during the preparation and placement of the engineered soil, who shall be thoroughly familiar with the type and operation of equipment being used. Said person shall direct all work performed under this section.

D Measurement
The department will measure Engineered Soil as quantity of soil in cubic yards, acceptably completed with the appropriate documentation.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0035.02	Engineered Soil	CY

Payment is full compensation for furnishing and placing the engineered soil; and for providing documentation to the engineer that the engineered soil meets specifications.

95. Bedding Layer, Item SPV.0035.03.

A Description
Furnish and install bedding layer material in conjunction with the placement of the engineered soil.

B Materials
The bedding layer shall be 3/8-inch dry pea gravel.

C (Vacant)

D Measurement
The department will measure Bedding Layer as quantity of pea gravel in cubic yards, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0035.03	Bedding Layer	CY

Payment is full compensation for furnishing and placing the bedding layer.

96. Moving Pole and Banner, Item SPV.0060.01.

A Description
This special provision describes work required to remove and reinstall poles and banners, done in accordance to the requirements of standard spec 638.

Revise standard spec 638 by replacing the word “State” with “City” and “signs” with “ poles and banner”, to make this specification applicable to work that is done on poles and banners that belong to the City of Milwaukee.

B (Vacant)

C Construction
Revise standard spec 638.3.2(1) to state that, in addition to being removed and transported, the pole and banner shall be safely stored away, and erected back in its original location.

Revise standard spec 638.3.2(2) to state that the pole and banner shall be erected back in its original location.

Revise standard spec 638.3.6 to state that the pole and banner are to be erected back in its original location.

Contractor is responsible for any damage to poles and banners, sustained as a result of removing, storing, and reinstalling said items.

See SPV.0060.17 and construction detail regarding installation of footing that supports the pole and banner.

D Measurement
The department will measure Moving Pole and Banner as quantity of poles as each individual unit, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.01	Moving Pole and Banner	Each

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

97. Removing Pole Footing, Item SPV.0060.02.

A Description
This special provision describes work associated with the removal, of a footing that supports a pole and banner.

B (Vacant)

C Construction
Remove the entire footing, and properly dispose of.

D Measurement
The department will measure Removing Pole Footing 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.0060.02	Removing Pole Footing	Each

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

98. Inlet Cover, Type 57, Item SPV.0060.03; Inlet Cover, Type 55, Item SPV.0060.04; Inlet Cover, Type 58A, Item SPV.0060.05; Inlet Cover, Type MS 58, Item SPV.0060.06; Manhole Cover, Type 57, Item SPV.0060.07; Catch Basin Type 45A, Item SPV.0060.08.

A Description
Perform work under these items in accordance to the requirements of standard spec 611 and the details as shown on the plans.

B (Vacant)

C (Vacant)

D Measurement
The department will measure Inlet Covers (Type), Manhole Cover (Type), and Catch Basin (Type) by each individual unit, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.03	Inlet Cover Type 57	Each
SPV.0060.04	Inlet Cover, Type 55	Each
SPV.0060.05	Inlet Cover, Type 58A	Each
SPV.0060.06	Inlet Cover Type MS 58	Each
SPV.0060.07	Manhole Cover Type 57	Each
SPV.0060.08	Catch Basin Type 45A	Each

Payment is full compensation for furnishing and installing the manhole and inlet covers and inlet.

99. Inlet Screen, Type M, Item SPV.0060.09; Inlet Screen, Type R, Item SPV.0060.010.

A Description
This special provision describes furnishing, installing, and maintaining proper inlet screens as directed by the engineer, as shown on the drawings, and as hereinafter provided.

B Materials

Use woven filtration geotextile fabric with the following physical properties:

Test	Method	Value
Grab Tensile Strength (lbs)	ASTM D-4632	180 min.
Mullen Burst (lbs/in^2)	ASTM D-3786	200 min.
Equivalent Sieve Size	ASTM D-4751	US No. 30 max.
Water Flow Rate (gpm/ft^2)	ASTM D-4491	140 min.
Permitivity (Sec^{-1})	ASTM D-4491	1.9 min.
Permeability (cm/sec)	ASTM D-4491	0.14 min.

C Construction

C.1 Installation

The control of soil erosion requires flexibility to accommodate changing conditions as the construction project progresses. In general, install the erosion control device at locations as described on the plan.

At all inlet locations, install a Type M screen. If the inlet being protected has a side inlet box, seal the inlet box until inlet protection is no longer needed. These screens must be in place prior to the start of any work, including sawing.

On reconstruction projects, install Type M screens at all inlets and storm or combined sewer manholes. Install these screens, or some other device or method acceptable to the engineer, for preventing infiltration of solids into the sewer system, on the day that removal takes place. When it becomes necessary to remove a brick from a drainage structure in order to drain the subgrade filter screen, use approximately the size and shape of one-half of the Type R screen. Pay for the cost of providing this protection, as well as that required for storage piles of earth, gravel, stone, or other debris. Should the frame on the structure be removed or an opening occurs beneath the frame, install additional erosion control in the form of Type R as part of maintaining erosion control.

C.2 Maintenance

Continue cleaning and repair of all types of control devices until the engineer accepts the work. All such cleaning and repair, as well as the eventual removal of the devices, is the responsibility of the contractor.

Completely clean out manholes into which dirt or other debris has fallen before the end of each work day. Should the contractor not perform the cleaning as required, his operation may be shut down until the situation is corrected.

Protect all control measures protruding above the normal paved and/or ground surface where vehicular and/or pedestrian traffic is being maintained by barricades with flashing lights.

Inspect the inlet basket within 24 hours after each rainfall or daily during extended periods of precipitation. Make repairs immediately, as necessary, to prevent particles from reaching the sewerage system and/or causing the surface flooding.

Remove sediment deposits after each storm event or as often as the fabric becomes clogged. Failure to maintain clean, debris free inlet baskets may result in the contractor's operations being shut down.

D Measurement
The department will measure Inlet Screens (Type) 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.0060.09	Inlet Screen Type M	Each
SPV.0060.10	Inlet Screen Type R	Each

Payment is full compensation for the number of actual devices supplied, installed and properly maintained.

100. Internal Sanitary Manhole Seal, Item SPV.0060.11.

A Description
This special provision describes furnishing and installing internal manhole chimney seals.

B Materials
Use an internal manhole seal.

C Construction
Field-measure the inside diameter of the manhole frame and the manhole chimney, and determine as to whether the inside face of the frame is vertical or tapered in order to obtain the proper size and shape rubber seal.

Install internal rubber chimney seals no sooner than 24 hours following chimney back plastering.

The surfaces against which the sleeve is to be compressed shall be circular, clean, reasonably smooth and free of any loose materials and excessive voids. Repair all flaws in these surfaces with the approved low-shrink mortar or grind the surfaces smooth. Apply a bead of butyl rubber caulk conforming to ASSHTO M-198 Type B to the lower sealing surface of sleeve.

Install the seal according to the manufacturer's instructions. (Refer to the plan data for configuration of chimney seal.)

D Measurement
The department will measure Internal Sanitary Seal 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.0060.11	Internal Sanitary Manhole Seal	Each

Payment is full compensation for furnishing and installing internal rubber chimney seals.

101. Adjusting Water Box, Item SPV.0060.12; Adjusting Water Manhole Frame and Lid, Item SPV.0060.13.

A Description
This special provision describes adjusting, protecting, and maintaining accessibility, for the duration of the paving project, to all city water service boxes, water gate valve boxes and water manholes located within the project limits.

B Materials
All material for the adjustment of these facilities must meet City of Milwaukee specifications and will be provided by the City of Milwaukee by contacting Mr. Jesse Hernandez, Milwaukee Water Works, at (414) 708-9005 (or Mr. Dave Goldapp, Milwaukee Water Works at (414) 286-6301)). If there is contractor damage, the materials must still be provided by the City of Milwaukee, however, in this case, the contractor will be charged for all materials. Materials furnished by the City of Milwaukee and not used on the project shall be delivered back to the Department of Public Works Field Headquarters – Infrastructure, Operations, Water Works at 3850 North 35th Street. Materials being returned must be accompanied with a "surplus material" form completed by the public works inspector assigned to the project.

C Construction
All water service boxes, water gate valve boxes and water manhole frames and lids within the project limits shall be adjusted to proposed elevations by the contractor using materials meeting city specifications.

The city will locate, mark, inspect and repair all water service boxes, water gate valve boxes and water manhole frames and lids within the limits of the project prior to commencement of work on the project.

Throughout the duration of the project, the contractor must ensure that all water service boxes, water gate valve boxes, and water manholes are adequately located and identified by blue paint, and that at all times, all water appurtenances remain accessible for operation by city forces. Exercise caution working adjacent to water facilities to avoid damage and ensure accessibility.

Upon completion of the contract, the city will inspect all water facilities to ensure the water boxes and manholes are clean, properly aligned, and accessible. The contractor shall be responsible to make identified repairs and adjustments, and if any repairs or adjustments are made by the city, the cost will be charged to the contractor.

D Measurement
The department will measure Adjusting Water Box and Adjusting Water Manhole Frame and Lid 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.0060.12	Adjusting Water Box	Each
SPV.0060.13	Adjusting Water Manhole Frame and Lid	Each

Payment is full compensation for furnishing all excavation, for adjustments, backfilling, disposal of surplus materials, water box or manhole clean-out, and restoration of the work site.

102. Water Main Protection, Item SPV.0060.14.

A Description
This special provision describes protecting existing water mains from newly constructed storm drainage facilities. No structures will be allowed over the existing water main or hydrant branch with less than 18" of vertical out-to-out clearance. Alternate drainage structures shall be used.

B Materials
Furnish and install materials as detailed on the construction plans.

C Construction
Construct drainage structure, located above and across an existing water main, by utilizing materials and joints that are water tight. For all catch basins and inlets that have less than 24" out-to-out of horizontal clearance the following protections shall be made:

- The catch basins and inlets shall be altered to provide 18" of vertical clearance to the water mains or hydrant branches.
- The catch basins and inlets shall be wrapped with 2 layers of 8 mil polyethylene around the base and extending 1ft vertically on all sides of the drainage structure.

D Measurement
The department will measure Water Main Protection as each individual water main protection, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.14	Water Main Protection	Each

Payment is full compensation for protecting existing water mains; and for furnishing all excavation, backfilling, disposal of surplus materials, restoration of the work site.

103. Concrete Base Type 10 Special, Item SPV.0060.15.

A Description
This special provision describes installing a concrete base type 10 special with a 36-inch diameter for monotube mast arm structures in accordance to standard spec 654 with modifications as shown on the plans, and as hereinafter provided.

B Materials
Conform to standard spec 654.

Modify standard spec 654.2 as follows:

Contractor shall supply templates, anchor rods, nuts, and washers for installation as shown on the plans.

C Construction
Construction of this item shall conform with standard spec 654.

D Measurement
The department will measure Concrete Base Type 10 Special as each individual concrete base, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.15	Concrete Base Type 10 Special	Each

Payment is full compensation for providing and installing concrete bases including furnishing all hardware and fittings necessary for installation.

104. Install Traffic Signal Base; Item SPV.0060.16.

A Description
Install concrete traffic signal bases furnished by the City of Milwaukee, for traffic signals as shown on the plans.

B Materials
Pre-cast concrete traffic signal bases will be furnished by the City of Milwaukee.

C Construction
Pick up pre-cast concrete traffic signal bases from the City of Milwaukee yard located at 1540 W. Canal Street. Contact traffic signal shop dispatch at (414) 286-3687 to coordinate pick up. Install concrete traffic signal bases in accordance to the plans. Plan changes must be approved by the City of Milwaukee Electric Services Supervisor or Traffic Engineer. The primary contacts are Mr. Al Nichols, Traffic Operations Dispatch (414) 286-3687 office, (414) 708-5148 mobile; or Mr. Joseph Blakeman, Traffic Control Engineer (414) 286-8070.

D Measurement
The department will measure Install Traffic Signal Base as each individual item of material, 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.0060.16	Install Traffic Signal Base	Each

Payment is full compensation for installing all materials; for excavation, backfilling and disposal of surplus material.

105. Concrete Footing for Banner Pole, Item SPV.0060.17.

A Description
This special provision describes constructing concrete footings at the locations shown on the plans, or as directed by the engineer.

B Material
Furnish bar steel reinforcement conforming to standard spec 505.2.

Furnish grade A, A-FA, A-S, A-T, A-IS, or A-IP concrete conforming to standard spec 501.2.

C Construction
Construct concrete footings, including necessary hardware and anchor bolts as shown in the plan details. In the event there are conflicts with existing utilities it may be necessary to shift footing locations, If footings are shifted to avoid utilities, contractor shall receive written approval from the engineerfor the new locations.

Construct concrete footings as specified in standard spec 501, and provide the surface finish specified in standard spec 502.3.7.2 and plan details. Finish the concrete footings to support banner poles with poles bearing evenly on the footings. Inspect the forming

and applicable reinforcement for concrete footings, before pouring the concrete. Cure the footings for five days before installing any poles.

D Measurement
The department will measure Concrete Footing for Banner Pole as each individual footing, 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.0060.17	Concrete Footing for Banner Pole	Each

Payment is full compensation for furnishing and installing all footings and backfilling and disposal of surplus materials.

106. Poles Type 10, Item SPV.0060.18.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

C Construction

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

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

D Measurement

The department will measure Pole Type 10 as each individual pole, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.18	Pole Type 10	Each

Payment is full compensation for providing and installing poles including all hardware and fittings necessary to install the poles.

107. Pole Type 12 Special, Item SPV.0060.19, Pole Type 13 Special, Item SPV.0060.20.

A Description

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

B Materials

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

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

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

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

Apply a zinc coating conforming to the process specified for steel sign bridges in standard spec 641.2.8. Ensure that the zinc coating is tight, free from rough areas or slag, and presents a uniform appearance.
After completing manufacturing, clean the exterior surfaces of each pole free of all loose scale, dirt, oil or grease, and other foreign substances.

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

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

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

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

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

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

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

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

C Construction

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

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

D Measurement

The department will measure Pole (Type) Special as each individual pole, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.19	Pole Type 12 Special	Each
SPV.0060.20	Pole Type 13 Special	Each

Payment is full compensation for providing and installing poles including all hardware and fittings necessary to install the poles.

108. Monotube Arms 30-FT, Item SPV.0060.21; Monotube Arms 35-FT, Item SPV.0060.22; Monotube Arms 40-FT, Item SPV.0060.23.

A Description

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

B Materials

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

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

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

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

Furnish monotube arms conforming to the following:

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

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

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

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

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

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

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

C Construction

Install monotube arms as specified in the plan details and using appropriate contractor-furnished hardware.

Prior to installation of each monotube arm, a 1 1/4-inch hole shall be drilled into the bottom of the arm approximately centered over each driving lane as shown on the plans. Where emergency vehicle pre-emption (EVP) is installed, a separate 1 1/4-inch hole shall be drilled in the bottom of the arm approximately centered over the roadway approach, but a minimum of four feet from the nearest drilled hole.

The contractor shall provide 9-14 AWG traffic signal cable spooled 5 feet outside the arm from each drilled hole in the arm, including the hole for EVP if applicable, to the base of the pole below the hand hole. A separate nylon pull rope shall also be provided for the EVP hole to the base of the pole below the hand hole where applicable.

D Measurement
The department will measure Monotube Arms (Length) as each individual arm, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.21	Monotube Arms 30-FT	Each
SPV.0060.22	Monotube Arms 35-FT	Each
SPV.0060.23	Monotube Arms 40-FT	Each

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

109. Giant Blue Hostas CG #1, Item SPV.0060.24; Catmint Blue Wonder CG #1, Item SPV.0060.25; Dwarf Daylillies CG #1, Item SPV.0060.26; Becky Shasta Daisy CG #1, Item SPV.0060.27; Ornamental Grass CG #5, Item SPV.0060.28; Daffodil Bulb 3" x 3", Item SPV.0060.29.

A Description
This special provision describes furnishing and planting plants of the species, varieties, and sizes specified; and includes furnishing all necessary materials, excavating plant holes, salvaging topsoil, transplanting, backfilling, mulching, watering, heeling in, disposal of surplus and waste materials, and necessary care & required replacements pending acceptance, at the locations shown on the plans in accordance with standard spec 632, and as hereinafter provided.

B Materials
Furnish material that is in accordance to the pertinent requirements of standard spec 632.

C Construction
Construction shall conform to the requirements of standard spec 632.3.

D Measurement
The department will measure by the number of each individual perennial and grass item, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.24	Giant Blue Hostas CG #1	Each
SPV.0060.25	Catmint Blue Wonder CG #1	Each
SPV.0060.26	Dwarf Daylillies CG #1	Each
SPV.0060.27	Becky Shasta Daisy CG #1	Each
SPV.0060.28	Ornamental Grass CG #5	Each
SPV.0060.29	Daffodil Bulb 3” x 3”	Each

Payment is full compensation for providing, transporting, handling, storing, placing, and replacing plant materials; for excavating all plant holes, salvaging topsoil, mixing and backfilling; for providing and applying required mulch; and for disposing of all excess and waste materials.

110. Polymer Concrete Vault 13-Inch x 24-Inch x 18-Inch, Item SPV.0060.30; Polymer Concrete Vault 17-Inch x 30-Inch x 24-Inch, Item SPV.0060.31; Polymer Concrete Vault, 17-Inch x 30-Inch x 18-Inch; Item SPV.0060.32.

A Description

This special provision describes furnishing and installing Polymer Concrete Vaults in accordance to current City of Milwaukee methods.

B Materials

Polymer Concrete shall be manufactured from one of the general types and grades defined in polymers in concrete structural applications state of the art report, ACI 548.6R-96 for structural uses. Thermoplastics will not be acceptable.

Enclosure walls shall be made from pattern cut structural fiberglass cloths to assure uniform, pre-measurable fiberglass content on all areas. Chopper gun fiberglass construction is not acceptable.

Binding polymers used in the manufacture of the polymer concrete and the fiber reinforced polyester shall be of the same formulation or from formulations with demonstrated chemical compatibility to assure complete chemical bonding of all components. Fiber reinforced polyester wall sections must be cast integrally into and chemically bonded within the upper polymer concrete casting.

1. Testing

Meet ANSI/SCTE 77 2010 (Tier 15 or greater), ASTM C 857, and WUC 3.6 structural requirements.

Compressive Modulus of Elasticity (fiberglass reinforced polymer): 5.6×10^6 PSI tested in accordance to procedures outlined in ASTM D-695.

Comprehensive Strength (fiberglass reinforced polymer): 24,300 PSI tested in accordance to ASTM D-695.

Flexural Strength (fiberglass reinforced polymer): 18,700 PSI tested in accordance to ASTM D-790.

Tensile Strength (fiberglass reinforced polymer): 12,100 PSI tested in accordance to procedures outlined in ASTM D-638.

Tensile Modulus of Elasticity (fiberglass reinforced polymer): 8.6 x 10^5 PSI tested in accordance to procedures outlined in ASTM D-638.

Splitting Tensile Strength (polymer concrete): Tested in accordance to procedures outlined in ASTM C-496.

Accelerated Service: Tested in accordance to procedure E outlined in ASTM D-756.

Water Absorption: Tested in accordance to ASTM D-570 outlined in sections 6.1 and 6.5.

Impact Resistance (fiberglass reinforced polymer concrete): 72 foot pounds in accordance to ASTM D-2444 administered with a "C" tup.

Skid Resistance: 0.60 coefficient of friction in accordance to ASTM C-1028.

Flammability Test: Tested in accordance to ASTM D-635.

Ultraviolet Exposure: Tested in accordance to ASTM test method G-53.

Chemical Resistance

1. Sodium Chloride 5%
2. Sodium Carbonate 0.1 N
3. Hydrochloric Acid 0.2 N
4. Acetic Acid 5%
5. Sulfuric Acid 0.1N
6. Sodium Sulfate 0.1 N
7. Sodium Hydroxide 0.1N
8. Kerosene Oil per ASTM D-543
9. Transformer Oil per ASTM D-543

The street lighting vaults and covers shall be gray in color and shall be flared wall as indicated on the Drawings. Covers shall be provided with 2 stainless steel bolts. Each cover shall have the words "TRAFFIC" cast into its surface along the longest dimension. The words shall be permanently recessed into the surface.

C Construction

Install rectangular flared wall vaults according to current City of Milwaukee standards.

Provisions for inserting conduit into any side or the bottom of the vault shall be included.

D Measurement
The department will measure Polymer Concrete Vault (Size) 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.0060.30	Polymer Conc. Vault 13-Inch x 24-Inch x 18-Inch	Each
SPV.0060.31	Polymer Conc. Vault 17-Inch x 30-Inch x 24-Inch	Each
SPV.0060.32	Polymer Conc. Vault 17-Inch x 30-Inch x 18-Inch	Each

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

111. Junction Boxes 12x18x8-Inch, Item SPV.0060.33.

A Description
This special provision describes furnishing and installing 12" x 18" x 8" electrical boxes for use as pull boxes on 2 ½ - inch nonmetallic rigid conduit installations.

B Materials
Furnish junction boxes made by an approved cast iron manufacturer and having a hot dipped galvanized coating. The covers and removable flanges shall be cast iron with a hot dipped galvanized coating and designed for vehicular applications. The covers and flanges shall be interchangeable to permit replacement without disturbing the box or conduit system. Furnish covers with a cross checkered pattern for vehicular traffic and equipped with pry bar slots, neoprene gasket and recessed stainless steel cover screws. Covers to have "STREET LIGHTING" cast into the cover or permanently attached.

Supply a stainless steel ¼" X 20" grounding lug on all boxes on a side of box opposite the entering conduit.

Direct all materials question to Mr. Thomas Manzke at (414) 286-3265.

C Construction
Furnish and install junction boxes. Provide 1" nonmetallic drains in the bottom of all junction boxes. Junction box conduit and elbow holes shall be cut in the field.

D Measurement
The department will measure Junction Boxes 12X18X8-Inch by each individual box, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.33	Junction Boxes 12X18X8-Inch	Each

Payment is full compensation for providing and installing all materials, drains and fittings, including the junction box and cover, grounding lug and stainless steel mounting hardware; for properly disposing of surplus material.

112. Concrete Collar Special, Item SPV.0060.34.

A Description
This work will consist of constructing a concrete collar as shown on the plans and as hereinafter provided.

B Materials
Furnish concrete masonry and material that is in accordance with standard spec 501.

C Construction
Cut and remove only the minimum amount of wall necessary around the existing junction chamber wall to make a new connection. Do not damage the existing junction chamber while making a connection. Build a concrete collar at connection to the junction chamber. The concrete collar shall be a minimum of 12 inches thick; dowel it into the existing structure with 9-inch long #5 deformed steel reinforcement bars placed 12 inches on center.

D Measurement
The department will measure Concrete Collar Special by each individual unit, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.34	Concrete Collar Special	Each

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

113. End Diaphragm Adjustment, Item SPV.0060.35.

A Description
Adjust the location of the existing 12C20.7 steel channel girder end diaphragms and install new 8C18.7 steel channel girder end diaphragms at the north and south abutments. Six (6) new 8C18.7 steel channels are required as end diaphragms at each abutment between girder lines 5 and 6, girder lines 7 and 8, and girder lines 8 and 9.

B Materials
Provide new $^{7}/_{8}$ inch diameter ASTM A325 (AASHTO M164) bolts, ASTM A563 (AASHTO M291) nuts, and washers ASTM F436 (AASHTO M293). (Note; the materials for new 8C18.7 steel channel girder end diaphragms are to be paid for under bid item Structural Carbon Steel 506.0105.)

C Construction
Remove all of the 12C20.7 steel channel end diaphragms from the gusset plates at the ends of the girders at the north and south abutments.

For the existing 12C20.7 steel channel girder end diaphragms; Drill two new $^{15}/_{16}$-inch diameter holes in the gusset plates 3 ½ inches below the lowest pair of existing holes. Reposition the diaphragm 3 ½ inches lower than its original orientation and reattach the 12C20.7 steel channel to the gusset plate with 6 bolts at each end. There are a total of 25 existing 12C20.7 steel channel girder end diaphragms to be adjusted. Fill the abandoned holes in the gusset plates with A325 bolts.

For the new 8C18.7 steel channel girder end diaphragms; Cut to length and drill holes in the new 8C18.7 steel channel. Position the new 8C18.7 steel channel girder end diaphragms 3 ½ inches lower than the original 12C20.7 steel channel end diaphragms orientation and attach the new 8C18.7 steel channel to the gusset plate by 4 bolts at each end. Augment the bolts by placing ¼-inch fillet welds along the sides of the channel section where it is adjacent to the gusset plate. There are a total of 6 new 8C18.7steel channel girder end diaphragms to be installed. Fill the abandoned holes in the gusset plates with A325 bolts.

D Measurement
The department will measure End Diaphragm Adjustment as each individual adjusted diaphragm, 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.0060.35	End Diaphragm Adjustment	Each

Payment is full compensation for removing and reattaching the existing end diaphragms, cutting and attaching the six new end diaphragms. Note: The materials for the new 8C18.7 steel channel girder end diaphragms are to be paid for under bid item Structural Carbon Steel 506.0105.

114. Reinstalling Pole and Banner, Item SPV.0060.36.

A Description
This special provision describes the reinstallation of poles and banners, which were removed as part of the work on the box culvert. See SPV.0060.01.

B (Vacant)

C Construction
During construction the engineer shall inspect the poles and banners for damage, prior to reinstalling. Any damage to the items will be the responsibility of the contractor. If damaged, the banner and pole will be rejected by the engineer.

Install the banner and poles at the location indicated on the plans.

D Measurement
The department will measure Reinstalling Pole and Banner 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.0060.36	Reinstalling Pole and Banner	Each

Payment is full compensation for transporting poles and banners to site; and for installing the poles and hardware.

115. Sub-Basin Bowl, Item SPV.0060.37; Catch Basin Elbow, Item SPV.0060.38.

A Description
This special provision describes the installation of storm drainage facilities at the concrete box culvert. Work shall be in accordance to standard spec 611, and the Standard Specifications for Sewer & Water Construction in Wisconsin, Sixth Edition dated December 22, 2003, Addendum No. 1, dated December 22, 2004, Addendum No. 2 dated April 22, 2008, and details as shown in plans.

B Materials
Furnish catalog number Neenah Foundry R-3223 Cast Iron Sub-Basin Bowl, or engineer's approved equivalent; and R-3226 Catch Basin Elbow, or engineer's approved equivalent.

C Construction
Install items in accordance to the referred to specifications, and the manufacturer recommendations.

D Measurement
The department will measure Sub-Basin Bowl and Catch Basin Elbow 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.0060.37	Sub-Basin Bowl	Each
SPV.0060.38	Catch Basin Elbow	Each

Payment is full compensation for furnishing and installing Sub-Basin Bowl and/or Catch Basin Elbow.

116. Informational Signs, Item SPV.0060.39.

A Description

This special provision describes the fabrication and installation of informational signs.

B Materials

Furnish all necessary materials including steel pole, steel base, bolts and concrete slab and plate covered with plexi glass plate bolted to the plate, using four ¼" bolts and installed as shown on plans.

C Construction

The sign shall be bolted to a 12" x 18" concrete base. The concrete base shall be 4" minimum in depth, and tied to the concrete sidewalk using pavement dowels.

The contractor shall contact Mr. Solomon Bekele at (414) 286-0507, to determine the exact locations of the signs to be installed as part of the project.

D Measurement

The department will measure Informational Signs 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.0060.39	Informational Signs	Each

Payment is full compensation for furnishing all work and materials necessary to install informational signs as designed.

117. 6-Inch Cleanouts, Item SPV.0060.40.

A Description

This special provision describes the installation of cleanouts.

B Materials
All cleanouts shall be PVC.

C (Vacant)

D Measurement
The department will measure 6-Inch Cleanouts 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.0060.40	6-Inch Cleanout	Each

Payment is full compensation for furnishing all work and materials necessary to construct the cleanouts as shown on the plans.

118. Black Eyed Susan CG #1, Item SPV.0060.41; Daylillies CG #1, Item SPV.0060.42; Purple Coneflower CG #1, Item SPV.0060.43; Russian Sage CG #1, Item SPV.0060.44; Karl Foerster Grass CG #1, Item SPV.0060.46; Switch Grass CG #1, Item SPV.0060.47.

A Description
This special provision describes furnishing and planting plants of the species, varieties, and sizes specified; and includes furnishing all necessary materials, excavating plant holes, salvaging topsoil, transplanting, backfilling, mulching, watering, heeling in, disposal of surplus and waste materials, and necessary care & required replacements pending acceptance, at the locations shown on the plans in accordance with standard spec 632, and as hereinafter provided.

B Materials
Furnish material that is according to the pertinent requirements of standard spec 632.

C Construction
Construction shall conform to the requirements of standard spec 632.3.

D Measurement
The department will measure by the number of each individual perennial, shrub and grass item, 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.0060.41	Black Eyed Susan CG #1	Each
SPV.0060.42	Daylillies CG #1	Each
SPV.0060.43	Purple Coneflower CG #1	Each
SPV.0060.44	Russian Sage CG #1	Each
SPV.0060.46	Karl Foerster Grass CG #1	Each
SPV.0060.47	Switch Grass CG #1	Each

Payment is full compensation for providing, transporting, handling, storing, placing, and replacing plant materials; for excavating all plant holes, salvaging topsoil, mixing and backfilling; for providing and applying required mulch; and for disposing of all excess and waste materials.

119. Adjusting TES Manhole Covers, Item SPV.0060.48.

A Description

This special provision describes adjusting the existing chimney of the block, precast, or brick round manholes; furnishing, installing and removing protection of the cables in the manhole during adjustment operations. Perform work in accordance to the standard specifications, the provisions of the article Adjusting Manhole Covers, as shown on the plans, and as hereinafter specified.

B Material

Furnish and install materials that conform to the requirements of standard spec 519. Salvage and reinstall existing covers on the manholes. The city will supply covers designated for replacement. Contractor shall contact Ricardo Lopez, Inventory Clerk at (414) 286-6123 prior to obtaining the frames and lids from the DPW Field Headquarters at 3850 N. 35th St. Contractor must have the "Castings Requisitions Form" which shall be supplied by the City at the Preconstruction Meeting to obtain the covers.

C Construction

Report any pre-existing problems to Ms. Karen Rogney of City Underground Conduits Section at (414) 286-3243 three working days in advance of any construction on manholes.

Before removing the pavement around the manhole, the contractor shall place a ¾-inch plywood cover or equal over existing active Street Lighting, Traffic Control, Communication or private vendor electrical cables. This cover shall be properly supported to/at the manhole floor.

Break out and remove pavement around manhole. Remove existing covers and store and secure them properly. Any damaged, lost, or stolen covers shall be the responsibility of the contractor and shall be replaced at contractor's expense.

Remove existing chimney to surface of concrete roof slab. If manhole does not have an existing concrete roof slab, remove sufficient chimney as to provide adequate corbel to fit new cast iron frame and cover.

Adjust manhole cover to proposed grade using bricks or concrete rings as necessary. Remove wedges/shims. Fill voids with grout. Do not back plaster inside walls.

After completion of paving, remove the temporary ¾-inch plywood cover or equal which is over the existing electrical cables in the manhole as mentioned above.

Notify Ms. Rogney three working days in advance of completion of each manhole adjustment, for inspection and acceptance of work performed. The contractor will receive no payment until the above work is approved by City Underground Conduits.

D Measurement
The department will measure Adjusting TES Manhole Covers 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 UMBER	DESCRIPTION	UNIT
SPV.0060.48	Adjusting TES Manhole Covers	Each

Payment is full compensation for furnishing all required materials, exclusive of frames, grates, or lids available and designated for adjusting; for removing, reinstalling and adjusting the covers. Covers to be adjusted and which are rendered unfit for use by the contractor through the contractor's operations will be replaced by the contractor in kind at the contractor's own cost and expense.

120. Installing Conduit Into Existing Manhole, Item SPV.0060.49.

A Description
This special provision describes locating existing conduit system manholes and installing new conduit into those manholes at the locations shown on the plans. The contractor shall verify existing conduit manhole locations with the City of Milwaukee, and shall maintain any existing conductors, fibers, and conduit paths without interruption or damage. Repair and restoration of all disturbed areas resulting from the work shall be in accordance to the pertinent provisions of the standard specifications, and as hereinafter provided.

B Materials
Conduit, as provided and paid for under other items in this contract. All materials shall conform to the pertinent provisions of the standard specifications unless otherwise noted.

C Construction
Carefully expose the outside of the existing structure without disturbing any existing conduits or cabling.

Drill the appropriate sized hole for the entering conduit at a location within the structure that will not disturb the existing cabling and will not hinder the installation of new

cabling within the installed conduit, or remove existing abandoned conduit from the structure to allow for the installation of the new conduits as indicated on the plans.

Fill any 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.

Carefully tamp backfill into place.

All disturbed areas shall be repaired and restored in kind.

D Measurement
The department will measure Installing Conduit Into Existing Manhole by the unit, acceptably completed. Up to six conduits entering a structure per entry point into the existing structure will be considered a single unit. Conduits in excess of six, or conduits entering at significantly different entry points into the existing manhole will constitute multiple units.

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

Item Number	Description	Unit
SPV.0060.49	Installing Conduit Into Existing Manhole	Each

Payment is full compensation for drilling holes; removing abandoned conduit; furnishing and installing all materials, including bricks, and coarse aggregate; for excavation, bedding and backfilling, including any sand or other required materials; furnishing and placing topsoil, fertilizer, seed, and mulch in disturbed areas; for disposal of surplus materials; and for making inspections.

121. 4-Foot Diameter Manhole Type TES, Item SPV.0060.50.

A Description
The work under this item consists of a 4'-0" round manhole for the City of Milwaukee Underground Conduit Section at locations shown in the plans, in accordance to standard specs 301, 611 and 501, and as hereinafter provided.

B Materials
Concrete and steel reinforcement shall conform to ASTM specification: C478 (latest edition), except that the single cage circumferential reinforcement in all vertical walls shall consist of lines of #6 steel wire spaced 3" horizontally and lines of #10 steel wire spaced 8" vertically located in the center of the wall.

Two lifting inserts for 1-1/2" diameter lifting eyes shall be cast in the wall of the base and all other riser sections except the top cap section.

Up to four 7/8" diameter galvanized steel 1-11/16" pulling-in eyes shall be cast in the wall of the base section directly across from each duct entrance.

Four 5/8" diameter plastic threaded cable rack bolt inserts shall be cast in the wall of the riser section.

A continuous circumferential Butyl Rubber gasket shall be supplied, to be laid on the wall joint of the base and riser section when manhole is being assembled at job site.

The number of pulling-in eyes and/or cable rack bolt inserts may vary.

Additionally, the size, location, shape and number of duct entrances and/or knock-out area may vary. Unit price of manhole shall not vary for number of openings, pulling-in eyes and/or rack bolt inserts.

The city will supply a frame and lid for the manhole. Contractor shall contact Mr. Ricardo Lopez, Inventory Clerk at (414) 286-6123 prior to obtaining the frame and lid from the DPW Headquarters at 3850 N. 35th St. Contractor must have the "Casting Requisition Form" which shall be supplied by the city at the Preconstruction Meeting.

For any questions on materials, contact Ms. Karen Rogney at (414) 286-3243.

C Construction
4' Diameter Manholes Type TES shall be installed in accordance to standard spec 611.3.

D Measurement
The department will measure 4' Diameter Manhole Type TES by each individual manhole, 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.0060.50	4' Diameter Manhole Type TES	Each

Payment is full compensation for furnishing all excavation work and disposal of material; for, furnishing and installing all materials, including bricks, and coarse aggregate, bedding and backfilling, concrete forms, concrete placement, appurtenances, and backfilling.

122. 4' Diameter "Doghouse" Manhole Type TES, Item SPV.0060.51.

A Description
The work under this item consists of a 4'-0" round "doghouse" manhole for the City of Milwaukee Underground Conduit Section at locations shown in the plans, in accordance to standard specs 301, 611 and 501, and as hereinafter provided. This work includes providing and placing PVC pipe and associated fittings, cement encasement, and other appurtenances to extend existing conduit as required to provide a complete and fully functional communications manhole unit.

B Materials

1. **Manhole.** Concrete and steel reinforcement shall conform to ASTM specification: C478 (latest edition), except that the single cage circumferential reinforcement in all vertical walls shall consist of lines of #6 steel wire spaced 3" horizontally, lines of #10 steel wire spaced 8" vertically located in the center of the wall, and #6 rebar hoop centered in the wall 3" above the window knock-outs.

Two lifting inserts for 1-1/2" diameter lifting eyes shall be cast in the wall of the base and all other riser sections except the top cap section.

Up to four 7/8" diameter galvanized steel 1-11/16" pulling-in eyes shall be cast in the wall of the base section. Pulling-in eyes to be located across from all proposed duct entrances.

Four 5/8" diameter plastic threaded cable rack bolt inserts shall be cast in the wall of the riser section.

A continuous circumferential Butyl Rubber gasket shall be supplied, to be laid on the wall joint of the base and riser section when manhole is being assembled at job site.

The number of pulling-in eyes and/or cable rack bolt inserts ordered may vary.

Size, location, shape, and number of duct entrances may vary. Unit price of manhole shall not vary for number of openings, pulling-in eyes or cable rack inserts.

Field verify window depth and locations prior to ordering manhole.

The city will supply a frame and lid for the manhole. Contractor shall contact Mr. Ricardo Lopez, Inventory Clerk at (414) 286-6123 prior to obtaining the frame and lid from the DPW Headquarters at 3850 N. 35th St. Contractor must have the "Casting Requisition Form" which shall be supplied by the city at the Preconstruction Meeting.

2. **Conduit.** The contractor shall furnish DB-60 polyvinyl chloride (PVC) conduit. Conduit will be accepted on the basis of a Manufacturer's Certificate of Compliance and WISDOT field inspection upon delivery to a project.

Manufacturers of PVC Conduit DB-60 shall request evaluation and approval of their products by filing with the department's Research Supervisor, Bureau of Highway Construction, a certificate setting forth the name or brand of pipe to be furnished, the specified type, category, grade and PVC plastic cell classifications. The certificate shall have attached a certified test report from an approved independent testing laboratory showing specific results of tests performed on each diameter conduit to be furnished conforming to all requirements of these specifications. The conduit tested shall be randomly selected for test by the independent testing laboratory as being representative of that manufacturer's conduit. The manufacturer of the conduit shall also submit with the

certification, a guarantee that all conduit furnished be of the same quality and composition and conform to the specification requirements as tested by the independent laboratory, as long as the manufacturer continues to furnish materials for WISDOT projects.

PVC conduit and fittings shall conform to the requirements of Standard Specifications for Smooth-Wall Poly (Vinyl Chloride) (PVC) Conduit and Fittings for Underground Installation, ASTM Designation: F512 (latest edition).

3. **Concrete.** The type of concrete to be used to encase the ducts will be:

Class of Concrete	Type of Cement	Min. Cement Content Sacks per Cubic Yard	Sizes of Coarse Aggregate
G-1	Standard Portland Cement Type 1A or 1SA	6.0	Sharp Torpedo Sand only

4. **Slurry Backfill.** Aggregate slurry backfill consists of No. 1 concrete aggregate Class 'C' concrete mix with the cement deleted.

Fly Ash (Class C)	75 lbs.
Concrete Sand (Damp)	1830 lbs.
No. 1 Concrete Aggr	1830 lbs.

The material shall be mixed with water to inundate the aggregate sufficiently to provide an approximate 3 inch slump. The mix shall be deposited in the trench directly from a concrete transit mix truck.

For any questions on materials, contact Ms. Karen Rogney at (414) 286-3243.

C Construction

1. **Manhole.** Manhole Type TES "Doghouse" shall be installed in accordance to standard spec 611.3. The manhole is to be installed within the excavation limits of the manhole that had been removed. The bottom section of the manhole shall be installed while avoiding damage to the live active cables. The excavation may need to be widened to slide the bottom under the existing cables. After the bottom section of the manhole has been set, the existing cables need to be placed with the window openings, splice cases and/or coils placed back into the manhole.

Extreme care must be exercised in the handling of working cables within the excavation. When cables need to be moved, particularly lead sheathed cables, move cables slowly and gradually. Avoid sharp kinks that may damage the inner core of the cables and the sheath.

The contractor shall complete the "doghouse" manhole installation without any damage or service disruption to the existing cables.

2. **Placing Duct.** All ducts shall be inspected before placing to see that the bores are clean and free from mud, sand, etc. Only ducts with a smooth bore, free from burrs, rough projections etc. shall be used. Where burrs or other rough areas likely to damage cable are found in the duct, they shall be smoothed off by rasping or scraping.

All existing ducts shall be extended into the new manhole structure unless otherwise noted on the plan. Split PVC duct should be used on ducts containing cables. The split duct shall be installed per manufactures recommendations using tape and reinforced with plastic straps to produce a rigid, stable unit

All ducts shall terminate on the inside wall of the manhole. A standard end bell fitting shall be installed on all duct access points into the manhole.

Where trace wires are present, reconnect and extend trace with #10 copper wire extended two feet past the inside wall of the manhole.

3. **Concreting.** After conduit has been laid and the trench and duct have been inspected, concreting is to begin. The minimum concrete encasement of the ducts shall be 3 inches on the top, 2 inches on the sides, and 3 inches on the bottom (as shown on the detail). After placing, the concrete shall be puddled with a splicing bar or similar tool so that complete duct encasement is accomplished. Wood braces used to keep the conduit from floating shall be removed before the concrete sets completely and the resultant encasement voids filled with concrete.

Concrete encasement shall be allowed sufficient time to set before backfilling is commenced.

4. **Slurry Backfill**. The backfilling of the conduit shall commence immediately after the duct has been inspected, approved and has had sufficient time to set to withstand the load.

An aggregate slurry as specified shall be used to backfill all concrete encased conduit. The trench shall be slurry backfilled to the proposed or existing subgrade. The mix shall be deposited in the trench directly from a concrete transit mix truck.

D Measurement

The department will measure 4' Diameter "Doghouse" Manhole Type TES by each individual manhole, 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.0060.51	4’ Diameter “Doghouse” Manhole Type TES	Each

Payment is full compensation for furnishing and installing all materials, including precast structure, bricks, conduit, conduit bodies, conduit fittings, trace wire, coarse aggregate, bedding, encasement, and backfilling including any concrete, stone, aggregate slurry, bracing, concrete forms, concrete placement, appurtenances, and backfilling.

123. Sawing Concrete Encased Duct Package, Item SPV.0060.52.

A Description

The work under this provision consists of full depth sawing of cement encased multiple duct conduit below grade; preparing sawed conduit ends to accept adaptor couplings needed to allow transition of new PVC conduit from existing clay, fiber or PVC conduit (See Item SPV.0090.07).

B (Vacant)

C Construction

1. Equipment

Use ring saw or concrete cutting chainsaw for all full-depth cuts. Use diamond blades. The contractor may use a high speed 16” construction saw on duct systems with less than 4-ducts when approved by the engineer.

2. Sawing Encasement

Carefully expose the outside of the existing cement encasement. The contractor is to verify that the conduit lines are free of all cabling. Saw a full depth transverse cut through the encasement. Saw straight cuts with the surface remaining vertical over its full depth. Hand chip concrete away from sawed conduit duct ends to allow transition fittings to be placed over the ends. The exposed conduit will be protected from damage. Any damaged conduit ends will be the responsibility of the contractor and will require a resaw at the contractor’s expense.

D Measurement

The department will measure Sawing Concrete-Encased Duct Package by the unit, acceptably completed. Up to 6 conduits per cement encasement will be considered a single unit.

Encasements in excess of 6 conduits will constitute multiple units.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.52	Sawing Concrete-Encased Duct Package	Each

Payment is full compensation for sawing concrete encased duct packages full depth.

124. Pavement Marking Grooved Preformed Thermoplastic Arrows Type 2, Item SPV.0060.54.

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

C Construction

C.1 General

For quality assurance, provide the 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 deep from the pavement surface or, if tined, from the high point of the tined surface. Measure depth using a straightedge placed perpendicular to the groove. The department may periodically check groove depths.

C.3 Groove Width – Linear Markings

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

C.4 Groove Position

Position the groove edge in accordance 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 at a minimum of 4-inches from the perimeter of the special marking. Groove separate areas for Word Items.

C.5 Groove Cleaning

C.5.1 Concrete

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

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

C.5.2 Asphalt

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

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

C.6 Preformed Thermoplastic Application

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

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

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

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

D Measurement

The department will measure Pavement Marking Grooved Preformed Thermoplastic Arrows Type 2 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.0060.54	Pavement Marking Grooved Preformed Thermoplastic Arrows Type 2	Each

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

125. Removing Street Lighting Hand Hole, Item SPV.0060.55.

A Description
This special provision describes work associated with the removal of street lighting hand hole that connects to the existing conduit.

B (Vacant)

C Construction
Remove the entire hand hole and properly dispose of.

D Measurement
The department will measure Removing Street Lighting Hand Hole 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.0060.55	Removing Street Lighting Hand Hole	Each

Payment is full compensation for furnishing all labor, tools, and incidentals necessary to complete the work, and shall be included in the unit price.

126. Capping of Abandoned Storm Inlets at Culvert, Item SPV.0060.56.

A Description
This special provision describes the work associated with capping the 12” diameter cast iron pipe sleeve storm inlets at the culvert prior to installation of Concrete Surfacer and Repair Mortar for Top Slab and Sheet Membrane Waterproofing for Top Slab.

B Materials
Furnish ½” thick Structural Carbon Steel plate to cover the 12” diameter cast iron pipe sleeve storm inlets at the culvert in accordance to what is specified in standard spec 506.2.2.2.

C Construction
Remove existing storm inlet pipe flush with top and underside of culvert and remove completely prior to capping storm inlets. Weld ½” thick Structural Carbon Steel plate to the 12” diameter cast iron pipe sleeve storm inlets at the culvert. Use welds to prevent plates from sliding horizontally.

D Measurement
The department will measure Capping Of Abandoned Storm Inlets At Culvert 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.0060.56	Capping Of Abandoned Storm Inlets At Culvert	Each

Payment is full compensation for furnishing all work and materials necessary to cap storm inlets, and shall be included in the unit price bid.

127. Install Fiber Optic Communications in Cabinet, Item SPV.0060.80.

A Description
This special provision describes installing fiber optic communications equipment in traffic signal cabinets.

B Materials
The department will furnish pre-terminated fiber optic patch panels and managed Ethernet switches. The materials will be provided with the traffic signal cabinet. The patch panels will have pre-terminated fiber optic cable pigtails. Provide two each 1-meter lengths of ST-ST single mode fiber jumper (2 fibers per jumper) from the patch panel to the Ethernet switch. Provide a 1-meter length of CAT-5e cable from the Ethernet switch to the controller. Provide a 1-meter length of CAT-5e cable from the Ethernet switch to the Interface Panel. CAT-5e patch cords shall have factory pre-terminated RJ45 / 8P8C connectors on both ends per TIA/EIA T568B. Provide all patch panel, Ethernet switch, and Interface Panel attachment hardware.

Provide a 12 AWG XLP insulated, stranded, copper, 600 volt AC locate wire through the conduit run from the communication vault to the traffic signal cabinet. Connect the locate wire by using a silicone filled wire nut at each pull box, vault or other access point. Alternatively, use a single wire through the access points, leaving a 6 foot coil in each pull box, vault or other access point for splicing. All material under this item shall meet the requirements of standard spec 655.

C Construction
Install the patch panel and Ethernet switch on the side of the traffic signal cabinet opposite the electrical service at a location as approved by the engineer. With approval by the engineer, the Ethernet switch may be placed on a shelf near the patch panel. Install the pre-terminated fiber optic cable in conduit from the patch panel to the communication vault as specified in standard spec 678.3.1. Fiber optic cable ends shall be covered securely to protect open ends during installation in raceways. Leave the remainder of the fiber optic cable coiled in the communication vault.

Install the fiber jumpers and CAT-5e cable and provide a communications link from the communication vault to the controller. Install the CAT5-e cable from the Interface Panel to the Ethernet switch.

Connect the locate wire by using a wire nut at each access point. Alternatively, use a single wire through the access points.

D Measurement
The department will measure Install Fiber Optic Communications in Cabinet as a single lump sum unit of work, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.80	Install Fiber Optic Communications in Cabinet	LS

Payment is full compensation for installing pre-terminated patch panels, Ethernet switches, and fiber optic cable in conduit; furnishing and installing attachment hardware, fiber jumpers, CAT-5e cable, and locate wire.

128. Traffic Signal Interconnect Vault, Item SPV.0060.81.

A Description
This special provision describes furnishing and installing a Traffic Signal Interconnect Vault and 2-piece vault lid.

B Materials
Furnish a communication vault and vault lid constructed of a combination of polymer concrete and fiberglass gray in color. All polymer concrete vaults are not acceptable.

Vault shall have an inside clear opening of 30” x 48” and the overall height shall be 48”. Stackable units are not acceptable.

The vault shall consist of a polymer concrete bottom ring with four corrugated fiberglass sidewalls and a polymer concrete top ring. The four corners of the vault shall be encapsulated in polymer concrete. No fiberglass taping of the sidewall panels will be accepted.

Furnish a vault lid with a minimum design load of 15,000 pounds and test load of 22,500 pounds. Testing shall be in accordance to SCTE-77- 2007, tested over a 10” x 10” plate. Tests utilizing a 10” x 20” plate are not acceptable. The vault lid shall consist of two interlocking pieces with each piece approximately 33” x 25.5”.

The vault lid shall have a permanent stamp that reads *WISDOT COMMUNICATIONS*. The manufactures name and load rating shall also be stamped on the lid cover. The vault lid shall have two slots measuring ½" x 4" to use as a cover lift out. The lid shall be secured utilizing four ½" stainless steel penta-head bolts with stainless steel washers.

Furnish manufactured gaskets to be placed between the lid and top of vault to resist water from entering the vault.

The vault and cover shall be designed with a field replaceable locking mechanism. The cover shall be able to be removed and the nut in the vault shall be able to be replaced without damaging the vault.

The vault sidewalls shall be manufactured of corrugated fiberglass and the spacing between each corrugation shall measure approximately 8" to facilitate conduit placement. The sidewalls shall have a smooth exterior and be gel-coated.

The vault shall have four ½" bolts embedded on the underside of the top ring to be used for lifting purposes.

Furnish fiber optic cable support assembly consisting of multiple brackets, racks, and rails required to suspend the required surplus cabling and any splice enclosure for a single vault. The support assemblies shall be made from or coated with a weather resistant material to ensure no corrosion.

Furnish self-curing caulking to provide a permanent bond and made of flexible rubber that is not affected by sunlight, water, oils, mild acids, and alkali. Use mildew-resistant and non-flammable, gray caulk.

C Construction

Construct communications vault in accordance to standard spec 611.

Provide a manufacturer-approved knockout punch driver to provide openings in the vault for conduit if not provided. Voids between the conduit and vault shall not exceed ½". Caulk the interior and exterior of the communication vault. Cure caulking according to manufacturer's specifications before backfilling.

Secure vault lid to vault with the manufacturer supplied hardware.

Anchor the support assemblies to the existing vault using stainless steel hardware.

D Measurement

The department will measure Traffic Signal Interconnect Vault as each individual vault, 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.0060.81	Traffic Signal Interconnect Vault	Each

Payment is full compensation for furnishing and installing all materials including vaults, lids, bolts, washers, mounting hardware, and caulking; for excavating, bedding, backfilling and restoration of ground to original condition including sand, aggregate, concrete, or other required materials; and for disposing of surplus materials.

129. Removing Traffic Signal Interconnect Vault, Item SPV.0060.82.

A Description

This special provision describes the removal of existing traffic signal interconnect vault.

B (Vacant)

C Construction

Coordinate with the STOC for disconnection of service at (414) 227-2166. The department will pay any fees charged by the utility. Excavate and remove existing vault. Backfill with material similar to the material surrounding the removal. Dispose of surplus or unsuitable excavated material as specified under standard spec 205.3.12. Stockpile communications vault for pickup by the owner.

D Measurement

The department will measure Removing Traffic Signal Interconnect Vault 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.0060.82	Removing Traffic Signal Interconnect Vault	Each

Payment is full compensation for removal of the vault; for stockpiling; and for excavating, backfilling, and disposing of surplus material.

130. Contractor Provided High-Strength Bolt Assemblies for Monotube Arms (Type 9) Item SPV.0060.83.

A Description

This special provision describes furnishing and installing high-strength bolt assemblies for monotube mast arm to pole connection on Type 9 signal poles as shown on the plans.

B Materials

Furnish same lot/heat high-strength bolts, hex nuts, two flat washers and also provide DTI (Direct Tension Indicator) washer of the size as given on the plans, per pole manufacturer design requirements and that conform to standard spec 506.2.5. Also submit "Buy America" provision compliance material certification.

C Construction

Provide high-strength bolts, hex nuts, two flat washers and DTI washer for connection of monotube arm to pole upright flange connection plates. Install per standard spec 506.3.12. Ensure that spare bolt, nuts and washer for ready for field test requirements and stored well not exposed the environments. Lubricate the bolt/nut before test and install. Follow the bolt field tests procedures per standard specs 506.2.5.6 and 506.3.12. Complete and submit DT2113 and DT2114 forms to project manager.

D Measurement

The department will measure Contractor Provided High Strength Bolt Assemblies for Monotube Arms (Type 9) as each individual arm, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.83	Contractor Provided High-Strength Bolt Assemblies for Monotube Arms (Type 9)	Each

Payment is full compensation for furnishing, installing and field testing high-strength bolt assemblies. All contractor provided high-strength bolt assemblies required for acceptable installation, field testing, and quality verification testing are incidental to this bid item.

131. Contractor Provided High-Strength Bolt Assemblies for Monotube Arms (Type 12) Item SPV.0060.84.

A Description

This special provision describes furnishing and installing high-strength bolt assemblies for monotube mast arm to pole connection on Type 12 signal poles as shown on the plans.

B Materials

Furnish same lot/heat high-strength bolts, hex nuts, two flat washers and also provide DTI (Direct Tension Indicator) washer of the size as given on the plans, per pole manufacturer design requirements and that conform to standard spec 506.2.5. Also submit "Buy America" provision compliance material certification.

C Construction

Provide high-strength bolts, hex nuts, two flat washers and DTI washer for connection of monotube arm to pole upright flange connection plates. Install per standard spec 506.3.12.

Ensure that spare bolt, nuts and washer for ready for field test requirements and stored well not exposed the environments. Lubricate the bolt/nut before test and install. Follow the bolt field tests procedures per standard specs 506.2.5.6 and 506.3.12. Complete and submit DT2113 and DT2114 forms to project manager.

D Measurement
The department will measure Contractor Provided High Strength Bolt Assemblies for Monotube Arms (Type 12) as each individual arm, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.84	Contractor Provided High-Strength Bolt Assemblies for Monotube Arms (Type 12)	Each

Payment is full compensation for furnishing, installing and field testing high-strength bolt assemblies. All contractor provided high-strength bolt assemblies required for acceptable installation, field testing, and quality verification testing are incidental to this bid item.

132. Concrete Curb and Gutter Integral 19-Inch, Item SPV.0090.01.

A Description
Construct Concrete Curb and Gutter Integral 19-Inch in accordance to the requirements in standard specs 415, 601, 716 and standard specs 415.3.15 and 501.3.1 and as shown in the plans.

B (Vacant)

C Construction
Concrete Curb and Gutter Integral 19-Inch in accordance to the requirements in standard spec 601.3 and as shown on the plans.

All curb and gutter shall have a flange thickness of 8.5 inches.

D Measurement
The department will measure Concrete Curb and Gutter Integral 19-Inch in length by the linear foot of curb and gutter, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.01	Concrete Curb and Gutter Integral 19-Inch	LF

Payment is full compensation for furnishing and installing Concrete Curb and Gutter Integral 19-Inch.

133. Construction Staking Concrete Sidewalk, Item SPV.0090.02.

A Description

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

B (Vacant)

C Construction

C.1 General

Obtain or calculate benchmark data, grades, and alignment from data in the plan and verify with the engineer prior to beginning the work. The engineer will furnish horizontal alignment, horizontal alignment ties and control point data. This work shall include reestablishing the plan horizontal roadway alignment, alignment ties, and control points.

Obtain approval from the engineer prior to beginning the work for methods of survey and prior to beginning the work. The degree of accuracy used in the survey work shall be consistent with third order, class II. Establish additional benchmarks and control points as necessary or as directed by the engineer. Check plan dimensions, alignment, and elevations for accuracy with existing field conditions. Immediately call to the engineer's attention any errors and apparent discrepancies for correction or interpretation prior to proceeding with the work.

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

C.2 Concrete Sidewalk

Place construction stakes for concrete sidewalk at intervals of 25 feet. A minimum of three stakes per cross section is required. Set and maintain as necessary additional stakes per cross section to achieve the required accuracy and to satisfy the contractors' method of operations. Set additional stakes as necessary to establish location and grade along intersecting road radii; and for auxiliary lanes, vertical curves, horizontal curves, and curve transitions. Locate all concrete sidewalk construction stakes to within 0.25 feet of the true horizontal position and establish the grade elevation to within 0.01 ft. of the true vertical position.

D Measurement

The department will measure Construction Staking, Concrete Sidewalk by the linear foot along each roadway centerline or reference line, acceptably completed. When sidewalk occurs on both sides of the roadway, the quantity of Construction Staking, Concrete Sidewalk, will be measured by the linear foot along the centerline or reference line of each side of the roadway.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.02	Construction Staking, Concrete Sidewalk	LF

Payment is full compensation for furnishing all survey work necessary to locate and set all concrete sidewalk construction stakes including additional stakes per cross section set to achieve the required accuracy and to satisfy the contractors' method of operations including intersecting road radii, auxiliary lanes, vertical curves, horizontal curves, and curve transitions; for resetting damaged or missing concrete sidewalk construction stakes; and for furnishing all labor, tools, stakes, lath, flags, equipment and incidentals necessary to complete the work for staking storm concrete sidewalk.

134. Galvanized Pipe 16 Gauge 9½-Inch, Item SPV.0090.04; Galvanized Pipe 16 Gauge 11½-Inch, Item SPV.0090.05.

A Description

This special provision describes the installation of galvanized pipe, in conjunction with what is described in of the special provisions (SPV.0060.37 and SPV.0060.38).

B Materials

Furnish pipe that is 16 gauge galvanized with an outside diameter of 9½-Inch.

Furnish pipe that is 16 gauge galvanized with an outside diameter of 11½-Inch.

C Construction

Install items in accordance to the specifications referred to in SPV.0060.37 and SPV.0060.38.

D Measurement

The department will measure Galvanized Pipe 16 Gauge (Inch) by the linear feet of pipe, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.04	Galvanized Pipe 16 Gauge 9½-Inch	LF
SPV.0090.05	Galvanized Pipe 16 Gauge 11½-Inch	LF

Payment is full compensation for furnishing and installing galvanized pipe.

135. 1-Duct Conduit Cement Encased, 4-Inch Rigid Nonmetallic Conduit DB-60, Item SPV.0090.06; 2-Duct Conduit Cement Encased, 4-Inch Rigid Nonmetallic Conduit DB-60, Item SPV.0090.07; 3-Duct Conduit Cement Encased, 4-Inch Rigid Nonmetallic Conduit DB-60, Item SPV.0090.08; 4-Duct Conduit Cement Encased, 4-Inch Rigid Nonmetallic Conduit DB-60, Item SPV.0090.09; 6-Duct Conduit Cement Encased, 4-Inch Rigid Nonmetallic Conduit DB-60, Item SPV.0090.10; 7-Duct Conduit Cement Encased, 4-Inch Rigid Nonmetallic Conduit DB-60, Item SPV.0090.11; 8-Duct Conduit Cement Encased, 4-Inch Rigid Nonmetallic Conduit DB-60, Item SPV.0090.12.

A Description

This work consists of furnishing and installing cement encased multiple duct conduit packages below grade in accordance to the applicable sections of the standard specifications, as shown on the plans and as hereinafter described.

B Materials

1. **Conduit**

   Furnish DB-60 polyvinyl chloride (PVC) conduit. Conduit will be accepted on the basis of a Manufacturer's Certificate of Compliance and WISDOT field inspection upon delivery to a project.

   PVC conduit and fittings shall conform to the requirements of Standard Specifications for Smooth-Wall Poly (Vinyl Chloride) (PVC) Conduit and Fittings for Underground Installation, ASTM Designation: F512 (latest edition).

2. **Concrete**

   The type of concrete to be used to encase the ducts will be:

Class of Concrete	Type of Cement	Min. Cement Content Sacks per Cubic Yard	Sizes of Coarse Aggregate
G	Standard Portland Cement Type 1A or 1SA	4.0	Sharp Torpedo Sand only

3. **Slurry Backfill**

   Aggregate slurry backfill consists of No. 1 concrete aggregate Class 'C' concrete mix with the cement deleted.

Fly Ash (Class C)	75 lbs.
Concrete Sand (Damp)	1830 lbs.
No. 1 Concrete Aggregate	1830 lbs.

The material shall be mixed with water to inundate the aggregate sufficiently to provide an approximate 3 inch slump. The mix shall be deposited in the trench directly from a concrete transit mix truck.

4. **Pull Rope Pull rope specifications will be:**

- Flat construction (7/16" to 5/8" wide)
- 100% woven aramid fiber (may include tracer wire)
- 1500 lbs. Minimum pull strength prelubricated
- Sequential footage markings for location

For any questions on materials, contact Ms. Karen Rogney at (414) 286-3243.

C Construction Method

1. **Excavation**

The excavation shall have the minimum or maximum dimensions shown on the plans and as follows:

No. of Ducts Wide	Minimum	Maximum
2	14 1/8"	16 5/8"
3	19 3/4"	22 1/4"
4	25 3/8"	27 7/8"
5	31"	33 1/2"
6	36 5/8"	39 1/8"

These minimum and maximum trench widths apply to standard 4 inch PVC electrical duct only. When required, the excavation may be widened for the handling and placing of materials.

Open-cut trenches shall be sheathed and braced as required by code and as necessary to maintain safety. The cost of furnishing, placing and removing of sheathing and bracing shall be included in the unit bid for the work.

The dimensions of the excavation will be governed by the number, configuration and the grade (cover) to which the conduit is to be installed as shown on the plan. The walls of the excavation shall be clean and true.

Previous to excavating trenches, the contractor shall expose the existing manhole and conduit lines. The object of this is to permit adjustments in line and grade to avoid special construction methods. The exposed manhole and conduit shall be protected from damage.

The conduit shall be laid at a depth so that sufficient protection from damage is provided. Allowable covers shall be as follows:

The standard cover for mainline conduit is 39 inches and the minimum cover acceptable shall be 28 inches.

The standard cover shall be maintained wherever possible and any deviation less than the minimum may be allowed only with specific approval of the engineer.

The trench shall be graded so that it will have a minimum pitch of three inches per 100 feet. When an obstruction is encountered in the trench and it is necessary to excavate a deeper trench than would otherwise be required, in order to obtain drainage, refer the matter to the Inspector to determine whether the extra excavation should be made.

In grading a trench for mainline conduit, there are three general practices for direction of pitch.

(a) When grading a trench in a street with a level grade, the high point of the trench bottom should ordinarily be centered between manholes and pitched downward equally toward each manhole.

(b) Where the street slopes in one direction, locate the high point of the trench bottom approximately 30 feet from the end wall of the higher manhole and grade toward both manholes.

(c) Where a steep grade is encountered, grade the trench at the minimum pitch from the end wall of the higher manhole to a point 20 feet plus or minus toward the lower manhole. From this point, follow the street grade at the standard cover to a point 20 feet plus or minimum away from the end wall of the lower manhole. From this point, the remainder of the section shall be laid at the normal pitch.

After the rough excavation is completed, the bottom of the trench shall be prepared to receive the conduit. The duct bed shall be brought to the final grade and graded uniformly from the high point to the low or drainage points. Stone chips or limestone screenings shall be used for grading the trench.

2. **Placing of Duct**

Placing of the duct is to proceed as soon as the duct bed has been completed. All ducts shall be inspected before placing to see that the bores are clean and free from mud, sand, etc. Only ducts with a smooth bore, free from burrs, rough projections etc. shall

be used. Where burrs or other rough areas likely to damage cable are found in the duct, they shall be smoothed off by rasping or scraping.

The duct shall be placed on base spacers with the ends staggered so no two couplings are adjacent. This may be accomplished by the use of the short lengths in stock or cutting back full length sections to the desired lengths. If cut pieces are used, the cut end shall be placed at the manhole. The base spacers shall be located within 2 feet of the end of each duct and one base spacer located in the middle of the duct.

Full length pieces shall be used for the balance of the conduit line.

Formations of two ducts or more in height are to be carried forward in full formation, that is, as each tier of 20 foot lengths is laid, the next higher tier of ducts shall then be placed on the intermediate spacers. These intermediate spacers shall be placed on top of the base spacers located within 2 feet from each duct end and one in the middle of each duct. The intermediate spacers and ducts shall be placed for the remaining tiers. Each length shall be glued into the adjoining coupling. A twist and push on the duct being placed will suffice for a water tight joint. Caution must be exercised in the driving operation, so that neither the coupling nor the duct will be split or damaged in any way. After the full formation has been completed, wood trench and duct bracing shall be placed on the ducts to prevent shifting or floating while the concrete envelope is being placed and during driving operation.

This procedure shall be followed with succeeding lengths, providing spacers at the proper intervals, until sufficient trench footage of completed formation has been placed and is ready to receive concrete encasement.

The terminating point for mainline conduit will be the inside manhole wall. A standard end bell fitting shall be installed on all duct access points.

A #10 copper tracer wire shall be installed along and above the centerline of the duct for encasement in the concrete. The wire shall be 4 feet longer than the run of conduit and be at least 2 feet long at each access point.

A pull rope shall be installed in each run of conduit, as laid. The rope shall be 4 feet longer than the run of conduit and shall be doubled back at least 2 feet at each raceway access point. The pull rope shall be anchored at each access point in a manner acceptable to the engineer.

3. **Concreting**

After sufficient conduit has been laid and the trench and duct have been inspected, concreting is to begin. The minimum concrete encasement of the ducts shall be 3 inches on the top, 2 inches on the sides, and 3 inches on the bottom. After placing, the concrete shall be puddled with a splicing bar or similar tool so that complete duct encasement is accomplished. Wood braces used to keep the conduit from floating shall

be removed before the concrete sets completely and the resultant encasement voids filled with concrete.

Concrete encasement shall be allowed sufficient time to set before backfilling is commenced.

4. **Slurry Backfill**

The backfilling of the conduit shall commence immediately after the duct has been inspected, approved and has had sufficient time to set to withstand the load.

An aggregate slurry as specified shall be used to backfill all concrete encased conduit. The trench shall be slurry backfilled to the proposed or existing subgrade. The mix shall be deposited in the trench directly from a concrete transit mix truck.

D Measurement

The department will measure 1-Duct, 2-Duct, 3-Duct, 4-Duct, 6-Duct, 7-Duct, and 8-Duct Conduit, Cement Encased, 4-Inch Rigid Nonmetallic Conduit DB-60 by the linear foot, acceptably completed. The measured quantity will equal the linear feet of encased duct, based on the distance along the centerline of duct between ends of conduit.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.06	1-Duct Conduit Cement Encased 4-Inch Rigid Non-metallic Conduit DB-60	LF
SPV.0090.07	2-Duct Conduit Cement Encased 4-Inch Rigid Non-metallic Conduit DB-60	LF
SPV.0090.08	3-Duct Conduit Cement Encased 4-Inch Rigid Non-metallic Conduit DB-60	LF
SPV.0090.09	4-Duct Conduit Cement Encased 4-Inch Rigid Non-metallic Conduit DB-60	LF
SPV.0090.10	6-Duct Conduit Cement Encased 4-Inch Rigid Non-metallic Conduit DB-60	LF
SPV.0090.11	7-Duct Conduit Cement Encased 4-Inch Rigid Non-metallic Conduit DB-60	LF
SPV.0090.12	8-Duct Conduit Cement Encased 4-Inch Rigid Non-metallic Conduit DB-60	LF

Payment is full compensation for furnishing the conduit, conduit bodies, conduit fittings, conduit spacers, end caps and trace wire; for excavating, bedding, encasement and backfilling including any concrete, stone, aggregate slurry, bracing, or other related materials; for disposing of surplus materials; and for making inspections, and for installing the conduit.

136. Fiber Optic Tracer Wire, Item SPV.0090.40.

A Description

This special provision describes furnishing and installing fiber optic tracer wire in all conduit containing fiber optic cable.

B Materials

Provide the tracer wire with a black insulation cover, No. 14 AWG, XLP, USE rated, 600 VAC, single conductor, copper wire.

C Construction

Install the tracer wire in all conduits containing fiber optic cable, running continuously through all pull boxes. Install the tracer wire to each control cabinet, but do not enter the cabinet. The tracer wire may be spliced only in pull boxes. Make splices only between full rolls of wire. For the cable splice, use a Western Union Splice soldered with resin core flux. All exposed surfaces of the solder shall be smooth. Solder splices using a soldering iron. Cover the splice with a WCSMW 30/100 heat shrink tube, minimum length 4-inches, and with a minimum one-inch coverage over the XLP insulation, underwater grade.

D Measurement

The department will measure Fiber Optic Tracer Wire in length by the linear foot of wire, measured along the centerline of the conduit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.40	Fiber Optic Tracer Wire	LF

Payment is full compensation for furnishing and installing the tracer wire; splicing; and for properly disposing of surplus materials.

137. Fiber Optic Warning Tape, Item SPV.0090.41.

A Description

This special provision describes furnishing and installing fiber optic warning tape above all conduit containing fiber optic cable.

B Materials

Provide underground warning mesh that is constructed of polypropylene and is fluorescent orange in color. Provide 6-inch detectable marking tape that has the words “Buried Fiber Optic Cable” and is orange in color.

C Construction
Lay underground warning mesh above all underground conduits, 12-inches below grade. The width of the warning mesh shall be the same as the width of the trench. Lay directly above the underground warning mesh, a 6-inch detectable marking tape that has the words "Buried Fiber Optic Cable" and is orange in color.

D Measurement
The department will measure Fiber Optic Warning Tape in length by the linear foot of tape, measured along the centerline of the conduit, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.41	Fiber Optic Warning Tape	LF

Payment is full compensation for furnishing and installing the marking tape; and for properly disposing of surplus materials.

138. Pavement Marking Grooved Preformed Thermoplastic Stop Line 18-Inch, Item SPV.0090.90.

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

C Construction
C.1 General
For quality assurance, provide the 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 deep from the pavement surface or, if tined, from the high point of the tined surface. Measure depth using a straightedge placed perpendicular to the groove. The department may periodically check groove depths.

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

C.4 Groove Position
Position the groove edge in accordance 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 at a minimum of 4-inches from the perimeter of the special marking. Groove separate areas for Word Items.

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

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

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

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

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

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

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

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

D Measurement
The department will measure Pavement Marking Grooved Preformed Thermoplastic Stop Line 18-Inch in length by the linear foot of tape placed, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.90	Pavement Marking Grooved Preformed Thermoplastic Stop Line 18-Inch	LF

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

139. Pavement Marking Grooved Preformed Thermoplastic Crosswalk 6-Inch, Item SPV.0090.94.

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

C Construction
C.1 General
For quality assurance, provide the 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 deep from the pavement surface or, if tined, from the high point of the tined surface. Measure depth using a straightedge placed perpendicular to the groove. The department may periodically check groove depths.

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

C.4 Groove Position
Position the groove edge in accordance 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 at a minimum of 4-inches from the perimeter of the special marking. Groove separate areas for Word Items.

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

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

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

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

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

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

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

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

D Measurement
The department will measure Pavement Marking Grooved Preformed Thermoplastic Crosswalk 6-Inch in length by the linear foot of tape placed, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.94	Pavement Marking Grooved Preformed Thermoplastic Crosswalk 6-Inch	LF

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

140. MIS Manhole Riser Extension, Item SPV.0105.01.

A Description
Furnish and Install MIS Manhole Riser Extension at the location indicated on the plans and specified herein.

B Materials
Furnish materials conforming to the following: State of Wisconsin Standard Specification for Sewer & Water Construction Sixth Edition Chapter 8.39.0 Precast Reinforced Concrete Manholes.

Manhole Steps
Manhole steps shall be Type PS2-PFS as manufactured by M. A. Industries, Peachtree City, Georgia 30269; or equal. Provide certified test data that the steps are capable of withstanding an 800-pound vertical load without sustaining more than a 3/8-inch permanent set when tested in accordance with Section 10 of ASTM C497.

Bentonite Waterstops
The bentonite waterstop material shall be the 1-inch by ¾-inch size flexible strip of bentonite waterproofing compound with an adhesive surface on one side of the strip, and it shall be the waterstop Type RX, as manufactured by the American Colloid Company, Arlington Heights, IL; or approved equal.

C Construction
Install MIS Manhole Riser Extension at the location shown on the plans.

Perform work under this item in accordance to the requirements of standard spec 611 and the details as shown on the plans.

D Measurement
The department will measure MIS Manhole Riser Extension 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.0105.01	MIS Manhole Riser Extension	LS

Payment is full compensation for providing all required materials, including masonry and fittings; for salvaging and reinstalling existing covers, including frame or lid; for all necessary excavation, backfilling, disposing of surplus material, and for cleaning out.

141. Electrical Work, Item SPV.0105.02.

A Description
This special provision describes supplying and installing light pole anchor bolts, grout, conduit, and 90˚ conduit elbows sized to run from lighting junction boxes to pole bases. The 2 ½" diameter conduit and junction boxes will be paid for under separate bid items.

B Materials
Furnish 2" diameter schedule 40 elbows, 18" radius, plain end and UL/ETL listed. Furnish 1" stainless steel anchor bolts with double stainless steel nuts and washers for each anchor.

The bolt circles supplied for mounting the lighting shall be stainless steel. The anchor bolts shall be 2' – 3" in length and also made of stainless steel. All bolt circles are to be 11 inches in diameter and shall be placed in such a manner that the mounted poles are perpendicular with the horizon (and not necessarily the structure).

Direct all materials questions to Mr. Tom Manzke at (414) 286-3265.

C Construction
Inspect all elbows before placing to see that bores are clean and free of mud, sand, and other deleterious substances. Only use elbows free from burrs and rough projections. Install a standard box adaptor on elbows at junction box access points.

When installing stainless steel anchor bolts, keep threads free from dirt and concrete. Install as shown in the plans. All light pole anchor bolt pads shall be leveled to the horizon.

Contact Dennis Miller at (414) 286-5942 office, (414) 708-4251 cell to arrange for the inspection of the elbows and anchor bolts prior to the structure deck and sidewalk pours.

D Measurement
The department will measure Electrical Work as a single lump sum unit of work, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.02	Electrical Work	LS

Payment is full compensation for furnishing and installing light pole anchor bolts, grout, 2" diameter elbows, 2" diameter conduit and fittings; and for making inspections.

142. Underdeck Utility Structure B-40-0438 City of Milwaukee Communications, Item SPV.0105.03.

A Description
This section describes furnishing and installing a City of Milwaukee traffic interconnect and communication six-duct package consisting of six 4-Inch Fiberglass Reinforced Epoxy (FRE) conduits, the conduit support system including field-drilling holes in the struts and auxiliary supports, embedding of inserts, stainless steel hanger rods, washers and nuts, and the abutment penetrations to Structure B-40-438 shown on the plans.

B Materials
Use material conforming to the class of material named and as specified. Conduit shall be non-metallic, filament-wound epoxy, suitable for direct burial, concrete encasement, and suspended from structure members without regard to outdoor ambient. The product shall contain carbon black to provide ultraviolet protection.

The conduit shall have an interference joint system consisting of an integral bell and spigot with interlocking male and female threads. Epoxy adhesive shall be applied on joints per manufacture's specifications prior to use.

Product shall be listed by Underwriters Laboratories and conform to the National Electrical Code.

The I.D. dimension shall be full, actual trade size with a wall thickness of .096 inches.

All adaptors, couplings, expansion joints and suspended hangers shall be FRE fittings corresponding to and manufactured for use with FRE conduit as specified on the plans. The suspended hanger assemblies shall include stainless steel threaded rods as specified on the plans.

Furnish concrete for structures conforming to standard spec 501, Grade E. Contractor may use premixed bag cement per engineer's approval.

C Construction

Construct according to the pertinent provisions of standard specs 502 and 652 and the plan details.

The duct package consists of six 4-inch ducts, one high by six wide.

Install the conduit 5 feet beyond the back of the structure abutment walls. Install 4" fiberglass to PVC adapters at the end of each duct. Provide temporary caps for the ends.

Coupling of the duct sections shall be accomplished and secured by first applying an epoxy adhesive then mating a spigot end into an integral bell end with a blow to the open end of the duct section.

Install all FRE duct and components according to manufacturer's instructions.

D Measurement

The department will measure Underdeck Utility, Structure B-40-0438, City of Milwaukee Communications, as a single lump sum unit of work, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.03	Underdeck Utility Structure B-40-0438 City of Milwaukee Communications	LS

Payment is full compensation for furnishing and installing the Underdeck Utility Structure B-40-438, City of Milwaukee Communications for both crossings; including the FRE conduit, the conduit support system including the stainless hangers, the abutment penetrations, and for furnishing all labor, equipment, tools and incidentals necessary to complete the work in accordance to the contract. Materials rendered unfit for use by the contractor as a result of the contractor's operations shall be replaced by the contractor in kind at the contractor's own cost and expense. Payment is full compensation of all incidentals and coordination required to complete this work and being accepted by the City of Milwaukee and the engineer.

143. Deck Drainage System, Structure B-40-0438, Item SPV.0105.04.

A Description

This special provision describes furnishing and installing deck drains, in accordance to the plans, the pertinent requirements of standard spec 514, and as hereinafter provided. Included in this work are the deck drain downspouts at the north abutment and all other components required for draining the structure deck.

B Materials

Furnish materials for the deck drains and downspouts that are in accordance to the plans, standard spec 514.2, and as hereinafter provided.

Furnish scuppers, downspouts, pipe, pipe clamps and outlet stubs of the sizes and gauges as shown on the plans. All material for Type "GC" casting, excluding grate hold down screws, shall be gray iron conforming to ASTM A48, Class 30. Downspouts, pipes, pipe clamps, all attaching support components, and all other materials required shall be cast material or fiberglass, conforming to ASTM D2996, Grade 1, Class A.

C Construction

Install the deck drains in accordance to the details shown on the plans, standard spec 514.3, and as hereinafter provided.

Prepare shop drawings and submit them to the engineer in accordance to standard spec 506.3.2.

D Measurement

The department will measure Deck Drainage System Structure B-40-0438 as a single lump sum unit of work for each structure, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.04	Deck Drainage System Structure B-40-0438	LS

Payment is full compensation for furnishing and installing deck drains, downspouts, pipes, pipe clamps, and all other components of the deck drainage system.

144. Railing Steel Type C2 Galvanized B-040-0058, Item SPV.0105.05.

A Description

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

B Materials

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

B1 Coating System

B1.1 Galvanizing

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

B1.2 Two-Coat Paint System

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

Ensure that the paint manufacturer reviews the process to be used for surface preparation and application of the paint coating system with the paint applier. The review shall include a visit to the facility performing the work if requested by the paint manufacturer. Provide written confirmation, from the paint manufacturer to the engineer, that the review has taken place and that issues raised have been addressed before beginning coating work under the contract.

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

Manufacturer	Coat	Products	Dry Film Minimum Thickness (mils)	Min. Time[1] Between Coats (hours)
Sherwin Williams 1051 Perimeter Drive Suite 710 Schaumburg, IL 60173 (847) 330-1562	Tie	Re-coatable Epoxy Primer B67-5 Series / B67V5	2.0 to 4.0	6
	Top	Acrolon 218 HS Polyurethane, B65-650	2.0 to 4.0	NA
Carboline 350 Hanley Industrial St. Louis, MO 63144 (314) 644-1000	Tie	Rustbond Penetrating Sealer FC	1	36
	Tie	Carboguard 60	4.0 to 6.0	10
	Tie	Carboguard 635	4.0 to 6.0	1
	Top	Carbothane 133 LH(satin)	4	NA
Wasser Corporation 4118 B Place NW Suite B Auburn, WA 98001 (253) 850-2967	Tie	MC-Ferrox B 100	3.0 to 5.0	8
	Top	MC-Luster 100	2.0 to 4.0	NA
PPG Protective and Marine Coatings P.O. Box 192610 Little Rock, AR 72219-2610 (414) 339-5084	Tie	Amercoat 399	3.0 to 5.0	3
	Top	Amercoat 450H	2.0 to 4.0	NA

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

B2 Shop Drawings

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

C Construction

C1 Delivery, Storage and Handling

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

C2 Touch-up and Repair

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

D Measurement

The department will measure Railing Steel Type C2 Galvanized B-40-0058 as a single lump sum unit of work for the structure where railing is acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.05	Railing Steel Type C2 Galvanized B-40-0058	LS

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

145. Railing Tubular Type 'M' (Modified) B-40-0438, Item SPV.0105.06.

A Description

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

B Materials

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

B1 Coating System

B1.1 Galvanizing

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

B1.2 Two-Coat Paint System

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

Ensure that the paint manufacturer reviews the process to be used for surface preparation and application of the paint coating system with the paint applier. The review shall include a visit to the facility performing the work if requested by the paint manufacturer. Provide written confirmation, from the paint manufacturer to the engineer, that the review has taken place and that issues raised have been addressed before beginning coating work under the contract.

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

Manufacturer	Coat	Products	Dry Film Minimum Thickness (mils)	Min. Time[1] Between Coats (hours)
Sherwin Williams 1051Perimeter Drive Suite710 Schaumburg,IL 60173 (847) 330-1562	Tie	Recoatable Epoxy Primer B67-5 Series / B67V5	2.0 to 4.0	6
	Top	Acrolon 218 HS Polyurethane, B65-650	2.0 to 4.0	NA
Carboline 350Hanley Industrial St. Louis, MO 63144 (314) 644-1000	Tie	RustbondPenetrating Sealer FC	1	36
	Tie	Carboguard 60	4.0 to 6.0	10
	Tie	Carboguard 635	4.0 to 6.0	1
	Top	Carbothane133 LH(satin)	4	NA
Wasser Corporation 4118 B Place NW Suite B Auburn, WA 98001 (253) 850-2967	Tie	MC-Ferrox B 100	3.0 to 5.0	8
	Top	MC-Luster 100	2.0 to 4.0	NA
PPG Protective and Marine Coatings P.O. Box 192610 Little Rock, AR 72219-2610 (414) 339-5084	Tie	Amercoat 399	3.0 to 5.0	3
	Top	Amercoat 450H	2.0 to 4.0	NA

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

Revise standard spec 513.2.1(2) as follows:

Paint all surfaces of railing according to standard spec 517.2.4.

Finish Color:Federal Standard 14062 green, semi gloss finish.

B2 Shop Drawings
Submit shop drawings showing the details of railing construction. Show the railing height post spacing, rail location, weld sizes and locations and all dimensions necessary for the construction of the railing. Show location of shop rail splices, field erection joints and expansion joints. State the name of the paint manufacturer and the product name of the tie coat and top coat used along with the color. State the size and material type used for all components. Also show the size and location of any vent or drainage holes provided.

B3 Cable Railing
Provide intermediate stainless steel cable railings, free from distortion or defects detrimental to appearance or performance, without kinks or sags. Terminate and tension cables in accordance to manufacturer's instructions.

Provide 1 x 19, Type 316 stainless steel strand, left-hand lay, per dimensional properties contained in MIL-DTL-87161.

Installed horizontal orientation with spacing as indicated on plans.

Provide diameter of 1/4" with minimum breaking strength of 8200 pounds.

Cable hardware components shall conform to ASTM A 276 and A 479, SAE/AMS QQ-S-763. Type 316 for stainless steel.

Wash thoroughly after installation using soap and clean water, rinse with clean water. Do not use acid solutions, steel wool or other harsh abrasives.

Install rubber grommets (oversized) surrounding stainless steel cables at all steel post penetrations to prevent wind chatter and extend the life of the steel post finishing system.

C Construction
C1 Delivery, Storage and Handling
Deliver material to the site in an undamaged condition. Upon receipt at the job site, all materials shall be thoroughly inspected to ensure that no damage occurred during shipping or handling and conditions of materials is in conformance with these specifications. If coating is damaged, contractor shall repair or replace railing assemblies to the approval of the engineer at no additional cost to the owner. Carefully store the material off the ground to ensure proper ventilation and drainage. Exercise care so as not to damage the coated surface during railing installation. No field welding, field cutting or drilling will be permitted without the approval of the engineer.

C2 Touch-up and Repair
For minor damage caused by shipping, handling or installation to coated surfaces, touch-up the surface in conformance with the manufacturer's recommendations. If damage is excessive, the railing assembly shall be replaced at no additional cost to the owner. The contractor shall provide the engineer with a copy of the manufacturer's recommended repair procedure and materials before repairing damaged coatings.

D Measurement
The department will measure Railing Tubular Type 'M' (Modified) B-40-0438 as a single lump sum unit of work for the structure where railing is acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.06	Railing Tubular Type 'M' (Modified) B-40-0438	LS

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

146. Transporting Traffic Signal and Intersection Lighting Materials STH 241 and Howard Ave., Item SPV.0105.40.

A Description
This special provision describes the transporting of department furnished materials for traffic signals and intersection lighting.

B Materials
Transport materials furnished by the department including: monotube arms and luminaire arms.

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

C (Vacant)

D Measurement
The department will measure Transporting Signal and Lighting Materials STH 241 and Howard Ave. as a single lump sum unit of work, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.40	Transporting Traffic Signal and Intersection Lighting Materials STH 241 and Howard Ave.	LS

Payment is full compensation for transporting the monotube poles, monotube arms and luminaire arms. Installation of these materials is included under a separate pay item.

147. Remove Traffic Signals STH 241 and Howard Ave., Item SPV.0105.41.

A Description

This special provision describes removing existing traffic signals at the state owned intersection of STH 241 and Howard Ave. in accordance to the pertinent provisions of standard spec 204 and as hereinafter provided. Specific removal items are noted in the plans.

B (Vacant)

C Construction

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

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

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

Notify the STOC at (414) 227-2166 at least five working days prior to disconnecting the fiber interconnect from the signal cabinet.

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

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

D Measurement

The department will measure Remove Traffic Signals STH 241 and Howard Ave. as a single lump sum unit of work for each intersection, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.41	Remove Traffic Signals STH 241 and Howard Ave.	LS

Payment is full compensation for removing and disassembling traffic signals; for scrapping of some materials; for disposing of scrap material; for delivering the requested materials to the West Allis Electrical Service Facility.

148. Remove Loop Detector Wire and Lead-in Cable, Intersection of STH 241 and Howard Ave., Item SPV.0105.42.

A Description

This special provision describes removing loop detector wire and lead-in cable at the Intersection of STH 241 and Howard Ave. Removal will be in accordance to standard spec 204, as shown in the plans, and as hereinafter provided.

B (Vacant)

C Construction

Notify the department's Electrical Field Unit at (414) 266-1170 at least five working days prior to the removal of the loop detector wire and lead-in cable.

Remove and dispose of detector lead-in cable, including loop wire, for abandoned loops. Detector lead-in cable and loop wire shall become property of the contractor and shall be disposed off of the right-of-way.

D Measurement

The department will measure Remove Loop Detector Wire and Lead-in Cable as a single lump sum unit of work for each intersection, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.42	Remove Loop Detector Wire and Lead in Cable, Intersection of STH 241 and Howard Ave.	LS

Payment is full compensation for removing, scrapping, and disposing of material and incidentals necessary to complete the contract work.

149. EVP Detector Head Installation STH 241 and Howard Ave., Item SPV.0105.43.

A Description

This special provision describes the transporting and installing of department furnished emergency vehicle preemption (EVP) detector heads and EVP detector head mounting brackets at the intersection of STH 241 and Howard Ave.

B Materials

Use materials furnished by the department including: emergency vehicle preemption (EVP) detector heads and evp detector head mounting brackets.

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

C Construction

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

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

D Measurement

The department will measure Installation STH 241 and Howard Ave. as a single lump sum unit of work, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.43	EVP Detector Head Installation STH 241 and Howard Ave.	LS

Payment is full compensation for transporting and installing of department furnished emergency vehicle preemption (EVP) detector heads and EVP detector head mounting brackets.

150. Transporting and Installing State Furnished Video Detection System, STH 241 and Howard Ave., Item SPV.0105.44.

A Description

This special provision describes the transporting and installing of the department furnished traffic signal video detection system on monotubes and luminaire arms.

B Materials

The contractor shall pick up the department furnished traffic signal video detection system for the state maintained traffic signal on the project at the department's Electrical Shop located at 935 South 60th Street, West Allis. Notify the department's Electrical Field Unit at (414) 266-1170 to make arrangements for picking up the department furnished materials at least five working days prior to material pick-up.

C Construction

Install the power cable, the camera manufacturer's connector cable whip, pole/arm mounting bracket, extension arm (if required) and camera as shown on the plans (the final determination of location will be made by the department's electrical personnel to ensure best line of sight). The department Electrical Field Unit (EFU) shall install State-furnished video detection equipment in the traffic signal control cabinet.

Install the power cable to run continuously (without splices) from the traffic signal cabinet plus an additional 10 feet to the handhole or base. Leave 10 feet of cable in each pull box. Install the camera manufacturer's connector cable whip from the camera to the handhole or base.

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

Notify department's Electrical Shop at (414) 266-1170 upon completion of the Monotube and Luminaire arm installation of the power cable, cable whip and camera at each intersection. Camera programming will be performed by the department with assistance from the vendor and the contractor when operation of the permanent signal begins.

D Measurement

The department will measure Transporting and Installing State Furnished Video Detection System STH 241 and Howard Ave. as a single lump sum unit of work for each intersection, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.44	Transporting and Installing State Furnished Video Detection System, STH 241 and Howard Ave.	LS

Payment is full compensation for transporting and installing the traffic signal video detection system, power cable, cable whips, mounting hardware, cameras and programming.

151. Install State Supplied Traffic Signal Cabinet STH 241 and Howard Ave., Item SPV.0105.45.

A Description

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

B Materials

Use materials furnished by the department including: the traffic signal controller and the traffic signal cabinet. The Southeast Region signal engineer will provide the project plans and specifications to the department's Traffic Signal Cabinet vendor a minimum of 70 calendar days prior to scheduled field installation. The department will provide notification at the preconstruction meeting of the Traffic Signal Cabinet vendor and provide the vendor's contact information.

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

The department will not be responsible for project delays and costs due to the delays of delivery by the vendor or by the failure of the traffic signal cabinet to pass acceptance testing.

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

Append standard spec 651.3.3 (6) with the following:

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

C Construction

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

Install the state furnished traffic signal cabinet on the concrete control cabinet base the same day it is delivered to the site location.

Request a signal inspection of the completed signal installation to the project engineer at least five working days prior to the time of the requested inspection. The department's Region Electrical personnel will perform the inspection.

D Measurement
The department will measure Install State Supplied Traffic Signal Cabinet STH 241 and Howard Ave. as a single lump sum unit of work, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.45	Install State Supplied Traffic Signal Cabinet STH 241 and Howard Ave.	LS

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

152. Temporary Non-Intrusive Vehicle Detection System for Intersections, STH 241 and Howard Ave., Item SPV.0105.46.

A Description
This work shall consist of furnishing, installing, maintaining and placing into operation and removing a temporary non-intrusive vehicle detection system (NIVDS) as shown on the plans, and as directed by the engineer in the field.

B Materials
This specification sets forth the minimum requirements for a system that detects vehicles on a roadway and provides detection outputs to a traffic signal controller. The materials shall also include all brackets, mounting hardware, cable, terminations, interface panels, and all other incidentals for the installation of the NIVDS equipment, as recommended by the manufacturer. This equipment shall meet the NEMA environmental, power and surge ratings as set forth in NEMA TS2 specifications.

All detection equipment, components, and terminations supplied under this item shall be fully compatible with the temporary traffic signal controller supplied for the project. The system architecture shall fully support Ethernet networking of system components. All required interface equipment needed for transmitting and receiving data shall be provided with the NIVDS.

The NIVDS shall provide flexible detection zone placement anywhere and at any orientation. Preferred detector configurations shall be detection zones placed across lanes of traffic for optimal count accuracy, detection zones placed parallel to lanes of traffic for

optimal presence detection accuracy of moving or stopped vehicles. Detection zones shall be able to be overlapped for optimal road coverage.

C Construction

The temporary NIVDS shall be installed by supplier factory-certified installers and as recommended by the supplier and documented in installation materials provided by the supplier.

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

The non-intrusive vehicle detection system, as shown in the traffic signal construction plans, shall be complete, in place, tested, and in full operation during each stage of construction.

Maintain all temporary vehicle detection zones as the plans show or as the engineer directs. The temporary vehicle detection zones shall be set near the vicinity and with approximate distance from the stop bar as shown on the plans. Check temporary vehicle detection zones every other week and at the opening of each stage of temporary traffic signal operation to ensure that they are working correctly and aimed properly. Periodic adjustment of the detection zones and/or moving of the temporary vehicle detection sensors may be required due to changes in traffic control, staging, or other construction operations.

Ensure the non-intrusive vehicle detection system stays in clean working order. Periodic cleaning of the equipment may be required due to dirt and dust build-up.

Remove the non-intrusive vehicle detection system at the conclusion of the project.

D Measurement

The department will measure Temporary Non-Intrusive Vehicle Detection System for Intersections (Location) as a single lump sum unit of work, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.46	Temporary Non-Intrusive Vehicle Detection System for Intersections, STH 241 and Howard Ave.	LS

Payment is full compensation for furnishing and installing the temporary non-intrusive vehicle detection system, including cabling, mounting brackets, mounting hardware, terminations, interface panels, testing and set up; for periodic checking and resetting of detection zones; for periodic cleaning for dirt and dust build-up; and for removing all equipment at the completion of the project.

153. Concrete Surface Repair - Deck, Item SPV.0165.02.

A Description

This special provision describes concrete surface repair up to 6 inches deep as needed of the delaminated portions of the deck encountered during the placement of the sheet membrane waterproofing, or found on the abutments, wingwalls or piers. Provide additional steel reinforcement and concrete masonry anchors as needed.

B Materials

Provide concrete and steel reinforcement in accordance to standard specs 502 and 505 and these special provisions. Concrete shall match the color of the existing concrete being patched. Use high strength epoxy coated steel reinforcement.

Provide masonry anchors as needed in accordance to standard spec 502 and these special provisions.

C Construction

Perform work in accordance to the applicable requirements of the standard specifications in general, and standard specs 501, 502, 505, and 509 in particular, except as modified herein or shown on the plans. Before starting the repair, conduct a survey of the concrete surfaces and mark areas requiring repair for engineer's inspection. Notify the engineer 48 hours in advance of the inspection. Remove concrete only from locations approved by the engineer. Do not remove more than 6 inches of concrete unless specifically shown on the plans or approved by the engineer. Define the limits of removal on the exposed surface with 1-inch deep saw cut. Remove concrete in such a way that removal pertaining to each bid item is bounded by straight lines. Establish horizontal and vertical controls to serve as a reference for measuring the thickness of concrete removed.

D Measurement

The department will measure Concrete Surface Repair - Deck by the square foot acceptably completed, measured as the exposed surface area 6 inches depth, following removal. Each repair area will be measured only once for payment purposes, irrespective of the number of operations for removing the concrete from that area.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0165.02	Concrete Surface Repair - Deck	SF

Payment is full compensation for removing unsound concrete; blast cleaning and providing additional reinforcement as necessary; furnishing and placing concrete; and for furnishing all scaffolding, formwork. Furnishing and placing reinforcement and masonry anchors will be paid for separately. Note: concrete surface repairs deeper than 6 inches will be paid for under SPV.0025.01, Deep Concrete Surface Repair.

154. Test Rolling, Item SPV.0170.01.

A Description

This special provision describes the testing of the stability of the finished earth subgrade by rolling with a tri-axle dump truck, the restoration of any soft or yielding areas evidenced by the test rolling, and retesting as determined by the engineer.

B Equipment

Furnish a fully load tri-axle dump truck to within 3 tons of the vehicle legal load limit and provide a minimum gross vehicle weight of 30 tons. Uniformly inflate all tires to the pressure recommended by the manufacturer for the applicable wheel load.

C Construction

Completely compact and shape the subgrade to approximate grade and cross section. Do not stake subgrade for areas to be tested.

Test roll at normal walking speed under the direction of the engineer or his representative.

Roll the earth subgrade at a width equal to the finished base course width. Make multiple passes throughout the length of the subgrade test area.

Center each pass on a proposed lane or applicable shoulder. When the shoulder width is less than 8 feet, the engineer will determine the number and location of passes required such that any wheel track will be within 3 to 4 feet of the previous adjacent wheel track.

Repair and consolidate any soft or yielding areas or depressions evidenced under the action of the test rolling to withstand retesting.

Excavate and replace any unstable material from the roadbed with selected materials.

Correct any yielding subgrade areas discovered during the test rolling operations prior to staking the subgrade and finish grading operations.

Perform corrective work in accordance to the standard specifications.

D Measurement

The department will measure Test Rolling by the station along the roadway centerline or reference line, acceptably completed. The department will measure two or more separate roadways by the station along each separate roadway as designated on the plans.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0170.01	Test Rolling	STA

Payment is full compensation for performing the Test Rolling; for providing any equipment; for any preparation of the subgrade, including the furnishing and incorporation of water, if required; for retesting as determined by the engineer and for restoration of the subgrade.

155. Joint Sealing, Item SPV.0180.01.

A Description

This special provision describes the minimum requirements for preparing the pavement joint or crack, and furnishing and installing the sealant. Seal all expansion, hand-formed, and sawed joints in the pavement. Also, seal all bond or construction joints.

B Materials

Joint sealer must comply with the requirements of ASTM Designation D3405. Joint sealer shall be composed of a mixture of materials that will form a resilient and adhesive compound capable of effectively sealing joints in concrete against the infiltration of moisture and foreign material throughout repeated cycles of expansion and contraction with temperature changes, and of a mixture that will not flow from the joints or be picked up by vehicle tires at summer temperatures. The material must be capable of being brought to a uniform pouring consistency suitable for completely filling the joints without inclusion of large air holes or discontinuities.

The joint sealer shall be elastic type but poured; melt by using indirect heat in suitable equipment provided with positive temperature control and mechanical agitation. Do not damage the material when heating it to the temperature required for satisfactory pouring.

When applying the joint sealer, the atmospheric and concrete temperature will be above 40° F.

C Construction

C.1 Preparation of Pavement Joint or Crack

Clean the pavement joint or crack of all foreign material prior to the installation of the joint sealer. Completely remove the slurry resulting from the sawing operations from the joint by blowing it clean with compressed air (minimum air pressure – 80 pounds per square inch).

D Measurement

The department will measure Joint Sealing by the area of square yards of pavement sealed acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0180.01	Joint Sealing	SY

Payment is full compensation for furnishing and placement of the sealant.

156. Colored Concrete Pavement 8 1/2-Inch, Item SPV.0180.02.

A Description

Placement, forming, and aggregate of the concrete to be in accordance to the pertinent provisions of standard spec 501, and as shown on the plans.

B Materials

Furnish one sample of the colored concrete; one for each color, at least 15 working days prior to the start of colored concrete pavement construction. The specified color is "brick red", as specified in the plan, with a clear liquid release agent. For final approval call Mr. Robert Viktora of the City of Milwaukee at 414-286-3896.

Use grade A2 or grade A-FA concrete as specified in standard spec 501.2. All colored concrete must originate from the same batch plant and follow the manufacturer's recommended procedures. The contractor is to submit, for approval, a concrete-mix design to Roger Reed, City of Milwaukee, Construction Section, Room 710 of the Zeidler Municipal Building.

C Construction

Pour concrete in two layers. The lower 4 1/2-inch layer shall be normal gray concrete; the upper 4-inch layer shall be integral color. The lower layer of concrete not to be poured until the Integral Color concrete has arrived on site. The integral color concrete shall be poured within one hour of the lower 4 1/2-inch concrete layer.

Colored concrete shall be installed by an experienced contractor who has installed a minimum of 30,000 square feet of colored concrete. Submit written documentation of colored concrete work to the engineer prior to the start of construction.

Use one to four mil. Polyethylene (plastic) for protection of all adjoining areas for Integral Color concrete.

Apply liquid color releases sparingly to colored surface.

Allow 24 hours before removing excess release from the slab with garden hose.

Apply decorative sealer to completely dry slab or as per manufacturer's methods. Apply two coats. The slab shall be dry before accepting traffic. After the sealer has been applied, the resultant surface is to be non-skid. Any method used to produce the non-skid surface to be approved by the engineer.

D Measurement

The department will measure Colored Concrete Pavement 8 ½-Inch, by the area of concrete installed, in square yards, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0180.02	Colored Concrete Pavement 8 1/2-Inch	SY

Payment is full compensation for furnishing and constructing colored concrete pavement.

157. Concrete Resurfacer and Repair Mortar, Item SPV.0180.04.

A Description

This special provision describes applying a concrete surfacer and repair mortar to the entire top of the culvert deck. The purpose of this application is to smooth rough surfaces, repair honeycombs, and dress up bug holes. This is a two-component, polymer-modified, cementitious-based material that is a trowel and screed applied overlay repair mortar.

B Materials

The mortar shall be two-component, shrinkage compensating and shall be compatible with cementitious materials. It shall have characteristics, which when cured, produces the following properties:

- Compressive Strength (ASTM C 109):
  Minimum, 1 day 3,000 psi (20.7 MPa)
  28 day 5,000 psi (34.5 MPa)

- Flexural Strength (ASTM C 348):
  Minimum, 1 day 725 psi (5.0 MPa)
  28 day 1,850 psi (13 MPa)

- Length Change (ASTM C 157):
  Maximum, -0.150%

- Slant Shear Bond Strength (ASTM C 882, modified):
  Minimum, 28 day, 1,850 psi (13 MPa)

- Modulus of Elasticity (ASTM C 469):
  Maximum 2.02 x 10^6psi (14.7 GPa) @ 28 days

- Freeze Thaw Resistance (ASTM C 666, Proc. A, 300 cycles, Modified):
  Minimum RDF 95%

C Construction

Perform work in accordance to the applicable requirements of the standard specifications in general. Examine surfaces to receive cementitious mortar. Notify engineer if surfaces are not acceptable. Do not begin surface preparation or application until unacceptable conditions have been corrected.

High pressure water-blast appropriate substrate at a minimum 2,000 psi and a maximum 3,000 psi to the limits on the drawing. Ensure complete removal of all dirt, grease, oil, toppings, coatings, or topical penetrating treatments or any other deleterious materials. Surface shall be slightly damp and have a maximum temperature of 95° F (35° F).

Mix up to 1.25 gallons of acrylic bonding agent per 50 lb. bag of cementitious mortar, either by drill and paddle (maximum 750 RPM) or paddle-type mortar mixer. Apply cementitious mortar as an overlay fill coat. Fill in the deteriorated, low area using a steel trowel and trowel tight to the high points in order to level out the deteriorated substrate. Screed over entire deteriorated substrate using a magic trowel. Wet trowel and screed the cementitious mortar smooth in the same direction. Work the material in to the deteriorated zone. Application of second coat may be proceed after final set of fill coat, which is typically 2-4 hours at 70° F (23.9°C). Apply cementitious mortar at a rate not to exceed 50 ft.^{2} per unit or ¼" (6.35 mm).

Apply light mechanical or hand sanding 72 hours at 70° F (23.9° C) after final finishing to remove any high spots or irregularities. Spot apply any defects. Protect fresh mortar from premature evaporation due to direct sunlight, steady winds or low humidity. Cure finished repair mortar by the application of two coats of curing compound. Apply the first coat immediately after completing finishing operations. Apply the second coat about 24 hours later. Alternatively cure finished overlay by the application of acrylic bonding agent after product has hardened at an application rate of 300 ft.^{2}/gal. Curing compounds must be compatible with the Sheet Membrane Waterproofing for Top Slab B-40-0058, Item 516.0610.S adhesives and surface primers.

D Measurement

The department will measure Concrete Resurfacer and Repair Mortar, applied in accordance to the contract and accepted, in area by the square yard. Measurement shall be based on the horizontal distance between the faces of any concrete parapets and the horizontal length of Concrete Surfacer applied.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0180.04	Concrete Resurfacer and Repair Mortar	SY

Payment is full compensation for furnishing and applying a two coat concrete surfacer and repair mortar to the entire top of the culvert deck including surface preparation and curing.

158. Concrete Mowing Strip 4-Inch, Item SPV.0180.05.

A Description

This special provision describes furnishing and installing colored broom finished concrete mowing strip around banner poles, and providing sealer and samples, in accordance to standard spec 602, the plan details, and as hereinafter provided.

B Materials

The concrete shall be Grade A-S, A-T, A-IS, A-IP, or A-FA as specified in standard spec 501.3.1. All colored concrete shall originate from the same batch.

Expansion joint material shall be ½-inch asphaltic treated felt.

B.1 General

Concrete Colored Mowing Strip 4-Inch shall be installed in areas surrounding the decorative banner poles, as indicated in the plans.

At least 15 working days prior to the start of colored concrete installation supply one 4-foot x 4-foot panel sample of the colored concrete with the proposed broom finish and troweled edge. Obtain approval from the engineer for the final color and finish, prior to placement of any colored concrete in the field.

The sample is expected to match the color of the existing mowing strip.

B.2 Color Admix

Use integral color admixture material specifically designed for coloring concrete. Blend admix at the plant per manufacturers specifications, to achieve the indicated color. Color admixtures and colors include:

BASF, Rheocolor – Deerskin
Schofield System – Antique Cork
Davis Colors – San Diego Buff

B.3 Curing Compound

The curing compound shall meet the specifications of ASTM C 1316 Type 1 Color A clear non-yellowing curing compound.

B.4 Finish

Finish shall be a medium brushed (broom) finish with a 6-inch smooth finish, as shown in the plans.

C Construction

Place ½-inch expansion felt between any other hard immovable surface and new concrete.

Concrete shall be place by installers experienced with colored, broom finished concrete.

Concrete pavement shall match the visual appearance of the approved sample. Replace concrete pavement, not conforming to the color and finish of the approved sample, at no expense to the department.

D Measurement
The department will measure Concrete Mowing Strip 4-Inch in area by the square yard of concrete pavement installed and acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0180.05	Concrete Mowing Strip 4-Inch	SY

Payment is full compensation for providing and installing the concrete; providing and installing curing compound and expansion material.

159. Removing Concrete Mowing Strip, Item SPV.0180.06.

A Description
This special provision describes work associated with the removal, of a concrete mowing strip that surrounds pole and banner footings, and a planter bed.

B (Vacant)

C Construction
Remove the entire mowing strip, and properly dispose of.

D Measurement
The department will measure Removing Concrete Mowing Strip by the square yard acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0180.06	Removing Concrete Mowing Strip	SY

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

160. Management of Solid Waste, Item SPV.0195.01.

A Description

A.1 General

This work will conform with the requirements of standard spec 205; to pertinent parts of the Wisconsin Administrative Code, Chapters NR 700-736 Environmental Investigation and Remediation of Environmental Contamination; Wisconsin Administration Code, Chapters NR 500-538, Solid Waste; and as shown on the plans and as supplemented herein.

Contaminated waste material excavated during construction which cannot in the opinion of the environmental consultant be managed as petroleum contaminated soil will be managed as solid waste. Solid waste within fill material may be encountered within the limits of the construction and may include materials such as industrial waste (foundry sand and slag).

This work consists of excavating, segregating, temporary stockpiling, loading, hauling, and disposing of solid waste material at a DNR-approved disposal facility. The nearest DNR-approved disposal facilities are:

Veolia Environmental Services Emerald Park Landfill
10629 S. 124th St.
Muskego, Wisconsin 53150
(414) 529-1360

Waste Management Metro Landfill
10712 S. 124th St.
Franklin, WI 53132
(414) 529-6180

Provide information to the environmental consultant and engineer that indicates the DNR-approved disposal facility that the contractor will use.

A.2 Notice to the Contractor – Contaminated Soil Locations

The department and others completed testing for soil and groundwater contamination for locations within this project where excavation is required. Testing indicated that contamination is present at the following location as shown on the plans:

- Station 78+15 to 78+70, from approximately 10 feet right of reference line to project limits left from approximately 9 to 11 feet bgs. Approximately 400 cubic yards (approximately 700 tons at an estimated 1.7 tons per cubic yard) of industrial waste (slag and foundry sand) -contaminated soil will be excavated from this area and be taken to a WDNR-licensed solid waste landfill for disposal.

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

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

No active groundwater monitoring wells were observed within the construction limits. If active groundwater monitoring wells are encountered during construction, notify engineer and protect them to maintain their integrity. The environmental consultant will determine if monitoring wells need to be maintained. For monitoring wells that do need to be maintained, adjust the wells that do not conflict with structures or curb and gutter to be flush with the final grade. For wells that conflict with the previously mentioned items or if monitoring wells are not required to be maintained, they will be abandoned by others.

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

Name:	Mr. Mike Cape, P.G.
Address:	141 NW Barstow Street, PO Box 798, Waukesha, WI 53187-0798
Phone:	(262) 548-5930
Fax:	(262) 548-6891
E-mail:	michael.cape@dot.wi.gov

A.3 Coordination

Coordinate work under this contract with the environment consultant:

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

The role of the environmental consultant will be limited to:

- Determining the location and limits of contaminated soil to be excavated based on soil analytical results from previous investigations, visual observations, and field screening of soil that is excavated;

- Identifying contaminated soils to be hauled to the landfill facility;

- Documenting that activities associated with management of contaminated soil are in conformance with the contaminated soil management methods for this project as specified herein; and

- Obtaining the necessary approvals for disposal of contaminated soil from the landfill facility.

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

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

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

A.4 Health and Safety Requirements
Supplement standard spec 107.1 with the following:

During excavation activities, expect to encounter soil contaminated with foundry wastes (foundry sand and slag). Site workers taking part in activities that will result in the reasonable probability of exposure to safety and health hazards associated with hazardous materials shall have completed health and safety training that meets the Occupational Safety and Health Administration (OSHA) requirements for Hazardous Waste Operations and Emergency Response (HAZWOPER), as provided in 29 CFR 1910.120.

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

B (Vacant)

C Construction
Supplement standard spec 205.3 with the following:

Solid waste is defined as material containing non-exempt materials such as foundry sand, and slag or similar wastes not exempt from licensing and requirements of Wisconsin Administrative Code NR 500–538 of the solid waste regulations. Dispose of all such material at an approved solid waste disposal facility.

During excavations in the areas of known contamination, larger chunks of clean concrete (~2 cubic feet) and bricks shall be segregated from the fill, to the extent practical and managed as common excavation. Under NR 500.08 this material is exempt from licensing and requirements of Wisconsin Administrative Code NR 500-538 of the solid waste regulations, and will be reused as designated by the environmental consultant or engineer as fill on the project, or it will be disposed of off-site at the contractor's disposal site(s).

Verify that the vehicles used to transport material are licensed for such activity in accordance to applicable state and federal regulations.

Obtain the necessary disposal facility approvals and DNR approvals for disposal. Do not transport regulated solid waste off-site without obtaining the approval of the environmental consultant and engineer and notifying the disposal facility.

If dewatering is required in area of known contamination, water generated from dewatering activities may contain petroleum VOCs and/or metals. Based on the limited groundwater testing performed in the Phase 2.5 investigation, the water generated may meet the effluent limits specified in "Contaminated Groundwater from Remedial Action Operations" (WPDES Permit No. WI-0046566-5), Table 3.1 once standard construction sediment removal is employed. Notify the engineer of any dewatering activities, and obtain any permits necessary to discharge water. Provide copies of such Permit to the engineer. Ensure continuous dewatering and excavation safety at all times. Provide, operate, and maintain adequate pumping equipment and drainage and disposal facilities. Meet any requirements and pay any costs for obtaining and complying with such permit use. Follow all applicable legislative statutes, judiciary decisions, and regulations of the State of Wisconsin.

Costs associated with excavation dewatering in the contaminated area are considered incidental to this pay item. The Wisconsin Department of Transportation will be the generator of regulated solid waste from this construction project.

D Measurement

The department will measure Management of Solid Waste by the ton of waste accepted by the disposal facility and as documented by weight tickets, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0195.01	Management of Solid Waste	Ton

Payment is full compensation for excavating, segregating, temporary stockpiling, loading, transporting, and disposal of solid waste material. No additional payment will be made for tipping fees associated with the disposal of solid waste.

161. Cobblestones, Item SPV.0195.02.

A Description
This special provision describes the requirements for placing cobblestone, within the bioswales.

B Materials
The stones shall be Wisconsin Granite Field Stone Boulders, or equal. The size shall range from 6’ to 8”.

C Construction
A minimum area size of 4’ x 4’ shall be constructed behind each bioswale curb opening.

D Measurement
The department will measure Cobblestones, by the ton, 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.0195.02	Cobblestone	TON

Payment is full compensation for furnishing and placing the cobblestone.

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

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

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

I. BASIC CONCEPTS

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

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

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

   Contract Goal: To maintain the intent of the Equal Employment Opportunity program, it is a goal that __6__ *(number)* TrANS Graduate(s) be utilized on this contract.

2) **On-the-Job Training, Item ASP.1T0A, ASP 1 Apprentice.** At the rate of $5.00 per hour on federal aid projects at the point when an employee who came out of the TrANS Program is subsequently entered into an apprenticeship contract in an underutilized skilled trade (this will include the Skilled Laborer Apprenticeship when that standard is implemented).

Eligibility and Duration: To the employing contractor, for the length of time the TrANS graduate is in apprentice status.

Contract Goal: To maintain the intent of the Equal Employment Opportunity program, it is a goal that __4__ *(number)* TrANS Apprentice(s) be utilized on this contract.

3) The maximum duration of reimbursement is two years as a TrANS graduate plus time in apprentice status.

4) If a TrANS program is not available in the contractor's area and another training program is utilized, payment of On-the-Job Training hours may be approved by the Wisconsin Department of Transportation (WisDOT) if the training program meets the established acceptance criteria. Only On-the-Job Training Hours accumulated after WisDOT approval will be reimbursed as specified under Items ASP.1T0G and ASP.1T0A. For more information, contact the Disadvantaged Business Enterprise Office at the phone numbers listed above.

5) WisDOT reserves the right to deny payments under items ASP.1T0G and ASP.1T0A if the contractor either fails to provide training or there is evidence of a lack of good faith in meeting the requirements of this training special provision.

I. RATIONALE AND SPECIAL NOTE

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

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

II. IMPLEMENTATION

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

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

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

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

IV. *TRANS TRAINING*

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

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

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

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

V. APPRENTICESHIP TRAINING

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

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

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

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

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

ADDITIONAL SPECIAL PROVISION 3
DISADVANTAGED BUSINESS ENTERPRISE PROGRAM

1. Description

General

a. The disadvantaged business enterprise (DBE) requirements of 49 CFR Part 26 apply to this contract. The department's DBE goal is shown on the cover of the bidding proposal. The contractor can meet the specified contract DBE goal by procuring services or materials from a DBE or by subcontracting work to a DBE. The department calculates the DBE participation as the dollar value of DBE participation included in the bid expressed as a percentage of the total contract bid amount.

b. Under the contract, the contractor agrees to provide the assistance to participating DBE's in the following areas:

   i. Produce accurate and complete quotes.
   ii. Understand highway plans applicable to their work.
   iii. Understand specifications and contract requirements applicable to their work.
   iv. Understand contracting reporting requirements.

c. The department encourages the contractor to assist and develop DBE firms to become fully knowledgeable contractors to successfully perform on its contracts.

d. For information on the disadvantaged business program, visit the department's Civil Rights and Compliance Section website at:

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

2. Definitions

a. Interpret these terms, used throughout this additional special provision, as follows:

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

3. DBE Percentage Required at Bid Submission

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

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

4. Department's DBE Evaluation Process

a. Documentation Submittal

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

i. Bidder Meets DBE Goal

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

ii. Bidder Does Not Meet DBE Goal

(1) If the bidder indicates a bid percentage on the Commitment to Subcontract to DBE Form [DT1506] that does not meet the contract DBE goal, the bidder must submit a Good Faith Waiver Form [DT1202] and supporting documentation. After award and before execution, the department will evaluate the bidder's DBE commitment and consider the bidder's good faith waiver request.

(2) The department will review the bidder's good faith waiver request and notify the bidder of one of the following:

a. If the department grants a good faith waiver, the bid is eligible for contract execution with respect to DBE commitment.

b. If the department rejects the good faith waiver request, the department may declare the bid ineligible for execution. The department will provide a written explanation of why the good faith waiver request was rejected. The bidder may appeal the department's rejection as allowed under 7 a. & b.

5. Department's Criteria for Good Faith Effort

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

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

b. The department, in conjunction with industry stakeholders, has developed the following guidance for contractor good faith effort. The guidance and the attached appendices provide a framework for the actions required by all parties in the processing and evaluation of bidder's total efforts to achieve the project specific DBE goal prior to the bid letting date.

c. Prime Contractors should:

i. Document all efforts and decisions made toward achieving the DBE goal on the contract. The bidder should use the Civil Rights & Compliance System [CRCS] and related WisDOT-approved DBE outreach tools, including the Bid Express Small Business Network, to foster DBE participation on all applicable contracts.

ii. Request quotes by identifying potential items to subcontract and solicit. Prime contractors are strongly encouraged to include in their initial contacts a single page including a detailed list of items for which they are accepting quotes, by project, within a letting. *See attached sample entitled "Sample Contractor Solicitation Letter" in Appendix A*. Prime contractors should also indicate a willingness to accept quotes in areas they are planning to perform themselves, ***as required by federal rules***. In some cases, it might be appropriate to use DBE's to do work in a prime contractor's area of specialization.

(1) Solicit quotes through all reasonable and available means from certified DBE firms who match 'possible items to subcontract' and send copies to DBESS office, highlighting areas in which you are seeking quotes. Email is acceptable.

(2) SBN is the preferred outreach tool. https://www.bidx.com/wi/main. Other acceptable means include postal mail, email, fax, phone call.

a. Primes must ask DBE firms for a response in their solicitations. See *Sample Contractors Solicitation Letter* in Appendix. This letter can be included as an attachment to the SBN sub-quote request.

b. Solicit quotes at least 10 calendar days prior to the letting date {ideally two Fridays before the letting} to allow DBE firms sufficient time to respond. Prime contractors should contact DBE firms early, asking them if they need help in putting together a quote, or helping to arrange for equipment needs, or solve other problems.

(3) Second solicitation should take place within 5 days

a. An email solicitation is highly recommended for this second solicitation

(4) Upon request, provide interested DBE firms with adequate information about plans, specifications and the requirements of the contract by letter, information session, email, phone call and/or referral.

(5) When potential exists, advise interested DBE firms on how to obtain bonding, line of credit or insurance as may be requested.

(6) Document DBE firm's interest in quoting by taking appropriate steps to follow up initial solicitation with:

a. Email to all prospective DBE firms in relevant work areas
b. Phone call log to DBE firms who express interest via written response or call.
c. Fax/letter confirmation
d. Copy of the DBE quotes
e. Signed copy of Bid Express SBN Record of Subcontractor Outreach Effort.

d. Evaluate DBE quotes as documentation is critical if the prime does not utilize the DBE firm's quote for any reason.

i. Evaluate DBE firm's capability to perform 'possible items to subcontract' using legitimate reasons, including but not limited to, ***a discussion with the DBE firm*** regarding its

capabilities prior to the bid letting. If lack of capacity is your reason for not utilizing the DBE quote, you are required to contact the DBE directly regarding their ability to perform the work indicated in the UCP directory as their work area [NAICS code]; only the work area and/or NAICS code listed in the UCP directory will be counted for DBE credit. Documentation of the conversation is required.

ii. In striving to meet a DBE conscious contract goal, prime contractors are expected to use DBE quotes that are responsive and reasonable. This includes DBE quotes that are not the low quote.

iii. **Special Circumstance:** Evaluation of DBE quotes with tied bid items. "Tied quotes are the condition in which a subcontractor submits quotes including multiple areas of expertise across multiple work areas noting that the items and price are tied. Typically this type of quoting represents a cost saving to the prime but is not clearly stated as a discount; tied quotes are usually presented as 'all or none' quote to the prime." When non-DBE subcontractors submit tied bid items in their quotes to the prime, the DBE firms' quote may seem not competitive. In such a case, the following steps are taken in comparing the relevant quotes. These are qualitative examples.

(1) Compare bid items common to both quotes, noting the reasonableness in the price comparison.

(2) Review quotes from other firms for the bid items not quoted by the DBE firm to see if combining both can provide the same competitive advantage that the tied bid items offered.

e. After notification of contract award, submit **'Commitment to Subcontract'** form within the time period specified in the contract.

i. Provide the following information along with department form DT1202:

(1) The names, addresses, e-mail addresses, telephone numbers of DBE's contacted. The dates of both initial and follow-up contact. A printed copy of SBN solicitation is acceptable.

(2) A description of information provided to the DBE's regarding the plans, specifications, and estimated quantities for portions of the work to be performed by that DBE.

(3) Photocopies or electronic copies of all written solicitations to DBE's.

(4) Documentation of each quote received from a DBE and, if rejected, the reason for that rejection.

(5) Bidder attendance at any pre-solicitation or pre-bid meetings the department held to inform DBE's of participation opportunities available on the project.

f. The department's DBE Support Services Office is available by phone, email or in writing to request assistance in meeting the DBE goal:

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

6. Bidder's Appeal Process

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

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

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

7. Department's Criteria for DBE Participation

Department's DBE List

a. The department maintains a DBE list on the department's website at

http://app.mylcm.com/wisdot/Reports/WisDotUCPDirectory.aspx

b. The DBE office is also available to assist at 414-438-4583 or 608-266-6961.

8. Counting DBE Participation

Assessing DBE Work

a. The department will only count the DBE usage towards the contract DBE goal if the DBE firm is certified as a DBE by one of the unified certification program agencies. If a firm becomes DBE certified before entering into a subcontract, the department may consider that DBE usage towards the contract goal. The department only counts the value of the work a DBE actually performs towards the DBE goal. The department assesses the DBE work as follows:

b. The department counts work performed by the DBE's own resources. The department includes the cost of materials and supplies the DBE obtains for the work. The department also includes the cost of equipment the DBE leases for the work. The department will not include the cost of materials, supplies, or equipment the DBE purchases or leases from the prime contractor or its affiliate, except the department will count non-project specific leases the DBE has in place before the work is advertised.

c. The department counts fees and commissions the DBE charges for providing a bona fide professional, technical, consultant, or managerial services. The department also counts fees and commissions the DBE charges for providing bonds or insurance. The department will only count costs the engineer deems reasonable based on experience or prevailing market rates.

d. If a DBE subcontracts work, the department counts the value of the subcontracted work only if the DBE's subcontractor is also a DBE.

e. The contractor shall maintain records and may be required to furnish periodic reports documenting its performance under this item.

f. It is the prime contractor’s responsibility to determine the DBE's ability to perform the work with the use of the UCP directory.

9. Commercially Useful Function

a. The department counts expenditures of a DBE toward the DBE goal only if the DBE is performing a commercially useful function on that contract.

b. A DBE is performing a commercially useful function if the following conditions are met:

c. For contract work, the DBE is responsible for executing a distinct portion of the contract work and it is carrying out its responsibilities by actually performing, managing, and supervising that work.

d. For materials and supplies, the DBE is responsible for negotiating price, determining quality and quantity, ordering, and paying for those materials and supplies.

10. Trucking

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

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

11. Manufacturers and Suppliers

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

12. DBE Prime

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

13. Joint Venture

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

14. Mentor Protégé

a. If a DBE performs as a participant in a mentor protégé agreement, the department will credit the portion of the work performed by the DBE protégé firm

b. On every other project that the mentor protégé team identifies itself on.

c. For no more than one half of the total contracted DBE goal on any WisDOT project.

15. DBE Replacement

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

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

16. Changes to the approved DBE Commitment Form DT1506

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

17. Contract Modifications

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

18. Payment

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

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

GFW SAMPLE MEMORANDUM

TO: DBE FIRMS

FROM: POTENTIAL PRIME CONTRACTOR OR MAJOR SUBCONTRACTOR

SUBJECT: **REQUEST FOR DBE QUOTES**

LET DATE & TIME

DATE: MONTH DAY YEAR

CC: DBE OFFICE ENGINEER

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

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

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

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

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

All questions should be directed to:

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

Sample Contractor Solicitation Letter Page 2

This sample is provided as a guide not a requirement

REQUEST FOR QUOTATION

Prime's Name: _____

Letting Date: _____

Project ID: _____

Please check all that apply

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

Prime Contractor 's Contact Person		DBE Contractor Contact Person	
Phone:		Phone	
Fax:		Fax	
Email:		Email	

Please circle the jobs and items you will be quoting below

Proposal No.	1	2	3	4	5	6	7
County							

WORK DESCRIPTION:

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

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

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

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

APPENDIX B
BEST PRACTICES FOR PRIME CONTRACTOR & DBE SUBCONTRACTOR GOOD FAITH EFFORT

This list is not a set of requirements; it is a list of potential strategies

Primes

- Prime contractor open houses inviting DBE firms to see the bid "war room" or providing technical assistance
- Participate in speed networking and mosaic exercises as arranged by DBE office
- Host information sessions not directly associated with a bid letting;
- Participate in a formal mentor protégé or joint venture with a DBE firm
- Participate in WisDOT advisory committees i.e. TRANSAC, or Mega Project committee meetings
- Facilitate a small group DBE 'training session' Clarifying how your firm prepares for bid letting, evaluates subcontractors, preferred qualifications and communication methods
- Encourage subcontractors to solicit and highlight DBE participation in their quotes to you
- Quality of communication, not quantity creates the best results. Contractors should do as thorough a job as possible in communicating with DBE firms before the bid and provide any assistance requested to assure best possible bid.

DBE

- DBE firms should contact primes as soon as possible with questions regarding their quotes or bid; seven days prior is optimal.
- Continually check for contract addendums on the HCCI website through the Thursday prior to letting to stay abreast of changes.
- Review the status of contracts on the HCCI website reviewing the 'apparent low bidder' list, and bid tabs at a minimum.
- Prepare a portfolio or list of related projects and prime and supplier references; be sure to note transportation-related projects of similar size and scope, firm expertise and staffing.
- Participate in DBE office assessment programs
- Participate on advisory and mega-project committees
- Sign up to receive the DBE Contracting Update
- Consider membership in relevant industry or contractor organizations
- Active participation is a must. Quote as many projects as you can reasonably work on; quoting the primes and bidding as a prime with the department are the only ways to get work.

APPENDIX C
Types of Efforts considered in determining GFE
This list represents concepts being assessed; analysis requires additional steps

1. Whether the contractor attended any pre-solicitation or pre-bid meetings that were scheduled by WisDOT to inform DBEs of contracting and subcontracting opportunities;
2. Whether the contractor provided written notice to a reasonable number of specific DBEs that their interest in the contract was being solicited, in sufficient time to allow the DBEs to participate effectively;
3. Whether the contractor followed up initial solicitations of interest by contacting DBEs to determine if the DBEs were interested; returned the phone calls of interested DBE firms.
4. Whether the contractor selected portions of the work to be performed by DBEs in order to increase the likelihood of meeting the DBE goal;
5. Whether the contractor provided interested DBEs with adequate information about the plans, specifications and requirements of the contract;
6. Whether the contractor negotiated in good faith with interested DBEs, not rejected DBEs as unqualified without sound reasons based on a thorough investigation of their capabilities;
7. Whether the contractor made efforts to assist interested DBEs in being more competitive.
8. Whether the contractor effectively used the services of available minority community organizations: minority contractors groups, local, state, and Federal minority business assistance offices, and other organizations that provide assistance to small businesses and DBE firms.
9. Whether Prime used CRCS to identify DBE who specialize in relevant work areas.
10. Whether the contractor used available resources including contacting the DBE office, using WisDOT's website
11. Whether the contractor returned calls of firms expressing interest in a timely manner.

APPENDIX D
Good Faith Effort Evaluation Guidance
Excerpt from Appendix A of 49 CFR Part 26

APPENDIX A TO PART 26 -- GUIDANCE CONCERNING GOOD FAITH EFFORTS

I. When, as a recipient, you establish a contract goal on a DOT assisted contract, a bidder must, in order to be responsible and/or responsive, make good faith efforts to meet the goal. The bidder can meet this requirement in either of two ways. First, the bidder can meet the goal, documenting commitments for participation by DBE firms sufficient for this purpose. Second, even if it doesn't meet the goal, the bidder can document adequate good faith efforts. This means that the bidder must show that it took all necessary and reasonable steps to achieve a DBE goal or other requirement of this part which, by their scope, intensity, and appropriateness to the objective, could reasonably be expected to obtain sufficient DBE participation, even if they were not fully successful.

II. In any situation in which you have established a contract goal, part 26 requires you to use the good faith efforts mechanism of this part. As a recipient, it is up to you to make a fair and reasonable judgment whether a bidder that did not meet the goal made adequate good faith efforts. It is important for you to consider the quality, quantity, and intensity of the different kinds of efforts that the bidder has made. The efforts employed by the bidder should be those that one could reasonably expect a bidder to take if the bidder were actively and aggressively trying to obtain DBE participation sufficient to meet the DBE contract goal. Mere pro forma efforts are not good faith efforts to meet the DBE contract requirements. We emphasize, however, that your determination concerning the sufficiency of the firm's good faith efforts is a judgment call: meeting quantitative formulas is not required.

III. The Department also strongly cautions you against requiring that a bidder meet a contract goal (i.e., obtain a specified amount of DBE participation) in order to be awarded a contract, even though the bidder makes an adequate good faith efforts showing. This rule specifically prohibits you from ignoring bona fide good faith efforts.

IV. The following is a list of types of actions which you should consider as part of the bidder's good faith efforts to obtain DBE participation. It is not intended to be a mandatory checklist, nor is it intended to be exclusive or exhaustive. Other factors or types of efforts may be relevant in appropriate cases.

A. Soliciting through all reasonable and available means (e.g. attendance at pre-bid meetings, advertising and/or written notices) the interest of all certified DBEs who have the capability to perform the work of the contract. The bidder must solicit this interest within sufficient time to allow the DBEs to respond to the solicitation. The bidder must determine with certainty if the DBEs are interested by taking appropriate steps to follow up initial solicitations.

B. Selecting portions of the work to be performed by DBEs in order to increase the likelihood that the DBE goals will be achieved. This includes, where appropriate, breaking out contract work items into economically feasible units to facilitate DBE participation, even when the prime contractor might otherwise prefer to perform these work items with its own forces.

C. Providing interested DBEs with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation.

D. (1) Negotiating in good faith with interested DBEs. It is the bidder's responsibility to make a portion of the work available to DBE subcontractors and suppliers and to select those portions of the work or material needs consistent with the available DBE subcontractors and suppliers, so as to facilitate DBE participation. Evidence of such negotiation includes the names, addresses, and telephone numbers of DBEs that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional agreements could not be reached for DBEs to perform the work.

(2) A bidder using good business judgment would consider a number of factors in negotiating with subcontractors, including DBE subcontractors, and would take a firm's price and capabilities as well as contract goals into consideration. However, the fact that there may be some additional costs involved in finding and using DBEs is not in itself sufficient reason for a bidder's failure to meet the contract DBE goal, as long as such costs are reasonable. Also, the ability or desire of a prime contractor to perform the work of a contract with its own organization does not relieve the bidder of the responsibility to make good faith efforts. Prime contractors are not, however, required to accept higher quotes from DBEs if the price difference is excessive or unreasonable.

E. Not rejecting DBEs as being unqualified without sound reasons based on a thorough investigation of their capabilities. The contractor's standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. non-union employee status) are not legitimate causes for the rejection or non solicitation of bids in the contractor's efforts to meet the project goal.

F. Making efforts to assist interested DBEs in obtaining bonding, lines of credit, or insurance as required by the recipient or contractor.

G. Making efforts to assist interested DBEs in obtaining necessary equipment, supplies, materials, or related assistance or services.

H. Effectively using the services of available minority/women community organizations; minority/women contractors' groups; local, state, and Federal minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBEs.

V. In determining whether a bidder has made good faith efforts, you may take into account the performance of other bidders in meeting the contract. For example, when the apparent successful bidder fails to meet the contract goal, but others meet it, you may reasonably raise the question of whether, with additional reasonable efforts, the apparent successful bidder could have met the goal. If the apparent successful bidder fails to meet the goal, but meets or exceeds the average DBE participation obtained by other bidders, you may view this, in conjunction with other factors, as evidence of the apparent successful bidder having made good faith efforts.

Appendix E
Small Business Network [SBN] Overview

The Small Business Network is a part of the Bid Express® service that was created to ensure that prime bidders have a centralized online location to find subs - including small and disadvantaged business enterprises (DBEs). It is available for prime bidders to use as part of their Basic Service subscription. Within the Small Business Network, **Prime Contractors** can:

1. Easily select proposals, work types and items:
    a. After adding applicable work types, select items that you wish to quote. Enter the sub-quote quantities and add comments, if desired. Adding or removing items and work types can be done quickly. If needed, you can save the sub-quote for completion at a later time.
2. Create sub-quotes for the subcontracting community:
    a. Create sub-quotes with ease using the intuitive sub-quote creator. In seven short steps, you can rapidly create a custom sub-quote directed to all subcontractors that bid on the applicable work types. Steps include: provide contact information and sub-quote expiration date, select letting and proposal, add work types and items, specify terms and conditions, upload attachments, and select vendors.
    b. Create a sub-quote to send to subcontractors or suppliers that lists the items in a proposal that you want quoted
    c. Create an unlimited number of sub-quotes for items you want quoted, and optionally mark them as a DBE-preferred request
    d. Add attachments to sub-quotes
3. View sub-quote requests & responses:
    a. After logging into the Bid Express service, you can quickly review all of your sub-quote requests and all unsolicited sub-quote requests from subcontractors. To simplify the Small Business Network home screen, sub-quote requests can be hidden with one click if they are not applicable.
    b. View or receive unsolicited sub-quotes that subcontractors have posted, complete with terms, conditions and pricing
4. View Record of Subcontractor Outreach Effort:
    a. For each sub-quote produced, a *Record of Subcontractor Outreach Effort* is generated that shows the response statistics for a particular sub-quote. If accepted by the letting agency, this report may serve as proof of a "Good Faith" effort in reaching out to the DBE community.
    b. Easily locate pre-qualified and certified small and disadvantaged businesses
    c. Advertise to small and disadvantaged businesses more efficiently and cost effectively
    d. Document your interactions with subs/DBEs by producing an Outreach Report (may be accepted as proof of DBE outreach at the discretion of each agency)

The Small Business Network is a part of the Bid Express® service that was created to ensure that small businesses have a centralized area to access information about upcoming projects. It can help small businesses learn more about opportunities, compete more effectively, network with other contractors and subcontractors, and win more jobs.

1. View and reply to sub-quote requests from primes:
    a. After logging into the Bid Express service, you can quickly review all incoming sub-quote requests and all unsolicited sub-quotes created by your company. Receive notifications by selected work type. To simplify on the Small Business Network home screen, sub-quote requests can be filtered by work types relevant to your interests, or hidden with one click if they are not applicable.
2. Select items when responding to sub-quote requests from primes:
    a. You have the freedom to choose and price any number of items when responding to a sub-quote request. Quantities can be modified, and per-item comments are also available.
    b. View requests for sub-quotes for work that primes have posted for projects they are bidding, add your pricing, terms, and conditions, and submit completed sub-quotes to the requesting primes
    c. Add attachments to a sub-quote
3. Create and send unsolicited sub-quotes to specific contractors:
    a. Create unsolicited sub-quotes with ease using the intuitive sub-quote creator. In eight short steps, you can rapidly create a custom sub-quote directed at any number of specific vendors of your choosing. Steps include: provide contact information and sub-quote expiration date, select letting and proposal, add work types and items, specify terms and conditions, upload attachments, and select vendors.
4. Easily select and price items for unsolicited sub-quotes:
    a. After adding applicable work types, select items that you wish to quote. The extended price calculates automatically, cutting out costly calculation errors. Comments can be provided on an per-item basis as well.
    b. Create an unsolicited sub-quote that lists the items from a proposal that you want to quote, include pricing, terms and conditions, and send it to selected prime/plan holder
    c. Add attachments to a sub-quote
    d. Add unsolicited work items to sub-quotes that you are responding to
5. Easy Access to Valuable Information
    a. Receive a confirmation that your sub-quote was opened by a prime
    b. View Bid Tab Analysis data from past bids, including the high, average and low prices of items.
    c. View important notices and publications from DOT targeted to small and disadvantaged businesses
6. Accessing Small Business Network for WisDOT contracting opportunities
    a. If you are a contractor not yet subscribing to the Bid Express service, go to **www.bidx.com** and select "Order Bid Express." The Small Business Network is a part of the Bid Express Basic Service.
    b. DBE firms can request a Bid Express Small Business Network Account at no cost by calling 414-438-4588

ADDITIONAL SPECIAL PROVISION 4

Payment to 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 "just cause" for withholding payment.

The prime contractor may also withhold routine retainage from payments due subcontractors.

Payment to Lower-Tier Subcontractors

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

Release of Routine Retainage

After granting substantial completion the department may reduce the routine retainage withheld from the prime contractor to 75 percent of the original total amount retained.

When the Department sends the semi-final estimate the department may reduce the routine retainage withheld from the prime contractor to 10 percent of the original total amount retained.

Within 30 calendar days of receiving the semi-final estimate from the department, submit written certification that subcontractors at all tiers are paid in full for acceptably completed work and that no routine retainage is being withheld. The department will pay the prime contractor in full and reduce the routine retainage withheld from the prime contractor to zero when the department approves the final estimate.

This special provision does not limit the right of the department, prime contractor, or subcontractors at any tier to withhold payment for work not acceptably completed or work subject to an unresolved contract dispute.

ADDITIONAL SPECIAL PROVISION 6

ASP 6 - Modifications to the standard specifications

Make the following revisions to the 2014 edition of the standard specifications:

101.3 Definitions

Replace the definition of semi-final estimate with the following effective with the December 2013 letting:

Semi-final estimate An estimate indicating the engineer has measured and reported all contract quantities and materials requirements.

105.11.1 Partial Acceptance

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

(2) Partial acceptance will relieve the contractor of maintenance responsibility for the designated portion of the work. By relieving the contractor of maintenance, the department does not relieve the contractor of responsibility for defective work or damages caused by the contractor's operations. Do not construe partial acceptance to be conditional final acceptance or final acceptance of any part of the project, or a waiver of any legal rights specified under 107.16.

105.11.2 Final Acceptance

Retitle and replace the entire text with the following effective with the December 2013 letting:

105.11.2 Project Acceptance

105.11.2.1 Inspection

105.11.2.1.1 General

(1) Notify the engineer when the project is substantially complete as defined in 105.11.2.1.3. As soon as it is practical, the engineer will inspect the work and categorize it as one of the following:

1. Unacceptable or not complete.
2. Substantially complete.
3. Complete.

105.11.2.1.2 Unacceptable or Not Complete

(1) The engineer will identify, in writing, work that is unacceptable or not complete. Immediately correct or complete that work. The engineer will assess contract time until the work is corrected or completed.

(2) Proceed as specified in 105.11.2.1.1 until the engineer determines that the work is complete.

105.11.2.1.3 Substantially Complete

(1) The project is substantially complete and the engineer will no longer assess contract time if the contractor has completed all contract bid items and change order work, except for the punch-list. As applicable, the following must have occurred:

1. All lanes of traffic are open on a finished surface.
2. All signage and traffic control devices are in place and operating.
3. All drainage, erosion control, excavation, and embankments are completed.
4. All safety appurtenances are completed.

(2) The engineer will provide a written punch-list enumerating work the contractor must perform and documents the contractor must submit before the the engineer will categorize the work as complete.

1. Punch-list work includes uncompleted cleanup work required under 104.9 and minor corrective work. Immediately correct or complete the punch-list work. The engineer may restart contract time if the contractor does not complete the punch-list work within 5 business days after receiving the written punch-list. The engineer and contractor may mutually agree to extend this 5-day requirement.
2. Punch-list documents include whatever contract required documentation is missing. The engineer may restart contract time if the contractor does not submit the punch-list documents within 15 business days after receiving the written punch-list. The engineer and contractor may mutually agree to extend this 15-day requirement.

(3) Proceed as specified in 105.11.2.1.1 until the work is complete.

105.11.2.1.4 Complete

(1) The project is complete when the contractor has completed all contract bid items, change order work, and punch-list work including the submission of all missing documentation.

105.11.2.2 Conditional Final Acceptance

(1) When the engineer determines that the project is complete, the engineer will give the contractor written notice of conditional final acceptance relieving the contractor of maintenance responsibility for the completed work.

105.11.2.3 Final Acceptance

(1) The engineer will grant final acceptance of the project after determining that all contract is work complete; all contract, materials, and payroll records are reviewed and approved; and the semi-final estimate quantities are final under 109.7.

(2) Failure to discover defective work or materials before final acceptance does not prevent the department from rejecting that work or those materials later. The department may revoke final acceptance if the department discovers defective work or materials after it has accepted the work.

105.13.3 Submission of Claim

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

(1) Submit the claim to the project engineer as promptly as possible following the submission of the Notice of Claim, but not later than final acceptance of the project as specified in 105.11.2.3. If the contractor does not submit the claim before final acceptance of the project, the department will deny the claim.

107.17.3 Railroad Insurance Requirements

Replace paragraph one with the following effective with the December 2013 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 engineer determines that the work is complete as specified in 105.11.2.1.4.

107.26 Standard Insurance Requirements

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

(1) Maintain the following types and limits of commercial insurance in force until the engineer determines that the work is complete as specified in 105.11.2.1.4.

TABLE 107-1 REQUIRED INSURANCE AND MINIMUM COVERAGES

TYPE OF INSURANCE	MINIMUM LIMITS REQUIRED[1]
1. Commercial general liability insurance endorsed to include blanket contractual liability coverage.[2]	$2 million combined single limits per occurrence with an annual aggregate limit of not less than $4 million.
2. Workers' compensation.	Statutory limits
3. Employers' liability insurance.	Bodily injury by accident: $100,000 each accident Bodily injury by disease: $500,000 each accident $100,000 each employee
4. Commercial automobile liability insurance covering all contractor-owned, non-owned, and hired vehicles used in carrying out the contract.[2]	$1 million-combined single limits per occurrence.

[1] The contractor may satisfy these requirements with primary insurance coverage or with excess/umbrella policies.

[2] The Wisconsin Department of Transportation, its officers, agents, and employees shall be named as an additional insured under the general liability and automobile liability insurance.

108.14 Terminating the Contractor's Responsibility

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

(1) The contractor's responsibilities are terminated, except as set forth in the contract bond and specified in 107.16, when the department grants final acceptance as specified in 105.11.2.3.

109.2 Scope of Payment

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

(2) The department will pay for the quantity of work acceptably completed and measured for payment as the measurement subsection for each bid item specifies. Within the contract provide means to furnish and install the work complete and in-place. Payment is full compensation for everything required to perform the work under the applicable bid items including, but not limited to, the work elements listed in the payment subsection. Payment also includes all of the following not specifically excluded in that payment subsection:

1. Furnishing and installing all materials as well as furnishing the labor, tools, supplies, equipment, and incidentals necessary to perform the work.
2. All losses or damages, except as specified in 107.14, arising from one or more of the following:
    - The nature of the work.
    - The action of the elements.
    - Unforeseen difficulties encountered during prosecution of the work.
3. All insurance costs, expenses, and risks connected with the prosecution of the work.
4. All expenses incurred because of an engineer-ordered suspension, except as specified in 104.2.2.3.
5. All infringements of patents, trademarks, or copyrights.
6. All other expenses incurred to complete and protect the work under the contract.

109.6.1 General

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

(3) The department’s payment of an estimate before conditional final acceptance of the work does not constitute the department’s acceptance of the work, and does not relieve the contractor of responsibility for:

1. Protecting, repairing, correcting, or renewing the work.
2. Replacing all defects in the construction or in the materials used in the construction of the work under the contract, or responsibility for damage attributable to these defects.

(4) The contractor is responsible for all defects or damage that the engineer may discover on or before the engineer’s conditional final acceptance of the work. The engineer is the sole judge of these defects or damage, and the contractor is liable to the department for not correcting all defects or damage.

109.7 Acceptance and Final Payment

Replace paragraphs one and two with the following effective with the December 2013 letting:

(1) After the engineer grants conditional final acceptance of the work as specified in 105.11.2.2 and reviews required document submittals and materials test reports, the engineer will issue the semi-final estimate.

(2) Within 30 calendar days after receiving the semi-final estimate, submit to the engineer a written statement of agreement or disagreement with the semi-final estimate. For an acceptable statement of disagreement, submit an item-by-item list with reasons for each disagreement. If the contractor does not submit this written statement within those 30 days, the engineer will process the final estimate for payment. The engineer and the contractor can mutually agree to extend this 30-day submission requirement.

450.3.3 Maintaining the Work

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

(1) Protect and repair the prepared foundation, tack coat, base, paved traffic lanes, shoulders, and seal coat. Correct all rich or bleeding areas, breaks, raveled spots, or other nonconforming areas in the paved surface.

455.3.2.5 Maintaining Tack Coat

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

(1) Protect and repair the existing surface and the tack coat. Correct areas with excess or deficient tack material and any breaks, raveled spots, or other areas where bond might be affected.

460.2.2.3 Aggregate Gradation Master Range

Replace paragraph one with the following effective with the January 2014 letting:

(1) Ensure that the aggregate blend, including recycled material and mineral filler, conforms to the gradation requirements in table 460-1. The values listed are design limits; production values may exceed those limits.

TABLE 460-1 AGGREGATE GRADATION MASTER RANGE AND VMA REQUIREMENTS

SIEVE	PERCENTS PASSING DESIGNATED SIEVES						
	NOMINAL SIZE						
	37.5 mm	25.0 mm	19.0 mm	12.5 mm	9.5 mm	SMA 12.5 mm	SMA 9.5 mm
50.0-mm	100						
37.5-mm	90 –100	100					
25.0-mm	90 max	90 -100	100				
19.0-mm	___	90 max	90 -100	100		100	
12.5-mm	___	___	90 max	90 -100	100	90 - 97	100
9.5-mm	___	___	___	90 max	90 -100	58 - 72	90 - 100
4.75-mm	___	___	___	___	90 max	25 - 35	35 - 45
2.36-mm	15 – 41	19 - 45	23 - 49	28 - 58	20 - 65	15 - 25	18 - 28
75-µm	0 – 6.0	1.0 - 7.0	2.0 - 8.0	2.0 - 10.0	2.0 - 10.0	8.0 - 12.0	10.0 - 14.0
% MINIMUM VMA	11.0	12.0	13.0	14.0[1]	15.0[2]	16.0	17.0

[1] 14.5 for E-3 mixes.

[2] 15.5 for E-3 mixes.

460.2.7 HMA Mixture Design

Replace paragraph one with the following effective with the January 2014 letting:

(1) For each HMA mixture type used under the contract, develop and submit an asphaltic mixture design according to the department's test method number 1559 as described in CMM 8-66 and conforming to the requirements of table 460-1 and table 460-2. The values listed are design limits; production values may exceed those limits. The department will review mixture designs and report the results of that review to the designer according to the department's test method number 1559.

TABLE 460-2 MIXTURE REQUIREMENTS

Mixture type	E - 0.3	E - 1	E - 3	E - 10	E - 30	E - 30x	SMA
ESALs x 10^6 (20 yr design life)	< 0.3	0.3 - < 1	1 - < 3	3 - < 10	10 - < 30	>= 30	___
LA Wear (AASHTO T96)							
100 revolutions(max % loss)	13	13	13	13	13	13	13
500 revolutions(max % loss)	50	50	45	45	45	45	40
Soundness (AASHTO T104) (sodium sulfate, max % loss)	12	12	12	12	12	12	12
Freeze/Thaw (AASHTO T103) (specified counties, max % loss)	18	18	18	18	18	18	18
Fractured Faces (ASTM 5821) (one face/2 face, % by count)	60 / __	65 / __	75 / 60	85 / 80	98 / 90	100/100	100/90
Flat & Elongated (ASTM D4791) (max %, by weight)	5 (5:1 ratio)	5 (5:1 ratio)	5 (5:1 ratio)	5 (5:1 ratio)	5 (5:1 ratio)	5 (5:1 ratio)	20 (3:1ratio)
Fine Aggregate Angularity (AASHTO T304, method A, min)	40	40	43	45	45	45	45
Sand Equivalency (AASHTO T176, min)	40	40	40	45	45	50	50
Gyratory Compaction							
Gyrations for N_{ini}	6	7	7	8	8	9	8
Gyrations for N_{des}	40	60	75	100	100	125	65
Gyrations for N_{max}	60	75	115	160	160	205	160
Air Voids, $\%V_a$ ($\%G_{mm}$ N_{des})	4.0 (96.0)	4.0 (96.0)	4.0 (96.0)	4.0 (96.0)	4.0 (96.0)	4.0 (96.0)	4.0 (96.0)
% G_{mm} N_{ini}	<= 91.5[1]	<= 90.5[1]	<= 89.0[1]	<= 89.0	<= 89.0	<= 89.0	___
% G_{mm} N_{max}	<= 98.0	<= 98.0	<= 98.0	<= 98.0	<= 98.0	<= 98.0	___
Dust to Binder Ratio[2] (% passing 0.075/P_{be})	0.6 - 1.2	0.6 - 1.2	0.6 - 1.2	0.6 - 1.2	0.6 - 1.2	0.6 - 1.2	1.2 - 2.0
Voids filled with Binder (VFB or VFA, %)	68 - 80[4] [5]	65 - 78[4]	65 - 75[3] [4]	65 - 75[3] [4]	65 - 75[3] [4]	65 - 75[3] [4]	70 - 80
Tensile Strength Ratio (TSR) (ASTM 4867)							
no antistripping additive	0.70	0.70	0.70	0.70	0.70	0.70	0.70
with antistripping additive	0.75	0.75	0.75	0.75	0.75	0.75	0.75
Draindown at Production Temperature (%)	___	___	___	___	___	___	0.30

[1] The percent maximum density at initial compaction is only a guideline.

[2] For a gradation that passes below the boundaries of the caution zone(ref. AASHTO MP3), the dust to binder ratio limits are 0.6 - 1.6.

[3] For 9.5mm and 12.5 mm nominal maximum size mixtures, the specified VFB range is 70 - 76%.

[4] For 37.5mm nominal maximum size mixes, the specified VFB lower limit is 67%.

[5] For 25.0mm nominal maximum size mixes, the specified VFB lower limit is 67%.

460.2.8.2.1.5 Control Limits

Replace paragraph one with the following effective with the January 2014 letting:

(1) Conform to the following control limits for the JMF and warning limits based on a running average of the last 4 data points:

ITEM	JMF LIMITS	WARNING LIMITS
Percent passing given sieve:		
37.5-mm	+/- 6.0	+/- 4.5
25.0-mm	+/- 6.0	+/- 4.5
19.0-mm	+/- 5.5	+/- 4.0
12.5-mm	+/- 5.5	+/- 4.0
9.5-mm	+/- 5.5	+/- 4.0
2.36-mm	+/- 5.0	+/- 4.0
75-µm	+/- 2.0	+/- 1.5
Asphaltic content in percent	- 0.3	- 0.2
Air voids in percent	+/- 1.3	+/- 1.0
VMA in percent[1]	- 0.5	- 0.2

[1] VMA limits based on minimum requirement for mix design nominal maximum aggregate size in Table 460-1.

(2) Warning bands are defined as the area between the JMF limits and the warning limits.

460.2.8.2.1.6 Job Mix Formula Adjustment

Replace the entire text with the following effective with the January 2014 letting:

(1) The contractor may request adjustment of the JMF according to the department's test method number 1559. Have an HTCP HMA technician certified at a level appropriate for process control and troubleshooting or mix design submit a written JMF adjustment request. Ensure that the resulting JMF is within specified master gradation bands. The department will have an HMA technician certified at level III review the proposed adjustment and, if acceptable, issue a revised JMF.

(2) The department will not allow adjustments that do the following:

- Exceed specified JMF tolerance limits.
- Reduce the JMF asphalt content unless the production VMA running average meets or exceeds the minimum VMA design requirement defined in table 460-1for the mixture produced.

(3) Have an HMA technician certified at level II make related process adjustments. If mixture redesign is necessary, submit a new JMF, subject to the same specification requirements as the original JMF.

520.3.8 Protection After Laying

Delete the entire subsection.

614.2.1 General

Replace paragraphs five and six with the following effective with the December 2013 letting:

(5) Furnish zinc coated wire rope and fitting conforming to the plans and galvanized according to ASTM A741.

(6) Before installation store galvanized components above ground level and away from surface run off. The department may reject material if the zinc coating is physically damaged or oxidized.

(7) Provide manufacturer's drawings, and installation and maintenance instructions when providing proprietary systems.

614.2.3 Steel Rail and Fittings

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

(1) Furnish galvanized steel rail conforming to AASHTO M180 class A, type II beam using the single-spot test coating requirements. Furnish plates, anchor plates, post mounting brackets, and other structural steel components conforming to 506.2.2.1 and hot-dip galvanized according to ASTM A123.

614.2.7 Crash Cushions

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

(1) Furnish permanent and temporary crash cushions from the department's approved products list. Use cushions as wide or wider than the plan back-width. Furnish transitions conforming to the crash cushion manufacturer's design and specifications. Submit manufacturer crash cushion and transition design details to engineer before installing.

616.3.1 General

Replace paragraph six with the following effective with the December 2013 letting:

(6) Remove and dispose of all excess excavation and surplus materials from the fence site.

618.3.3 Restoration

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

(1) Upon termination of hauling operations and before conditional final acceptance, restore all haul roads, including drainage facilities and other components, to the equivalent of pre-hauling conditions.

627.3.1 General

Replace paragraph four with the following effective with the December 2013 letting:

(4) Maintain the mulched areas and repair all areas damaged by wind, erosion, traffic, fire or other causes.

637.3.2.1 General

Delete paragraph three effective with the December 2013 letting.

670.3.4.2 Post-Construction Work

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

(1) Submit 5 copies of ITS documentation including but not limited to the following:

- Operator's manual: for contractor furnished equipment, submit a manual containing detailed operating instructions for each different type or model of equipment and or operation performed.
- Maintenance procedures manuals: for contractor furnished equipment, submit a manual containing detailed preventive and corrective maintenance procedures for each type or model of equipment furnished.
- Cabinet fiber optic wiring diagram: submit a cabinet wiring diagram, identified by location for each cabinet. Include both electrical wiring and fiber optic conductor and cable connections. Place one copy of the fiber optic wiring diagram in a weatherproof holder in the cabinet. Deliver the other copies to the engineer.
- As-built drawings: submit final as-built drawings that detail the final placement of all conduit, cabling, equipment, and geometric modifications within the contract. Provide all documentation in an electronic format adhering to the region’s ITS computer aided drafting standards and according to the department’s as-built requirements. The department will review the as-built drawings for content and electronic format. Modify both the content and format of as-built drawings until meeting all requirements.
- Equipment inventory list: submit an inventory list including serial number, make, model, date installed, and location installed of all equipment installed under the contract.

Errata

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

415.3.14 Protecting Concrete

Correct errata by referencing the opening to service specification.

(1) Erect and maintain suitable barricades and, if necessary, provide personnel to keep traffic off the newly constructed pavement until it is opened for service as specified in 415.3.15. Conform to 104.6 for methods of handling and facilitating traffic.

501.2.9 Concrete Curing Materials

Correct errata by changing AASHTO M171 to ASTM C171.

(2) Furnish sheeting conforming to ASTM C171 for white opaque polyethylene film, except that the contractor may use clear or black polyethylene for cold weather protection.

607.2 Materials

Correct errata by changing AASHTO M198 to ASTM C990.

(1) Use materials conforming to the requirements for the class of material named and specified below.

Composite pipe, couplings, fittings and joint materials	ASTM D2680
Annular rubber and plastic gaskets for flexible, watertight joints	ASTM C990
External rubber gaskets, mastic, and protective film	ASTM C877
Mortar	519.2.3

637.2.1.3 Sheet Aluminum

Correct errata by changing ASTM B449 to B921 and eliminating the specification for coating thickness.

(4) Degrease, etch, and coat the sign blank on both sides with a chromate treatment conforming to ASTM B921, class 2.

637.3.3.4 Performance

Correct errata to reference to 105.11.2.3 as revised to implement changes to the finals process.

(1) Under 105.11.2.3 the department may revoke acceptance and direct the contractor to repair or replace previously accepted sign installations if the department subsequently discovers evidence of defective materials or improper installation. Deficiencies that warrant department action include but are not limited to the following:

- Sign posts more than five degrees out of plumb.
- Signs twisted by more than 5 degrees from plan orientation.
- Signs with delaminated or warped plywood.
- Signs with bubbling, fading, delaminating, or buckling sheeting.

646.3.3.4 Proving Period

Correct errata to reference to 105.11.2.3 as revised to implement changes to the finals process.

(4) Replace all marking within sections with a percent failing more than 10% and repair or replace all markings that, in the engineer's assessment, show evidence of improper construction. If post-acceptance inspections uncover evidence of defective materials or improper construction, the department may revoke acceptance under 105.11.2.3.

ADDITIONAL SPECIAL PROVISION 7

A. Reporting 1st Tier and DBE Payments During Construction

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

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

ADDITIONAL SPECIAL PROVISION 9
Electronic Certified Payroll Submittal

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

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

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

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

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

REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of $10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding $10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under

this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are

applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurance Required by 49 CFR 26.13(b):

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor

will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of $10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding $2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 “Contract provisions and related matters” with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages

a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH–1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b.(1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or

will notify the contracting officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b.(1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g. , the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH–347 is available for this purpose from the Wage and Hour Division Web site at http://www.dol.gov/esa/whd/forms/wh347instr.htm or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency..

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH–347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

6. Subcontracts. The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility.

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The following clauses apply to any Federal-aid construction contract in an amount in excess of $100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of $10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.

3. Withholding for unpaid wages and liquidated damages. The FHWA or the contacting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2.) of this section.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term “perform work with its own organization” refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:

(1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
(2) the prime contractor remains responsible for the quality of the work of the leased employees;
(3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and
(4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C.3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.
2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost $25,000 or more – as defined in 2 CFR Parts 180 and 1200.

1**. Instructions for Certification – First Tier Participants:**

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

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

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

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. “First Tier Covered Transactions” refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). “Lower Tier Covered Transactions” refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). “First Tier Participant” refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). “Lower Tier Participant” refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

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

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (https://www.epls.gov/), which is compiled by the General Services Administration.

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

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

* * * * *

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

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

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

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification; and

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

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

2. **Instructions for Certification - Lower Tier Participants:**

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost $25,000 or more - 2 CFR Parts 180 and 1200)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. “First Tier Covered Transactions” refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). “Lower Tier Covered Transactions” refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). “First Tier Participant” refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). “Lower Tier Participant” refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

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

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (https://www.epls.gov/), which is compiled by the General Services Administration.

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

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the

department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed $100,000 (49 CFR 20).

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed $100,000 and that all such recipients shall certify and disclose accordingly.

ATTACHMENT A - EMPLOYMENT AND MATERIALS PREFERENCE FOR APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS ROAD CONTRACTS

This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

SEPTEMBER 2002

NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY (EXECUTIVE ORDER 11246)

1. The Offeror's or Bidder's attention is called to the "Employment Practices" and "Equal Opportunity Clause" set forth in the Required Contract Provisions, FHWA 1273.

2. The goals and timetables for minority and female participation expressed in percentage terms for the contractor's aggregate work force in each trade, on all construction work in the covered area, are as follows:

Goals for Minority Participation for Each Trade:

County	%	County	%	County	%
Adams	1.7	Iowa	1.7	Polk	2.2
Ashland	1.2	Iron	1.2	Portage	0.6
Barron	0.6	Jackson	0.6	Price	0.6
Bayfield	1.2	Jefferson	7.0	Racine	8.4
Brown	1.3	Juneau	0.6	Richland	1.7
Buffalo	0.6	Kenosha	3.0	Rock	3.1
Burnett	2.2	Kewaunee	1.0	Rusk	0.6
Calumet	0.9	La Crosse	0.9	St. Croix	2.9
Chippewa	0.5	Lafayette	0.5	Sauk	1.7
Clark	0.6	Langlade	0.6	Sawyer	0.6
Columbia	1.7	Lincoln	0.6	Shawano	1.0
Crawford	0.5	Manitowoc	1.0	Sheboygan	7.0
Dane	2.2	Marathon	0.6	Taylor	0.6
Dodge	7.0	Marinette	1.0	Trempealeau	0.6
Door	1.0	Marquette	1.7	Vernon	0.6
Douglas	1.0	Menominee	1.0	Vilas	0.6
Dunn	0.6	Milwaukee	8.0	Walworth	7.0
Eau Claire	0.5	Monroe	0.6	Washburn	0.6
Florence	1.0	Oconto	1.0	Washington	8.0
Fond du Lac	1.0	Oneida	0.6	Waukesha	8.0
Forest	1.0	Outagamie	0.9	Waupaca	1.0
Grant	0.5	Ozaukee	8.0	Waushara	1.0
Green	1.7	Pepin	0.6	Winnebago	0.9
Green Lake	1.0	Pierce	2.2	Wood	0.6

Goals for female participation for each trade: 6.9%

These goals are applicable to all the contractor's construction work, (whether or not it is federal or federally assisted), performed in the covered area. If the contractor performs construction work in the geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and nonfederally involved construction.

The contractor's compliance with the Executive Order and the Regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from contractor to contractor or from project to project for the sole purpose of meeting the contractor's goals shall be a violation of the contract, the Executive Order and the Regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within ten (10) working days of award of any construction subcontract in excess of $10,000.00 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor, employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed.

   As referred to in this section, the Director means:

   Director
   Office of Federal Contract Compliance Programs
   Ruess Federal Plaza
   310 W. Wisconsin Ave., Suite 1115
   Milwaukee, WI 53202

   The "Employer Identification Number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941.

4. As used in this notice, and in the contract resulting from solicitation, the "covered area" is the county(ies) in Wisconsin to which this proposal applies.

APRIL 2013

ADDITIONAL FEDERAL-AID PROVISIONS

NOTICE TO ALL BIDDERS

To report bid rigging activities call:

1-800-424-9071

The U.S. Department of Transportation (DOT) operates the above toll-free "hotline" Monday through Friday, 8:00 a.m. to 5:00 p.m., Eastern Time. Anyone with knowledge of possible bid rigging, bidding collusion, or other fraudulent activities should use the "hotline" to report such activities.

The "hotline" is part of the DOT's continuing effort to identify and investigate highway construction contract fraud and abuse and is operated under the direction of the DOT Inspector General. All information will be treated confidentially and caller anonymity will be respected.

DECEMBER 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 2-28.5 to ensure compliance with this “Buy America” provision.

http://roadwaystandards.dot.wi.gov/standards/cmm/cm-02-28.pdf#cm2-28.5

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/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 September 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 $1.50/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 $1.50/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 $1.50/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 $1.50/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 $1.50/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 $1.50/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

SUPERSEDES DECISION WI20120010
U. S. DEPARTMENT OF LABOR
(DAVIS-BACON ACT, MINIMUM WAGE RATES)

STATE: Wisconsin
GENERAL DECISION NUMBER: WI130010
DATE: September 27, 2013
DESCRIPTION OF WORK: Highways and Airport Runway and Taxiway Construction

LABORERS CLASSIFICATION:	Basic Hourly Rates	Fringe Benefits
Group 1: General Laborer; Tree Trimmer; Conduit Layer; Demolition and Wrecking Laborer; Guard Rail, Fence and Bridge Builder; Landscaper, Multiplate Culvert Assembler; Stone Handler; Bituminous Worker (Shoveler, Loader, Utility Man); Batch Truck Dumper; or Cement Handler; Bituminous Worker; (Dumper, Ironer, Smoother, Tamper); Concrete Handler	$26.06	18.15
Group 2: Air Tool Operator; Joint Sawer and Filler (Pavement); Vibrator or Tamper Operator (Mechanical Hand Operated); Chain Saw Operator; Demolition Burning Torch Laborer	26.21	18.15
Group 3: Bituminous Worker (Raker and Luteman); Formsetter (Curb, Sidewalk, and Pavement); Strike Off man	26.41	18.15
Group 4: Line and Grade Specialist	26.56	18.15
Group 5: Blaster and Powderman	26.71	18.15
Group 6: Flagperson traffic control person	22.55	18.15

CLASSES OF LABORER AND MECHANICS

Bricklayer	35.58	16.07
Carpenter	30.52	14.41
Piledriverman	27.25	19.46
Ironworker	30.52	23.47
Cement Mason/Concrete Finisher	30.69	17.53
Electrician		See Page 3
Line Construction		
Lineman	38.25	18.00
Heavy Equipment Operator	34.43	16.71
Equipment Operator	30.60	15.41
Heavy Groundman Driver	26.78	14.11
Light Groundman Driver	24.86	13.45
Groundsman	21.04	12.16
Millwrights	26.32	13.98
Painter, Brush	29.52	18.79
Painter, Spray and Sandblaster	30.27	18.79
Painter, Bridge	29.87	18.79
Well Drilling:		
Well Driller	16.52	3.70

Truck Drivers:	Basic Hourly Rates	Fringe Benefits
1 & 2 Axles	23.82	18.32
Three or More Axles; Euclids, Dumptor & Articulated, Truck Mechanic	23.97	18.32

Notes: Welders receive rate prescribed for craft performing operation to which welding is incidental. Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29 CFR, 5.5(a)(1)(ii)). Includes Modification #0, dated January 4, 2013; Modification #1 dated February 1, 2013; Modification #2 dated June 7, 2013; Modification #3 dated July 19, 2013; Modification #4 dated August 23, 2013; Modification #5 dated September 13, 2013; Modification #6 dated September 27, 2013.

SUPERSEDES DECISION WI20120010
U. S. DEPARTMENT OF LABOR
(DAVIS-BACON ACT, MINIMUM WAGE RATES)

STATE: Wisconsin
GENERAL DECISION NUMBER: WI130010
DATE: September 27, 2013
DESCRIPTION OF WORK: Highways and Airport Runway and Taxiway Construction

POWER EQUIPMENT OPERATORS CLASSIFICATION:	Basic Hourly Rates	Fringe Benefits
Group 1: Cranes, tower cranes and derricks, with or without attachments, with a lifting capacity of over 100 tons or cranes, tower cranes and derricks with boom, leads and/or jib lengths measuring 176 feet or longer	$36.72	$20.10
Group 2: Cranes, tower cranes and derricks, with or without attachments, with a lifting capacity of 100 tons or less or cranes, tower cranes and derricks with boom, leads and/or jib lengths measuring 175 feet or less, and backhoes (excavators) having a manufacturer's rated capacity of 3 cu. yds. and over, caisson rigs, pile driver, dredge operator, dredge engineer.	$36.22	$20.10
Group 3: Mechanic or welder - heavy duty equipment, cranes with a lifting capacity of 25 tons or less, concrete breaker (manual or remote); vibrator/sonic concrete breaker; concrete laser screed; concrete slipform paver; concrete batch plant operator; concrete pavement spreader - heavy duty (rubber tired); concrete spreader and distributor, automatic subgrader (concrete); concrete grinder and planing machine; concrete slipform curb and gutter machine; slipform concrete placer; tube finisher; hydro blaster (10,000 psi and over); bridge paver; concrete conveyor system; concrete pump; stabilizing mixer (self propelled); shoulder widener; asphalt plant engineer; bituminous paver; bump cutter and grooving machine; milling machine; screed (bituminous paver); asphalt heater, planer and scarifier; backhoes (excavators) having a manufacturers rated capacity of under 3 cu. yds.; grader or motor patrol; tractor (scraper, dozer, pusher, loader); scraper - rubber tired (single or twin engine); endloader hydraulic backhoe (tractor-type); trenching machine; skid rigs; tractor, side boom (heavy); drilling or boring machine (mechanical heavy); roller (over 5 tons); percussion or rotary drilling machine; air track; blaster; loading machine (conveyor); tugger; boatmen; winches and A-frames; post driver; material hoist operator.	$35.72	$20.10
Group 4: Greaser, roller steel (5 tons or less); roller (pneumatic tired) - self-propelled; tractor (mounted or towed compactors and light equipment); shouldering machine; self-propelled chip spreader; concrete spreader; finishing machine; mechanical float; curing machine; power subgrader; joint saw (multiple blade) belting machine; burlap machine; texturing machine; tractor, endloader (rubber tired) - light; jeep digger; fork lift; mulcher; launch operator; fireman; environmental burner.	$35.46	$20.10
Group 5: Air compressor; power pack; vibratory hammer and extractor; heavy equipment, leadman; tank car heaters; stump chipper; curb machine operator; concrete pro-portioning plants generators; mudjack operator; rock breaker; crusher or screening plant; screed (milling machine); automatic belt conveyor and surge bin; pug mill operator; oiler; pump (over 3 inches); drilling machine helper.	$35.17	$20.10
Group 6: Off – road material hauler with or without ejector	$29.27	$20.10

Premium Pay:
EPA Level "A" protection - $3.00 per hour
EPA Level "B" protection - $2.00 per hour
EPA Level "C" protection - $1.00 per hours

SUPERSEDES DECISION WI20120010
U. S. DEPARTMENT OF LABOR
(DAVIS-BACON ACT, MINIMUM WAGE RATES)

STATE: Wisconsin
GENERAL DECISION NUMBER: WI130010
DATE: September 27, 2013
DESCRIPTION OF WORK: Highways and Airport Runway and Taxiway Construction

LABORERS CLASSIFICATION:	Rates	Benefits
Electricians		
Area 1	$28.40	16.676
Area 2:		
Electricians	29.13	17.92
Area 3:		
Electrical contracts under $130,000	26.24	16.85
Electrical contracts over $130,000	29.41	16.97
Area 4:	28.10	17.24
Area 5	28.61	16.60
Area 6	35.25	19.30
Area 8		
Electricians	30.60	24.95% + 10.33
Area 9:		
Electricians	32.94	18.71
Area 10	28.97	19.55
Area 11	31.91	23.60
Area 12	32.87	19.23
Area 13	32.82	22.51
Teledata System Installer		
Area 14		
Installer/Technician	21.89	11.83
Sound & Communications		
Area 15		
Installer	16.47	14.84
Technician	24.75	16.04

Area 1 - CALUMET (except township of New Holstein), GREEN LAKE (N. part, including Townships of Berlin, St. Marie and Seneca), MARQUETTE (N. part, including Townships of Crystal Lake, Neshkoro, Newton & Springfield), OUTAGAMIE, WAUPACA, WAUSHARA and WINNEBAGO COUNTIES.

Area 2 - ASHLAND, BARRON, BAYFIELD, BUFFALO, BURNETT, CHIPPEWA, CLARK (except Mayville, Colby, Unity, Sherman, Fremont, Lynn and Sherwood), CRAWFORD, DUNN, EAU CLAIRE, GRANT, IRON, JACKSON, LA CROSSE, MONROE, PEPIN, PIERCE, POLK, PRICE, RICHLAND, RUSK, ST. CROIX, SAWYER, TAYLOR, TREMPEALEAU, VERNON and WASHBURN COUNTIES

Area 3 - FLORENCE (townships of Aurora, Commonwealth, Fern, Florence and Homestead), MARINETTE (Niagara township)

Area 4 - BROWN, DOOR, KEWAUNEE, MANITOWOC (except Schleswig), MARINETTE (Wausauke and area south thereof), OCONTO, MENOMINEE (East of a line 6 miles West of the West boundary of Oconto County), SHAWANO (except area North of Townships of Aniwa and Hutchins) COUNTIES.

Area 5 - ADAMS, CLARK (Colby, Freemont, Lynn, Mayville, Sherman, Sherwood, Unity), FOREST, JUNEAU, LANGLADE, LINCOLN, MARATHON, MARINETTE (Area North of the town of Wausaukee), MENOMINEE (Area West of a line 6 miles West of the West boundary of Oconto County), ONEIDA, PORTAGE, SHAWANO (Area North of the townships of Aniwa and Hutchins), VILAS AND WOOD COUNTIES

Area 6 - KENOSHA COUNTY

Area 8 - DODGE, (Emmet Township only), GREEN, JEFFERSON, LAFAYETTE, RACINE (Burlington township), ROCK and WALWORTH COUNTIES

Area 9 - COLUMBIA, DANE, DODGE, (area west of Hwy. 26, except Chester & Emmet Townships), GREEN LAKE (except townships of Berlin, Seneca and St. Marie), IOWA, MARQUETTE (except townships of Neshkoka, Crystal Lake, Newton and Springfield), and SAUK COUNTIES

Area 10 - CALUMET (Township of New Holstein), DODGE (East of Hwy. 26 including Chester Township), FOND DU LAC, MANITOWOC (Schleswig), and SHEBOYGAN COUNTIES

Area 11 - DOUGLAS COUNTY

Area 12 - RACINE (except Burlington township) COUNTY

Area 13 - MILWAUKEE, OZAUKEE, WASHINGTON and WAUKESHA COUNTIES

Area 14 - Statewide.

Area 15 - DODGE (East of Hwy 26 including Chester Twp, excluding Emmet Twp), FOND DU LAC (Except Waupun), MILWAUKEE, OZAUKEE, MANITOWOC (Schleswig), WASHINGTON, AND WAUKESHA COUNTIES.

FEBRUARY 1999

NOTICE TO BIDDERS
WAGE RATE DECISION

The wage rate decision of the Secretary of Labor which has been incorporated in these advertised specifications is incomplete in that the classifications may be omitted from the Secretary of Labor's decision.

Since the bidder is responsible, independently, for ascertaining area practice with respect to the necessity, or lack of necessity, for the use of these classifications in the prosecution of the work contemplated by this project, no inference may be drawn from the omision of these classifications concerning prevailing area practices relative to their use. Further, this omission will not, per se, be construed as establishing any governmental liability for increased labor cost if it is subsequently determined that such classifications are required.

There may be omissions and/or errors in the federal wage rates. The bidder is responsible for evaluating and determining the correct applicable rate. The higher of state or federal rate will apply.

CONTRACT: 20140114005 PROJECT(S): 2265-08-70 FEDERAL ID(S): WISC 2014001

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
	SECTION 0001 ROAD WORK					
0010	201.0120 CLEARING	85.000 ID		.		.
0020	201.0220 GRUBBING	85.000 ID		.		.
0030	203.0600.S REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS (STATION) 01. 77+37.79	LUMP	LUMP			.
0040	203.0600.S REMOVING OLD STRUCTURE OVER WATERWAY WITH MINIMAL DEBRIS (STATION) 02. 34+50.57	LUMP	LUMP			.
0050	204.0100 REMOVING PAVEMENT	80,238.000 SY		.		.
0060	204.0109.S REMOVING CONCRETE SURFACE PARTIAL DEPTH	2,575.000 SF		.		.
0070	204.0115 REMOVING ASPHALTIC SURFACE BUTT JOINTS	720.000 SY		.		.
0080	204.0120 REMOVING ASPHALTIC SURFACE MILLING	2,575.000 SY		.		.
0090	204.0150 REMOVING CURB & GUTTER	663.000 LF		.		.

CONTRACT: 20140114005 PROJECT(S): 2265-08-70 FEDERAL ID(S): WISC 2014001

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0100	204.0155 REMOVING CONCRETE SIDEWALK	11,620.000 SY		.		.
0110	204.0175 REMOVING CONCRETE SLOPE PAVING	401.000 SY		.		.
0120	204.0195 REMOVING CONCRETE BASES	27.000 EACH		.		.
0130	204.0215 REMOVING CATCH BASINS	39.000 EACH		.		.
0140	204.0220 REMOVING INLETS	5.000 EACH		.		.
0150	204.0250 ABANDONING MANHOLES	17.000 EACH		.		.
0160	204.0255 ABANDONING CATCH BASINS	36.000 EACH		.		.
0170	205.0100 EXCAVATION COMMON **P**	45,292.000 CY		.		.
0180	205.0501.S EXCAVATION, HAULING, AND DISPOSAL OF PETROLEUM CONTAMINATED SOIL	420.000 TON		.		.
0190	206.1000 EXCAVATION FOR STRUCTURES BRIDGES (STRUCTURE) 01. B-40-0438	LUMP	LUMP			.

CONTRACT: 20140114005 PROJECT(S): 2265-08-70 FEDERAL ID(S): WISC 2014001

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0200	206.2000 EXCAVATION FOR STRUCTURES CULVERTS (STRUCTURE) 01. B-40-0058	LUMP	LUMP			.
0210	210.0100 BACKFILL STRUCTURE	2,049.000 CY		.		.
0220	213.0100 FINISHING ROADWAY (PROJECT) 01. 2265-08-70	1.000 EACH		.		.
0230	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH	33,346.000 TON		.		.
0240	310.0115 BASE AGGREGATE OPEN GRADED	160.000 CY		.		.
0250	312.0115 SELECT CRUSHED MATERIAL	45.000 CY		.		.
0260	320.0125 CONCRETE BASE 6-INCH	440.000 SY		.		.
0270	390.0303 BASE PATCHING CONCRETE	400.000 SY		.		.
0280	415.0070 CONCRETE PAVEMENT 7-INCH	150.000 SY		.		.
0290	415.0085 CONCRETE PAVEMENT 8 1/2-INCH	74,058.000 SY		.		.
0300	415.0210 CONCRETE PAVEMENT GAPS	18.000 EACH		.		.

CONTRACT: 20140114005 PROJECT(S): 2265-08-70 FEDERAL ID(S): WISC 2014001

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0310	415.0410 CONCRETE PAVEMENT APPROACH SLAB	310.000 SY	.		.	
0320	416.0280 CONCRETE DRIVEWAY HES 8-INCH	3,410.000 SY	.		.	
0330	416.0610 DRILLED TIE BARS	1,054.000 EACH	.		.	
0340	440.4410.S INCENTIVE IRI RIDE	17,280.000 DOL	1.00000		17280.00	
0350	455.0105 ASPHALTIC MATERIAL PG58-28	35.000 TON	.		.	
0360	455.0605 TACK COAT	85.000 GAL	.		.	
0370	460.1103 HMA PAVEMENT TYPE E-3	568.000 TON	.		.	
0380	465.0105 ASPHALTIC SURFACE	170.000 TON	.		.	
0390	465.0110 ASPHALTIC SURFACE PATCHING	150.000 TON	.		.	
0400	502.0100 CONCRETE MASONRY BRIDGES	683.000 CY	.		.	

CONTRACT: 20140114005 PROJECT(S): 2265-08-70 FEDERAL ID(S): WISC 2014001

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0410	502.2000 COMPRESSION JOINT SEALER PREFORMED ELASTOMERIC (WIDTH) 01. 3/8-INCH	158.000 LF		.		.
0420	502.3100 EXPANSION DEVICE (STRUCTURE) 01. B-40-0438	LUMP	LUMP			.
0430	502.3200 PROTECTIVE SURFACE TREATMENT	1,925.000 SY		.		.
0440	502.5005 MASONRY ANCHORS TYPE L NO. 5 BARS	758.000 EACH		.		.
0450	505.0605 BAR STEEL REINFORCEMENT HS COATED BRIDGES	138,607.000 LB		.		.
0460	505.0610 BAR STEEL REINFORCEMENT HS COATED CULVERTS	4,520.000 LB		.		.
0470	506.0105 STRUCTURAL STEEL CARBON	711.000 LB		.		.
0480	506.1510 SHEET ZINC	690.000 LB		.		.
0490	506.2610 BEARING PADS ELASTOMERIC LAMINATED	33.000 EACH		.		.
0500	506.3015 WELDED STUD SHEAR CONNECTORS 7/8X6-INCH	2,301.000 EACH		.		.

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CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0510	506.3025 WELDED STUD SHEAR CONNECTORS 7/8X8-INCH	2,304.000 EACH		.		.
0520	506.7050.S REMOVING BEARINGS (STRUCTURE) 01. B-40-0438	33.000 EACH		.		.
0530	509.1500 CONCRETE SURFACE REPAIR	198.000 SF		.		.
0540	509.9025.S EPOXY INJECTION CRACK REPAIR	1,950.000 LF		.		.
0550	509.9026.S CORED HOLES 2-INCH DIAMETER	16.000 EACH		.		.
0560	516.0100 DAMPPROOFING	121.000 SY		.		.
0570	516.0500 RUBBERIZED MEMBRANE WATERPROOFING	57.000 SY		.		.
0580	516.0610.S SHEET MEMBRANE WATERPROOFING FOR TOP SLAB (STRUCTURE) 01. B-40-0058	1,000.000 SY		.		.
0590	517.0900.S PREPARATION AND COATING OF TOP FLANGES (STRUCTURE) 01. B-40-0438	LUMP	LUMP			.
0600	517.1010.S CONCRETE STAINING (STRUCTURE) 01. B-40-0438	2,308.000 SF		.		.

CONTRACT: 20140114005 PROJECT(S): 2265-08-70 FEDERAL ID(S): WISC 2014001

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0610	517.1010.S CONCRETE STAINING (STRUCTURE) 02. B-40-0058	1,005.000 SF		.		.
0620	517.1015.S CONCRETE STAINING MULTI-COLOR (STRUCTURE) 01. B-40-0058	598.000 SF		.		.
0630	517.1050.S ARCHITECTURAL SURFACE TREATMENT (STRUCTURE) 01. B-40-0058	598.000 SF		.		.
0640	517.1800.S STRUCTURE REPAINTING RECYCLED ABRASIVE (STRUCTURE) 01. B-40-0438	LUMP	LUMP			.
0650	517.4500.S NEGATIVE PRESSURE CONTAINMENT AND COLLECTION OF WASTE MATERIALS (STRUCTURE) 01. B-40-0438	LUMP	LUMP			.
0660	517.6001.S PORTABLE DECONTAMINATION FACILITY	1.000 EACH		.		.
0670	601.0150 CONCRETE CURB INTEGRAL TYPE D	264.000 LF		.		.
0680	601.0319 CONCRETE CURB & GUTTER 19-INCH	455.000 LF		.		.
0690	601.0322 CONCRETE CURB & GUTTER 22-INCH	50.000 LF		.		.
0700	601.0331 CONCRETE CURB & GUTTER 31-INCH	2,149.000 LF		.		.

CONTRACT: 20140114005 PROJECT(S): 2265-08-70 FEDERAL ID(S): WISC 2014001

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0710	601.0600 CONCRETE CURB PEDESTRIAN	18.000 LF		.		.
0720	602.0410 CONCRETE SIDEWALK 5-INCH	58,854.000 SF		.		.
0730	602.0515 CURB RAMP DETECTABLE WARNING FIELD NATURAL PATINA	526.000 SF		.		.
0740	602.1000 CONCRETE LOADING ZONE	4,000.000 SF		.		.
0750	603.8000 CONCRETE BARRIER TEMPORARY PRECAST DELIVERED	260.000 LF		.		.
0760	603.8125 CONCRETE BARRIER TEMPORARY PRECAST INSTALLED	260.000 LF		.		.
0770	604.0400 SLOPE PAVING CONCRETE	401.000 SY		.		.
0780	608.0312 STORM SEWER PIPE REINFORCED CONCRETE CLASS III 12-INCH	2,452.000 LF		.		.
0790	611.0420 RECONSTRUCTING MANHOLES	11.000 EACH		.		.
0800	611.1004 CATCH BASINS 4-FT DIAMETER	29.000 EACH		.		.
0810	611.2004 MANHOLES 4-FT DIAMETER	2.000 EACH		.		.

CONTRACT: 20140114005 PROJECT(S): 2265-08-70 FEDERAL ID(S): WISC 2014001

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0820	611.3003 INLETS 3-FT DIAMETER	16.000 EACH		.		.
0830	611.8110 ADJUSTING MANHOLE COVERS	126.000 EACH		.		.
0840	611.8115 ADJUSTING INLET COVERS	36.000 EACH		.		.
0850	611.9705 SALVAGED MANHOLE COVERS	136.000 EACH		.		.
0860	611.9710 SALVAGED INLET COVERS	93.000 EACH		.		.
0870	612.0106 PIPE UNDERDRAIN 6-INCH	619.000 LF		.		.
0880	612.0206 PIPE UNDERDRAIN UNPERFORATED 6-INCH	160.000 LF		.		.
0890	616.0206 FENCE CHAIN LINK 6-FT	20.000 LF		.		.
0900	616.0404 FENCE CHAIN LINK SALVAGED 4-FT	20.000 LF		.		.
0910	619.1000 MOBILIZATION	1.000 EACH		.		.
0920	620.0300 CONCRETE MEDIAN SLOPED NOSE	153.000 SF		.		.

CONTRACT: 20140114005 PROJECT(S): 2265-08-70 FEDERAL ID(S): WISC 2014001

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0930	621.0100 LANDMARK REFERENCE MONUMENTS	3.000 EACH		.		.
0940	623.0200 DUST CONTROL SURFACE TREATMENT	70,627.000 SY		.		.
0950	625.0100 TOPSOIL	13,235.000 SY		.		.
0960	627.0200 MULCHING	151.000 SY		.		.
0970	628.1504 SILT FENCE	338.000 LF		.		.
0980	628.1520 SILT FENCE MAINTENANCE	338.000 LF		.		.
0990	628.1905 MOBILIZATIONS EROSION CONTROL	1.000 EACH		.		.
1000	628.1910 MOBILIZATIONS EMERGENCY EROSION CONTROL	1.000 EACH		.		.
1010	628.6005 TURBIDITY BARRIERS	286.000 SY		.		.
1020	628.7010 INLET PROTECTION TYPE B	1.000 EACH		.		.
1030	628.7015 INLET PROTECTION TYPE C	5.000 EACH		.		.

CONTRACT: 20140114005 PROJECT(S): 2265-08-70 FEDERAL ID(S): WISC 2014001

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1040	628.7570 ROCK BAGS	10.000 EACH		.		.
1050	629.0210 FERTILIZER TYPE B	8.330 CWT		.		.
1060	631.0300 SOD WATER	12.000 MGAL		.		.
1070	631.1000 SOD LAWN	13,235.000 SY		.		.
1080	632.0101 TREES (SPECIES, ROOT, SIZE) 01. JAPANESE TREE LILAC B&B 3" CAL	2.000 EACH		.		.
1090	632.0101 TREES (SPECIES, ROOT, SIZE) 02. ADIRONDACK CRABAPPLE B&B 3" CAL	2.000 EACH		.		.
1100	632.0101 TREES (SPECIES, ROOT, SIZE) 03. SHADEMASTER HONEYLOCUST B&B 3" CAL	4.000 EACH		.		.
1110	632.0101 TREES (SPECIES, ROOT, SIZE) 04. CALLERY PEAR B&B 3" CAL	3.000 EACH		.		.
1120	632.0101 TREES (SPECIES, ROOT, SIZE) 05. CRIMSON SPIRE ENGLISH OAK B&B 3" CAL	8.000 EACH		.		.
1130	632.0201 SHRUBS (SPECIES, ROOT, SIZE) 01. ANNABELLE HYDRANGEAS CG #5	7.000 EACH		.		.

CONTRACT: 20140114005 PROJECT(S): 2265-08-70 FEDERAL ID(S): WISC 2014001

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1140	632.0201 SHRUBS (SPECIES, ROOT, SIZE) 02. COOL SPLASH HONEYSUCKLE CG #5	6.000 EACH		.		.
1150	632.0201 SHRUBS (SPECIES, ROOT, SIZE) 03. GROW LOW SUMAC CG #3	9.000 EACH		.		.
1160	632.0201 SHRUBS (SPECIES, ROOT, SIZE) 04. RED KNOCKOUT ROSES CG #5	7.000 EACH		.		.
1170	632.0201 SHRUBS (SPECIES, ROOT, SIZE) 05. YELLOW KNOCKOUT ROSES CG #5	10.000 EACH		.		.
1180	632.0201 SHRUBS (SPECIES, ROOT, SIZE) 06. RUGOSA ROSES CG #3	32.000 EACH		.		.
1190	632.0201 SHRUBS (SPECIES, ROOT, SIZE) 07. ARCTIC BLUE WILLOW CG #5	8.000 EACH		.		.
1200	632.0201 SHRUBS (SPECIES, ROOT, SIZE) 08. DIABLO NINEBARK CG #5	20.000 EACH		.		.
1210	632.0201 SHRUBS (SPECIES, ROOT, SIZE) 09. TIGERS EYE SUMAC CG #5	14.000 EACH		.		.
1220	632.0201 SHRUBS (SPECIES, ROOT, SIZE) 10. RED TWIG DOGWOOD CG #5	5.000 EACH		.		.
1230	632.0201 SHRUBS (SPECIES, ROOT, SIZE) 11. SAMBUCUS CG #5	7.000 EACH		.		.
1240	632.9101 LANDSCAPE PLANTING SURVEILLANCE AND CARE CYCLES	30.000 EACH		.		.

CONTRACT: 20140114005 PROJECT(S): 2265-08-70 FEDERAL ID(S): WISC 2014001

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1250	634.0816 POSTS TUBULAR STEEL 2X2-INCH X 16-FT	9.000 EACH		.		.
1260	637.2210 SIGNS TYPE II REFLECTIVE H	176.500 SF		.		.
1270	638.2602 REMOVING SIGNS TYPE II	8.000 EACH		.		.
1280	642.5201 FIELD OFFICE TYPE C	1.000 EACH		.		.
1290	643.0100 TRAFFIC CONTROL (PROJECT) 01. 2265-08-70	1.000 EACH		.		.
1300	643.0300 TRAFFIC CONTROL DRUMS	131,452.000 DAY		.		.
1310	643.0420 TRAFFIC CONTROL BARRICADES TYPE III	99,535.000 DAY		.		.
1320	643.0500 TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS	942.000 EACH		.		.
1330	643.0600 TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER BASES	942.000 EACH		.		.
1340	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A	199,070.000 DAY		.		.
1350	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C	131,452.000 DAY		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1360	643.0900 TRAFFIC CONTROL SIGNS	40,762.000 DAY		.		.
1370	645.0112 GEOTEXTILE FABRIC TYPE DF SCHEDULE B	129.000 SY		.		.
1380	646.0106 PAVEMENT MARKING EPOXY 4-INCH	7,794.000 LF		.		.
1390	646.0116 PAVEMENT MARKING EPOXY 6-INCH	1,904.000 LF		.		.
1400	646.0126 PAVEMENT MARKING EPOXY 8-INCH	3,282.000 LF		.		.
1410	646.0841.S PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 4-INCH	578.000 LF		.		.
1420	646.0843.S PAVEMENT MARKING GROOVED WET REFLECTIVE CONTRAST TAPE 8-INCH	550.000 LF		.		.
1430	647.0166 PAVEMENT MARKING ARROWS EPOXY TYPE 2	7.000 EACH		.		.
1440	647.0206 PAVEMENT MARKING ARROWS BIKE LANE EPOXY	5.000 EACH		.		.
1450	647.0306 PAVEMENT MARKING SYMBOLS BIKE LANE EPOXY	5.000 EACH		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1460	647.0356 PAVEMENT MARKING WORDS EPOXY	7.000 EACH		.		.
1470	647.0576 PAVEMENT MARKING STOP LINE EPOXY 24-INCH	984.000 LF		.		.
1480	647.0776 PAVEMENT MARKING CROSSWALK EPOXY 12-INCH	3,738.000 LF		.		.
1490	649.0200 TEMPORARY PAVEMENT MARKING REFLECTIVE PAINT 4-INCH	21,292.000 LF		.		.
1500	649.0400 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH	60,315.000 LF		.		.
1510	649.0801 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 8-INCH	5,203.000 LF		.		.
1520	649.1400 TEMPORARY PAVEMENT MARKING STOP LINE REMOVABLE TAPE 24-INCH	392.000 LF		.		.
1530	649.1800 TEMPORARY PAVEMENT MARKING ARROWS REMOVABLE TAPE	67.000 EACH		.		.
1540	649.2000 TEMPORARY PAVEMENT MARKING WORDS REMOVABLE TAPE	67.000 EACH		.		.
1550	650.4000 CONSTRUCTION STAKING STORM SEWER	303.000 EACH		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1560	650.4500 CONSTRUCTION STAKING SUBGRADE	14,550.000 LF		.		.
1570	650.6500 CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 01. B-40-0438	LUMP	LUMP			.
1580	650.6500 CONSTRUCTION STAKING STRUCTURE LAYOUT (STRUCTURE) 02. B-40-0058	LUMP	LUMP			.
1590	650.7000 CONSTRUCTION STAKING CONCRETE PAVEMENT	14,550.000 LF		.		.
1600	650.8500 CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS (PROJECT) 01. 2265-08-70	LUMP	LUMP			.
1610	650.9910 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (PROJECT) 01. 2265-08-70	LUMP	LUMP			.
1620	652.0215 CONDUIT RIGID NONMETALLIC SCHEDULE 40 1 1/4-INCH	75.000 LF		.		.
1630	652.0220 CONDUIT RIGID NONMETALLIC SCHEDULE 40 1 1/2-INCH	150.000 LF		.		.
1640	652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH	1,492.000 LF		.		.
1650	652.0230 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2 1/2-INCH	1,104.000 LF		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1660	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH	24,925.000 LF		.		.
1670	652.0605 CONDUIT SPECIAL 2-INCH	744.000 LF		.		.
1680	652.0610 CONDUIT SPECIAL 2 1/2-INCH	100.000 LF		.		.
1690	652.0615 CONDUIT SPECIAL 3-INCH	148.000 LF		.		.
1700	652.0800 CONDUIT LOOP DETECTOR	992.000 LF		.		.
1710	652.0900 LOOP DETECTOR SLOTS	390.000 LF		.		.
1720	653.0135 PULL BOXES STEEL 24X36-INCH	5.000 EACH		.		.
1730	653.0140 PULL BOXES STEEL 24X42-INCH	13.000 EACH		.		.
1740	653.0905 REMOVING PULL BOXES	24.000 EACH		.		.
1750	654.0101 CONCRETE BASES TYPE 1	11.000 EACH		.		.
1760	654.0110 CONCRETE BASES TYPE 10	4.000 EACH		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1770	654.0113 CONCRETE BASES TYPE 13	4.000 EACH		.		.
1780	654.0217 CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL	1.000 EACH		.		.
1790	655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG	745.000 LF		.		.
1800	655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG	3,604.000 LF		.		.
1810	655.0260 CABLE TRAFFIC SIGNAL 12-14 AWG	2,018.000 LF		.		.
1820	655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG	2,035.000 LF		.		.
1830	655.0700 LOOP DETECTOR LEAD IN CABLE	2,199.000 LF		.		.
1840	655.0800 LOOP DETECTOR WIRE	1,331.000 LF		.		.
1850	655.0900 TRAFFIC SIGNAL EVP DETECTOR CABLE	921.000 LF		.		.
1860	656.0200 ELECTRICAL SERVICE METER BREAKER PEDESTAL (LOCATION) 01. STH 241 & HOWARD AVE	LUMP	LUMP			.
1870	657.0100 PEDESTAL BASES	11.000 EACH		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1880	657.0405 TRAFFIC SIGNAL STANDARDS ALUMINUM 3.5-FT	1.000 EACH		.		.
1890	657.0425 TRAFFIC SIGNAL STANDARDS ALUMINUM 15-FT	4.000 EACH		.		.
1900	657.0430 TRAFFIC SIGNAL STANDARDS ALUMINUM 10-FT	6.000 EACH		.		.
1910	657.1345 INSTALL POLES TYPE 9	1.000 EACH		.		.
1920	657.1355 INSTALL POLES TYPE 12	4.000 EACH		.		.
1930	657.1520 INSTALL MONOTUBE ARMS 20-FT	1.000 EACH		.		.
1940	657.1545 INSTALL MONOTUBE ARMS 45-FT	2.000 EACH		.		.
1950	657.1555 INSTALL MONOTUBE ARMS 55-FT	2.000 EACH		.		.
1960	658.0110 TRAFFIC SIGNAL FACE 3-12 INCH VERTICAL	14.000 EACH		.		.
1970	658.0115 TRAFFIC SIGNAL FACE 4-12 INCH VERTICAL	8.000 EACH		.		.
1980	658.0215 BACKPLATES SIGNAL FACE 3 SECTION 12-INCH	14.000 EACH		.		.

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1990	658.0220 BACKPLATES SIGNAL FACE 4 SECTION 12-INCH	8.000 EACH		.		.
2000	658.0416 PEDESTRIAN SIGNAL FACE 16-INCH	8.000 EACH		.		.
2010	658.0500 PEDESTRIAN PUSH BUTTONS	10.000 EACH		.		.
2020	658.0600 LED MODULES 12-INCH RED BALL	14.000 EACH		.		.
2030	658.0605 LED MODULES 12-INCH YELLOW BALL	14.000 EACH		.		.
2040	658.0610 LED MODULES 12-INCH GREEN BALL	14.000 EACH		.		.
2050	658.0615 LED MODULES 12-INCH RED ARROW	8.000 EACH		.		.
2060	658.0620 LED MODULES 12-INCH YELLOW ARROW	16.000 EACH		.		.
2070	658.0625 LED MODULES 12-INCH GREEN ARROW	8.000 EACH		.		.
2080	658.0635 LED MODULES PEDESTRIAN COUNTDOWN TIMER 16-INCH	8.000 EACH		.		.
2090	658.5069 SIGNAL MOUNTING HARDWARE (LOCATION) 01. STH 241 & HOWARD AVE	LUMP	LUMP			.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2100	661.0200 TEMPORARY TRAFFIC SIGNALS FOR INTERSECTIONS (LOCATION) 01. STH 241 & HOWARD AVE	LUMP	LUMP			.
2110	661.0300 GENERATORS	2.000 DAY	.			.
2120	670.0100 FIELD SYSTEM INTEGRATOR	LUMP	LUMP			.
2130	670.0200 ITS DOCUMENTATION	LUMP	LUMP			.
2140	678.0200 FIBER OPTIC SPLICE ENCLOSURE	1.000 EACH	.			.
2150	678.0300 FIBER OPTIC SPLICE	4.000 EACH	.			.
2160	678.0500 COMMUNICATION SYSTEM TESTING	LUMP	LUMP			.
2170	690.0150 SAWING ASPHALT	3,360.000 LF	.			.
2180	690.0250 SAWING CONCRETE	2,795.000 LF	.			.
2190	715.0415 INCENTIVE STRENGTH CONCRETE PAVEMENT	5,313.000 DOL	1.00000		5313.00	

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2200	715.0502 INCENTIVE STRENGTH CONCRETE STRUCTURES	5,500.000 DOL	1.00000		5500.00	
2210	ASP.1T0A ON-THE-JOB TRAINING APPRENTICE AT $5.00/HR	4,000.000 HRS	5.00000		20000.00	
2220	ASP.1T0G ON-THE-JOB TRAINING GRADUATE AT $5.00/HR	3,000.000 HRS	5.00000		15000.00	
2230	SPV.0025 SPECIAL 01. DEEP CONCRETE SURFACE REPAIR	20.000 CF	.		.	
2240	SPV.0035 SPECIAL 01. PLANTING SOIL	20.000 CY	.		.	
2250	SPV.0035 SPECIAL 02. ENGINEERED SOIL	397.000 CY	.		.	
2260	SPV.0035 SPECIAL 03. BEDDING LAYER	80.000 CY	.		.	
2270	SPV.0060 SPECIAL 01. MOVING POLE AND BANNER	5.000 EACH	.		.	
2280	SPV.0060 SPECIAL 02. REMOVING POLE FOOTING	5.000 EACH	.		.	
2290	SPV.0060 SPECIAL 03. INLET COVER TYPE 57	48.000 EACH	.		.	
2300	SPV.0060 SPECIAL 04. INLET COVER TYPE 55	18.000 EACH	.		.	

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2310	SPV.0060 SPECIAL 05. INLET COVER TYPE 58A	13.000 EACH		.		.
2320	SPV.0060 SPECIAL 06. INLET COVER TYPE MS 58	1.000 EACH		.		.
2330	SPV.0060 SPECIAL 07. MANHOLE COVER TYPE 57	1.000 EACH		.		.
2340	SPV.0060 SPECIAL 08. CATCH BASIN TYPE 45A	67.000 EACH		.		.
2350	SPV.0060 SPECIAL 09. INLET SCREEN TYPE M	148.000 EACH		.		.
2360	SPV.0060 SPECIAL 10. INLET SCREEN TYPE R	144.000 EACH		.		.
2370	SPV.0060 SPECIAL 11. INTERNAL SANITARY MANHOLE SEALS	55.000 EACH		.		.
2380	SPV.0060 SPECIAL 12. ADJUSTING WATER BOX	127.000 EACH		.		.
2390	SPV.0060 SPECIAL 13. ADJUSTING WATER MANHOLE FRAME AND LID	2.000 EACH		.		.
2400	SPV.0060 SPECIAL 14. WATER MAIN PROTECTION	27.000 EACH		.		.
2410	SPV.0060 SPECIAL 15. CONCRETE BASE TYPE 10 SPECIAL	11.000 EACH		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2420	SPV.0060 SPECIAL 16. INSTALL TRAFFIC SIGNAL BASE	29.000 EACH		.		.
2430	SPV.0060 SPECIAL 17. CONCRETE FOOTING FOR BANNER POLE	5.000 EACH		.		.
2440	SPV.0060 SPECIAL 18. POLES TYPE 10	3.000 EACH		.		.
2450	SPV.0060 SPECIAL 19. POLES TYPE 12 SPECIAL	4.000 EACH		.		.
2460	SPV.0060 SPECIAL 20. POLES TYPE 13 SPECIAL	7.000 EACH		.		.
2470	SPV.0060 SPECIAL 21. MONOTUBE ARMS 30-FT	3.000 EACH		.		.
2480	SPV.0060 SPECIAL 22. MONOTUBE ARMS 35-FT	7.000 EACH		.		.
2490	SPV.0060 SPECIAL 23. MONOTUBE ARMS 40-FT	4.000 EACH		.		.
2500	SPV.0060 SPECIAL 24. GIANT BLUE HOSTAS CG #1	12.000 EACH		.		.
2510	SPV.0060 SPECIAL 25. CATMINT BLUE WONDER CG #1	228.000 EACH		.		.
2520	SPV.0060 SPECIAL 26. DWARF DAYLILLIES CG #1	66.000 EACH		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2530	SPV.0060 SPECIAL 27. BECKY SHASTA DAISY CG #1	156.000 EACH		.		.
2540	SPV.0060 SPECIAL 28. ORNAMENTAL GRASS CG #5	24.000 EACH		.		.
2550	SPV.0060 SPECIAL 29. DAFFODIL BULB 3" X 3"	500.000 EACH		.		.
2560	SPV.0060 SPECIAL 30. POLYMER CONCRETE VAULT 13"X24"X18"	74.000 EACH		.		.
2570	SPV.0060 SPECIAL 31. POLYMER CONCRETE VAULT 17"X30"X24"	2.000 EACH		.		.
2580	SPV.0060 SPECIAL 32. POLYMER CONCRETE VAULT 17"X30"X18"	63.000 EACH		.		.
2590	SPV.0060 SPECIAL 33. JUNCTION BOX 12"X18"X8"	2.000 EACH		.		.
2600	SPV.0060 SPECIAL 34. CONCRETE COLLAR SPECIAL	7.000 EACH		.		.
2610	SPV.0060 SPECIAL 35. END DIAPHRAGM ADJUSTMENT	31.000 EACH		.		.
2620	SPV.0060 SPECIAL 36. REINSTALLING POLE AND BANNER	5.000 EACH		.		.
2630	SPV.0060 SPECIAL 37. SUB-BASIN BOWL	3.000 EACH		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2640	SPV.0060 SPECIAL 38. CATCH BASIN ELBOW	1.000 EACH		.		.
2650	SPV.0060 SPECIAL 39. INFORMATIONAL SIGNS	14.000 EACH		.		.
2660	SPV.0060 SPECIAL 40. 6-INCH CLEANOUTS	16.000 EACH		.		.
2670	SPV.0060 SPECIAL 41. BLACK EYED SUSAN CG #1	84.000 EACH		.		.
2680	SPV.0060 SPECIAL 42. DAYLILLIES CG #1	408.000 EACH		.		.
2690	SPV.0060 SPECIAL 43. PURPLE CONEFLOWER CG #1	60.000 EACH		.		.
2700	SPV.0060 SPECIAL 44. RUSSIAN SAGE CG #1	36.000 EACH		.		.
2710	SPV.0060 SPECIAL 46. KARL FOERSTER GRASS CG #1	38.000 EACH		.		.
2720	SPV.0060 SPECIAL 47. SWITCH GRASS CG #1	58.000 EACH		.		.
2730	SPV.0060 SPECIAL 48. ADJUSTING TES MANHOLE COVERS	19.000 EACH		.		.
2740	SPV.0060 SPECIAL 49. INSTALLING CONDUIT INTO EXISTING MANHOLE	6.000 EACH		.		.

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2750	SPV.0060 SPECIAL 50. 4' DIAMETER MANHOLE TYPE TES	10.000 EACH		.		.
2760	SPV.0060 SPECIAL 51. 4' DIAMETER "DOGHOUSE" MANHOLE TYPE TES	2.000 EACH		.		.
2770	SPV.0060 SPECIAL 52. SAWING CONCRETE ENCASED DUCT PACKAGE	14.000 EACH		.		.
2780	SPV.0060 SPECIAL 54. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC ARROWS TYPE 2	6.000 EACH		.		.
2790	SPV.0060 SPECIAL 55. REMOVING STREET LIGHTING HAND HOLE	1.000 EACH		.		.
2800	SPV.0060 SPECIAL 56. CAPPING OF ABANDONED STORM INLETS AT CULVERT	2.000 EACH		.		.
2810	SPV.0060 SPECIAL 80. INSTALL FIBER OPTIC COMMUNICATIONS IN CABINET	1.000 EACH		.		.
2820	SPV.0060 SPECIAL 81. TRAFFIC SIGNAL INTERCONNECT VAULT	1.000 EACH		.		.
2830	SPV.0060 SPECIAL 82. REMOVING TRAFFIC SIGNAL INTERCONNECT VAULT	1.000 EACH		.		.
2840	SPV.0060 SPECIAL 83. CONTRACTOR PROVIDED HIGH-STRENGTH BOLT ASSEM. FOR MONOTUBE ARMS (TYPE 9)	1.000 EACH		.		.

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2850	SPV.0060 SPECIAL 84. CONTRACTOR PROVIDED HIGH-STRENGTH BOLT ASSEM. FOR MONOTUBE ARMS (TYPE 12)	4.000 EACH		.		.
2860	SPV.0090 SPECIAL 01. CONCRETE CURB AND GUTTER INTEGRAL 19-INCH	27,550.000 LF		.		.
2870	SPV.0090 SPECIAL 02. CONSTRUCTION STAKING CONCETE SIDEWALK	8,660.000 LF		.		.
2880	SPV.0090 SPECIAL 04. GALVANIZED PIPE 16 GAUGE 9 1/2-INCH	4.000 LF		.		.
2890	SPV.0090 SPECIAL 05. GALVANIZED PIPE 16 GAUGE 11 1/2-INCH	5.000 LF		.		.
2900	SPV.0090 SPECIAL 06. 1-DUCT CONDUIT, CEMENT ENCASED, 4" RIGID NON-METALLIC CONDUIT DB-60	12.000 LF		.		.
2910	SPV.0090 SPECIAL 07. 2-DUCT CONDUIT, CEMENT ENCASED, 4" RIGID NON-METALLIC CONDUIT DB-60	529.000 LF		.		.
2920	SPV.0090 SPECIAL 08. 3-DUCT CONDUIT, CEMENT ENCASED, 4" RIGID NON-METALLIC CONDUIT DB-60	33.000 LF		.		.

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2930	SPV.0090 SPECIAL 09. 4-DUCT CONDUIT, CEMENT ENCASED, 4" RIGID NON-METALLIC CONDUIT DB-60	2,582.000 LF		.		.
2940	SPV.0090 SPECIAL 10. 6-DUCT CONDUIT, CEMENT ENCASED, 4" RIGID NON-METALLIC CONDUIT DB-60	3,582.000 LF		.		.
2950	SPV.0090 SPECIAL 11. 7-DUCT CONDUIT, CEMENT ENCASED, 4" RIGID NON-METALLIC CONDUIT DB-60	229.000 LF		.		.
2960	SPV.0090 SPECIAL 12. 8-DUCT CONDUIT, CEMENT ENCASED, 4" RIGID NON-METALLIC CONDUIT DB-60	11.000 LF		.		.
2970	SPV.0090 SPECIAL 40. FIBER OPTIC TRACER WIRE	166.000 LF		.		.
2980	SPV.0090 SPECIAL 41. FIBER OPTIC WARNING TAPE	166.000 LF		.		.
2990	SPV.0090 SPECIAL 90. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC STOP LINE 18-INCH	193.000 LF		.		.
3000	SPV.0090 SPECIAL 94. PAVEMENT MARKING GROOVED PREFORMED THERMOPLASTIC CROSSWALK 6-INCH	734.000 LF		.		.

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3010	SPV.0105 SPECIAL 01. MIS MANHOLE RISER EXTENSION	LUMP	LUMP			.
3020	SPV.0105 SPECIAL 02. ELECTRICAL WORK	LUMP	LUMP			.
3030	SPV.0105 SPECIAL 03. UNDERDECK UTILITY STRUCTURE B-40-0438	LUMP	LUMP			.
3040	SPV.0105 SPECIAL 04. DECK DRAINAGE SYSTEM STRUCTURE B-40-0438	LUMP	LUMP			.
3050	SPV.0105 SPECIAL 05. RAILING STEEL TYPE C2 GALVANIZED B-40-0058	LUMP	LUMP			.
3060	SPV.0105 SPECIAL 06. RAILING TUBULAR TYPE 'M' (MODIFIED) B-40-0438	LUMP	LUMP			.
3070	SPV.0105 SPECIAL 40. TRANSPORTING TRAF SIG & INTERSECTION LIGHTING MATERIALS STH 241 & HOWARD AVE	LUMP	LUMP			.
3080	SPV.0105 SPECIAL 41. REMOVE TRAFFIC SIGNALS STH 241 & HOWARD AVE	LUMP	LUMP			.
3090	SPV.0105 SPECIAL 42. REMOVE LOOP DETECTOR WIRE & LEAD-IN CABLE STH 241 & HOWARD AVE	LUMP	LUMP			.
3100	SPV.0105 SPECIAL 43. EVP DETECTOR HEAD INSTALLATION STH 241 & HOWARD AVE	LUMP	LUMP			.

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3110	SPV.0105 SPECIAL 44. TRANSPORT & INST STATE FURN VIDEO DETECTION SYSTEM STH 241 & HOWARD AVE	LUMP	LUMP			.
3120	SPV.0105 SPECIAL 45. INSTALL STATE SUPPLIED TRAFFIC SIGNAL CABINET STH 241 AND HOWARD AVE.	LUMP	LUMP			.
3130	SPV.0105 SPECIAL 46. TEMP NON-INTRUSIVE VEHICLE DETECTION SYS FOR INTERSECT STH 241 & HOWARD AVE	LUMP	LUMP			.
3140	SPV.0165 SPECIAL 02. CONCRETE SURFACE REPAIR - DECK	1,350.000 SF	.			.
3150	SPV.0170 SPECIAL 01. TEST ROLLING	175.000 STA	.			.
3160	SPV.0180 SPECIAL 01. JOINT SEALING	72,380.000 SY	.			.
3170	SPV.0180 SPECIAL 02. COLORED CONCRETE PAVEMENT 8 1/2 INCH	1,720.000 SY	.			.
3180	SPV.0180 SPECIAL 04. CONCRETE RESURFACE AND REPAIR MORTAR	1,000.000 SY	.			.
3190	SPV.0180 SPECIAL 05. CONCRETE MOWING STRIP 4-INCH	29.000 SY	.			.

CONTRACT: 20140114005 PROJECT(S): 2265-08-70 FEDERAL ID(S): WISC 2014001

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
3200	SPV.0180 SPECIAL 06. REMOVING CONCRETE MOWING STRIP	55.000 SY		.		.
3210	SPV.0195 SPECIAL 01. MANAGEMENT OF SOLID WASTE	700.000 TON		.		.
3220	SPV.0195 SPECIAL 02. COBBLESTONES	10.000 TON		.		.
	SECTION 0001 TOTAL					.
	TOTAL BID					.

PLEASE ATTACH SCHEDULE OF ITEMS HERE