HIGHWAY WORK PROPOSAL

Proposal Number: 1 3

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

COUNTY	STATE PROJECT ID	FEDERAL PROJECT ID	PROJECT DESCRIPTION	HIGHWAY
Milwaukee	2265-16-70	WISC 2015 006	27th St, City of Franklin/Oak Creek W Drexel Ave to College Ave (CTH ZZ)	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, $ 650,000.00 Payable to: Wisconsin Department of Transportation	Attach Proposal Guaranty on back of this PAGE.
Bid Submittal Due Date: February 10, 2015 Time (Local Time): 9:00 AM	Firm Name, Address, City, State, Zip Code **SAMPLE** **NOT FOR BIDDING PURPOSES**
Contract Completion Time September 30, 2016	
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 Pavement removals, clearing, grubbing, common excavation, breaker run material, dense graded base, storm sewer, concrete pavement, concrete curb and gutter, HMA pavement, retaining walls R-40-585, R-40-586, R-40-587, R 40-588, R-40-589, R-40-590, R-40-612, lighting, traffic signals, signing, pavement marking, sanitary sewer, water main.	
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 2265-16-70, 27th Street, City of Franklin/Oak Creek, W. Drexel Avenue to College Avenue (CTH ZZ), STH 241, 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, 2015 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 (20140630)

2. Scope of Work.

The work under this contract shall consist of pavement removals, clearing, grubbing, common excavation, breaker run material, dense graded base, storm sewer, concrete pavement, concrete curb and gutter, HMA pavement, retaining walls R-40-585, R-40-586, R-40-587, R-40-588, R-40-589, R-40-590, R-40-612, lighting, traffic signals, signing, pavement marking, sanitary sewer, water main work, and all incidental items necessary to complete the work as shown on the plans and included in the proposal and contract.
104-005 (20090901)

Partnering Charter
Supplement standard spec 104.1 as follows:

The department intends to encourage, support, and implement a partnering system on this contract with the full participation of the contractor and all subcontractors.

Partnering is a performance system designed to achieve an optimal relationship between all parties to a construction contract. Further, it is a method of conducting business in the construction profession without unnecessary, excessive, or disruptive external party involvement. The partnering system is structured to draw on the strengths of each participating organization to identify and achieve mutually profitable objectives.

The partnering system will consist of three main elements: preparation of a partnering charter, establishing and implementing a partnering effectiveness evaluation technique, and establishing and implementing an issue resolution procedure.

It is anticipated that within 14 calendar days of the issuance of a notice to proceed with construction, the department, its consultants, and the prime contractor on the project will participate, with their subcontractors, in a one day meeting to write a partnering charter.

The partnering charter is the basic manual for operating the partnering system. It includes, at a minimum, the mission of the project and the objectives of the project team. In addition, it outlines, in broad terms, the project evaluation methods to be used and the dispute resolution process to be applied to conflict issues as they arise on the job.

It is anticipated that the partnering charter meeting participants will establish and publish the partnering effectiveness evaluation method. This partnering evaluation method will set guidelines for periodically measuring project performance against the mission and objectives set out in the charter.

It is also anticipated that the partnering charter meeting participants will establish and publish the issue resolution procedure, designed to help resolve disputes quickly, satisfactorily, and as near as possible to the originating level of the dispute.

The contractor is required to participate in establishing these three elements of the partnering system in cooperation with the department and its consultants. Outside costs for effectuating the partnering effort will be mutually agreed to by both parties and will be shared equally.

The establishment of a partnership charter on this project will not change the legal relationship of the parties to the contract nor relieve either party from any of the terms of the contract.
104-010 (20030820)

3. Prosecution and Progress.

Work on this project shall not start prior to May 1, 2015.

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. Work efforts will possibly require multiple or concurrent controlling operations to occur at the same time. This information is to

assist the contractor and its subcontractors and shall not be interpreted as a demonstration of specified means and methods.

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

Anticipate cold weather concrete masonry, concrete paving and ancillary concrete work (curb, sidewalk, etc.). Plan to heat aggregates and water for mixes, and that the heating of the aggregate and water is considered incidental to those concrete pay items. Covering and other cold weather items needed to complete the concrete masonry, concrete paving and ancillary concrete work shall be incidental to the respective concrete pay items.

Schedule of Operations
The department anticipates that the construction activities for each stage are as follows:

Stage 1A Construction

- Install storm sewer trunk.
- Install temporary signals.
- Install temporary pavement in medians, on west side of southbound STH 241, and on both side of Sycamore Street.
- Install temporary pavement in shoulder south of Minnesota Avenue during a single lane night closure.
- Install cross culverts at Station 1226+70 and Station 1248+28.

Stage 1B Construction

- Construct northbound STH 241 from Station 1198+56 to 1321+50.
- Construct westbound Drexel Avenue, westbound Northwestern Mutual Way, westbound Rawson Avenue and westbound College Avenue.
- Construct eastbound Riverwood Boulevard and eastbound Sycamore Street.
- Place storm sewer on east half of STH 241.

Stage 1C Construction

- Place temporary asphalt on southbound intersection of College Avenue and STH 241.

Stage 1D Construction

- Place temporary asphalt pavement at southbound intersection of Rawson Avenue and STH 241, Northwest Mutual Way and STH 241, and Sycamore Street and STH 241.

Stage 1E Construction

- Place temporary asphalt pavement at the southbound intersection of Drexel Avenue and STH 241.

Stage 2A Construction

- Construct STH 241 southbound from Station 1199+23 to Station 1323+50.
- Construct eastbound Drexel Avenue, eastbound Northwestern Mutual Way, eastbound Rawson Avenue and eastbound College Avenue.
- Construct westbound Riverwood Boulevard and eastbound Sycamore Street.
- Install storm sewer on southbound STH 241.

Stage 2B Construction

- Construct STH 241 southbound at the intersection of College Avenue, Sycamore Street, Riverwood Drive, Rawson Avenue, Northwestern Mutual Way and Drexel Avenue.

Stage 2C Construction

- Place temporary asphalt pavement at southbound intersection of Rawson Avenue and STH 241 and Northwest Mutual Way and STH 241.
- Place HES concrete at northbound intersection of Rawson Avenue and STH 241 and Drexel Avenue and STH 241.

Stage 3 Construction

- Construct medians and left turn lanes.

Local Street Work Restrictions

Comply with all local ordinances that apply to local street work operations, including those pertaining to working during night time hours. Furnish any ordinance variance issued by the municipality or required permits to the engineer in writing 3 days prior to performing such work.

Existing trees, street light poles, hydrants and other utility poles are to remain in place during construction unless otherwise noted in the plan. Conduct an on-site visit prior to bidding to determine any special measures required for proper clearance between trees, hydrants and poles and the paving equipment. Zero offset paving and ancillary concrete work will be incidental to the concrete pay items.

All Work Restrictions

Any ordinance variance issued by the municipality or required permits shall be furnished to the engineer, by the contractor, in writing three working days before performing such work.

When engaged in roadway cleaning operations, use equipment having vacuum or water spray mechanisms to eliminate the dispersion of particulate matter into the atmosphere. If vacuum equipment is employed, it must have suitable self-contained particulate collectors to prevent discharge from the collection bin into the atmosphere.

Excavation material and cleared and grubbed material shall be stockpiled on upland areas an adequate distance away from wetlands, storm sewer inlets, floodplains and the waterways as determined by the engineer.

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

Maintain pedestrian access at all locations outside the immediate construction area.

Lay out all doweled transverse joints on this project, including intersections. The engineer must approve the 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, inlets and water valve boxes.

Obtain any noise variance permits to complete the work outside of standard hours. Any permits obtained must be provided to the engineer.

Maintain the integrity of the inlet protection throughout the project. Remove and dispose of any debris that may prevent the flow of water.

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

Commercial Driveways
All commercial driveways shall remain open to traffic and built in stages to ensure access at all times. Schedule removal and replacement operations so that the time lapse between removal and replacement is minimal. Inform the property tenants a minimum of 72 hours in advance of commencing driveway removal and replacement work activities.

Fish Spawning
There shall be no instream disturbance of waterways as a result of construction activity under or for this contract, from March 1 to June 15 both dates inclusive, in order to avoid adverse impacts upon the spawning of endemic fish populations.

Any change to this limitation will require submitting a written request by the contractor to the engineer, subsequent review and concurrence by the Department of Natural Resources in the request, and final approval by the engineer. The approval will include all conditions to the request as mutually agreed upon by WisDOT and DNR.

Interim Completion of Work
Complete all removals, storm sewer, grading, base aggregate dense, temporary asphaltic pavement and temporary signals for Stage 1A work and complete the placement of traffic control devices and temporary barrier wall for the traffic switch to Stage 1B in accordance to the contract documents, prior to 12:01 AM, July 10, 2015.

Complete all removals, grading, base course, storm sewer, HMA and concrete pavements, curb and gutter, temporary pavement marking, permanent and temporary signing, lighting, retaining walls necessary for northbound STH 241, westbound Rawson Avenue (CTH BB) and eastbound W Sycamore Street, placement of traffic control devices, drainage establishment and restoration necessary to complete Stage 1, All Phases, as shown in the plans prior to 12:01 AM, November 20, 2015.

4. Mandatory Pre-Bid Meeting.

Supplement standard spec 102.3.1 with the following:

Prospective bidders are required to attend a mandatory pre-bid meeting from 2:00 PM to 4:00 PM on Tuesday, January 27, 2015 at NW Barstow Street, Waukesha in Conference Room 314.

No meeting minutes will be prepared. Issues discovered at the meeting will be handled by addendum.
102-010 (20041504)

5. Traffic.

General Requirements
Perform the work under this contract in a manner that will not interfere with the travel lanes and shoulders on STH 241 except as indicated on the plans. Maintain clear travel lane widths and turn lanes of at least 11 feet on STH 241. Maintain a minimum of 1-foot between the travel lane and the traffic barrels and a minimum of 2-feet between opposing directions of travel. Maintain access to side roads and commercial entrances with a minimum of 10-foot lanes.

Vehicles, equipment and materials may be stored within the road right-of-way at locations approved by the engineer. Do not park vehicles within the right-of-way of STH 241 that are actively engaged in the construction operations or authorized by the engineer. Equip all vehicles and equipment entering or leaving live traffic lanes with a hazard identification beam (flashing yellow beacon) visible in all directions. Activate the beacon when merging into, leaving, or crossing a live traffic lane, and whenever working off the roadway within the clear zone.

Coordinate traffic handling arrangements with the engineer before starting work. Ensure that all traffic control devices are in place and approved by the engineer before the beginning of each stage.

Prior to the installation of traffic control devices, provide the engineer and the State Highway Patrol with the name and telephone number of a local person responsible for the emergency maintenance of traffic control that can be contacted during non-working hours in the event a safety hazard develops.

Provide 24 hours-a-day availability of equipment and forces to promptly restore barricades, or other traffic control devices that are damaged or disturbed. In no case shall any barricade or other traffic control device be out of service for more than 24 hours.

Conduct operations in such a manner that causes the least interference and inconvenience to the free flow of vehicles on STH 241, Drexel Avenue, Rawson Avenue and College Avenue. This includes the following:

1. Immediately repair or replace at contractor expense any damage done to traffic control signs or advisory signs along the traveled roadway during construction operations.

2. Deliver materials and equipment off the live traveled lanes and shoulders.

3. Completely cover any signs containing messages conflicting with nearby signs.

4. Immediately clean up debris falling onto the roadway.

Submit the weekly schedule of lane closures at least one week in advance of the first closing to the engineer.

Do not remove any traffic control signs, advisory signs or delineators not included in the plans without the approval of the engineer.

Temporary halting of traffic on the side roads will require a flag person, associated advanced signing and be in accordance to the Plans.

Pedestrian and Bicycle Accommodations

The project is located within commercial and residential districts of the cities of Franklin, Oak Creek, Milwaukee and Greenfield. It is essential to maintain available pedestrian facilities along STH 241. Provide pedestrian detours and alternative routes as provided in the plans. Modifications of the pedestrian routes may be needed depending on contractor operations and activities.

Maintain existing sidewalk to the extent possible, except as directed by the engineer. In areas of existing sidewalk open to pedestrian traffic, which are under construction as part of the contract, provide a temporary surface for the pedestrian access at all times. The temporary surface shall meet the requirements of the Americans with Disabilities Act Accessibilities Guidelines (ADAAG) and shall consist of temporary asphaltic surface, skid resistant steel plating, or alternative materials as approved by the engineer. Gravel and base course material is not acceptable. Temporary asphalt and base course items have been included in the contract to temporary replace any sidewalk disturbed by construction activities in the contract. Maintain ADAAG accessible pedestrian walkways free of mud, and construction equipment or debris. Cleaning off sidewalks shall be incidental to the contract. Maintain sidewalk access to all businesses and residences at all times. Coordinate with residents and businesses prior to removing or closing sidewalks.

Existing pedestrian signals are provided at Riverwood Boulevard, Sycamore Street and College Avenue. The Oak Leaf Trail crosses STH 241 at Drexel Avenue. Maintain the existing pedestrian crossings at the signalized intersections throughout construction. Maintain the Oak Leaf Trail crossing throughout construction. Construct pedestrian crossings of intersections meeting requirements of the Americans with Disabilities Act Accessibility Guidelines (ADAAG) and consisting of temporary asphaltic surface. Gravel or base course material is not acceptable. Maintain ADAAG accessible pedestrian crossings that are free from equipment or mud, sand, and construction debris. The Temporary Crosswalk and Bus Stop Access bid item is payment for maintaining crosswalks through the construction zone where existing crosswalks exist as indicated in the plans. Any closures of sidewalk will be approved by the engineer. At locations where crosswalks crossing exist on both sides of the intersection, closure of one of the two crosswalks is permitted as long as all other crossings are completely open. At intersections where only one crosswalk exists, crossing work should be staged to maintain crosswalk at all times.

Use safety fence to separate pedestrians and bicyclists from the construction zone where appropriate. Do not park vehicles or store materials on active sidewalks.

Transit

The Milwaukee County Transit System (MCTS) has one route within the project limits, Route 27. The route follows STH 241 from the Wal-Mart at Sycamore Street to the Glendale Industrial Park. The southbound route includes stops at Sycamore Street, 6451 S. 27th Street and College Avenue. The northbound route includes stops at 6508 S. 27th Street and College Avenue. The existing bus stop locations will be impacted by the construction. Provide temporary bus stop locations in proximity to the existing locations.

Provide safe refuge areas at the temporary bus stop locations as well as street crossing access at the bus stop locations.

Specific Requirements

Traffic shifts shown in a given stage may occur at different times during that stage depending on the controlling elements for a given traffic movement.

Provide two open lanes of traffic in each direction at all times with the exception that STH 241 may be reduced to one open lane in each direction at night between 10:00 PM and 5:00 AM Allow all turning movements, except as noted at intersections for HES pavement.

<u>Stage 1A</u>

Traffic

- Night closures for culvert / storm sewer installation at Station 1211+50 RT, Station 1248+25, Station 330+90 RT, 1212+50, RT 1226+00, 1264+50 LT, Station 1274+50 LT, 1307+88 LT, 1318+73 LT, 1249+00 RT, 1250+25 RT, 1251+50 RT, 1251+50 RT, 1261+00 RT, 1266+25 RT and Station 520+05 RT

Construction

- Install storm sewer trunk.
- Install temporary signals.
- Install temporary pavement in medians, on west side of STH 241 southbound, and on both sides of Sycamore Street.
- Install temporary pavement in shoulder south of Minnesota Avenue during a single lane night closure.
- Install culvert at Station 1226+70 and Station 1248+28.

Stage 1B

Traffic

- Close STH 241 northbound from Station 1198+56 to Station 1321+50.
- Divert northbound traffic onto existing southbound STH 241.
- Night closure for storm sewer installation at Station 474+30 and Station 521+00.
- Some turning movements not available until HES pavement meets minimum compressive strength.

Construction

- Move temporary signals.
- Construct the northbound STH 241 from Station 1198+56 to 1321+50.
- Place storm sewer on northbound STH 241.

Stage 1C

Traffic

- Northbound STH 241 to remain closed south of College Avenue.
- Divert northbound and southbound traffic to northbound STH 241 north of College Avenue utilizing crossover at Station 1300+50.
- Flip traffic on College Avenue during night closure.
- Night closure for storm sewer installation at Station 1316+30.

Construction

- Adjust temporary signals.
- Place temporary asphalt on southbound intersection of College Avenue and STH 241.

Stage 1D

Traffic

- Northbound STH 241 to remain closed south of Northwestern Mutual Way.
- Divert traffic to southbound STH 241 south of Northwestern Mutual Way utilizing crossover at Station 1237+10.
- Flip traffic on Rawson Avenue.
- Night closure on Rawson Avenue for temporary pavement installation.

Construction

- Adjust temporary signals.
- Place temporary asphalt pavement at southbound intersection of Rawson Avenue and STH 241, Northwest Mutual Way and STH 241, and Sycamore Street and STH 241.

Stage 1E

Traffic

- Divert traffic to the newly constructed northbound STH 241.
- Night closure on Drexel Avenue for temporary pavement installation.

Construction

- Adjust temporary signals.
- Place temporary asphalt pavement at the southbound intersection of Drexel Avenue and STH 241.

Stage 2A

Traffic

- Close southbound STH 241 from Station 1199+23 to Station 1323+50.
- Divert traffic to the newly constructed northbound STH 241.
- Night closure for storm sewer installation at Station 459+40.
- Some turning movements not available until HES pavement meets minimum compressive strength.

Construction

- Adjust temporary signals.
- Construct STH 241 southbound from Station 1199+23 to Station 1323+50.
- Install storm sewer on southbound STH 241.

Stage 2B

Traffic

- Southbound STH 241 to remain closed.
- Divert traffic to the newly constructed northbound STH 241.
- Flip traffic for College Avenue, Sycamore Street, Riverwood Drive, Rawson Avenue, Northwestern Mutual Way and Drexel Avenue.
- Some turning movements not available until HES pavement meets minimum compressive strength.

Construction

- Adjust temporary signals.
- Construct STH 241 southbound at the intersection of College Avenue, Sycamore Street, Riverwood Drive, Rawson Avenue, Northwestern Mutual Way and Drexel Avenue.

Stage 2C

Traffic

- Close northbound STH 241 from Station 1198+56 to 1321+50.
- Divert traffic to the newly constructed southbound STH 241.
- Flip traffic for Rawson Avenue.
- Some turning movements not available until HES pavement meets minimum compressive strength.

Construction

- Adjust temporary signals.
- Place temporary asphalt pavement at southbound intersection of Rawson Avenue and STH 241 and Northwest Mutual Way and STH 241.
- Place HES concrete at northbound intersection of Rawson Avenue and STH 241 and Drexel Avenue and STH 241.

Stage 3

Traffic

- Traffic on newly constructed outside lanes of northbound and southbound STH 241.

Construction

- Adjust temporary signals.
- Construct medians and left turn lanes.

Other Considerations:

Villa Drive

Temporary lane closures are allowed. The work may be performed with flagging operations.

Drexel Avenue

Drexel Avenue may be restricted to one open lane of traffic in each direction. Allow all turning movements.

Northwestern Mutual Way

Northwestern Mutual Way may be restricted to one open lane of traffic in each direction. Allow all turning movements.

W Minnesota Avenue

Temporary lane closures are allowed. The work may be performed with flagging operations. Allow all turning movements.

Rawson Avenue

Rawson Avenue may be restricted to one lane of traffic in each direction between 8:00 PM and 5:00 AM. Allow all turning movements.

S. Riverwood Boulevard

S. Riverwood Boulevard may be restricted to one open lane of traffic in each direction. Allow all turning movements.

W. Sycamore Street

W Sycamore Street may be restricted to one open lane of traffic in each direction. Allow all turning movements.

W. College Avenue

Eastbound College Avenue may be restricted to one open lane of traffic in each direction between 9:00 PM and 5:00 AM east of STH 241. Westbound College Avenue may be restricted to one open lane of traffic west of STH 241.

Private and Commercial Entrances

Temporary lane closures are allowed where not otherwise provided for in these special provisions or the plans. The work may be performed with flagging operations.

6. Lane Rental Fee Assessment.

A General

The contract designates some lane closures to perform the work. No Lane Rental Fee Assessments will be charged for closing lanes during the designated times of lane closures as shown in Traffic article. If a lane is closed outside of the designated lane closure times, the contractor will be subject to Lane Rental Fee Assessments. If a lane is obstructed at any time due to contractor operations, it is considered a closure. The purpose of lane rental is to enforce compliance of lane restrictions and discourage unnecessary closures.

The contractor shall submit the dates of the proposed lane, ramp, and roadway restrictions to the engineer as part of the progress schedule. The contractor will coordinate lane, ramp, and roadway closures with any concurrent operations on adjacent roadways within 3 miles of the project.

If other projects are in the vicinity of this project, coordinate lane closures to run concurrent with lane closures on adjacent projects when possible. When lane closures on adjacent projects extend into the limits of this project, Lane Rental Fee Assessments will only occur if the closure facilitates work under this contract.

A.1 Lane Rental Fee Assessment

The Lane Rental Fee Assessment incurred for each lane closure, each ramp closure, and each full closure of a roadway, per direction of travel, is as follows:

27th Street/STH 241, Northbound and Southbound

- 5:00 AM – 6:00 AM $500 per lane per 15 minutes
- 6:00 AM – 10:00 PM $1,700 per lane per 15 minutes

College Avenue (CTH ZZ), Westbound and Eastbound

- 5:00 AM – 6:00 AM $500 per lane per 15 minutes
- 6:00 AM – 9:00 PM $1,700 per lane per 15 minutes

The Lane Rental Fee Assessment represents the average cost of the interference and inconvenience to the road users for each closure. The Lane Rental Fee Assessment will be measured in 15-minute increments. All lane, roadway, or ramp closure event increments less than 15 minutes will be assessed as a 15-minute increment.

Lane Rental Fee Assessments will be made based on the applicable rate for any and all closures whether work is being performed or not. The engineer, or designated representative, will be the sole authority in determining time period length for the Lane Rental Fee Assessment.

Lane Rental Fee Assessments will not be assessed for closures due to crashes, accidents or emergencies not initiated by the contractor.

B (Vacant)

C (Vacant)

D Measurement

The department will assess Lane Rental Fee Assessment by the dollar under the administrative item Failing to Open Road to Traffic. The total dollar amount of Lane Rental Fee Assessment will be computed by multiplying the Lane Rental Assessment Rate by the number of 15-minute increments of each lane closure event as described above.

Lane Rental Fee Assessment will be in effect from the time of the Notice to Proceed until the department issues final acceptance.

E (Vacant)

7. Municipality Acceptance of Sanitary Sewer and Water Main Construction.

Both the department and the Milwaukee Water Works, Milwaukee Metropolitan Sewerage District, Franklin Sewer and Water Department, and Oak Creek Sewer and Water Utility personnel will inspect construction of sanitary sewer and water main under this contract. Construction staking, testing, and acceptance of the sanitary sewer and water main construction for the City of Oak Creek's facilities will be by the Oak Creek Sewer and Water Utility. However, construction staking and testing of the sanitary sewer and water main construction for the Milwaukee Water Works and Franklin Sewer and Water Department shall be performed by the contractor. Final acceptance of the City of Milwaukee and City of Franklin's facilities will be by the Milwaukee Water Works and Franklin Sewer and Water Department.

8. Referenced Construction Specifications.

Construct the sanitary sewer and water main work conforming to the "Standard Specifications for Sewer and Water Construction in Wisconsin, latest edition." If there is a discrepancy or conflict between the referenced specification and the standard specifications regarding contract administration, part 1 of the standard specifications governs.

9. Public Convenience and Safety.

Revise standard spec 107.8(6) as follows:

Check for and comply with local ordinances governing the hours of operation of construction equipment. Do not operate motorized construction equipment from 10:00 PM until the following 8:00 AM, unless prior written approval is obtained from the engineer.
107-001 (20060512)

10. Holiday Work Restrictions.

Do not perform work on, nor haul materials of any kind along or across any portion of the highway carrying 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 22, 2015 to 6:00 AM Tuesday, May 26, 2015 for Memorial Day;
- From noon Thursday, July 2, 2015 to 6:00 AM Monday, July 6, 2015 for Independence Day;
- From noon Friday, September 4, 2015 to 6:00 AM Tuesday, September 8, 2015 for Labor Day;
- From noon Wednesday, November 25, 2015 to 6:00 AM Monday, November 30, 2015 for Thanksgiving and deer hunting season;
- From noon, Thursday, December 24, 2015 to 6:00 AM Monday, December 28, 2015 for Christmas.
- From noon, Thursday, December 31, 2015 to 6:00 AM Monday, January 4, 2016 for New Year's Day.
- From noon Friday, May 27, 2016 to 6:00 AM Tuesday, May 31, 2016 for Memorial Day;
- From noon Friday, July 1, 2016 to 6:00 AM Tuesday, July 5, 2016 for Independence Day;
- From noon Friday, September 2, 2016 to 6:00 AM Tuesday, September 6, 2016 for Labor Day;

107-005 (20050502)

11. Information to Bidders, U.S. Army Corps of Engineers Section 404 Permit.

The department has obtained a U.S. Army Corps of Engineers Section 404 permit. Comply with the requirements of the permit in addition to requirements of the special provisions. A copy of the permit is available from the regional office by contacting Tom Lazcano at (262) 574-5437.
107-054 (20080901)

12. Utilities.

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

Some of the utility work described below is dependent on prior work being performed by the contractor at specific sites. In such situations provide the engineer and the affected utility a good faith notice of when the utility is to start work at the site. Provide the notice 14 calendar days in advance of the expected time when the prior work is to begin and provide the time when the site will be available to the utility. Follow up with a confirmation notice to the engineer and the utility not less than 3 working days before the site will be ready for the utility to begin its work.

Maintain the integrity of the facilities necessary to maintain the operation of the utilities at all times.

Bidders are advised to contact the utility companies listed in the plans prior to preparing their bids to obtain current information on existing and new locations and the status of any utility relocation work stated herein.

List of Utilities on Project 2265-16-70, 27th Street, City of Franklin/Oak Creek, STH 241:
The utilities on this project include; The Wisconsin DOT (traffic and lighting), City of Milwaukee DPW (traffic, sewer, communications and lighting), Milwaukee Water Works (water), Milwaukee Metropolitan Sewerage District (sewer and gas), Franklin Sewer and Water Department (sewer and water), Oak Creek Sewer and Water Utility (sewer and water), We Energies(electric and gas), Wisconsin Gas Company D/B/A We Energies(gas), West Shore Pipeline Company (gas), AT&T Wisconsin (communications), Time Warner Cable (cable television), TW Telecom (communication), Midwest Fiber (communication), Teleport Communications America Milwaukee, Inc (communication), Oak Creek (lighting), City of Greenfield (water and lighting), TCA (Telecom).

Wisconsin DOT (traffic and lighting) has an underground and above ground signal facilities at the intersections of W. Drexel Avenue, Northwestern Mutual Way, W. Rawson Avenue, S. Riverwood Boulevard, W. Sycamore Street and W. College Avenue. The traffic signals will be reconstructed as part of the project. Temporary signals will operate during the

construction. A fiber optic interconnect will run between all six signalized intersections and will connect to the existing interconnect at both ends of the project.

Contact:
John Haug, Traffic Engineering Supervisor
141 North Barstow Street
PO Box 798
Waukesha, WI 53187
Phone: (262) 521-5356
Email: john.haug@dot.wi.gov

AT&T Communications has an underground telephone line along east side of 27th Street from beyond the southern project limit to approximately Station 1307+00. There are underground telephone lines along the west side of 27th Street from approximately Stations 1227+10 to 1230+40, 1255+25 to 1264+50, 1283+70 to 1303+70 and 1321+00 to 1323+10. There are underground crossings of 27th Street at approximately Stations 1274+90, 1283+70 and 1308+80.

There is an underground conduit with manholes in 27th Street along the east side of the street from beyond the southern project limit to beyond the northern project limit. There are underground conduits with manholes crossing 27th Street at approximately Stations 1209+40, 1212+40, 1228+70, 1229+10, 1256+00, 1265+70, 1303+70, 1310+45, 1316+65 and 1322+70.

There is an underground conduit with manholes in Drexel Avenue in the street from beyond the western project limit to approximately Station 332+50.

There is an underground conduit along the south side of Drexel Avenue from beyond the western project limit to approximately Station 329+00.

There is an underground conduit with manholes in Rawson Avenue near the center median of the street from beyond the western project limit to approximately Station 423+00.

There is an underground conduit along the north side of College Avenue from approximately Stations 521+50 to 523+00 and pedestals located at approximately 521+50, 57' LT and 523+10, 60' LT.

There are overhead lines on the west side of 27th Street from beyond the southern project limit to approximately Station 1210+00, 1241+70 to 1252+30, 1266+50 to 1273+00, and 1308+90 to 1310+50.

Relocation Work That Will Take Place During Construction:

Proposed Facilities

- Coordinate with AT&T for the adjustment or replacement of existing telephone conduit ducts at the following locations:

27th Street:

- Station 1317+54, Ex. 12 MTD (Print #2): Storm Sewer
- Station 1316+40, Ex. 14 MTD (Print #2): Storm Sewer
- Station 1315+00 to 1310+74 14/12 MTD (Prints 2-5): Storm Sewer and Road Cut
- Station 1307+00 to 1302+50 14/12 MTD (Prints 2-5): Storm Sewer and Road Cut
- Station 1300+70 to 1299+50 12 MTD (Print #5): Storm Sewer
- Station 1297+20, 12 MTD (Print #6): Storm Sewer
- Station 1291+25 to 1284+50, 12 MTD (Prints 7-9): Storm Sewer
- Station 1283+00 to 1274+94, 14 MTD (Prints 9-11): Storm Sewer and Road Cut
- Station 1274+11 to 1266+23, 12 MTD (Prints 11-13): Storm Sewer and Road Cut
- Station 1265+00 to 1257+50, 14/12 MTD (Prints 13 and 14): Storm Sewer and Road Cut
- Station 1265+00 to 1249+00, 12 MTD (Prints 15 and 16): Storm Sewer and Road Cut
- Station 1238+25 to 1231+00, 12 MTD (Prints 19 and 20): Road Cut
- Station 1220+50 to 1213+00, 14/12 MTD (Prints 22, 23, and 24): Storm Sewer and Road Cut
- Station 1212+03 to 1204+00, 10/8 MTD (Prints 24, 25, and 26): Storm Sewer and Road Cut
- Station 1203+00 to 1200+25, 10/8 MTD (Prints 26 and 27): Storm Sewer and Road Cut
- Station 1209+42, crossing median and southbound lane. Remove 94', 1-3.5" Transite Duct
- Station 1255+57, crossing northbound and southbound lanes. Remove 134', 1+3.5" Transite Duct
- Station 1303+54, crossing northbound and southbound lanes. Adjust/replace 129', 1-4" S.P.
- Station 1310+47, crossing northbound and southbound lanes. Remove 70', 1-3.5" Transite Duct
- Station 1322+63, crossing southbound lane. Remove 58', 1-3.5" Transite Duct

Adjustments College Ave:

Station 516+75 to 519+50 8 MTD (Print 32): Storm Sewer and Road Cut
Station 514+76 2 PC (Print 33): Storm Sewer

Storm Adjustments W. Rawson Ave:

Station 418+50 to 420+40 8 MCD (Print 35)

Storm Adjustments W. Drexel Ave:
Station 330+77 to 331+75, 5PCand3PC (Print 37)
Station 326+50 to 330+40, 5PC and 3PC (Print 38)

Existing Storms That Need To Be Cut To Lower:
517+59 6 MTD and 2PC (Print 32)

Allow a minimum of 2 days for completion of the work at each location.

Additional lateral ducts will need to be installed along the project corridor and will require adjustments during construction as traffic allows.

- The roofs of existing AT&T manholes throughout the project may protrude up into the proposed road cut. Use caution at the following locations:

27th Street:
- Station 1203+64, 49' RT, the roof is at the proposed road cut
- Station 1239+06, 50' RT, the roof extends into the proposed road cut
- Station 1283+59, 58' RT the roof is at the proposed road cut
- Station 1283+64, 50' RT, the roof is at the proposed road cut
- Station 1292+24, 50' RT, the roof is at the proposed road cut
- Station 1297+65, 50' RT, the roof extends into the proposed road cut
- Station 1316+68, 47' RT and 53' RT, the roof extends into the proposed road cut

W. Rawson Avenue:
- Station 410+95, 53' LT, the roof is at the proposed road cut

- AT&T conduit throughout the project may have a depth of less than the desired 18-inches below the proposed road cut. Use caution at the following locations:

27th Street:
- Station 1211+69, 51' RT, the existing/adjusted 10 MTD conduit is approximately 10-inches below the proposed road cut.

- Station 1297+65, 50' RT to Station 1299+50, 50' RT, the existing/adjusted 12 MTD conduit is approximately 13-inches below the proposed road cut.

- Station 1300+50, 50' RT to Station 1302+60, 50' RT, the existing/adjusted 12 MTD conduit is approximately 15-inches below the proposed road cut.

- Abandoned telephone facilities will remain in place at the following locations:

27th Street:
- Station 1209+42, 24' RT, going northeasterly, 1-4" S.P.
- Station 1210+53, 51' RT, going southeasterly, 1-4" S.P.

- Station 1212+77, crossing northbound and southbound lanes, 2-4” S.P. and 2 Multi Tile Duct
- Station 1225+15, 50’ RT. going southeasterly, 1-4” S.P.
- Station 1230+52, 50’ RT, going northeasterly, 1-4” S.P.
- Station 1237+92, 50’ RT. going southeasterly, 1-4” S.P.
- Station 1262+73, 51’ RT, going southeasterly, 1-4” S.P.
- Station 1267+89, crossing northbound and southbound lanes, 2-4” P.D.
- Station 1275+01, 50’ RT, going northeasterly, 1-4” S.P.
- Station 1285+52, 49’ RT, going northeasterly, 1-4” S.P.
- Station 1290+94, 50’ RT, going southeasterly, 1-4” S.P.
- Station 1310+17, 50’ RT, going northeasterly, 1-4” S.P.
- Station 1310+47, 25’ RT going southeasterly, 1-4” S.P.
- Station 1310+47, 45’ LT, going west, 1-4” S.P.
- Station 1313+00, 50’ RT going southeasterly, 1-4” S.P.
- Station 1313+20, 50’ RT, going southeasterly, 1-4” S.P.
- Station 1322+63, crossing northbound lane. 1-3.5” Transite duct

W. Drexel Avenue:

- Station 330+82, 10’ LT to Station 331+22, 9’ LT, then going southeasterly 50’ across the southbound turn lane. 1-4” S.P. and 1-4” P.D.

- Station 327+22, 12’ LT, southwesterly 44’ into eastbound lane, 2-4” P.D.

- Station 2325+07, 20’ RT to 2328+78, 12’ RT, then southeasterly to a pole at 2329+32, 65’ RT, 2-4” P.D.

W. Rawson Avenue:

- Station 416+44, 13’ LT, going southwesterly across eastbound lane, 1-4” S.P.

- Station 419+45, 12’ LT, going northwesterly across westbound lane, 1-4” S.P.

- Station 420+56, 11’ LT, 8 MTD to Station 421+18, 16’ LT, to Station 422+16, 15’ LT then 2-4” S.P. southeasterly crossing the eastbound lane at Station 422+31.

W. College Avenue:

- Station 517+59, 12’ LT, going southwesterly, 2-4” P.D.
- Station 518+74, 13’ LT, going northwesterly, 1-4” P.D.
- Station 521+23, 12’ LT, going northeasterly, 1-4” S.P.
- Station 521+85, 11’ LT, going northeasterly, 1-4” S.P.
- Station 522+10, 55’ LT, going easterly 100’, 1-4” P.D.

- General information within the road reconstruction area.

Aerial cable or service wires attached to We Energies poles along the east and west sides of S. 27th Street will be replaced and buried in joint trenches within the routes designed by We Energies.

S. 27th Street Station 1199+25 to Station 1324+00:

- From Station 1209+75 to Station 1210+75 on the west side of the roadway the present AT&T buried cable will be abandoned.
- From Station 1199+25 to 1208+00 on the east side of the roadway an existing buried cable is replaced 1' west of the east property line.
- From Station 1215+15 to 1250+50 on the east side of the roadway the exiting buried cable is replaced within a joint trench on private right-of-way.
- From Station 1250+50 to 1253+50 on the east side of the roadway the existing buried cable is replaced with an aerial service drop between We Energies poles.
- From Station 1253+50 to 1264+00 on the east side of the roadway the existing buried cable will be replaced 1' west of the east property line.
- From Station 1255+50 to 1264+00 on the west side of the roadway the existing buried cable will be replaced within a joint trench in private right-of-way.
- From Station 1266+25 to 1274+00 on the west side of the roadway the existing buried cable/service drops are replaced within a joint trench on private right-of-way.
- From Station 1288+00 to 1295+00 on the west side of the roadway the existing AT&T buried cable is rerouted (the new feed is the from north) 1' east of the west property line from Station 1295+00 to Station 1297+00, where it enters a joint trench on private right-of-way, then continuing north to Station 1299+75 as a new feeder route.
- From Station 1268+50 to 1292+25, on the east side of the roadway an existing buried cable will be replaced 1' west of the east property line.
- From Station 1295+85 to 1297+50, on the east side of the roadway the present buried cable is replaced 1' west of the east property line.
- From Station 1298+00 to 1302+75, on the east side of the roadway an existing buried cable will be replaced 1' west of the east property line from Station 1298+00 to 1300+75 where it enters a joint trench in private right-of-way and continues north Station 1302+75.
- From Station 1308+00 to 1311+00, on the west side of the roadway two existing AT&T cabinets located in the proposed sidewalk will be relocated to approximately 5' of Station 1310+80, 2' east of the west property line and west of the proposed sidewalk. The proposed connecting buried cables will route west (6') at Station 1310+80 into a joint trench routing north/south in private right-of-way, allowing for the removal of the aerial plant on the north/south We Energies pole line.

- From Station 1317+25 on the east side of the roadway one AT&T existing closure will be removed and not replaced.
- From Station 1321+25 to 1322+65, on the west side of the roadway the existing AT&T buried cable is rerouted to feed from the south. The placement route is 1' east of the west property line from Station 1321+25, south to 1317+07, 65' LT, then routing west 1' south of the north property line along W. College Avenue to an AT&T present cabinet at Station 517+85, 65' LT on W. College Avenue.

W. Drexel Avenue:

- From Station 332+50 to 333+00 on the south side of the roadway a new buried cable route is established to reach the proposed We Energies pole line located in private right-of-way along the south side of W. Drexel Avenue. The connection point for this buried cable is a proposed underground conduit crossing north/south of W. Drexel Avenue near Station 332+50.

W. Rawson Avenue:

- Station 413+50 to 419+25 on the south side of the roadway the existing AT&T buried cable is replaced by utilizing a proposed WE Energies pole line along the north side of W. Rawson Avenue**.**

- Station 421+50 to 427+50 on the south side of the roadway the existing aerial cable is replaced with a buried cable installed from a proposed underground conduit starting at the northeast corner of W. Rawson Avenue and S. 27th near Station 1266+56, 248' RT, then routing east 1' south of the north property line to Station 427+50, then routing to the south side of W. Rawson Avenue reaching a present pole near that location.

Riverwood Blvd:

- From Station 458+00 to 459+00 on the south side of the roadway the existing buried cable is replaced 1' north of the south right-of-way line from a proposed underground conduit starting near Station 1274+04, 83' LT, west to Station 1274+71.79, 202.87' LT.

W. Sycamore Avenue:

- From Station 477+50 to 479+00 on the north side of the roadway an existing buried cable is replaced 1' south of the proposed north property line, then enters a joint trench near 1294+96.40, 105.94' LT then continuing north on private right-of-way.

W. College Avenue:

- Station 512+50 to 518+00 on the south side of the roadway **t**he existing buried cable is replaced 1' north of the south property line**.**

- Station 511+33 to 518+00, North side of the roadway **t**he existing 3 buried cables will be replaced with 1 buried cable installed 2' south of the north right-of-way line. Three buried cables from Station 511+50 to 512+50 in the existing shoulder will be lowered.
- Station 523+00 on the north side of the roadway the existing AT&T cabinet and connecting cables at this location are replaced with a new cabinet installed in private right-of-way approximately 10' north of the present site. An underground conduit is placed to this station from a manhole in the intersection.

Anticipated staging of AT&T work

AT&T will begin work before road construction project begins and continue working after the project start. Coordinate with AT&T to confirm the areas where the identified utility conflicts have been cleared.

AT&T work planned before road construction begins:
The S. 27th Street underground conduit (south to north, along east edge of north bound traffic lane routing through the entire project area) as shown on road plans will be adjusted along with the manholes being reconstructed at the stations listed below. Work will continue along the route up until the project road construction work prevents access to the conduit route.

The reconstructed manholes are located along S. 27th Street at Stations, 1203+64, 1212+44, 1221+36, 1256+84, 1265+68, 1274+51 and 1283+61.

New conduit lateral crossings (east to west) replacing existing crossings that are in conflict with the proposed storm sewer will be installed. The existing cables will be cut over to cables in the new duct before road construction begins. AT&T will need access to all the manholes for splicing purposes during construction.

AT&T work planned after the north bound traffic lane is available for access to the S. 27th Street conduit system:
During road construction in stages 2 and 3 when the north bound (easterly lane) is closed and pavement is removed, AT&T will adjust the remaining duct packages for the proposed storm sewers and road cuts. Coordinate with AT&T to identify and schedule work in the best locations for conduit adjustments.

The back of the curb conflicting buried cables are planned to be replaced along the east right-of way in coordination with the road work. The estimated time for AT&T to complete the north bound lane is approximately 10 weeks depending on site availability and access.

AT&T replacements in or along W. Drexel Avenue, W. Rawson Avenue and W. College Avenue will be completed as the S. 27th road work proceeds or before. Coordinate with AT&T to determine best time to access to these areas and utilize the project traffic control.

Total number of conduit feet to be placed or adjusted is 11,889' of which 1,710' will be adjusted or placed prior to construction. Approximately 10,179' of conduit is planned to be adjusted or placed during construction.

Contact:

Dean Herro
435 S. 95th Street
Milwaukee, WI 53214
Phone: (414) 678-2644
Email: dh2572@att.com

Midwest Fiber Networks LLC has an overhead communication line along west side of S. 27th Street from beyond the southern project limit to approximately Station 1207+65. There is underground fiber line along the west side of S. 27th Street from approximately Stations 1207+65 to 1209+65 and along the east side from 1209+65 to 1314+50 and along the west side from 1314+50 to beyond the northern project limit. There are underground crossings of S. 27th Street at approximately Stations 1209+65, 1212+70, 1228+60 and 1314+50.

There are hand holes in the underground conduit along S. 27th Street at approximately Stations 1213+00, RT, 1228+50, RT, 1249+60, RT, 1268+30, RT, 1282+30, RT, 1294+90, RT and 1314+50, LT and RT.

There is an underground conduit along the north side of Drexel Avenue from beyond the western project limit to beyond the eastern project limit.

The following facilities will be adjusted during construction:

- At Station 1209+44, 67' LT to 1208+76, 67' LT move the duct to a new pole at 1208+76, 92' LT.
- At Station 1209+75, 68' LT to 1209+75, 66' RT lower the line a minimum of 2' in place.
- At Station 1209+50 to 1215+00 lower the line a minimum of 2' in place. At Station 1212+50 the line will be moved 2' east.
- At Station 1213+14, 67' RT move the handhole east 15' to Station 1213+11, 82' RT.
- At Station 1220+00 to 1222+00 lower the line a minimum of 2' in place.
- At Station 1228+75, 72' RT move the handhole east 7' to Station 1228+75, 79' RT.
- At Station 1243+50 to 1244+35 lower the line a minimum of 2' in place.
- At Station 1249+75, 69' RT move the handhole east 8' to Station 1249+75, 77' RT.
- At Station 1248+60 to 1250+25 lower the line a minimum of 2' and relocate 8' east.
- At Station 1251+33 to 1261+50 lower the line a minimum of 2' and relocate east to avoid a storm grate and light pole.
- At Station 1261+50 to 1264+85 lower the line a minimum of 3' in place.
- At Station 1266+00 to 1260+25 shift the line 2' east to avoid signals.

- At Station 1266+80 to 1267+55 lower the line a minimum of 2' in place.
- At Station 1268+42, 77' RT move the handhole east 5' to Station 1268+42, 82' RT.
- At Station 1271+75 to 1274+80 lower the line a minimum of 1' in place.
- At Station 1279+75 to 1283+50 lower the line a minimum of 2' in place.
- At Station 1282+37, 67' RT move the handhole east 7' to Station 1282+37, 75' RT.
- At Station 1286+25 to 1288+00 lower the line a minimum of 3' in place.
- At Station 1293+50 to 1293+80 shift the line west 2' for signals.
- At Station 1294+70 to 1294+90 shift the line east 2' for signals.
- At Station 1294+90 to 1295+50 lower the line a minimum of 3' in place.
- At Station 1296+30 to 1299+00 lower the line a minimum of 2' and shift it east for light poles.
- At Station 1305+90 to 1306+20 shift the line east 2' for a light pole.
- At Station 1308+95 to 1309+60 shift the line east 2' for a light pole.
- At Station 1310+00 to 1310+90 lower the line a minimum of 5' in place.
- At Station 1314+46, 61' RT move the handhole south to Station 1310+90, 67' RT.
- At Station 1310+90 to 1312+50 lower the line a minimum of 5' in place.
- At Station 1314+70, 64' LT move the handhole west to Station 1314+70, 66' LT.
- At Station 1312+50 to 1324+25 lower the line a minimum of 2' in place.

Contact:

Cory Schmuki
Midwest Fiber Networks LLC
3701 W. Burnham Street – Suite C
Milwaukee, WI 53215
Phone: (414) 459-3561, Mobile: (414) 349-2764
Email: cschmuki@midwestfibernetworks.com

Teleport Communications America Milwaukee has an overhead communication line on We Energies poles along north side of Rawson Avenue from beyond the western project limit to approximately Station 417RS+60 where the line crosses to the south side of Rawson Avenue on continues on to the eastern project limit.

This facility will be relocated underground prior construction. Teleport Communications America Milwaukee will bury the new communication line along the north side of Rawson Avenue from approximately Stations 411RS+00 LT to 417RS+60 LT, where the line will cross Rawson Avenue to the south side and continue on to the east from approximately Station 417RS+50 RT to 428RS+00 RT.

Pole removals along S. 27th Street are dependent on the removal of communication company facilities. Provide 3 days notice for We Energies to remove poles once they have been vacated.

Contact:

Debbie Saddler
Northwind Technical Services
3701 W. Burnham Street – Suite C
Milwaukee, WI 53215
Phone: (414) 459-3572
Email: d.saddler@northwindteck.com

West Shore Pipe Line Company has a 16-inch underground high pressure petroleum line within a 20-inch steel casing crossing S. 27th Street at approximately Station 1277+00. This line will not be relocated however the construction activities will impact the minimum clearance requirements. The depth to the top of the casing was recorded as approximately 6.3 and 6.9 feet near the east and west edges of the existing pavement respectively.

General Guidelines for operations in the vicinity of the pipeline:
An on-site inspector from West Shore Pipe Line (Buckeye Partners L.P.) "Buckeye" must be present any time construction work is conducted within 25 feet of the pipeline.

Do not store equipment or stockpile materials within 25 feet of the pipeline.

Do not operate heavy machinery directly over the pipe line.

Weld a plate over the teeth of the backhoe bucket and remove the side cutters prior to excavating within 25 feet of the pipeline. If excavation is within 2 feet of the outer edge of the pipe in any direction, only hand excavation, air cutting and vacuum excavation are permitted.

Where proper vertical clearance cannot be maintained, install temporary sand or cement bags, or other suitable material to maintain proper clearance to the pipe.

At any location where the pipe is exposed, allow Buckeye the opportunity to inspect the condition of the pipe, install cathodic protection test lead and/or install underground warning mesh.

The maximum unsupported exposed length of the pipe is 35 feet. Support the pipe with grout and sand bags or padded skids when required. At no time should the pipe be used as a brace to support equipment or sheeting/shoring materials.

Perform backfill and compaction in the presence of a Buckeye on site inspector and to the satisfaction of Buckeye's on site inspector. Provide a minimum of 6-inches of fine loose earth or sand with no sharp gravel, rock, hard clods or other debris on all sides of the pipe. Place the remaining backfill over the pipeline in a manner which doesn't disturb the previously placed padding material around the pipe or causes damage to the pipeline. Compact the back fill by hand until 18-inches of cover over the pipeline is achieved. Compact the surrounding disturbed areas around the pipeline to the same degree of

compaction as over the pipeline. Restore the site to its original condition except for items that are part of the Buckeye approved change.

Specific Guidelines for operations in the vicinity of the pipeline:
It is anticipated that the final grading will in places yield a minimum cover of 36 inches over the pipeline; however during construction, it is anticipated less than 36-inches cover will be maintained. Provide a minimum of 24-inches of cover during construction.

It is anticipated that in places the cover depth over the pipeline crossing may exceed a desirable maximum cover height of 6-feet, as the existing cover depth may be greater than 6-feet. Do not exceed the existing cover depth in areas where the proposed cover depth is in excess of 6-feet.

The use of vibratory equipment larger than walk-behind units is not permitted within 10 feet of the pipeline until 4-feet of cover over the pipeline is achieved.

A desirable 24-inch minimum clearance and absolute 12-inch minimum clearance is required where other utility installations cross under the pipeline. Place sand or select fill between the pipeline and other utility crossings. A sand slurry backfill that does not require compaction may be used instead of granular backfill round the petroleum pipeline (gas main) in the vicinity of the new storm sewer crossing.

Contact West Shore Pipe Line (Buckeye Partners L.P.) prior to performing work near their facilities.

Contact:
Aric Aufdermauer
Mobile: (414) 391-8102
Email: AAufdermauer@buckeye.com

Secondary contact:
Michael Norris, Sr. Specialist, Right-of-way
12920 Bell Road
Lemont, IL 60439
Office Phone: (630) 257-7583
Direct: (219) 313-5321
Email: MRNorris@buckeye.com

We Energies- Electric has overhead electric facilities on the west side of S. 27th Street from beyond the southern project limit to Drexel Avenue with several crossings to the east. At Drexel Avenue the main line crosses S. 27th Street and heads east along the south side of Drexel Avenue. These facilities will be relocated prior to construction.

There is a buried electric line along the east side of S. 27th Street from Drexel Avenue to approximately Station 1239+00. From Station 1242+50 an overhead line continues to the north along the west side of 27th on overhead electric poles beyond the northern project limits. There are several overhead crossings to the east.

At Rawson Avenue there is an overhead electric line along the north side of Rawson Avenue from beyond the western project limit to S. 27th Street. There is also an east-west underground electric crossing on S. 27th Street, near Rawson Avenue, at approximately Station 1268+00. These facilities will be relocated prior to construction.

There is an underground electric line along the south side of College Avenue from beyond the western project limit to approximately Station 519+00. Near that station the cable turns southward and runs within the S. 27th Street right-of-way to Station 1315+27, 67.5' LT (riser pole 91-02098).

An underground line running east from 517+43, 53' LT to the riser pole at 519+34, 71.6' LT, will be relocated prior to construction. In addition, the pole line along the west side of 27th St, from 519+34 to 1324+68, will be relocated to the proposed right-of-way line, as well as poles at 513+69.9, 26.5' LT, 515+27.7, 28.9' LT and 514+93.7, 21.8' RT.

We Energies (S. 27th Street, from W. Rawson Avenue to the north project limits):
The existing overhead electric facilities along S. 27th Street will be relocated to underground facilities from W. Rawson Avenue to W. College Avenue The new underground cables and associated pad mounted equipment will generally be located within easements along the west side of the road. It's expected that We Energies cables will be buried 5 to 10 feet west of the right-of-way. New cables will cross S. 27th Street at 5 locations between Rawson and College. New cables will also be installed across W. Rawson, east of S. 27th Street, and across W. Sycamore and Riverwood Blvd, west of S. 27th Street.

Along W. College Avenue just west of S. 27th Street, the existing underground cable along the south side of the road will be replaced and the old cable abandoned. The location of some of the overhead facilities will also be adjusted, with some of the poles being replaced or permanently removed. The overhead facilities along S. 27th Street from W. College Ave to Station 1324+67.3, 67' LT will be relocated to new poles. (See **Table 1 – Part A** for station offset information).

We Energies (S. 27th Street, from the south project limits to W. Rawson Avenue):
In general the existing overhead facilities will be relocated or replaced with underground facilities. In most locations, We Energies will replace the existing overhead along S. 27th Street with underground cables on private property. In several locations overhead facilities will remain to supply overhead service to existing customers.

The existing overhead facilities on the south side of Rawson Avenue, east of S. 27th Street, will be removed. The existing overhead facilities on the both sides of S. 27th Street, south of Drexel Avenue will be relocated to the new right-of-way line. (See **Table 1 – Part B** for station offset information).

Table 1 – Part A
We Energies Facilities – S. 27th Street Project 2265-16-70

Part A Notes:
-New cables installed in easement on private property may not be included in the following list. Unless otherwise noted, We Energies cable will typically be from 5 to 15 feet west of the west right-of-way of S. 27th Street, from (approximately Station 1268+00 to Station 1314+25.
-All overhead electrical conductors will be removed from the S. 27th St right-of-way, from W. College Avenue to W. Rawson Avenue.

WORK REQUEST	POINT/SPAN	STATION / OFFSET	FACILITY NUMBER	FACILITY DESCRIPTION
3518947	100	1326+49, 67' LT	73-4077	Add anchor to pole
3518947	110	1324+68, 67' LT	14-	New pole and anchor guy
3518947	115	1324+69.3, 67' LT	56-6089	Remove pole and anchor guy
3518947	120	1323+40.6, 68.6' LT	14-	New pole
3518947	125	1323+30.5, 67.3' LT	30-7658	Remove pole
3518947	130	1321+80.3, 82' LT	14-	New pole
3518947	135	1321+82, 67' LT	52-1550	Remove pole
3518947	140	1321+23, 103.9' LT		Cable splices
3518947	130-140			Re-route service cable in Easement
3518947	150	1320+24, 95' LT	14-	New pole
3518947	155	1320+12, 67' LT	67-5119	Remove pole
3518947	160	1318+68, 99.5' LT 1318+42.4, 101.6' LT	14-	New pole Anchor
3518947	165	1318+52, 67' LT	58-7406	Remove pole
3518947	175	1317+25, 67' LT	87-08081	Remove framing and risers
3518947	200	517+81.3, 55' LT	89-04922	Reframe pole, install anchor guy east
3518947	210	517+61.5, 54' LT	14-	New pole
3518947	215	517+42.3, 54' LT	87-08080	Remove pole
3518947	220	516+61.4, 52.9' LT	87+08079	Lower pole, move to right-of-way
3518947	230	515+18.4, 53.7' LT	87-08078	Lower pole, move to right-of-way
3518947	250	514+78, 40' RT	14-	New pole
3518947	255	514+93.7, 21.8' RT	88T5299	Vacate pole – AT&T to remove
3518947	260	513+69.8, 53.6' LT	87-08077	Reframe pole
3518947	265	513+69.9, 26.5' LT	00-18315	Remove pole and anchor
3518947	270	513+16.6, 34.7' LT	14-	New pole and anchor guys

WORK REQUEST	POINT/SPAN	STATION / OFFSET	FACILITY NUMBER	FACILITY DESCRIPTION
		513+47.6, 35.3’ LT 513+42.6, 35.2’ LT		
3518947	280	513+85, 53.5’ LT	14-	New pole
3518947	290	512+45.5, 31’ LT	00-18316	Trench and shift pole
3518947	295	512+46.9, 25.26’ LT	Unknown	Remove stub pole
3518949	100	517+81, 73.5’ RT		Splice pit
3518949	102	516+99, 72.9’ RT		Bore pit
3518949	103	1317+25, 67’ LT	87-08081	Remove pole
3518949	104	515+48, 45.4’ RT		Splice pit
3518949	105	1315+26, 68’ LT	91-02098	Remove pole
3518949	125	1313+54, 67’ LT	96-18512	Remove pole and anchor
3518949	130	1312+98, 92’ LT		Bore pit
3518949	135	1312+94, 84’ RT	91-01355	Remove pole
3518949	140	Easement		Bore pit
3518949	130-140	1313+00	3-500 Cable	Bore cable 11’ deep across right-of-way
3518949	165	1312+42, 66’ LT	89-00692	Remove pole
3518949	170	1312+37, 92’ LT		Bore pit
3518949	225	1310+50, 66’ LT	89-00693	Remove pole
3518949	230	1310+45, 90’ LT		Bore pit
3518949	285	1308+84, 67’ LT	89-00628	Remove pole
3518949	295	1308+48, 67’ LT	62-6122	Remove pole
3518949	305	1307+56, 67’ LT	98-04541	Remove pole
3518951	165	1305+71, 68’ LT	85-02576	Remove pole
3518951	175	1303+51, 68’ LT	91-03060	Remove pole
3518951	255	1302+48, 68’ LT	89-00631	Remove pole
3518951	265	1301+09, 67’ LT	89-00626	Remove pole
3518951	275	1299+69, 67’ LT	06-08650	Remove pole
3518951	285	1299+50, 68’ LT	89-00627	Remove pole
3518951	295	1302+56, 80’ RT	91-03102	Remove pole
3518951	292	New loc. unknown	Meter Pedestal	To be moved by property owner
3518951	355	476+30, 28’ LT	90U7683	Remove padmounted transformer
3518951	360	473+52, 47’ LT	Splice	Splice pit
3518951	355-360			Abandon cable in right-of-way
3518951	355-395			Abandon cable north of right-of-way
3518951	365	1298+67, 67’ LT	90-04751	Remove pole
3518951	375	1296+67, 67’ LT	90-04752	Remove pole
3518951	380	1296+86, 97.5’ LT		Bore pit
3518951	385	1295+23, 66’ LT	00-32004	Remove pole
3518951	395	1295+09, 66’ LT	90-04753	Remove pole
3518951	405	1294+98, 61’ LT	91U13807	Remove secondary pedestal

WORK REQUEST	POINT/SPAN	STATION / OFFSET	FACILITY NUMBER	FACILITY DESCRIPTION
3518951	480	1295+00, 92.5' LT		Bore pit
3518951	490	1294+98, 61' LT	C/Franklin Ped	City pedestal
3518951	500	1294+84, 63' LT	State DOT Ped	WIDOT pedestal
3518951	480-490		Service Cable	Electric service route
3518951	480-500		Service Cable	Electric service route
3518953	108	1295+28, 96' LT		Bore pit
3518953	110	1292+97, 97' LT		Bore pit
3518953	108-110	479+00	3-500 Cable	Bore cable across Sycamore St. right-of-way
3518953	115	1293+31, 67' LT	90-04754	Remove pole
3518953	125	1291+53, 67' LT	00-06724	Remove pole
3518953	135	1289+75, 67' LT	90-04756	Remove pole
3518953	145	1288+00, 67' LT	90-04757	Remove pole
3518953	138	1287+92, 95' LT		Bore pit
3518953	140	1287+89, 111' LT	14U-	Install Padmounted Switch VFI Unit
3518953	142	1287+87, 95' LT		Bore pit
3518953	155	1286+20, 66' LT	90-04758	Remove pole
3518953	165	1284+46, 68' LT	90-04759	Remove pole
3518953	170	1284+08, 96' LT	14U-	Install Padmounted Switch VFI Unit
3518953	182	1284+00, 82' RT		Bore pit
3518953	170-182	1284+00	3-500 Cable	Bore cable across S. 27th St. right-of-way
3518955	120	1273+23, 86' LT		Bore pit
3518955	125	1273+53, 66' LT	90-04766	Remove pole
3518955	130	1273+98, 88' LT	14U-	Install padmounted transformer
3518955	135	1274+00, 66' LT	05-04411	Remove pole
3518955	140	1274+04, 88' LT	14U-	Install secondary pedestal
3518955	150	1274+38, 73' LT	05U8333	Temporary secondary pedestal
3518955	155	1274+45, 65' LT	99-05523	Remove pole
3518955	160	1273+28, 99' RT		Bore pit
3518955	170	1272+66, 100' RT	14-	Install new pole
3518955	180	1272+29, 67' RT	88T18901	Vacate pole – AT&T to remove
3518955	185	1270+90, 69' RT	90-04770	Remove pole
3518955	195	1269+77, 68' RT	90-04771	Remove pole
3518955	200	1274+27, 110' RT	14U-	Install padmounted transformer
3518955	210	461+74, 02' RT	14-	Install temporary pole
3518955	215	461+53, 07' LT	42-0981	Remove pole
3518955	225	1275+61, 70' RT	87-08315	Remove pole
3518955	240	1275+60, 110' RT	TWC pedestal	Install ped for Time Warner

WORK REQUEST	POINT/SPAN	STATION / OFFSET	FACILITY NUMBER	FACILITY DESCRIPTION
3518955	315	1278+83, 69’ RT	93-05513	Remove pole
3518955	325	1279+77, 69’ RT	93-05512	Remove pole
3518955	345	1280+99, 69’ RT	90-04890	Remove pole
3518955	365	1283+32, 83’ RT	97-06052	Remove pole
3518957	115	1266+18, 79’ LT	00-07512	Remove pole
3518957	120	1266+10, 74’ LT	96U0837	Temp pedestal for traffic signals
3518957	130	1266+83, 109’ LT	14U-	Install secondary pedestal/TV ped
3518957	135	1266+84, 77’ LT	08-01818	Remove pole
3518957	137	1267+04, 75’ LT	99-13063	Remove pole
3518957	140	1267+57, 105’ LT	14U-	Install padmounted transformer
3518957	150	1267+57, 98’ LT	14U-	Install padmounted transformer
3518957	195	1268+42, 67’ LT	00-28039	Remove pole
3518957	205	1268+65, 66’ LT	90-04769	Remove pole
3518957	215	1270+25, 65’ LT	90-04768	Remove pole
3518957	225	1271+89, 66’ LT	90-04767	Remove pole
3518957	230	1272+70, 90’ LT		Bore pit
3518957	250	1274+62, 80’ LT		Splice pit
3518957	260	1279+71, 81’ LT		Splice pit
3518957	265	1279+73, 70’ LT	05-04410	Remove pole
3518957	270	1280+07, 82’ LT	Time Warner Ped	Bore pit, Place ped for TWC
3518957	275	1279+94, 68’ LT	90-04762	Remove pole
3518957	285	1280+97, 66’ LT	90-04761	Remove pole
3518957	295	1281+25, 68’ LT	96-01067	Remove pole
3518957	305	1282+72, 68’ LT	94-08192	Remove pole
3518957	310	1284+02, 87’ LT		Bore pit
3518959	110	1267+95, 104’ LT		Bore pit
3518959	120	1268+06, 77’ RT		Bore pit
3518959	115	1268+51, 65’ RT	3-500 Cable	Cable corner
3518959	110-120	1268+00	3-500 Cable	Bore cable across S. 27th St. right-of-way
3518959	135	422+90, 63’ LT		Cable corner
3518959	140	422+53, 106’ LT		Bore pit
3518959	145	422+88, 45’ RT		Cable corner
3518959	135-145	422+89	3-500 Cable	Abandon cable across Rawson Av right-of-way
3518959	150	422+54, 65’ LT		Bore pit
3518959	140-150	422+53	3-500 Cable	Bore cable across Rawson Ave right-of-way
3518959	Bore Angle	425+75, 65’ RT		Bore Angle
3518959	160	426+18, 55’ RT	3-500 Splices	Splice 3-500 to existing

WORK REQUEST	POINT/SPAN	STATION / OFFSET	FACILITY NUMBER	FACILITY DESCRIPTION
				cables
3518959	150-Angle		3-500 Cable	Bore cable SS of Rawson Ave right-of-way
3518959	Angle-160		3-500 Cable	Bore cable SS of Rawson Ave right-of-way
3518959	105	1268+65, 66’ LT	90-04769	
3518959	115	1268+75, 63.7’ RT	3-500 Corner	
3518959	105-115		3-500 Cable	Abandon cable across S. 27 St right-of-way
3518959	115-135		3-500 Cable	Abandon cable in right-of-way NE Corner of S. 27 St and Rawson Ave Intersection
3567185	15	1297+20, 67’ RT	30-90008	Remove pole
3567185	18	1297+47, 96.5’ RT	14-	Install pole
3576772	100	411+11, 67’ LT	07-01192	Reframe pole
3576772	102	411+27, 67’ LT	99-13055	Reframe pole
3576772	105	413+93, 68’ LT	99-13057	Remove pole
3576772	110	413+93, 66’ LT	14-	Install pole
3576772	120	415+09. 67’ LT	99-13059	Reframe pole
3576772	130	416+82, 67’ LT	99-13060	Reframe pole
3576772	160	416+42, 128’ LT		Splice pit
3576772	170	417+06, 67’ LT	14-	Install pole and anchor
3576772	175	417+63, 67’ LT	99-13062	Remove pole
3576772	120-160	415+09, 67’ LT to 416+44, 80’ LT	3-1AL Cables	Abandon cables in right-of-way
3576772		416+44, 80’ LT to 416+42, 128’ LT	3-1AL Cables	Abandon cables on private property

Table 1 – Part B
We Energies Facilities – S 27th Street Project 2265-16-70

Part B Notes:
-New We Energies facilities installed in easement on private property may not be included in the following list. Unless otherwise notes, We Energies cable and equipment will typically be installed from 3 to 15 feet off the existing or proposed right-of-way, inside private property.

WORK REQUEST	POINT/SPAN	STATION / OFFSET	FACILITY NUMBER	FACILITY DESCRIPTION
3604587	100	1200+15,79LT	05-16179	AT S.I.-POLE TO REMAIN AS IS.
3604587	110	1202+12,79LT	05-16178	AT S.I.-POLE TO REMAIN AS IS.
3604587	115	1203+26,66LT	99-13248	REMOVE POLE
3604587	120	1203+25,79LT	15-	PROPOSED 50’ POLE
3604587	125	1203+60,71RT	99-19551	REMOVE POLE
3604587	130	1203+65,82RT	15-	PROPOSED 45’ POLE
3604587	135	1204+55,67LT	99-13249	REMOVE POLE
3604587	140	1204+52,79LT	15-	PROPOSED 50’ POLE
3604587	145	1205+11,69RT	77T90076	VACATE ATT POLE
3604587	150	1205+15,83RT	15-	PROPOSED 40’ POLE
3604587	155	1206+29,67LT	99-06449	REMOVE POLE
3604587	160	1206+08,78LT	15-	PROPOSED 50’ POLE
3604587	165	1207+63,68LT	99-06448	REMOVE POLE
3604587	170	1207+65,79LT	15-	PROPOSED 50’ POLE
3604587	175	1207+28,67RT	03-0416	REMOVE POLE
3604587	180	1207+28,100RT	15-	PROPOSED 45’ POLE
3604587	190	1208+80,79LT	15-	PROPOSED 50’ POLE
3604587	190 to 192	10’ SPAN	--	PROPOSED UG SEC CABLE
3604587	192	1208+90,81LT	15U	PROPOSED SEC PWR PED
3604587	195	1209+44,67LT	99-17623	REMOVE POLE
3604587	197	1209+41,75LT	99U2469	REMOVE SEC PWR PED
3604587	198	1209+88,79LT	15-	PROPOSED 50’ POLE
3604587	200	1210+63,79LT	15-	PROPOSED 50’ POLE
3604587	205	1210+93,65LT	08-01817	REMOVE POLE
3604587	209	1211+32,67LT	08-01967	REMOVE POLE
3604587	213	1211+70,82LT	08-01965	REMOVE POLE
3604587	212/214 to 216/218	327+85,105RT to 327+85,45LT	3 #1 AL CABLES IN EACH DUCT	ROAD BORE ACROSS DREXEL AVE WITH 2-4” DUCTS
3604587	222	325+20,65RT	15U	PROPOSED PRI JUNCTION BOX
3604587	224	325+16,56RT	--	SPLICE TO EXISTING UG CABLE

WORK REQUEST	POINT/SPAN	STATION / OFFSET	FACILITY NUMBER	FACILITY DESCRIPTION
3604587	209 to 224	435’ SPAN	--	ABANDON UG ELECTRIC CABLES
3604587	221.5 to 222/224	34’ SPAN	--	3-500AL UG CABLES and 3 #1 AL UG CABLES
3604587	205 to 220	307’ SPAN	--	ABANDON UG ELECTRIC CABLES
3604587	226 to 230	1210+45,75LT to 1210+45,92RT	3-500CU CABLES IN 6” DUCT	ROAD BORE ACROSS 27th ST WITH 6” PLASTIC DUCT
3604587	230 to 234	1210+45,92RT to 332+00,72RT	3-500CU CABLES	197’ SPAN (120’ IN RD right-of-way and 77’ ON PRIVATE PROPERTY)
3604587	217	331+35,60RT	12-11211	POLE TO REMAIN TO FEED PWR TO TRAFF CONTR UNTIL RD JOB BEGINS
3604587	221	332+45,59RT	12-11208	REMOVE POLE
3604587	225	333+38,61RT	12-11207	REMOVE POLE
3604587	246	334+38,61RT	12-11206	POLE OK-BEYOND CONST LIMIT
3604587	250 to 254	332+40,67RT to 332+40,85LT	3 #1 AL CABLES IN 4” DUCT	ROAD BORE ACROSS DREXEL AVE. 1-4” DUCT
3604587	229 to 231	332+45,91LT to 1215+27,86RT	3 #1 AL UG PRI CABLES	ABANDON 322’ UG ELECTRIC CABLES
Table 3604617	105 to 115	1027’ SPAN	--	ABANDON UG PRI CABLE
3604617	115	1225+56,87RT	03U10830	REMOVE PRI JUNCTION BOX
3604617	115 to 119	935’ SPAN	--	ABANDON UG PRI CABLE
3604617	117	1230+75,65RT	63-6100	REMOVE POLE
3604617	119	1234+87,88RT	03U10828	REMOVE PAD MOUNT XFMR
3604617	121	1234+86,70RT	03-09026	REMOVE POLE
3604617	121.5	1234+89,67RT	71T5576	ATT POLE. ATT TO REMOVE
3604617	119 to 124	184’ SPAN	--	ABANDON UG SVC CABLE
3604617	128 to 132	1236+00,90RT to 1236+00,88LT	--	ROAD BORE ACROSS S.27th ST 2-4” DUCTS FOR FUTURE
3604617	120 to 124	147’ SPAN	--	SVC CABLE TO TRAFF CABINET
3604617	119 to 127	400’ SPAN	3 #1 AL UG	ABANDON UG PRI

WORK REQUEST	POINT/SPAN	STATION / OFFSET	FACILITY NUMBER	FACILITY DESCRIPTION
			CABLE	CABLE
3604617	127	1238+84,81RT	03U10827	REMOVE PRI JUNCTION BOX
3604617	134 to 136	1240+05,98RT to 1240+55,97RT	3 #1 AL UG CABLE	NEW CABLE IN RD right-of-way
3604617	136 to 140	1240+55,97RT to 1240+55,92LT	3 #1 AL CABLES IN 4" DUCT	ROAD BORE ACROSS S. 27th ST 1-4" DUCT
3604614	100	1240+55,92LT	--	BORE PIT
3604614	105	1242+43,67LT	07-01170	REMOVE POLE
3604614	115	1243+98,66LT	31-4244	REMOVE POLE
3604614	121	1243+88,66RT	POLE # UNK	REMOVE POLE
3604614	125	1245+55,67LT	92-09605	REMOVE POLE
3604614	135	1245+54,86LT	92-09604	REMOVE POLE
3604614	135a	1245+54,90LT	--	BORE PIT
3604614	155	1247+05,67LT	31-4242	REMOVE POLE
3604614	175	1248+63,66LT	31-4241	REMOVE POLE
3604614	185	1250+72,67LT	88-07638	REMOVE POLE
3604608	110	1255+60,90LT	--	BORE PIT and END OF DUCT
3604608	110 to 120	1255+60,90LT to 1255+60,78RT	1 #1 AL CABLE IN 4" DUCT	ROAD BORE ACROSS S. 27^{TH} ST 1-4" DUCT
3604608	120	1255+60,78RT	--	BORE PIT and END OF DUCT
3604608	140	1255+52,78RT	15-	INSTALL 45' POLE AND ANCHOR
3604608	145	1255+50,68RT	56-7380	REMOVE POLE
3604608	150	1254+35,78RT	15-	INSTALL 40' POLE
3604608	155	1254+31,68RT	70-3262	REMOVE POLE
3604608	160	1253+40,80RT	15-	INSTALL 35' POLE
3604608	165	1253+30,65RT	88T18914	VACATE ATT POLE. ATT TO REMOVE
3604608	170	1252+25,89RT	15-	INSTALL 35' POLE AND ANCHOR
3604608	175	1252+25,67RT	88T18913	ST LITE POLE TO REMAIN UNTIL ROAD PROJECT BEGINS
3604608	177	1250+49,67RT	88T18912	VACATE ATT POLE. ATT TO REMOVE
3604608	190	1254+41,98LT	--	BORE PIT and DUCT END
3604608	195	1254+81,68LT	31-4237	REMOVE POLE
3604608	190 to 200	1254+41,98LT to 1253+53,98LT	1 #1 AL CABLE IN 4" DUCT	ROAD BORE ACROSS MINNESOTA AVE - 1-4" DUCT

WORK REQUEST	POINT/SPAN	STATION / OFFSET	FACILITY NUMBER	FACILITY DESCRIPTION
3604608	200	1253+53,98LT	--	BORE PIT and DUCT END
3604608	215	1253+60,69LT	67-5866	ST LITE POLE TO REMAIN UNTIL ROAD PROJECT BEGINS
3604608	160 to 215	136' SPAN	--	INST OH WIRE TO FEED ST LITE
3604608	225	1252+22,68LT	73-3498	
3604632	100	416+58,68LT	99-13060	LISTED AS REF. POLE TO REMAIN
3604632	100 to 110	188' SPAN	4 #2 AL OH WIRE	PROPOSED OH CROSSING
3604632	110	417+71,83RT	15-	PROPOSED 45' POLE
3604632	110a	417+87,81RT	--	8" HELIX ANCHOR
3604632	100 to 105	136' SPAN	--	REMOVE OH CROSSING
3604632	105	416+30,66RT	99-13061	REMOVE POLE
3604632	N/A	414+25,65RT	99-13058	NOT IN CONFLICT. POLE TO REMAIN
3604632	155	1263+29,90LT	90-31171	REMOVE POLE
3604632	165	1263+28,67LT	90-01779	REMOVE POLE
3604632	165 to 175	156' SPAN	--	REMOVE OH CROSSING
3604632	175	1263+76,82RT	X8T90180	VACATE ATT POLE.ATT TO REMOVE
3604632	185	1262+59,76RT	06T11319	VACATE ATT POLE.ATT TO REMOVE
3604632	195	1204+55,67LT	90-01780	REMOVE POLE
3604632	205	1261+15,67LT	82-04238	REMOVE POLE
3604632	190	1261+16,93LT	15U	PROPOSED JUNCTION ENCLOSURE
3604632	190 to 200	188' SPAN	1 #1 AL CABLE IN 4" DUCT	ROAD BORE ACROSS S. 27th ST 1-4" DUCT
3604632	200	1261+20,95RT	15U	PROPOSED PADMOUNT XFMR
3604632	210	1261+31,89RT	15-	PROPOSED 35' POLE and ANCHOR
3604632	220	1262+58,91RT	15-	PROPOSED 35' POLE
3604632	230	1263+65,91RT	15-	PROPOSED 35' POLE and ANCHOR
3604632	215	1259+56,67LT	56-2135	ST LITE POLE TO REMAIN UNTIL ROAD PROJECT BEGINS
3604632	225	1259+45,67RT	60-3099	REMOVE POLE
3604632	235	1259+01,67RT	52-4298	REMOVE POLE
3604632	245	1257+81,67RT	88T18917	VACATE ATT POLE.ATT TO REMOVE

WORK REQUEST	POINT/SPAN	STATION / OFFSET	FACILITY NUMBER	FACILITY DESCRIPTION
3604632	275	1256+65,68RT	88T18916	VACATE ATT POLE.ATT TO REMOVE
3604632	270	1257+86,98LT	DUCT END	BORE PIT
3604632	280	1257+86,81RT	DUCT END	BORE PIT
3604632	280 to 304	25' SPAN	1#6 DX UG CABLE	INST UG TO MAINTAIN SVC TO ST LITES IN MEADIAN
3604632	304	1257+84,66RT	--	UG SPLICE
3604632	280 to 306	132' SPAN	--	3/0 AL TX UG SVC CABLE
3604632	306	1259+00,82RT	--	UG SPLICE
3604632	295	1257+,81,65LT	60-7324	REMOVE POLE
3604632	305	1256+40,67LT	86-02501	REMOVE POLE
3604632	317	1257+59,03RT	80-08289	AL ST LITE POLE IN MEDIAN TO REMAIN UNTIL RD PROJ BEGINS
3604638	110	1264+82,80LT	54-3672	POLE TO STAY UNTIL RD JOB BEGINS. FEEDS ST LITE POLE IN MEDIAN.
3604638	114	1264+61,12RT	81-00430	AL ST LITE POLE IN MEDIAN TO REMAIN UNTIL RD PROJ BEGINS
3604638	130	421+06,62.3RT	65-0029	POLE TO STAY UNTIL RD JOB BEGINS. FEEDS ST and AREA LITE POLES
3604638	150	422+32,61.1RT	65-0028	REMOVE POLE
3604638	160	423+22.4,60.8RT	58-2343	REMOVE POLE
3604638	170	424+75.8,60.6RT	65-0031	REMOVE POLE
3604638	180	426+29.6,61.2RT	65-0032	REMOVE POLE
3604638	190	427+77.4,60.3	01-06048	DEADEND AND INST ANCHORS

Any facilities not explicitly identified as being relocated have been deemed to not be in conflict and will remain in place. It is expected that the contractors will work safely around any facilities left within the work zone. If the plans change such that facilities become in conflict, it is expected that provisions found in TRANS 220.06 are followed regarding any coordination that will be required. Locations of the new facilities described here may change based on negotiated agreements between landowners and We Energies.

An existing street lighting pole located on the north side of College Avenue near Station 515+28, 29' LT, will remain in place as long as possible during construction per an agreement between We Energies and the City of Greenfield. Contact We Energies a minimum of 2 weeks prior construction in the area of the pole to allow time for We Energies to remove the pole.

Contact:
Joe Lampada
7815 Northwestern Ave
Racine, WI 53406
Phone: (262) 886-7046
Email: joe.lampada@we-energies.com

We Energies - Gas will relocate the gas facility on the west side of Rawson Ave starting at Station 416+50 heading east until Station 427+37.

Fitting 1 located at 416+50, 63' RT
Fitting 2 located at 416+50, 73' RT
Fitting 3 located at 417+54, 73' RT
Fitting 4 located at 418+62, 100' RT
Crossing S. 27th Street at 1264+50 the top of pipe elevation to be at approximately 770.00. The crossing will be below an 18" SSPRC crossing between storm sewer Structures 1264 and 1264D and a 12" SSPRC crossing between storm sewer Structures 1264J and 1264I.
Fitting 5 located at 421+13, 103' RT
Fitting 6 located at 421+51, 75' RT
Fitting 8 located at 427+35, 75' RT
Fitting 9 located at 427+35', 13' RT

We Energies - Gas will relocate the existing low pressure facilities at the following locations.

S. 27th Street: We Energies Gas will relocate to the west side of S. 27th Street from Station 1199+00 to 1271+00. The new location will be 3 feet east of the new west right-of-way of S. 27th Street with minor variations between Station 1221+75 and 1246+50. We Energies - Gas will relocate from Station 1317+00 to 1321+00 (6 feet east of the west right-of-way).

Drexel Avenue: We Energies will relocate on the south side of W Drexel Avenue between Station 2323+50 and 2331+50 at 3 feet north of the south right-of-way.

Rawson Avenue: We Energies will relocate on the south side of Rawson from 415+00 to 418+50. This section of low pressure will be installed with the high pressure main. We Energies will relocated on the north side of Rawson from 410+75 to 427+25 located at 3 feet south of the north right-of-way.

College Ave: We Energies will relocate on the south side of College from Station 521+00 to 534+00 and from Station 519+00 to 511+00 (3 feet north of the south right-of-way).

We Energies Gas will install new low pressure gas main at the following locations:

S. 27th Street from Station 1205+00 to 1211+00 (3 feet west of the east right-of-way)
S. 27th Street from Station 1252+50 to 1259+25 (3 feet east of the west right-of-way)
S. 27th Street from Station 1312+00 to 1316+00 (3 feet west of the east right-of-way)

No Gas Relocation Work is proposed between Stations 1270+50 to 1310+00.

All new and relocated main installed by We Energies Gas on this project will be installed to avoid conflicts related to the road project and other utility installations.

Any facilities not explicitly identified as being relocated have been deemed to not in conflict with the project and will remain in place.

Contact:
Erich Wuestenhagen
500 South 116th Street
West Allis, WI 53214
Phone: (414) 651-3948 mobile
Email: erichan.wuestenhagen@we-energies.com

Time Warner has overhead facilities along the east side of S. 27th Street from the beginning to the end of the construction limits. The lines are attached to We Energies service poles. Time Warner will to relocate their facilities jointly with We Energies prior to construction.

Time Warner has overhead facilities on We Energies poles along the west side of S. 27th Street from beyond the southern project limit to Drexel Avenue with several crossings to the east. At Drexel Avenue the facility crosses 27th Street and heads east along the south side of Drexel Avenue. These facilities will be relocated prior to construction.

At Rawson Avenue there are overhead facilities along the north side of Rawson Avenue from and beyond the western project limit to 27th Street and overhead along the south side of Rawson Avenue from and beyond the eastern project limit to 27th Street. These facilities will be relocated prior to construction. There is also an underground cable along the north side of Rawson Avenue from approximately 426+50 to 429+75 that will be abandoned.

There is an underground facility along the south side of College Avenue from beyond the western project limit to approximately Station 519+25. Near that station the cable turns southward and runs within the S. 27th Street right-of-way to Station 1315+27, 67.5' LT (riser pole 91-02098). This underground facility will be abandoned and relocated prior to construction.

Time Warner owns a pole at 1240+82. 67' LT that will be removed prior to construction.

The overhead cable facilities located on We Energies poles in the Cities of Franklin and Oak Creek will be relocated to be underground facilities. Any facilities not explicitly identified as being relocated have been deemed to not be in conflict and will remain in place.

The majority of the duct and coax installation work for relocation of facilities will be completed by We Energies in easements located behind proposed or existing right-of-way with easement widths varying from 4' to 20'. All ducts being installed within road crossings will be placed by We Energies. Work being completed by TWC within right-of-way will be from 1274+08, 88' LT to 1278+77, 88' LT with a buried depth of 60" and from 1279+88, 79' RT to 1283+32, 79' RT with a buried depth of 60". TWC will be pulling cables through ducts placed by We Energies and splicing newly installed facilities within the project limits. All work above will be completed prior to construction.

The locations of the new facilities may change based on negotiated agreements between landowners and We Energies as part of the joint use and easement agreements being obtained by We Energies on Time Warner Cable's behalf.

Contact:

Steve Cramer
1320 N. Martin Luther King Jr. Drive
Milwaukee, WI 53212
Phone: (414) 277-4045, 414-688-2385 (mobile)
Email: steve.cramer@twcable.com

TW Telecom has overhead facilities on We Energies poles along the west side of S. 27th Street from 1242+50 LT to 1250+25 LT (riser pole 73-3498) the facility continues underground north to 1253+60 LT at this point the facility turns and continues west along Minnesota Ave to outside of the project limits. This facility will be relocated prior to construction. The underground cables will be abandoned.

TW Telecom has overhead facilities on We Energies poles along the west side of S 27th Street from 1310+50 LT to 1312+43 LT the facility crosses 27th Street and continues east along the property line beyond the project limits. This facility will be relocated prior to construction.

The overhead cable facilities located on We Energies poles in the Cities of Franklin and Oak Creek will be relocated to be underground facilities. Any facilities not explicitly identified as being relocated have been deemed to not be in conflict and will remain in place.

All duct installation work for relocation of facilities will be completed by We Energies in easements located behind the proposed or existing right-of-way with easement widths varying from 4' to 20'. All ducts being installed within road crossings will be placed by We Energies. TW Telcom will be pulling cables through the ducts placed by We Energies and splicing newly installed facilities within the project limits. All work above will be completed prior to construction.

The locations of the new facilities may change based on the negotiated agreements between landowners and We Energies as part of the joint use and easement agreements obtained by We Energies on TW Telecom's behalf.

Contact:

Brahim Gaddour
3235 Intertech Drive, Suite 600
Brookfield, WI 53045-5140
Phone: (414) 908-1027, (414) 704-1026 mobile
Email: brahim.gaddour@twtelecom.com

Milwaukee Metropolitan Sewerage District (MMSD) has a 24-inch metropolitan interceptor sewer (MIS) pipe in S. 27th Street from the northern project limits, south to W. College Avenue. The pipe continues east in W. College Avenue to the eastern project limit in W. College Avenue. MMSD also has a 16-inch landfill gas pipe line along the southern edge of W. College Avenue extending through the project limits.

Conflicts with MMSD pipe lines are not anticipated as the pipes are expected to be far enough below subgrade as to not be in conflict.

Manhole cover adjustments will be made by MMSD during construction. The following manhole covers need adjustment: The cover in W. College Avenue at approximately Station 520+63, 29' LT, the covers in 27th Street at approximately Stations 1317+38, 8' RT and 1321+12, 8' RT. It is anticipated that the adjustments can be accomplished by removing adjusting rings.

The cover of the manhole at 1321+12, 8' RT is anticipated to fall within the new curb line. Adjust the curb line around the manhole as necessary. Construct the curb flow line such that water is not retained on or directed to flow over the manhole cover.

The contractor shall relocate the tracer wire terminal access for a landfill gas line test station located at approximately Station 515+87, 33' RT. Persons performing work on the landfill gas pipeline shall be qualified per federal regulations or be observed by a qualified person (see Code of Federal Regulations: 49 CFR Part 192 – Subpart N for personnel qualifications).

Contact MMSD prior to performing work on their facilities.

Contacts:

For MMSD to adjust manholes

Debra Jenson
260 West Seeboth Street
Milwaukee, WI 53204
Phone: (414) 225-2243
Email: brebitski@mmsd.com

When working in the vicinity of MMSD facilities

Larry Anderson
260 West Seeboth Street
Milwaukee, WI 53204
Phone: (414) 225-2241
Email: landerson@mmsd.com

The City of Oak Creek Water and Sewer Utility has sewer and water facilities on the east side of S. 27th Street from beyond the southern project limits to W. College Avenue. There are also sewer and water facilities on the eastern legs of W. Rawson and W. College Avenues.

The City of Oak Creek will relocate the existing fire hydrants prior to and during construction. The City of Oak Creek Water Utility will adjust the water main in the vicinity of Stations 1266+75, RT and 1281+50 to 1286+00, RT and adjust the water main valve covers along the entire length of the project during construction. The city will adjust valve covers in 27th Street at approximately Stations 1202+20, 73' RT, 1207+20, 75' RT, 1209+45, 80' RT, 1214+85, 64' RT, 1220+75, 60' RT, 1220+93, 60' RT, 1223+95, 60' RT, 1227+30, 60' RT, 1230+25, 60' RT, 1233+23, 60' RT, 1236+25, 60' RT, 1238+90, 60' RT, 1239+35, 80' RT, 1241+90, 60' RT, 1243+95, 80' RT, 1244+60, 60' RT, 1247+08, 60' RT, 1249+60, 52' RT, 1250+15, 80' RT, 1251+70, 83' RT, 1252+18, 60' RT, 1257+73, 62' RT, 1262+50, 80' RT, 1263+63, 85' RT, 1266+85, 55' RT, 1270+20, 57' RT, 1275+40, 60' RT, 1284+20, 60' RT, 1288+07, 57' RT, in Rawson Avenue at approximately Stations 422+40, 55' LT, 426+95, 50' LT and at other locations as necessary on the City of Oak Creek's facilities.

Conflicts with City of Oak Creek sanitary pipe lines are not anticipated as the pipes are expected to be far enough below subgrade as to not be in conflict.

The contractor shall adjust the manhole covers and water valves.

Contact the City of Oak Creek prior to performing work on their facilities.

Contact:

Fred Fairbanks
170 W. Drexel Avenue
Oak Creek, WI 53154
Phone: (414) 570-8200 Ext. 16
Email: ffairbanks@water.oak-creek.wi.us

City of Oak Creek Street Lighting has street lights mounted on We Energy poles along the south side of W. College Avenue, in the median of W. Rawson Avenue and along both sides of W. Drexel Avenue.

The existing street lighting will be removed along with the power poles with We Energy's relocation work prior to construction.

Contact:
Brian Johnston
8640 S. Howell Avenue
Oak Creek, WI 53154
Phone: (414) 768-6531
Email: bjohnston@oakcreekwi.org

City of Milwaukee Street Lighting has street lights on east side of S. 27th Street at approximately Stations 1318+62, 58' RT and 1320+15, 58' RT and on the on north side of W. College Avenue at approximately Stations 522+36, 46' LT and 523+87, 46' LT.

The existing street lighting units will be removed by the City of Milwaukee prior to construction. The existing cable and bases will be abandoned by the city and removed by the contractor.

Contact:
Dennis Miller
1530 West Canal Street
Milwaukee, WI 53233
Phone: (414) 286-5942, (414) 708-4251 mobile
Email: dennis.miller@milwaukee.gov

City of Milwaukee Communication has facilities in the project vicinity however conflicts are not anticipated. Utility adjustments are not anticipated.

Contact:
Bryan Pawlak
1440 West Canal Street
Milwaukee, WI 53233
Phone: (414) 286-3686
Email: bryan.pawlak@milwaukee.gov

City of Milwaukee Sewer Utility has sanitary sewer facilities on the east side of S. 27th Street from W. College Avenue to beyond the northern project limits. There are also sewer facilities on the eastern leg of W. College Avenue on the north side of the street.

Conflicts with City of Milwaukee sanitary pipe lines are not anticipated as the pipes are expected to be far enough below subgrade as to not be in conflict.

The contractor shall adjust the manhole covers.

Contact the City of Milwaukee prior to performing work on their facilities.

Contact:
Tony Kotecki
841 N. Broadway
Milwaukee, WI 53202
Phone: (414) 286-2433, (414) 708-3886 mobile
Email: anthony.kotecki@milwaukee.gov

City of Milwaukee Water Works has water facilities on the west side of S. 27th Street from W. Sycamore Avenue to beyond the northern project limits. There are also water facilities from beyond the eastern project limit to beyond the western project limits on the north side of W. College Avenue.

The contractor shall adjust the water main at the locations shown in the plans.

The contractor shall relocate the existing fire hydrants and adjust the water main valve covers and curb stops.

Protect the water main at the following Structures: 1312A, Station 1312+40, 63' LT; 515B, Station 514+86, 9' LT.

Prior to proceeding with construction determine the field locations of the water mains by contacting "Diggers Hotline". Maintain the integrity of the existing water mains and appurtenances at all times. Maintain a minimum of 3-feet of clearance from the outside edge of proposed above ground installations (such as fences, poles, etc.) to the outside edge of any fire hydrant. Maintain access to all fire hydrants within the construction area and protect the hydrants against damage for the duration of the project.

Contact the City of Milwaukee Water Works prior to performing work on their facilities.

Contact:
Dave Goldapp
841 N. Broadway, Room 409
Milwaukee, WI 53202
Phone: (414) 286-6301, (414) 708-2695 mobile
Email: dave.goldapp@milwaukee.gov

City of Greenfield Sewer Utility has sanitary sewer facilities on the west side of S. 27th Street from W. College Avenue to beyond the northern project limits.

Conflicts with City of Greenfield sanitary pipe lines are not anticipated as the pipes are expected to be far enough below subgrade as to not be in conflict.

The contractor shall adjust the manhole and inlet covers.

Contact the City of Greenfield prior to performing work on their facilities.

The City of Greenfield Street Lighting has street lights located on STH 241 north of the College Avenue intersection to the north construction limits. The City of Greenfield DPW will salvage and re-install the existing light poles. Replace the light pole bases that are in conflict with the highway construction. The City of Greenfield will provide a bolt circle template for the new bases.

Contact the City of Greenfield prior to performing work on their facilities. Provide ten (10) working days notice to schedule the light pole removals.

Contact:

Richard Sokol
7325 West Forest Home Avenue, Room 203
Greenfield, WI 53220
Phone: (414) 329-5324
Email: ricks@greenfieldwi.us

City of Franklin Water and Sewer Utility has sewer and water facilities on the west side of S. 27th Street from beyond the southern project limits to W. College Avenue. There are also sewer and water facilities on the western legs of W. Drexel Avenue, Northwestern Mutual Way, W. Rawson Avenue, S. Riverwood Boulevard, W. Sycamore Street and W. College Avenue.

Conflicts with City of Franklin's sanitary pipe lines are not anticipated as the pipes are expected to be far enough below subgrade as to not be in conflict.

Revisions to the City of Franklin Sanitary Sewer and Water Mains will be performed by the contractor. Coordinate work with the Franklin Water and Sewer Utility. The Franklin Sanitary Sewer and Water Main Revisions work is shown on the drawings labeled FR-P-1 through FR-P-201 in Section 2 of the Contract Drawings.

Field verify the location and depth of the existing water mains identified to be insulated as shown in the Contract Drawings. Verify the field location and depth of the water main every 20 feet where insulation is to be installed. Do not use heavy machinery to excavate within three (3) inches of a pipeline. The contractor will be responsible for verifying that the proposed locations and elevations of the sanitary sewer and water main facilities do not conflict with other work associated with the project. Verify that there is adequate separation between the proposed water main and proposed storm sewer. The proposed storm sewer shall be located a minimum of 18 inches above or 6 inches below the outside diameter of the water main.

The Franklin Water and Sewer Utility will furnish the proprietary items identified in the specifications for installation. Contact the City of Franklin to obtain proprietary items or to return unused items. Store the items furnished by the Franklin Water and Sewer Utility in a secure manner. The proprietary items furnished by the Franklin Water and Sewer Utility include:

- Manhole Castings and Lids
- Valve Boxes
- Valve Box Sidewalk Castings
- Curb Boxes
- Curb Box Paving Adaptors
- Curb Stops
- Couplings and Fittings for Water Services
- Repair Clamps for Water Main Pipeline
- Fire Hydrants (hydrants scheduled to be replaced)
- Tracer Wire Access Risers
- Waterproof Splice Connectors for Tracer Wire

Relocate the existing fire hydrants to suitable locations in the terrace and replace the water main valve covers and curb stops.

We Energies presently leases two light fixtures on wooden utility poles to the City of Franklin. We Energies leases two aluminum light poles to the City of Franklin and the City of Oak Creek. We Energies will remove the two light fixtures and two aluminum light poles. We Energies will coordinate the removal of the light fixtures and aluminum light poles with the City of Franklin and the contractor.

Contact the City of Franklin prior to performing work on their facilities.

Contact:
Michael Budish
9229 West Loomis Road
Franklin, WI 53132
Phone: (414) 425-7510
Email: mbudish@franklinwi.gov

13. Environmental.

Supplement standard spec 107.20 with the following:

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

Stockpile spoil material on upland sites an adequate distance from the stream and any open water created by excavation. Install filter fabric silt fence between spoil material and the stream and between the entire disturbed area and the waterway.

WDNR mandates that appropriate erosion control measures be applied to borrow and waste areas during and following construction. Following completion of the project, restore borrow and waste areas and properly seed, mulch and protect them from the effects of erosion.

When engaged in roadway clearing operations, the contractor shall use equipment having vacuum or water spray mechanisms to eliminate the dispersion of particulate matter into the atmosphere. If vacuum equipment is employed, it must have a suitable self-contained particulate collector to prevent discharge from the collector bin into the atmosphere.

Remove all temporary erosion control measures after disturbed areas are stabilized or at the direction of the engineer.

Existing waterways and sensitive areas shall be protected. Do not disturb or store any equipment or materials in these areas without prior approval from the engineer. Store materials upland and away from the waterway. Do not wash out equipment in drainage ways or direct conduits to waters of the state. Keep slurry out of drainage ways.

If dewatering is required, filter or settle the dirty water prior to off-site release or into a waterway. Dissipate the release as to not cause any scour outflow area.

Provide the Erosion Control Implementation Plan (ECIP) 14 days prior to the pre-construction conference. The contractor shall prepare and submit an ECIP for the project, including borrow sites and material disposal sites, in accordance to Wis. Adm. Code 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.

14. Environmental Protection, Butler’s Gartner Snake.

The Butler’s Gartner Snake may be present within the project limits. This species is no longer listed on the State Endangered and Protected Species list as of May 2013, however the environmental commitments made for project 2262-15-70 were agreed upon prior to May 2013 and provisions regarding this species still apply.

Exclusion Fencing
Prior to May 15 install silt fencing on the east side of STH 241 from Station 1238+00 to 1283+00 to serve as a snake exclusion fence. Maintain the fence until November 1. Properly install (entrench) the silt fence to discourage snakes from entering the work area. The exclusion fencing may also serve as an erosion control fence.

Inspect the fence weekly and after significant rain events to ensure the integrity of the fence. In the event of a breach, make repairs to the fence within 24 hours of the inspection that first noted the breach.

15. Notice to Contractor – Contamination Beyond Construction Limits.

The department completed testing for soil and ground water contamination for locations within this project where excavation is required. Testing indicated that petroleum-contaminated soil is present at the following site(s):

1. Station 1210+00 to 1212+00 from 90 feet RT of centerline to 200 feet RT of centerline.
2. Station 1205+00 to 1207+00 from 200 feet RT of centerline to 400 feet RT of centerline.

The contaminated soils at the above sites are expected to be beyond the excavation limits necessary to complete the work under this project. Control construction operations at these locations to ensure that they do not extend beyond the excavation limits indicated in the plans. If contaminated soils are encountered at these sites or elsewhere on the project during excavation, terminate excavation in the area and notify the engineer.

The Hazardous Materials Report is available by contacting: Tom Lazcano, 141 NW Barstow St., Waukesha, WI, 53187, (262) 574-5437.
107-100 (20050901)

16. Health and Safety Requirements for Workers Remediating Petroleum Contamination.

Supplement standard spec 107.1(2) with the following:

Soil contamination with gasoline, diesel fuel, fuel oil, or other petroleum related products may be encountered during excavation activities. Prepare a site specific Health and Safety Plan complying with the Occupational Safety and Health Administration (OSHA) standard for Hazardous Waste Operation and Emergency Response (HAZWOPER), 29 CFR 1910.120.

All site workers taking part in remediation activities or who will have the reasonable probability of exposure of safety or health hazards associated with the hazardous material shall have completed Health and Safety training that meets OSHA requirements. Prior to the start of remediation work, submit to the engineer a site specific Health and Safety Plan, and written verification that workers will have completed up-to-date OSHA training.

Develop, delineate, and enforce the health and safety exclusions zones for each contaminated site location pursuant to 29 CFR 1910.120.
107-115 (20050502)

17. Notice to Contractor – Survey Monuments.

Five Section Corners are located within the project limits. The Southeastern Wisconsin Regional Planning Commission (SEWRPC) will locate, and tie off the existing monuments, and will at an appropriate time during construction, install new monuments marking all of the U.S. Public Land Survey corners within the project area.

The contractor shall notify SEWRPC at least two weeks prior to the commencement of any work on the project, to make sure the existing monuments have been located and tied off. The contact for SEWRPC is John Washburn at (262) 574-6721.

The contractor shall remove and dispose of the existing monuments during project excavation or grading. Notify SEWRPC of the date of the removal.

For corner locations in proposed concrete pavement, a two-foot by two-foot square opening shall be boxed out by the contractor prior to placement of the concrete pavement to accommodate the installation of the new monument. Alternatively, a 24-inch minimum diameter core drilled through the finished pavement can be provided as a substitute for a boxed out area.

The contractor shall notify SEWRPC when the subgrade has been finished. SEWRPC will set a temporary stake in the subgrade marking the center of the box or core area prior to paving.

SEWRPC will install a new monument in the boxed or cored out area, and backfill the boxed out area to the level of the bottom of the concrete pavement. The contractor shall be responsible for filling and finishing the remainder of the boxed or cored out area with concrete.

Providing the box out or coring concrete pavement and finishing the pavement around the installed monument shall be considered incidental to the concrete paving item.

For corner locations in proposed asphalt pavement, installation of the monument will need to be scheduled after the binder course is laid but before the final lift is applied. The contractor shall notify SEWRPC when the binder course is in place. SEWRPC will set the monument with top flush with the top of the binder course. An iron collar will be provided to contractor to be placed over the monument, thereby keeping the monument cap open as the finish course is placed. All work involved will be considered incidental to the paving item.

For corner locations in grassed medians, the installation will be done by SERWPC after landscaping work has been completed.

18. Notice to Contractor – West Shore Pipe Line.

West Shore Pipe Line Company has a 16-inch underground gas line within a 20-inch steel casing crossing 27th Street at approximately Station 1277+00. Construction activities are anticipated to impact the minimum clearance requirements, use caution when working in the vicinity of this facility. Measures necessary to protect the integrity of this gas line are incidental to other items in the contract. Contact West Shore Pipeline to get a complete list of the measures necessary to protect this facility when working in the vicinity of this gas line.

19. 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)

20. Business Parking Lots.

Business parking lots will be impacted by the project. Only occupy parking stalls while actively working in the parking lot. Notify business owners at least five calendar days prior to beginning work in the parking lot.

No materials are allowed to be stored within parking stalls without the consent of the business owner and approval of the engineer. Parking of personal vehicles in business parking lots is not allowed without the consent of both business and property owner.

Restore parking within 21 calendar days of removing pavement at all parking stalls. Keep the parking lots open to traffic and parking.

21. Clearing and Grubbing, Emerald Ash Borer.

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

Supplement standard spec 201.3 with the following:

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

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

(a) 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.
(b) 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.
(c) 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.
(d) White ash (F. americana) tends to occur primarily in upland forests, often with Acer saccharum.

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

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

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

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

ATCP 21.17 Emerald ash borer; import controls and quarantine.

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

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

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

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

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

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

Ash trees.

Ash limbs, branches, and roots.

Ash logs, slabs or untreated lumber with bark attached.

Cut firewood of all non-coniferous species.

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

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

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

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

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

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

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

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

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

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

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

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

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

Burning is optional if in compliance standard spec 201.3.

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

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

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

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

Furnishing and Planting Plant Materials
Supplement standard spec 632.2.2 with the following:

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

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

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

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

22. Removing Pavement.

The work under this item shall be in accordance to the requirements of standard spec 204, as shown on the plans, and as hereinafter provided.

Remove existing concrete pavement in a manner that causes minimal disturbance to the underlying base material.

All removed pavement shall be considered unusable material, and shall become the property of the contractor and shall be disposed of by the contractor in an environmentally acceptable manner. The cost to dispose of all excess materials, including steel reinforcement, shall be included in the item of Removing Pavement.

23. Hauling Restrictions.

Provide personnel to control the movement of trucks entering and leaving the work sites adjacent to "open to public areas".

Equip all vehicles that are hauling materials on public roads that are subject to spillage with tailgates and adequate sideboards. Use canvas covers and any other protective devices to prevent spillage as determined necessary by the engineer.

24. Removing Signs.

Conform to the requirements of standard specification 638 and as modified in this special provision.

Upon completion of the removal of Type II signs along northbound STH 241 and along all side roads east of STH 241, contact Ralph Kneusel at the City of Oak Creek, (414) 768-5680, to arrange delivery of the signs to the city's DPW facility at 800 W. Puetz Road. The city will inspect the materials and has the right to reject damaged or otherwise unwanted materials.

Upon completion of the removal of Type II signs along southbound STH 241 and along all side roads west of STH 241, contact Ron Romeis at the City of Franklin, (414) 425-7510, to arrange delivery of the signs to the city's DPW facility at 7979 West Ryan Road. The city will inspect the materials and has the right to reject damaged or otherwise unwanted materials.

25. Removing Bus Shelters.

The Milwaukee County Transit System (MCTS) will remove the existing bus shelters. Contact Mr. Dave Ziarek, Ziarek@mcts.org, (414) 343-1764 to schedule removal of the bus shelters. Provide a minimum 21 calendar day notice in advance of the expected time the bus shelters should be removed.

26. Removing Overhead Sign Support, Item 204.9060.S.01.

A Description
This special provision describes removing Overhead Sign Support in accordance to the pertinent provisions of standard spec 204 and as hereinafter provided.

B (Vacant)

C Construction
Remove all structural steel supports and remove concrete footings or bases. The structural steel becomes the contractor's property, unless otherwise specified. Dispose of the structural steel off of the right-of-way. Remove concrete footings or bases as specified for restoration of site in standard spec 638.3.9.

D Measurement
The department will measure Removing Overhead Sign Support as each individual removed sign structure, acceptably completed.

E Payment
Supplement standard spec 204.5 to include the following:

ITEM NUMBER	DESCRIPTION	UNIT
204.9060.S.01 204-025 (20041005)	Removing Overhead Sign Supports	Each

27. Removing Light Pole, Item 204.9060.S.02.

A Description
This special provision describes Removing Light Pole in accordance to the pertinent provisions of standard spec 204 and as hereinafter provided.

B (Vacant)

C (Vacant)

D Measurement
The department will measure Removing Light Pole as each individual removed light pole, acceptably completed.

E Payment
Supplement standard spec 204.5 to include the following:

ITEM NUMBER	DESCRIPTION	UNIT
204.9060.S.02	Removing Light Pole	Each
204-025 (20041005)		

28. Removing Stone Retaining Wall, Item 204.9090.S.01; Removing Block Retaining Wall, Item 204.9090.S.02.

A Description
This special provision describes removing stone retaining walls and block retaining walls in accordance to the pertinent provisions of standard spec 204 and as hereinafter provided.

B (Vacant)

C (Vacant)

D Measurement
The department will measure Removing Stone Retaining Wall and Removing Block Retaining Wall by the linear feet, acceptably completed.

E Payment
Supplement standard spec 204.5 to include the following:
Choose an item.

ITEM NUMBER	DESCRIPTION	UNIT
204.9090.S.01	Removing Stone Retaining Wall	LF
204.9090.S.02	Removing Block Retaining Wall	LF
204-025 (20041005)		

29. Removing Sheet Pile Retaining Wall Station 416+20 'RS', Item 204.9105.S.01.

A Description
This special provision describes removing a sheet pile retaining wall at Station 416+20 'RS' in accordance to the pertinent provisions of standard spec 204 and as hereinafter provided.

B (Vacant)

C (Vacant)

D Measurement

The department will measure Removing Sheet Pile Retaining Wall Station 416+20 'RS' as a lump sum for the work, acceptably completed.

E Payment

Supplement standard spec 204.5 to include the following:

Choose an item.

ITEM NUMBER	DESCRIPTION	UNIT
204.9105.S.01	Removing Sheet Pile Retaining Wall Station 416+20'RS'	LS

204-025 (20041005)

30. Excavation, Hauling, and Disposal (Bioremediation) of Petroleum Contaminated Soil, Item 205.0501.S.

A Description

A.1 General

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

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

Advanced Disposal Emerald Park Landfill
W124 S10629 S. 124th St.
Muskego, WI 53150
Phone: (414) 529-1360

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 Location

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 location as shown on the plans:

1. South 27th Street Station 1211+00 to 1212+35 from approximately 50 feet to 150 feet right of reference line, from 1 to 12 feet bgs. Soil is contaminated with GRO, DRO, PVOCs, and naphthalene. Approximately 588 cubic yards (approximately 1,000 tons at an estimated 1.7 tons per cubic yard) of soil will be excavated from this area for the installation of storm sewer.

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

A.3 Excavation Management Plan

The excavation management plan for this project has been designed to minimize the offsite bioremediation of contaminated material. The excavation management plan, including those 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 in these areas 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. Bryan Bergmann, P.G.
Phone:	(262) 901-2126
Fax:	(262) 879-1220
E-mail:	bbergmann@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 bioremediation 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

4. Obtaining the necessary approvals for bioremediation of contaminated soil from the bioremediation 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 bioremediation facility that will be used for bioremediation 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 bioremediation facility for bioremediation 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 bioremediation 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 will likely contain metals. Such water may, with approval of the City of Oak Creek and/or Franklin and the Milwaukee Metropolitan Sewerage District (MMSD), be discharged to the sanitary sewer as follows:

- Meet all applicable requirements of the MMSD including the control of suspended solids. Perform all necessary monitoring to document compliance with MMSD's requirements. Furnish, install, operate, maintain, disassemble, and remove treatment equipment necessary to comply with MMSD's requirements.

- Ensure continuous dewatering and excavation safety at all times. Provide, operate, and maintain adequate pumping equipment and drainage and disposal facilities.

Notify the engineer of any dewatering activities, and obtain any permits necessary to discharge water. Provide copies of such permits to the engineer. 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 bioremediation facility as documented by weight tickets generated by the bioremediation 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)

31. 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)

32. 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] The department will not assess a ride disincentive for HMA pavement placed in cold weather because of a department-caused delay as specified in standard spec 450.5(4) of the contract additional special provisions (ASP 6).

[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.

33. Railing Pipe, Item 513.2050.S.

A Description

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

B (Vacant)

C Construction
Weld the posts and rails together.

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

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

ITEM NUMBER	DESCRIPTION	UNIT
513.2050.S	Railing Pipe	LF

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

34. Concrete Staining Multi-Color R-40-0588, Item 517.1015.S.01; Concrete Staining Multi-Color R-40-0612, Item 517.1015.S.02.

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

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

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

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

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

B.2 Concrete Stain
Use concrete stain manufactured for use on exterior concrete surfaces. Use the following products, or equal as approved by the department:

Tri-Sheen Concrete Surfacer, Smooth by TK Products
Tri-Sheen Acrylic by TK Products
TK-1450 Natural Look Urethane Anti-Graffiti Primers by TK Products
Safe-Cure and Seal EPX by Chem Masters
H&C Concrete Stain Solid Color Water Based 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.

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 R-40-0588	SF
517.1015.S.02	Concrete Staining Multi-Color R-40-0612	SF

Payment is full compensation for furnishing and applying the coloring system; for preparing the concrete surface; and for constructing and staining the sample panels.
517-115 (20140630)

35. Architectural Surface Treatment R-40-0588, Item 517.1050.S.01; Architectural Surface Treatment R-40-0612, Item 517.1050.S.02.

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

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

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

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

C Construction
C.1 Equipment
Equipment and tools necessary for performing all parts of the work shall be satisfactory as to design, capacity, and mechanical condition for the purposes intended. Repair,

improve, replace, or supplement all equipment that is not maintained in full working order, or which is proven inadequate to obtain the results prescribed.

C.2 Form Liner Preparation
Clean the form liner prior to each pour and ensure that it is free of any build-up. Visually inspect each liner for blemishes or tears, and repair if necessary per manufacturer's recommendations.

Apply form release per manufacturer's recommendations.

C.3 Form Liner Attachment
Place adjacent liners less than ¼-inch from each other, attach liner securely to forms in accordance to the manufacturer's recommendations, and coordinate wall ties with form liner and form manufacturer, e.g., diameter, size, and frequency.

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

Grind or fill pouring blemishes.

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

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

ITEM NUMBER	DESCRIPTION	UNIT
517.1050.S.01	Architectural Surface Treatment R-40-0588	SF
517.1050.S.02	Architectural Surface Treatment R-40-0612	SF

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

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

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

B Materials

B.1 Proprietary Modular Block Gravity Wall Systems

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

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

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

B.2 Design Requirements

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

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

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

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

B.3 Wall System Components

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

B.3.1 Backfill

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

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

B.3.2 Wall Facing

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

The top course of facing units shall be a solid precast concrete unit designed to be compatible with the remainder of the wall. The finishing course shall be bonded to the underlying facing units with a durable, high strength, flexible adhesive compound compatible with the block material. A formed cast-in-place concrete cap may also be used to finish the wall. A cap of this type shall be designed to have texture, color, and an appearance that complements the remainder of the wall. The vertical dimension of the cap shall not be less than 3½ inches. Expansion joints shall be placed in the cap to correspond with each 24-inch change in vertical wall height or at a maximum spacing of 10 feet. Concrete for all cast-in-place caps shall be Grade A and shall conform to the requirements of standard spec 501.3.

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

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

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

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

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

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

A department-approved independent testing laboratory shall control and conduct all modular block sampling and testing for certification. Prior to sampling, the manufacturer's representative shall identify all pallets of modular blocks contained in each lot. All pallets of blocks within the lot shall be numbered and marked to facilitate random sample selection. The representative of the independent testing laboratory shall identify five pallets of blocks by random numbers and shall then select one block from each of these pallets. Solid blocks used as a finishing or top course shall not be selected. The selected blocks shall remain under the control of the person who conducted the sampling until shipped or delivered to the testing laboratory. All pallets of blocks within a lot shall be strapped or wrapped to secure the contents and tagged or marked for identification. The engineer will reject any pallet of blocks delivered to the project without intact security measures. The contractor shall remove all rejected blocks from the project at no expense to the department.

The department may conduct testing of certified or non-certified modular blocks lots delivered to the project. The department will not do freeze-thaw testing on blocks less than 45 days old. If a random sample of five blocks of any lot tested by the department fails to meet any of the requirements of this specification (nonconforming), the contractor shall remove from the project site all blocks from the failed lot that have not been

installed in the finished work, at no cost to the department, unless the engineer allows otherwise. Nonconforming blocks installed in the finished work will be considered approved by the department as stated in standard spec 106.5(2) and any adjustment to the contract price will not exceed the price of the blocks charged by the supplier.

B.3.3 Leveling Pad

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

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

C Construction

C.1 General

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

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

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

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

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

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

C.2 Geotechnical Information

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

D Measurement

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

E Payment

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

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

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

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

37. Cover Plates Temporary, Item 611.8120.S.

A Description

This special provision describes furnishing, installing and removing a steel plate to cover and support asphaltic pavement and traffic loading at manholes, inlets and similar structures during milling and paving operations.

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

C (Vacant)

D Measurement
The department will measure Cover Plates Temporary as units, acceptably completed in place.

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

ITEM NUMBER	DESCRIPTION	UNIT
611.8120.S	Cover Plates Temporary	Each

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

The steel plates shall become the property of the contractor when no longer needed in the contract work.
611-006 (20030820)

38. Pipe Grates, Item 611.9800.S.

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

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

Furnish pipe grates galvanized according to ASTM A123.

Furnish angles and brackets galvanized according to ASTM A123.

Furnish required hardware galvanized according to ASTM A153.

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

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

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
611.9800.S	Pipe Grates	Each

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

39. Fence Safety, Item 616.0700.S.

A Description
This special provision describes furnishing and installing a plastic fence at locations shown on the plans and as hereinafter provided.

B Materials
Furnish notched conventional metal "T" or "U" shaped fence posts.

Furnish fence fabric meeting the following requirements.

Color:	International orange (UV stabilized)
Roll Height:	4 feet
Mesh Opening:	1 inch min to 3 inch max
Resin/Construction:	High density polyethylene mesh
Service Temperature:	-60° F to 200° (ASTM D648)
Tensile Yield:	Avg. 2000 lb per 4 ft. width (ASTM D638)
Ultimate Tensile Strength:	Avg. 3000 lb per 4 ft. width (ASTM D638)
Elongation at Break (%):	Greater than 100% (ASTM D638)
Chemical Resistance:	Inert to most chemicals and acids

C Construction
Drive posts into the ground 12 to 18 inches. Space posts at 7 feet.

Use a minimum of three wire ties to secure the fence at each post. Weave tension wire through the top row of strands to provide a top stringer that prevents sagging.

Overlap two rolls at a post and secure with wire ties.

D Measurement
The department will measure Fence Safety by the linear foot along the base of the fence, center-to-center of posts, 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
616.0700.S	Fence Safety	LF

Payment is full compensation for furnishing and installing fence and posts; maintaining the fence and posts in satisfactory condition; and for removing and disposing of fence and posts at project completion.
616-030 (20070510)

40. Signs Type I and II.

Furnish and install new mounting brackets per approved product list for type II signs on overhead sign supports incidental to sign. For type II signs on sign bridges use aluminum vertical support beams noted above incidental to sign. New mounting brackets are incidental to the sign being installed.

Modify standard spec 637.2.4 with the following:

Use stainless steel bolts, washers and nuts for type I and type II signs mounted on sign bridges or type I signs mounted on overhead sign supports. Use clips on every joint for Sign Plate A 4-6 when mounted on a sign bridge or overhead sign support. Inspect installation of clips and assure bolts and nuts are tightened to manufacturers recommended torque values.

Use aluminum vertical sign support beams that have a 5-inch wide flange and weigh 3.7 pounds per foot, if the L-brackets are 4 inches wide then use 4 inch wide flange beams weighing 3.06 pounds per foot. Contractor shall measure the width of the L-brackets on existing structures of determine the width needed for sign support beams

Use beams a minimum of six feet in length or equal to the height of the sign to be supported, whichever is greater. Use U-bolts that are made of stainless steel, one-half inch diameter and of the proper size to fit the truss cords of each sign bridge. Install vertical sign support beams on each sign and use new U-bolts to attach each beam to the top and bottom cord of the sign bridge truss.

For type II signs on overhead sign supports follow the approved product list for mounting brackets.

Replace standard spec 637.2.4.1(2)2 with the following:

Clips may be either stainless steel or ASTM B 108, aluminum alloy, 356.0-T6.

Append standard spec 637.3.2.1(3) with the following:

Provide the engineer with 3 copies of drawings of the signs proposed to be furnished under this contract for approval.

Append standard spec 637.3.3.2(2) with the following:

Install Type I Signs at the offset stated in the plan, which shall be the clear distance between the edge of mainline pavement right edgeline and the near edge of the sign.

Append standard spec 637.3.3.3(3) with the following:

Furnish and install new aluminum vertical sign support beams on each sign and new U-bolts to attach each beam to the top and bottom cord of the sign bridge truss for Type I or Type II Signs and Type I signs on overhead sign supports incidental to sign. New I-beams are incidental to the sign being installed.
637-SER1 (20120401)

41. Pond Liner Clay, Item 640.1303.S.

A Description
This special provision describes furnishing and installing low permeable clay in the areas shown on the plans.

B Materials
For each source, prior to excavating and hauling the low permeable clay to the project, submit the results of the laboratory tests described in Table 1. The laboratory testing shall document that the clay from the source meets or exceeds the requirements.

The sample for the hydraulic conductivity test shall be remolded clay at a minimum dry density of 95% of the maximum dry density as determined by the Standard Proctor test AASHTO T-99 and at a moisture content required to achieve the required hydraulic conductivity, but with a minimum moisture content at or above the optimum moisture content as determined in the Standard Proctor test AASHTO T-99. Conduct the laboratory source testing at the frequency listed in Table 1. Submit the test results to the engineer for review, two weeks prior to construction.

C Construction
C.1 Low Permeable Clay Placement
C.1.1 Subgrade
Compact the subgrade to a minimum density as defined in standard spec 207.3.6.2, Standard Compaction, or as otherwise specified in the contract requirements.

C.1.2 Erosion Protection
Do not place the low permeable clay until after all adjacent site grading has been completed and only after silt fence has been installed completely around the area of low permeable clay placement.

C.1.3 Low Permeable Clay Placement
After the fine grading is complete, place and compact low permeable clay in completed 6-inch lifts. Place each lift of low permeable clay in one continuous lift. See plans for

low permeable clay construction limits. Measure the thickness of the low permeable clay shown on the plans perpendicular to the surface.

Notify the engineer at least three days prior to starting construction of low permeable clay.

Table 1

Reference	Number	Test Title	Requirements	Testing Frequency	
				Screening	QA/QC[12]
AASHTO[1]	T99-01	Moisture –Density Relationships of Soils Using a 2.5-kg (5.5 lb) Rammer a 305 mm (12-in.) Drop (Standard Proctor)	NA[11]	1/source	NA
AASHTO	T-88-00	Particle Size Analysis of Soils	P200[3] $\geq$ 50%	2/source	1/lift
AASHTO	T-89-02	Determining the Liquid Limit of Soils	LL[4] $\geq$ 22%	2/source	1/lift
AASHTO	T-90-00	Determining the Plastic Limit and Plasticity Index of Soils	PI[5] $\geq$ 12%	2/source	1/lift
AASHTO	T310-03	In-Place Density and Moisture Content of Soils and Soil-Aggregates by nuclear Methods (Shallow Depth)	DD[6] $\geq$ 95% of the MDD[7]	NA	100'x100' Grid/lift
ASTM[2]	D5084-03	Standard Test Methods for Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter	K[8] $\leq 1 \times 10^{-7}$ cm/sec	1/source[9]	1/site[10]

Notes:
1. AASHTO = American Association of State Highway and Transportation Officials
2. ASTM = American Society of Testing and Materials
3. P200 = Percent by weight passing the #200 sieve (%)
4. LL = Liquid Limit (%)
5. PI = Plasticity Index (%)
6. DD = Dry Density (pcf)
7. MDD = Maximum Dry Density (pcf) as determined by the Standard Proctor Test
8. K = Hydraulic Conductivity (cm/sec)
9. The sample for the test shall be remolded at a minimum dry density of 95% of the maximum dry density as determined by the Standard Proctor test and at a moisture content required to achieve the required hydraulic conductivity, but with a minimum moisture content at or above the optimum moisture content as determined in the Standard Proctor test.
10. An undisturbed sample from a thinned walled sampler (Shelby tube)
11. NA = Not applicable
12. QA/QC = Quality Assurance / Quality Control

Compact the low permeable clay to a minimum of 95% Standard Proctor AASHTO T-99 Maximum Dry Density with a footed compaction equipment having feet at least as long as the loose lift height. As needed, clay shall be disked or otherwise mechanically processed prior to compaction to break up clods and allow moisture content adjustment. Clod size shall be no greater than 4-inches. All compaction equipment utilized shall have a minimum static weight of 30,000 pounds.

Provide all equipment necessary to adjust low permeable clay to the proper moisture content for compaction.

Make sufficient number of passes of the compaction equipment over each lift of clay to ensure complete remolding of the clay.

Do not proceed with placement of additional lifts until all required low permeable clay testing and documentation has been completed for the previous lift.

During placement of the low permeable clay the minimum moisture content shall be as defined by the testing performed in the source evaluation and with the following limits:

- No drier than the optimum moisture content as determined by the Standard Proctor test.

If the in-place low permeable clay fails to meet the requirements of Table 1, then remove and replace or rework any portion of the low permeable clay not meeting the project requirements until project specifications are met. There shall be no compensation for removing, replacing and reworking low permeable clay not meeting the requirements in Table 1.

C.1.4 QA/QC Testing of the Low Permeable Clay

The department will perform the QA/QC testing at the frequency shown in Table 1. The department will record the thickness of low permeable clay on a 100-foot x 100-foot grid pattern.

Provide the following:

- Access for on-site testing, inspection, and documentation.
- Machinery required to grade/blade density test locations.
- Machinery required to collect undisturbed clay samples (i.e., with Shelby tubes).
- Replace and recompact clay material removed for testing purposes.

D Measurement

The department will measure Pond Liner Clay in volume by the 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
640.1303.S	Pond Liner Clay	CY

Payment is full compensation for dewatering areas of site where the low permeable clay is to be placed; for furnishing, placing and compacting the low permeable clay; and for performing all tests.
640-016 (20130615)

42. Nighttime Work Lighting-Stationary.

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

B (Vacant)

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

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

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

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

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

4. Electrical power source information.

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

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

7. Detail information on any other auxiliary equipment.

C.2 Portable Lighting
Provide portable lighting that is sturdy and free standing and does not require any guy wires, braces, or any other attachments. Furnish portable lighting capable of being moved as necessary to keep up with the construction project. Position the portable lighting and trailers to minimize the risk of being impacted by traffic on the roadway or by

construction traffic or equipment. Provide lightning protection for the portable lighting. Portable lighting shall withstand up to 60 mph wind velocity.

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

C.3 Light Level and Uniformity

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

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

C.4 Glare Control

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

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

1. Aim tower-mounted luminaires, either parallel or perpendicular to the roadway, so as to minimize light aimed toward approaching traffic.
2. Aim all luminaires such that the center of beam axis is no greater than 60 degrees above vertical (straight down).

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

C.5 Continuous Operation

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

D (Vacant)

E Payment

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

643-010 (20100709)

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

A Description

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

B Materials

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

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

C Construction

C.1 General

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

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

C.2 Groove Depth

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

C.3 Groove Width – Longitudinal Markings

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

C.4 Groove Position

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

C.5 Groove Cleaning

C.5.1 Concrete

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

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

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

C.5.2 New Asphalt
Groove pavement five or more days after paving.

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

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

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

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

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

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

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

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

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)

44. Notice to Contractor – Traffic Signal Equipment Lead Time.

Lead time for traffic signal equipment specified for this project has been ranging from 12-weeks to 18-weeks. Order equipment as soon as possible to assure the equipment is procured in a timely fashion and, therefore, installed, inspected, and ready for turn-on at the required date.

45. Traffic Signals, General.

All work shall be in accordance to the plans and the State of Wisconsin Department of Transportation Standard Specifications for Highway and Structure Construction, 2015 Edition, and these special provisions.

Department Owned Traffic Signals
Work under this item shall consist of furnishing and installing all materials, except for the, traffic signal cabinet, and video detection system for the department owned traffic signals. Install the traffic signal cabinet, video detection system, and emergency vehicle preemption system furnished by the department.

46. General Requirements for Electrical Work.

Append standard spec 651.3.3 (3) with the following:

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 for the state owned and maintained traffic signals.

47. Electrical Service Meter Breaker Pedestal STH 241 and W. Drexel Avenue, Item 656.0200.01; STH 241 and Northwestern Mutual Way, Item 656.0200.02; STH 241 and W. Rawson Avenue (CTH BB), Item 656.0200.03; STH 241 and S. Riverwood Boulevard, Item 656.0200.04; STH 241 and W. Sycamore Avenue/Street, Item 656.0200.05; STH 241 and W. College Avenue (CTH ZZ), Item 656.0200.06; Lighting Cabinet No. A, Item 656.0200.07; Lighting Cabinet No. B, Item 656.0200.08; Lighting Cabinet No. 90, Item 656.0200.09; Lighting Cabinet No. 91, Item 656.0200.10; Lighting Cabinet No. E, Item 656.0200.11; Lighting Cabinet No. F, Item 656.0200.12.

Append standard spec 656.2.3 with the following:

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

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

Append standard spec 656.3.4 with the following:

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

Append standard spec 656.5(3) with the following:

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

48. Electrical Splices – Municipal Lighting.

Supplement standard spec 655.2 with the following:

Electrical splices shall be made with connectors with the following properties: 600V insulation, AL/CU conductor compatibility, mechanical set screw, oxide inhibitor, suitable for wet locations, rated 90°C. Splices shall be Burndy BIBS series, Ilsco PDSS series, or approved equal by other manufacturer.

Supplement standard spec 655.3.1 with the following:

Do not install splices in underground pullboxes. Splices shall be installed in light pole bases. Tighten splice screws to manufacturer's recommended torque.

49. Pedestrian Signal Face 16-Inch.

Append standard spec 658.2.3.2(1) with the following:

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.

Furnish black housings for all pedestrian signal heads.

Append standard spec 658.3.4 with the following:

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

50. Pedestrian Push Buttons.

Append standard spec 658.2.5 with the following:

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, display and beeper that sounds simultaneously with button push.

Furnish low profile, unfinished cast aluminum, vandal resistant, and flush mounting pole mount.

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.

51. Poles, Arms, Standards, and Bases.

Append standard spec 657.2.2 with the following:

All aluminum poles shall be anodized and painted black. All steel poles shall have a powder coated enamel finish that is black. Pedestal bases and transformer bases shall also be anodized and painted black, matching the color of the poles, after anodizing.

52. Traffic Signal Faces.

Append standard spec 658.2.2 with the following:

The color of all traffic signal equipment is to be black, including visors and the backs of the signal heads

Append standard spec 658.2.3.3 with the following:

The color of all pedestrian signal housing is to be black, including visors and the backs of the pedestrian signal heads

Append standard spec 658.3.2 with the following:

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

53. Temporary Traffic Signals for Intersections.

Append standard spec 661.2.1 with the following:

(1) Furnish all temporary traffic signal equipment as shown on the plan. The signal controller shall be capable of operating with the temporary non-intrusive vehicle detection system. All wood poles shall be plumb and level. Provide primary and secondary temporary traffic signal contact names and phone numbers who will be responsible for implementing temporary traffic signal timing changes. The department may request traffic signal timing changes to an approved incident timing plan during the project. Implement any approved incident timing plan immediately upon notification of the change and immediately upon notification of switching the timing plan back to normal operation. Immediately notify the department of implementation of temporary traffic signal timing changes. Record the times of operation of the incident timing and subsequent return to normal operation and provide this information to the department.

(3) Use the existing underground electric service and/or meter breaker pedestal for the operation of the Temporary Traffic Signal. The department (if department owned/maintained traffic signal) or municipality (if municipal owned/maintained traffic signal) will pay for all energy costs for the operation of the Temporary Traffic Signal.

Coordinate with the Traffic Control contractor for the installation of temporary stop signs during switch over of the signal service whenever a generator is used. Placement of signs shall be in accordance to the MUTCD, Signing Guidelines Manual and Work Zone Safety Guide.

(6) Furnish pedestrian signal faces in accordance to standard spec 658.2.3.

(7) Furnish pedestrian push buttons in accordance to standard spec 658.2.5.

(8) Furnish LED traffic signal faces and backplates in accordance to the pertinent provisions in standard spec 658.2. The traffic signal faces shall be listed on the "*Wisconsin Department of Transportation Qualified Electrical Products"* list. Vehicular signal indications shall be 12-inch LED modules, give an appearance of an incandescent lamp and conform to the latest version of ITE-VTCSH.

(9) Furnish LED luminaires in accordance to the pertinent provisions in standard spec 659.2. The luminaires shall be listed on the "*Wisconsin Department of Transportation Qualified Electrical Products"* list.

Append standard spec 661.3.1 with the following:

(8) Install pedestrian signal faces on the wood pole or wood post as the plans show. Maintain the height to the bottom of the pedestrian signal face as indicated in SDD Traffic Signal Standard Poly Bracket Mountings (Typical) 13 FT. or 15 FT.

(9) Install pedestrian push buttons in accordance to standard spec 658.3.5. Mount push buttons so that they are wheelchair accessible from the temporary crossing areas and in accordance to MUTCD Chapter 4.

Append standard spec 661.3.1.1 with the following:

(2) Place the pole in the ground to no less than 1/5 of the pole's length as the plans show. Sawcut existing pavement and concrete curb and gutter as needed to install the wood poles and guy wire anchors. Sawcut existing pavement in accordance to the pertinent provisions in standard spec 690.3, Construction. Remove pavement and concrete curb and gutter as shown on the plans and if needed to install the wood poles and guy wire anchors. Remove only as much pavement as needed to install the wood poles. Remove pavement and curb and gutter in accordance to the pertinent provisions in standard spec 204.3, Construction. Hold any wood poles in place and/or move wood poles during construction due to conflicts with proposed work.

Append standard spec 661.3.1.4 with the following:

(1) Arrange for every other week inspections with the engineer to check the height of the span wire above the roadways to ensure that the bottom of the traffic signal heads remain

within the minimum and maximum heights allowed above the roadway. Make all height adjustments within 1-hour of an inspection indicating that adjustments are required. Notify the engineer in writing upon completion of all necessary adjustments. Maintain a written log to properly document the date of each every other week inspection, the heights above the roadway, the roadway clearance after adjustments have been made and acceptance by the engineer. Provide all documentation related to the every other week span wire height checks as well as all records related to maintenance performed on the temporary traffic signal installations to the engineer.

Append standard spec 661.5 with the following:

(2) Payment for the Temporary Traffic Signals for Intersections bid item is full compensation for providing, operating, maintaining, and repairing the complete temporary installation; and for removal. Payment also includes the following:

1. Furnishing and installing the replacement equipment.
2. The cost of delivery and pick-up of the cabinet assemblies.
3. Removal of service and site restoration.

Payment is full compensation 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 cleaning up and properly disposing of waste.

54. Install Video Encoder, Item 677.0300.S.

A Description

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

B Materials

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

C Construction

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

D Measurement

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

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
677.0300.S	Install Video Encoder	Each

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

55. Crack and Damage Survey, Item 999.1500.S.

A Description
This special provision describes conducting a crack and damage survey of the residences and business located at 2810-2842 W. Rawson Ave., Franklin, WI (Station 3412+75'RW' to Station 3417+50'RW', LT). The survey includes a commercial building with several businesses and a billboard sign structure.

This Crack and Damage Survey shall consist of two parts. The first part, performed prior to construction activities, shall include a visual inspection, photographs, and a written report describing the existing defects in the building(s) being inspected. The second part, performed after the construction activities, shall also include a visual inspection, photographs, and written report describing any change in the building's condition.

B (Vacant)

C Construction
Prior to any construction activities, thoroughly inspect the building structures for existing defects, including interior and exterior walls. Submit a written report of the inspector's name, date of inspection, descriptions and locations of defects, and photographs. The intent of the written report and photographs is to procure a record of the general physical condition of the building's interior and exterior walls and foundation. The report shall be typed on bond paper and be in text form.

The photographs shall be taken by a professional photographer capable of producing sharp, grain free, high-contrast colored pictures with good shadow details. The photographs shall be 3½ inch by 5 inch color prints, glossy, and mounted in protective storage pages with clear slip-in pockets and clear background. Each sheet shall hold four prints. The back of each photograph shall contain the following information:

ID _____
Building Location _____
View looking _____
Date _____
Photographer _____

Prior to the start of any construction activities pertinent to this survey, submit a copy of the written report and photographs to the engineer.

After the construction activities are complete, conduct another survey in the same manner, take photographs, and submit another written report to the engineer.

In lieu of photographs, a professional videographer may be hired to use a video camera capable of producing a video with the clarity required to perform this work.

D Measurement
The department will measure Crack and Damage Survey as 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
999.1500.S	Crack and Damage Survey	LS

Payment is full compensation for providing the before and after written reports, and for photographs or video.
999-010 (20130615)

56. Backfill Slurry, Item SPV.0035.01.

A Description
Furnish and place slurry backfill in accordance to the pertinent requirements of standard spec 209 except as hereinafter modified and as shown on the plans.

B Materials
Use aggregates that conform to standard spec 501 for Grade A Concrete. Weigh aggregates at a batch plant suitable for batching concrete masonry. Mix and deliver to the project site using a truck mixer. Add enough water to enable the mixture to flow readily.

C Construction
Prior to placement of slurry backfill, provide for positive drainage of the area to be backfilled. Discharge from the truck in a manner to prevent segregation. Completely fill excavation in a single operation. Consolidation or compaction effort will not be required. Allow twelve hours to elapse before paving over the backfill.

D Measurement
The department will measure Backfill Slurry in volume by the cubic yard of material placed and accepted. Such volume will be computed from dimensions of the area to be backfilled as shown in the construction details. In irregular or inaccessible areas, the engineer may allow volume to be determined by other approximate methods.

E Payment
The department will pay for measured quantities at the contract unit price in accordance to standard spec 209.5 under the following bid item:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0035.01	Backfill Slurry	CY

Payment is full compensation for providing positive drainage of area backfilled and for furnishing and placing slurry.

57. Temporary Crosswalk and Bus Stop Access, Item SPV.0045.01.

A Description

This special provision describes furnishing, installing, and removing temporary surface material, gravel or base aggregate dense, barricades type III, and safety fence to maintain accessible crosswalks crossing the construction work zone and bus stops within the work zone in accordance to the plans and the standard specifications.

B Materials

Furnish a hard temporary surface material consisting of asphaltic surface temporary in accordance to standard spec 465, any grade of concrete, skid resistant steel plating, or alternative material as approved by the engineer. Gravel or base course material is not acceptable for the landing zone. Gravel or base course is acceptable for the temporary sidewalk connection.

Furnish barricades type III conforming to the pertinent provisions of standard spec 643.2.4.

Furnish safety fence in accordance to the following:

- Furnish notched conventional metal “T” or “U” shaped fence posts.
- Furnish fence fabric meeting the following requirements.
- Color: International orange (UV stabilized)
- Roll Height: 4 feet
- Mesh Opening: 1 inch min to 3 inch max
- Resin/Construction: High density polyethylene mesh
- Service Temperature: -60° F to 200° (ASTM D648)
- Tensile Yield: Avg. 2000 lb per 4 ft. width (ASTM D638)
- Ultimate Tensile Strength: Avg. 3000 lb per 4 ft. width (ASTM D638)
- Elongation at Break (%): Greater than 100% (ASTM D638)
- Chemical Resistance: Inert to most chemicals and acids

C Construction

Install, maintain, move, and remove temporary surface material at Temporary Crosswalk and Bus Stop Access locations as directed by the engineer. Level and compact the surface prior to placing temporary surface material. The temporary crosswalk shall have a minimum clear width of 4 feet; be located outside the immediate work area, as approved by the engineer; and shall meet the requirements of the current Americans with Disabilities Act Accessibility Guidelines (ADAAG). Install safety fence along both sides of the temporary crosswalk as directed by the engineer. Reconstruct or relay Temporary Crosswalk and Bus Stop Access and reset safety fence when disturbed by construction operations or utility trenches.

Install safety fence as follows:

- Drive posts into the ground 12 to 18 inches. Space posts at 7 feet.
- Use a minimum of three wire ties to secure the fence at each post. Weave tension wire through the top row of strands to provide a top stringer that prevents sagging.
- Overlap two rolls at a post and secure with wire ties.

Maintain ADAAG accessible pedestrian crossings that are free from equipment or mud, sand and construction debris.

D Measurement

The department will measure Temporary Crosswalk and Bus Stop Access by the day, acceptably completed. The measured quantity will equal the number of calendar days a temporary crosswalk through the work zone or bus stop within the work zone is open to pedestrian traffic. A crosswalk is defined as an accessible crossing of a single leg of an intersection. A crossing of a street with an island within the route will be considered a single crosswalk. Each day that the crosswalk or bus stop is out of service for more than 2 hours will result in one day being deducted from the quantity measured for payment. Undisturbed crosswalks and bus stops on existing pavement or completed crosswalks on new pavement or completed bus stops will not be measured for payment.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0045.0001	Temporary Crosswalk and Bus Stop Access	Day

Payment is full compensation for furnishing, loading, hauling; for preparing the foundation; for furnishing, placing, maintaining, and removing temporary surface material; for reconstructing or relaying the temporary surface material; for furnishing, installing, and maintaining barricades type III; for furnishing and installing fence and posts; maintaining the fence and posts in satisfactory condition; and for removing and disposing of fence and posts at project completion.

58. Manhole 10-FT Diameter Special, Item SPV.0060.01.

A Description

This work shall consist of constructing reinforced concrete manholes, as shown on the plans and as herein provided.

B Materials

The materials furnished and used in the work shall conform to standard spec 611.2.

C Construction

The construction methods employed in the work shall conform to standard spec 611.3.

D Measurement
The department will measure Manhole 10-FT Diameter Special as each individual special 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.0060.01	Manhole 10-FT Diameter Special	Each

Payment is full compensation for furnishing and assembling all materials; and for forming and placing of concrete.

59. Reconnect Storm Sewer Laterals, Item SPV.0060.02.

A Description
This special provision describes reconnecting existing storm sewer laterals to new Storm Sewer Structures or new pipe.

B (Vacant)

C Construction
Identify all private laterals in existing Storm Sewer Structures prior to that Storm Sewer Structure's removal. Remove existing lateral pipes to the next good joint and replace in-kind. Verify that positive drainage is achieved when connecting to the new inlet or curb outlet Storm Sewer Structure. The contractor will be allowed to salvage any structurally sound pipe that was removed with prior approval by the engineer. Connect the existing pipes to the new pipes with the appropriate coupling, concrete collar or by means approved by the engineer. Concrete masonry for concrete collar shall be in accordance to standard spec 501. Any additional pipe or materials required to reconnect the storm sewer laterals shall be considered incidental to this bid item.

D Measurement
The department will measure Reconnect Storm Sewer Laterals by each lateral connected, 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	Reconnect Storm Sewer Laterals	Each

Payment is full compensation for performing all work; furnishing and installing all materials, couplings, concrete collars, and pipe.

60. Adjusting Sanitary Manhole - Oak Creek, Item SPV.0060.04.

A Description

This work includes adjusting sanitary manholes a maximum of 18 inches vertically up or down to an elevation as determined by the engineer as well as installing frame and cover and external frame/chimney seal, in accordance to the Standard Specifications for Sewer and Water Construction in Wisconsin, latest edition and amendments (SSSW).

B Materials

B.1 Adjusting Rings

Adjustment rings shall be precast concrete rings and shall have an inside diameter to match the manhole opening. Do not use any cracked or broken rings. The individual adjusting rings shall have a maximum height of 8 inches and a minimum of 2 inches and shall be sealed with bituminous or plastic mastic to assure water tightness. The minimum chimney height shall be no less than 2 inches and the maximum chimney height shall not exceed 24 inches from the top of the pre-cast section to the bottom of the casting.

B.2 Manhole Seal

Each sanitary manhole within the paving limits shall receive an internal/external adaptor furnished by the Oak Creek Water and Sewer Utility. Coordinate delivery/pick-up with Mr. Bryan Jahns, (414) 852-3917, of the Oak Creek Water and Sewer Utility.

Manholes outside of the paving limits shall be bolted down in accordance to File No. 32 of the SSSW using stainless steel hardware. The contractor shall drill four holes in the new casting spaced as per File No. 32 of the SSSW.

C Construction

C.1 General

The location of existing sanitary manholes to be adjusted is indicated on the plans. Adjust these items as shown in the plan. Adjust manholes as necessary so that the frames and cover when placed will be at the established required grade. Install seals in accordance to the manufacturer's recommended installation procedures. No steps shall be installed in the chimney section. Furnish and use compacted granular backfill in the manhole excavation area to existing surface or to appropriate depth. Reuse the existing frame and cover except as noted below.

Manholes at the following stations will require new Neenah R-1661A, 6" Manhole frames and covers that will be provided by the Oak Creek Water and Sewer Utility. Contact the Construction Coordinator, Mr. Bryan Jahns, at (414) 852-3917 to coordinate pick up from the Utility. The contractor shall salvage the existing frame and cover and deliver to the Oak Creek Water and Sewer Utility, 170 West Drexel Avenue, Oak Creek, WI 53154.

Sanitary Manhole Station	R-1661A Quantity
1266 + 86 RT	1
1270 + 20 RT	1
1299 + 21 RT	1
1308 + 62 RT	1

If the contractor damages a frame and lid that is to be reused, they shall provide and install a new one at no cost to the department. The casting shall be a Neenah Foundry R-1661 with self-sealing lid.

D Measurement

The department will measure Adjusting Sanitary Manhole - Oak Creek as a unit per each adjustment, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.04	Adjusting Sanitary Manhole - Oak Creek	Each

Payment is full compensation for furnishing and installing all materials including adjusting rings, masonry; for excavating, backfilling, and compacting; for disposing of surplus materials; and for cleaning out and restoring the structure.

61. Reconstruct Sanitary Manhole - Oak Creek, Item SPV.0060.03.

A Description

This work includes reconstructing existing sanitary manholes to grade as shown in the plans, reinstalling the cone section, adjusting rings, frame and cover, and installing external frame/chimney seal, in accordance to the Standard Specifications for Sewer and Water Construction in Wisconsin, latest edition and amendments (SSSW).

B Materials

B.1 Cones

All Cone sections shall be salvaged and re-used. Sections damaged during construction operations shall be replaced by the contractor at no cost to the department.

B.2 Adjusting Rings

Adjustment rings shall be precast concrete rings and shall have an inside diameter to match the manhole opening. Do not use any cracked or broken rings. The individual adjusting rings shall have a maximum height of 8 inches and a minimum of 2 inches and shall be sealed with bituminous or plastic mastic to assure water tightness. The minimum chimney height shall be no less than 2 inches and the maximum chimney height shall not exceed 24 inches from the top of the pre-cast section to the bottom of the casting.

B.2 Manhole Seal

Each sanitary manhole within the paving limits shall receive an internal/external adaptor furnished by the Oak Creek Water and Sewer Utility. Coordinate delivery/pick-up with Mr. Bryan Jahns, (414) 852-3917, of the Oak Creek Water and Sewer Utility.

Manholes outside of the paving limits shall be bolted down in accordance to File No. 32 of the SSSW using stainless steel hardware. The contractor shall drill four holes in the casting spaced as per File No. 32 of the SSSW.

C Construction

C.1 General

Reconstruction includes removal of the frame, cover, casting, adjusting rings and cone, rotating and installing the salvaged cone at the new orientation, placement of new undamaged adjusting rings, and resetting of the frame and cover. No steps shall be installed in the chimney section. Install seals in accordance to the manufacturer's recommended installation procedures. Remove existing frames, covers, castings and manhole cone sections with care to prevent damage. All joints shall be water tight at the time of construction. Furnish and use compacted granular backfill. Reuse existing frame and cover except as noted below.

Manholes at the following stations will require new Neenah R-1661A, 6" Manhole frames and covers or R-1661, Frames and Covers that will be provided by the Oak Creek Water and Sewer Utility. Contact the Construction Coordinator, Mr. Bryan Jahns, at (414) 852-3917, to coordinate pick up from the Utility. The contractor shall salvage the existing frame and cover and deliver to the Oak Creek Water and Sewer Utility, 170 West Drexel Avenue, Oak Creek, WI 53154.

Sanitary Manhole Station	R-1661A Quantity	R-1661 Quantity
1291 + 98 RT	1	
1278 + 02 RT		1

Contractor shall provide and install 9 inch macwrap exterior joint sealer at the barrel – cone joint in addition to the requirements of the SSSW.

Contractor shall install EZ-STIK all-weather butyl sealant or approved equal on all manhole joints.

If the contractor damages a frame and lid that is to be salvaged, they shall provide and install a new one at no cost to the department. The casting shall be a Neenah Foundry R-1661 with self-sealing lid.

D Measurement

The department will measure Reconstruct Sanitary Manhole - Oak Creek per each individual unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.03	Reconstruct Sanitary Manhole - Oak Creek	Each

Payment is full compensation for removal of existing manhole cone section, adjusting rings, frames, cover and castings; for reinstalling manhole cone section; for installing adjustment rings and frame/chimney seals; for disposal of surplus material, cleanup, and for restoring site work. No additional monies will be paid to the contractor for replacement of existing manhole cone sections due to damage caused by the contractor's removal operations.

62. Adjust Manhole Casting - Franklin, Item SPV.0060.05; Replace Casting – Franklin, Item SPV.0060.06; Replace Lid – Franklin, Item SPV.0060.07; Add Clean Out Caps – Franklin, Item SPV.0060.08.

A Description

This work includes adjusting existing sanitary manholes to the finish grade as shown on the plans, reinstalling the casting frame and lid or installation of a new casting frame and or lid, installing sanitary manhole external chimney seals, and adding caps to existing clean out risers in accordance to the Standard Specifications for Sewer and Water Construction in Wisconsin, latest edition and amendments (SSSW).

B Materials

B.1 Grade Rings

Concrete grade rings shall conform to Section 8.39.11 of the Standard Specifications for Sewer and Water Construction in Wisconsin. Grade rings shall be 2 inches or 4 inches in thickness.

Manhole grade rings may be either concrete rings as described above or plastic rings as approved by the City of Franklin.

Mortar for grade rings shall be a mixture of 50 percent Penngrout non-shrink cementitious grout by IPA Systems, Inc. or equal, and 50 percent type M mortar.

B.2 Manhole Chimney Seal

External sanitary manhole chimney seals shall conform to Section 3.5.4.1(c) of the Standard Specifications for Sewer and Water Construction in Wisconsin. External sanitary manhole chimney seals shall seal the chimney and casting.

B.3 Manhole Castings

Type 1 and Type 2 manhole castings installed within paved areas shall be Neenah Foundry R-1661 or R-1661-A as shown on the plans or equal. Lids shall be Type B, self-sealing with a rubber "T" type gasket, and watertight concealed pickholes.

B.4 Clean Out Caps
All clean out caps shall be constructed of PVC. Clean out caps shall be suitable for the size of the existing clean out and frost sleeve.

C Construction
A finished sanitary sewer manhole chimney shall not exceed 18 inches or be less than 2 inches as measured from the base of the casting to the top of the conical precast section.

Manhole adjustments falling outside of a 2 to 18 inch range should be adjusted under the Raise Manhole – Franklin Sanitary bid item, or Lower Manhole – Franklin Sanitary bid item.

Adjust Manhole Casting
Remove the existing casting frame and lid, and grade rings, and reinstall existing casting frame and lid, and furnish and install new grade rings, external sanitary manhole chimney seal to the finish grade as shown on the plans. Thoroughly clean the mating surface on top of precast concrete corbel section. Lay the precast concrete grade rings in full bed of mortar and completely fill the joints. Place an external sanitary manhole chimney seal over the joints. Install the external sanitary manhole chimney seal in accordance to the manufacturer's recommendations. It is intended that the external portion of this external sanitary manhole chimney seal extend from the casting frame to the top of the conical section as a single piece. The surface against which the seal is to be placed shall be circular without offsets, clean, reasonably smooth and free of any loose material and excessive voids. Repair flaws in these surfaces with an approved low-shrink mortar and ground smooth. The seal shall be inspected by the engineer prior to backfilling. Reinstall the existing casting frame and lid.

Set the casting frames and lids accurately so the complete installation is at the correct elevation required to fit the proposed adjoining surfaces. If installed in concrete surfaces, set the casting frames, and grout as necessary, as specified in standard spec 415.3.6.1. Set the manhole frames so that they comply with the surface requirements of the SSSW. Fit or secure the lids to the frames to eliminate rocking or chattering. Make sure the lids are not in place while striking off and finishing the adjoining concrete.

Set casting frames located in pavement areas so that they comply with the surface requirements specified in standard spec 450.3.2.9. Place a 6-foot straightedge over the centerline of each frame parallel to the direction of traffic at the completion of the paving. Make a measurement at each side of the frame, average the 2 measurements. If this average is greater than 5/8 inch, reset the casting frame to the correct plane and elevation. If this average is 5/8 inch or less but greater than 3/8 inch, the department will allow the casting frame to remain in place.

If the casting frame is higher than the adjacent pavement, then make the 2 measurements at each end of the straightedge and average them.

Backfill for all manholes shall be a 1 bag slurry in the manhole excavation area to existing surface or to appropriate depth for pavement installation.

Replace Casting

Remove the existing casting frame and lid and furnish and install new casting frame and lid, grade rings, external sanitary manhole chimney seal to the finish grade as shown on the plans. Thoroughly clean the mating surface on top of precast concrete conical section. Lay the precast concrete grade rings in full bed of mortar and completely fill the joints. Place an external sanitary manhole chimney seal over the joints. Install the external sanitary manhole chimney seal in accordance to the manufacturer's recommendations. It is intended that the external portion of this external sanitary manhole chimney seal extend from the casting frame to the top of the conical section as a single piece. The surface against which the seal is to be placed shall be circular without offsets, clean, reasonably smooth and free of any loose material and excessive voids. Repair flaws in these surfaces with an approved low-shrink mortar and ground smooth. The seal inspected by the engineer prior to backfilling. Install new casting frame and lid

Set the casting frames and lids accurately so the complete installation is at the correct elevation required to fit the proposed adjoining surfaces. If installed in concrete surfaces, set the casting frames, and grout as necessary, as specified in standard spec 415.3.6.1. Set the manhole frames so that they comply with the surface requirements of the SSSW. Fit or secure the lids to the frames to eliminate rocking or chattering. Make sure the lids are not in place while striking off and finishing the adjoining concrete.

Set casting frames located in pavement areas so that they comply with the surface requirements specified in standard spec 450.3.2.9. Place a 6-foot straightedge over the centerline of each frame parallel to the direction of traffic at the completion of the paving. Make a measurement at each side of the frame, average the two measurements. If this average is greater than 5/8 inch, reset the casting frame to the correct plane and elevation. If this average is 5/8 inch or less but greater than 3/8 inch, the department will allow the casting frame to remain in place.

If the casting frame is higher than the adjacent pavement, then make the two measurements at each end of the straightedge and average them

Backfill for all manholes shall be a 1 bag slurry in the manhole excavation area to existing surface or to appropriate depth for pavement installation.

Replace Lid

Remove and measure existing lid diameter and depth. Measure existing frame as recommended by the manufacturer and provide a new Type B lid with "T" type seal gasket and concealed pickhole to accommodate existing casting frame.

Clean Out Cap

Measure existing clean out riser and frost sleeve to determine the outside diameter. Furnish and install a cap for the clean out riser and sleeve.

D Measurement
The department will measure Adjust Manhole Casting - Franklin, Replace Casting – Franklin, and Replace Lid – Franklin, and Add Clean Out Caps- Franklin as each individual unit, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.05	Adjust Manhole Casting – Franklin	Each
SPV.0060.06	Replace Casting – Franklin	Each
SPV.0060.07	Replace Lid – Franklin	Each
SPV.0060.08	Add Clean Out Caps – Franklin	Each

Payment is full compensation for furnishing all removal of casting frames and lids, existing grade rings, reinstallation of casting frames and lids, furnishing and installing casting frames and lids, grade rings, mortar and seals, clean out caps, excavation, backfilling, disposal of surplus materials, manhole preparation and cleanout, and restoring the structure and all labor, tools, equipment and incidentals necessary to complete the work.

63. Raise Manhole - Franklin, Item SPV.0060.09; Lower Manhole – Franklin, Item SPV.0060.10; Rotate Conical Section – Franklin, Item SPV.0060.11.

A Description
This work includes reconstructing existing sanitary manholes to the finish grade as shown on the plans, furnishing and installing manhole risers, removing manhole risers, reinstalling the casting frame and lid, conical sections, and installing external sanitary manhole chimney seals, in accordance to the Standard Specifications for Sewer and Water Construction in Wisconsin, latest edition and amendments (SSSW).

B Materials
B.1 General
Furnish precast manhole riser sections as described in section 3.5.3 of the SSSW to the height required to create a finished manhole according to plan elevations. Contractor shall verify manhole dimensions and vertical height adjustment prior to ordering materials.

B.2 Conical Sections
Conical sections shall be salvaged and re-used.

B.3 Riser Sections
Concrete riser sections shall conform to Section 8.39 of the Standard Specifications for Sewer and Water Construction in Wisconsin.

B.4 Grade Rings
Concrete grade rings shall conform to Section 8.39.11 of the Standard Specifications for Sewer and Water Construction in Wisconsin. Grade rings shall be 2 inches or 4 inches in thickness.

Grade rings may be either concrete rings as described above or plastic rings as approved by the City of Franklin.

Mortar for grade rings shall be a mixture of 50 percent Penngrout non-shrink cementitious grout by IPA Systems, Inc. or equal, and 50 percent type M mortar.

B.5 Manhole Seals
External sanitary manhole chimney seals shall conform to Section 3.5.4.1(c) of the Standard Specifications for Sewer and Water Construction in Wisconsin. External sanitary manhole chimney seals shall seal the chimney and casting frame.

Manhole joint sealant for riser and conical section joints shall be a preformed vulcanized butyl rubber strip and be of the size necessary to fill the annular space of the joint. Joint sealant shall be a dense, stable compressive material with a tacky outer surface. Joint sealant shall be Kent Seal No. 2, as manufactured by Hamilton Kent, Inc. Butyl-Lok as manufactured by A-Lok Products, EZ-STIK as manufactured by Press-Seal Gasket or equal.

External manhole collar joint seal shall conform to ASTM Specifications, C877 latest revision, Type II. External manhole collar joint seal shall consist of a collar 9 to 18 inches wide with an outer layer of polyethylene and an under layer of rubberized mastic that is reinforced with a woven polypropylene fabric. Two steel straps shall be located within the joint seal ¾ inches from each edge.

B.6 Manhole Steps
Manhole steps shall conform to the requirements of Section 8.40.1 A or B of the Standard Specifications for Sewer and Water Construction in Wisconsin. Manhole steps shall be suitable for press fit field installation in drilled holes for existing precast concrete manholes. First step shall be set 8 inches below the top of the cone section.

C Construction
C.1 General
Raising or lowering manholes includes removal of the casting frame and lid, grade rings and conical section, riser sections as required, addition of a new riser section(s) to the appropriate height and orientation, furnishing and installing new grade rings, manhole seals, and installation of the existing casting frame and lid.

Remove the existing casting frame, lid, grade rings and manhole conical sections with care to prevent damage. Saw cut riser sections to be removed vertically in each quadrant to allow removal of the existing section without disturbing joints between subsequent

sections. Install guide bars as required if joints on new manhole sections are not compatible with the existing manhole sections. Install new manhole riser sections as required. Install manhole steps on all riser sections and base section in accordance to the manufacturer's recommended installation procedures. Install manhole collar joint seal on riser sections joints and conical section and riser section joint. When temperatures are 50 degrees Fahrenheit or less, a row of butyl rubber joint sealant shall be installed at each of the two horizontal surfaces. External joint sealant shall be installed on all riser joints and the conical and riser section joint. Backfill for all manholes shall be a 1 bag slurry in the manhole excavation area to existing surface or to appropriate depth for pavement installation.

Rotating existing conical section includes removal of the casting frame and lid, grade rings and rotation of the existing conical section so the casting frame and lid will be located outside of curbs, furnishing and installing new grade rings, manhole seals and resetting of the casting frame and lid. Existing manhole steps shall be removed with care from the existing riser sections and existing base section to prevent damage. New manhole steps shall be installed in vertical alignment with the new conical section. Install manhole steps on all riser sections and base section in accordance to the manufacturer's recommended installation procedures. Furnish and install manhole joint sealant and external manhole seal on joint between cone and barrel section. Backfill for all manholes shall be a 1 bag slurry in the manhole excavation area to existing surface or to appropriate depth for pavement installation.

Use mortar between all grade rings and coat the rings with mortar on the inside and outside of the manhole for water tightness.

The manhole riser and conical sections shall be constructed such that a minimum of two 2-inch grade rings are installed at each manhole. A maximum of 18 inches of adjustment will be allowed, but the top two rings shall be of 2-inch thickness.

Furnish and install new external chimney seals on all raised or lowered manholes or manholes with rotated conical sections in accordance to the manufacturer's recommended installation procedures.

Set the casting frames and lids accurately so the complete installation is at the correct elevation required to fit the proposed adjoining surfaces. If installed in concrete surfaces, set the casting frames, and grout as necessary, as specified in standard spec 415.3.6.1.. Set the manhole frames so that they comply with the surface requirements of the SSSW. Fit or secure the lids to the frames to eliminate rocking or chattering. Make sure the lids are not in place while striking off and finishing the adjoining concrete.

Set casting frames located in pavement areas so that they comply with the surface requirements specified in standard spec 450.3.2.9. Place a 6-foot straightedge over the centerline of each frame parallel to the direction of traffic at the completion of the paving. Make a measurement at each side of the frame, average the 2 measurements. If this average is greater than 5/8 inch, reset the casting frame to the correct plane and elevation.

If this average is 5/8 inch or less but greater than 3/8 inch, the department will allow the casting frame to remain in place.

If the casting frame is higher than the adjacent pavement, then make the two measurements at each end of the straightedge and average them.

D Measurement
The department will measure Raise Manhole – Franklin, Lower Manhole – Franklin, Rotate Conical Section – Franklin 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.0060.09	Raise Manhole – Franklin	Each
SPV.0060.10	Lower Manhole – Franklin	Each
SPV.0060.11	Rotate Conical Section – Franklin	Each

Payment is full compensation for removal of existing casting frames, lids, manhole conical section, and manhole riser sections, for furnishing and installing additional precast concrete riser sections; for reinstalling of the manhole conical section, casting frame and lids; for furnishing and installing manhole steps, grade rings, and manhole seals; for furnishing all excavation and backfill; for disposal of surplus material, cleanup, for restoring site work, and all labor, tools, equipment and incidentals necessary to complete the work.

64. Water Main Protection, Item SPV.0060.12.

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:

1) Alter the catch basins and inlets to provide 18” of vertical clearance to the water mains or hydrant branches.
2) Wrap the catch basins and inlets 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.0060.12	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, and for furnishing all labor, equipment, materials, tools and incidentals necessary to complete the work.

65. Circuit Breaker Panel and Photo Control System, Item SPV.0060.14.

A Description
This special provision describes equipment to be installed in control cabinet. Perform work conforming to standard spec 656 and as follows.

Supplement standard spec 656.0200 with the following:

B Materials
The lighting control system shall consist of a 480/240V single phase load center, 240/120V load center, 4 pole lighting contactor, 480V:120/240V transformer, surge protective device, and electric photo eye and time clock. The load center shall be Cutler Hammer CH12L125B, Square-D QO112L125G, GE AL1121MB, or approved equal by another manufacturer. Load center shall have copper busing, and be equipped with feeder breakers as shown on drawings.

Lighting contactors shall be Cutler Hammer type ECL03D1A4A, or approved equal by Square D, GE, or another manufacturer. Four 60 amp 600V contacts, NEMA 1 enclosure, 120V coil, electrically held, normally open, aux contact. Provide Hand / Off / Auto switch to provide manual control.

The Photo-eye shall be stem mounted swivel type. Ratings shall be 120V 1800W resistive or 1000VA Ballast. Photoeye shall include cadmium sulfide photocell, adjustable shield, and delay action to prevent false-off operation. Photoeye shall operate on at 1-5 footcandles, and shall operate off at 3-15 footcandles. The photocontrol shall have a gasketed weatherproof enclosure and shall function over a temperature range of -40°F to 140ºF. Intermatic K4221C, Tork 2001, or approved equal by another manufacturer.

The transformer shall be encapsulated type, copper or aluminum windings, and shall include a NEMA 3R indoor/outdoor enclosure, 185°C insulation, and be designed for

115ºC heat rise. Transformer shall be Cutler-Hammer S20N11S01N or approved equal by Square D, GE, or another manufacturer.

The Lighting Time Clock shall be powered at 120V, 24 hours schedule, mechanically operated, single pole, single throw. Contacts shall be rated 40 amps resistive/inductive/tungsten or 1000 VA pilot duty 120/208/240 VOLT AC. Timeclock shall be Intermatic T101, Tork 1101, or approved equal by another manufacturer.

The control cabinet shall include a cabinet light with cabinet switch, and GFCI/WP 20A 120V NEMA 5-20R receptacle inside the cabinet. Install outlet in cast bell box with weatherproof cover.

Cabinet light shall include the following features: LED or fluorescent source, 120V power supply, remote door switch for automatic operation.

Provide a surge protective device with the following properties: UL 1449 Type 2, NEMA 1 enclosure, thermally protected MOV technology, dual colored protection status indicators for each phase and N-G, 200 kA short circuit current rating, 200 kA per phase surge current capacity rating. Protection modes: L-L, L-N, N-G.

Protection modes and UL 1449 VPR for grounded wye circuits with 480/277 V, three-phase, three-wire circuits shall not exceed the following:

1. Line to Neutral: 1200 V for 480Y/277 V.
2. Line to Ground: 1200 V for 480Y/277 V.
3. Line to Line: 2000 V for 480Y/277 V.

Provide adhered engraved identification tag on control cabinet.

C Construction

Mount and install photo sensor and time clock on control cabinet. Surface-mount and install circuit breaker and lighting contactor inside control cabinet as specified in the plans and as specified by the manufacturer. Consult drawing for exact location of sensor, time clock and panels.

D Measurement

The department will measure Circuit Breaker Panel and Photo Control System, 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.0060.14	Circuit Breaker Panel and Photo Control System	Each

Payment is full compensation for purchasing and installing equipment, and for disposing of surplus material.

66. Lighting Control Cabinet Type 3060, Item SPV.0060.15.

A Description
This special provision describes furnishing and installing lighting control cabinets as shown on the plans and as hereinafter provided.

B Materials
The cabinet shall be by APX Enclosures, Southern Manufacturing Company, or approved product by other manufacturer.

Enclosure shall have the following minimum features:

- Minimum 0.125" 5052-H32 Aluminum.
- Double flanged door frame opening on all four sides and drip shield.
- All exterior welded and ground smooth.
- No holes or knockouts.
- Padlock hasp, and quarter turn stainless steel door handle with 3 point latches.
- Mounting backplane.
- Stainless steel hinge pin and panel screws.
- Natural aluminum finish.
- NEMA 3R rated.
- Coordinate dimensions with installed equipment.

C Construction
Install as shown in the plans, as specified by the manufacturer.

D Measurement
The department will measure Lighting Control Cabinet 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.0060.15	Lighting Control Cabinet Type 3060	Each

Payment is full compensation for purchasing and installing equipment, and disposing of surplus material.

67. Municipal Luminaire LED, Type A3, Item SPV.0060.16.

A Description
This special provision describes furnishing and installing LED luminaires at the locations shown in the plan.

B Materials

B.1 Material Qualifications

Furnish a complete list of documentation in accordance to standard spec 651.2 and the following requirements. Be prepared to provide the following materials and/or data to the engineer [Eric Perea, WisDOT SE Region Lighting Engineer, 141 NW Barstow Street, Waukesha, WI 53187, eric.perea@dot.wi.gov] for review and approval:

One example luminaire matching what is proposed for use on the project. Example luminaire shall be available for evaluation for up to two weeks time. Furnish the following list of specific documentation detailing the characteristics of the LED luminaire:

- Fixture IES files (.ies format) for illumination modeling
- Cut sheets, warranty information and parts list for all equipment.
- Luminaire heat dissipation techniques.
- Energy usage information.
- Color spectrum with HID lamp comparison.
- Optical design features.

Do not order materials until the engineer approves the list.

B.2 Luminaire

Furnish LED luminaires with a slim, low profile design that minimizes wind loading. Luminaires shall be constructed of rugged cast and extruded aluminum with integral, weather-tight LED driver components with high performance aluminum heat-sinks. The luminaire shall include an integral 9" arm for direct to pole mounting.

B.2.1 Electronic Components

Luminaire shall provide lighting output from high brightness, 4000K, minimum 70 CRI, long life Class 1 LED sources. Drivers shall operate across 120-277V or 347-480V (refer to drawings for voltage), 50/60 Hertz as standard. LED drivers shall have a power factor greater than 90% and THD less than 20% of full load. All luminaires shall come equipped with an integral surge suppression meeting ANSI C62.41.2-2002 C high level.

B.2.2 Optical / Illumination Performance

Luminaire shall conform to the following:

- Luminaire tested and certified by an independent test laboratory to meet the photometric performance criteria established by IESNA LM-79.
- Luminaire shall be IESNA Type III distribution.
- Luminaire shall deliver a minimum of 8,650 (type 3) or 8,150 (type 4) lumens and be rated to consume no more than 105 watts (+/- 8%) while operating for a minimum of 180,000 hours (+/- 10%) at 25° C.
- Maximum nominal drive current of 530 mA.

B.2.3 Finish
The luminaire fixture finish shall feature a electrostatically applied, thermally cured, triglycidal isocyanurate (TGIC) textured polyester powdercoat finish, providing resistance to corrosion, ultraviolet degradation and abrasion. Alternative equivalent finishes shall be approved by the engineer. The finish color shall be black.

B.2.4 Ratings / Certifications
Luminaires shall be rated and/or certified as follows:

- U.L. listed for wet locations
- RoHS compliant for lead and mercury standards
- IP-66 minimum weather fastness rating
- IDA dark sky full cutoff compliant

Acceptable LED luminaires are:

- Luminaire shall be Philips Gardco P21-A1-1-3-105LA-NW-HVU-BLP-SPRH.

C Construction
Install LED Luminaire in accordance to the pertinent provisions of standard spec 659 and as the manufacturer directs.

D Measurement
The department will measure Municipal Luminaire LED Type A3 as each individual LED luminaire, 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	Municipal Luminaire LED, Type A3	Each

Payment is full compensation for furnishing all materials; installing a complete luminaire; and for furnishing all documentation.

68. Municipal Luminaire LED, Type A4, Item SPV.0060.17.

A Description
This special provision describes furnishing and installing LED luminaires at the locations shown in the plan.

B Materials
Municipal Luminaire LED, Type A4 is identical to Municipal Luminaire LED, Type A3 with the following exceptions:

- Luminaire shall be IESNA Type IV distribution.

Acceptable LED luminaires are:

- Luminaire shall be Philips Gardco P21-A1-1-4-105LA-NW-HVU-BLP-SPRH.

C Construction
Install LED Luminaire in accordance to the pertinent provisions of standard spec 659 and as the manufacturer directs.

D Measurement
The department will measure Municipal Luminaire LED Type A4 as each individual LED luminaire, 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	Municipal Luminaire LED, Type A4	Each

Payment is full compensation for furnishing all materials; installing a complete luminaire; and for furnishing all documentation.

69. Municipal Luminaire LED, Type B4, Item SPV.0060.18.

A Description
This special provision describes furnishing and installing LED luminaires at the locations shown in the plan.

B Materials
Municipal Luminaire LED, Type B4 is identical to Municipal Luminaire LED, Type A3 with the following exceptions:

- Luminaire shall be IESNA Type IV distribution.
- Luminaire lumen output shall be 14320 initial lumens.
- Input wattage shall be 170 watts.

Acceptable LED luminaires are:

- Luminaire shall be Philips Gardco P32-A1-1-4-170LA-NW-HVU-BLP-SPRH.

C Construction
Install LED Luminaire in accordance to the pertinent provisions of standard spec 659 and as the manufacturer directs.

D Measurement
The department will measure Municipal Luminaire LED Type B4 as each individual LED luminaire, 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	Municipal Luminaire LED, Type B4	Each

Payment is full compensation for furnishing all materials; installing a complete luminaire; and for furnishing all documentation.

70. Removing Monotube Bases, Item SPV.0060.19.

A Description
Work under this specification consists of removing the existing Type 10 and Type 13 monotube bases at the intersection of STH 241 and W. College Avenue (CTH ZZ). Work under this specification shall be done in accordance to standard spec 204 and these special provisions.

B Materials
Materials shall be in accordance to standard spec 204.

C Construction
Construction shall be in accordance to standard spec 204.

D Measurement
The department will measure Removing Monotube Bases as each 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.0060.19	Removing Monotube Bases	Each

Payment is full compensation for breaking down and removing; for hauling and disposing of materials; for restoring the roadway cross-section; and for backfilling.

71. Municipal Light Pole – 30-Feet, Item SPV.0060.20.

A Description
This special provision describes poles for the support of municipal lighting units.

B Materials
Furnish materials as herein described. Conform to the applicable provisions of standard spec 659 Lighting and standard spec 657 Poles. Certify lighting units to resist all available loads.

The pole shall have the following material properties:

- Nominal pole height of 30'.
- Tapered rounded aluminum pole with minimum wall thickness of 0.188", spun from seamless alloy aluminum.
- 8" bottom diameter, 4.5" top diameter.
- Factory installed vibration damper.
- Rated for all available loads at 90 MPH wind speed, 1.3 gust factor. Minimum rated EPA 7.1 square feet.
- Flush mounted 4"x6" handhole cover, tamper-resistant handhole locking device.
- Stainless steel hardware.
- Grounding provision.
- The anchor base shall be cast from A356 alloy aluminum, and shall be continuously welded to the pole. Nut covers shall be pressure fit aluminum.
- The pole shall have a polyester powder coat, matching the luminaire finish color.

C Construction

Use methods that conform to standard spec 659, Lighting and standard spec 657, Poles.

D Measurement

The department will measure Municipal Light Pole – 30-Feet as each individual unit 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.0060.20	Municipal Light Pole – 30-Feet	Each

Payment is full compensation under the basis of standard spec 659, Lighting and standard spec 657, Poles.

Handhole fuses and wiring from pole handhole to luminaire are incidental to Municipal Light Pole – 30'.

72. Municipal Transformer Base, Item SPV.0060.21.

A Description

This special provision describes transformer bases for the support of municipal lighting units.

B Materials

Furnish materials as herein described. Conform to the applicable provisions of standard spec 659, Lighting and standard spec 657, Poles. Certify lighting units to resist all available loads.

The transformer base shall have the following material properties:

- Top 12” square, bottom 13” square.
- Nominal height of 17”.
- 9” wide x 11” tall access door.
- Bolt circuit diameter matching pole.
- Cast aluminum construction.
- Stainless steel hardware.
- Galvanized structural fasteners.
- Grounding provision
- The transformer base shall have a polyester powder coat, matching the luminaire finish color.
- Basis of design: Valmont 07R1012B17 or approved equal.

C Construction

Use methods that conform to standard spec 659, Lighting and standard spec 657, Poles.

D Measurement

The department will measure Municipal Transformer Base as each individual transformer 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.0060.21	Municipal Transformer Base	Each

Payment is full compensation under the basis of standard spec 659 Lighting and standard spec 657 Poles in the standard specifications.

73. Removing Communications Vault, Item SPV.0060.22.

A Description

This special provision describes removing an existing communications vault.

B Materials

Materials include existing communications vault and restoration materials such as backfill, topsoil, seeding, mulch, and fertilizer in accordance to the pertinent provisions of standard specs 201, 625, 627, 629, 630, 636, and 640.

C Construction

Disconnect and cap conduit entering communications vault. Remove and dispose of the communications vault. Backfill with material similar to the material surrounding the removal and restore the disturbed area by placing 4-inches of topsoil, and fertilize, seed, and mulch all disturbed areas in accordance to the pertinent requirements of the standard specifications.

It is acceptable to re-use the vault lid in instances where new communications vaults are being installed in the project and the existing lid is undamaged. It is the contractor's responsibility to determine if the existing vault lids fit on the proposed vaults.

D Measurement
The department will measure Removing Communications Vault as each individual removed unit, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.22	Removing Communications Vault	Each

Payment is full compensation for removing and disposing of a communications vault; and for backfill, topsoil, fertilizer, seed and mulch.

74. Salvage and Replace Street Light, Item SPV.0060.23.

A Description
This special provision describes the removal of existing street lights to accommodate the traffic control staging and reinstalling the street light on a new concrete light base.

B Materials
Use materials for the concrete bases as described in standard spec 654.2.

C Construction
Under the bid item Salvage and Replace Street Light, remove the complete lighting unit (pole, transformer base, luminaire, luminaire arm, and internal wiring and fusing) from its concrete base and install it on a new concrete base after the temporary pavement for traffic control staging is no longer needed. Furnish any miscellaneous accessories and hardware required to complete the installation of the lighting unit.

Coordinate the de-energizing of the street lighting and removal of street lights with the electrician from the community that owns the lights. Contact information for the communities is listed below:

City of Milwaukee Street Lighting – Contact Dennis Miller at (414) 286-5942.
City of Greenfield Street Lighting – Contact Richard Sokol at (414) 329-5324.
City of Oak Creek Street Lighting – Contact Brian Johnston at (414) 768-6531.

Complete the removal work as soon as possible following shut down of the equipment.

Pole wiring and fusing within the lighting unit is to be salvaged and reused during installation. Disconnect the existing branch circuits prior to lighting unit removal. If splicing or fusing equipment is damaged during removal, provide new equipment as specified for a new pole installation.

Ensure the street lighting circuit to all adjacent lights staying in place remains functional.

Perform a field review of existing highway lighting equipment with the electrician from the community owning the lights. Notify the engineer of any damaged or non-operating equipment. Remove the street lighting assemblies from their concrete foundation. Ensure that internal wires and hardware remain intact.

Store all removed materials designated in the plans at a safe and secure location. Protect from theft and damage. Return all salvageable excess lighting equipment to the community owning the street lights. Properly dispose offsite all materials that cannot be salvaged. Contact the appropriate community's electrician to coordinate a post-storage inspection of all equipment to be installed. All equipment that is determined to have been damaged during storage is to be replaced in kind at the contractor's expense.

Concrete bases are to be constructed according to standard detail drawing 9C2-6 and standard spec 654.3.

Splicing and fusing materials and circuit connections are to be as per the WisDOT Standard Detail Drawing 9E3-4 (Non-Freeway Lighting Unit Pole Wiring) and the WisDOT Qualified Electrical Products List. If damaged during removal or installation, provide internal pole conductors as WisDOT requirements.

Furnish new hot dip galvanized flat washers and anchors nuts per WisDOT requirements.

Ensure the centerline of the pole shaft is vertical after installation.

All components of the lighting unit are to be installed in a workable first class condition and also include all miscellaneous hardware required for a complete and operational lighting unit.

D Measurement

The department will measure Salvage and Replace Street Light 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.0060.23	Salvage and Replace Street Light	Each

Payment is full compensation for removing and installing materials, including pole, arm, luminaire, lamp, internal pole wiring and fusing, and all pole accessories, hardware and fitting necessary to install the lighting unit in working first class condition, for constructing new concrete bases with new anchor bolts and conduit, all labor, equipment and incidentals necessary to complete the contract work.

75. Salvage and Replace Street Light - Greenfield, Item SPV.0060.24.

A Description
This special provision describes the coordination with the City of Greenfield to remove the existing light poles and replacement of the existing concrete base.

B Materials
Use materials for the concrete bases as described in standard spec 654.2.

C Construction
Under the bid item Salvage and Replace Street Light - Greenfield, the complete lighting unit (pole, transformer base, luminaire, luminaire arm, and internal wiring and fusing) will be removed by the City of Greenfield from its concrete base. Install a new concrete base after the temporary pavement for traffic control staging is no longer needed.

Coordinate the de-energizing of the street lighting and removal of street lights with the electrician from the community that owns the lights. Contact information for the communities is listed below:

City of Greenfield Street Lighting – Contact Richard Sokol at (414) 329-5324.

Ensure the street lighting circuit to all adjacent lights staying in place remains functional.

Concrete bases are to be constructed according to standard detail drawing 9C2-6 and standard spec 654.3.

Furnish new hot dip galvanized flat washers and anchors nuts per WisDOT requirements.

D Measurement
The department will measure Salvage and Replace Street Light - Greenfield 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.0060.24	Salvage and Replace Street Light - Greenfield	Each

Payment is full compensation for coordination with the City of Greenfield to remove the street lights; for constructing new concrete bases with new anchor bolts and conduit, all labor, equipment and incidentals necessary to complete the contract work.

76. Temporary Cover Plate Storm Sewer, Item SPV.0060.25.

A Description
This work shall consist of constructing steel temporary cover plates on storm sewer inlets and manholes as shown on the plans.

B Materials
The materials furnished and used in the work shall be steel plate material rated for H20 vehicle loading.

C Construction
Temporary Cover Plates shall be constructed to the dimensions shown in the construction details, and shall be constructed to allow cover plate to cover the entire opening of the storm sewer structure. The opening of the temporary cover plate shall be constructed to the dimensions shown in the construction detail and of sufficient size to hold a Type H casting while still allowing rain runoff to enter the storm sewer structure.

D Measurement
The department will measure Temporary Cover Plate Storm Sewer as each individual cover plate, acceptably completed

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.25	Temporary Cover Plate Storm Sewer	Each

Payment is full compensation for furnishing and assembling all materials; and for installation and removal of materials.

77. Welded Stud Shear Connectors 1/2 x 4-Inch, Item SPV.0060.26.

A Description
This special provision describes furnishing and installing 1/2 inch diameter by 4 inch long welded stud shear connecters, in accordance to standard spec 506, as shown on the plans, and as hereinafter provided.

B (Vacant)

C (Vacant)

D Measurement
The department will measure Welded Stud Shear Connectors 1/2 x 4-Inch as each individual unit, acceptably completed. The department will measure the total number of connectors incorporated in the work and accepted.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.26	Welded Shear Stud Connectors 1/2x4-Inch	Each

Payment is full compensation for providing and installing the shear connectors.

78. Remove Water Service, Item SPV.0060.27.

A Description

This special provision describes permanently disconnecting the water service from the corporation stop at the water main and removing the curb stop near the right-of-way line.

B (Vacant)

C Construction

Excavate down to the water main and disconnect the water service line from the water main at the corporation stop. Cap the corporation stop on the water main. Remove and dispose of the entire curb stop assembly. Properly dispose of removed materials. It is permissible to abandon the disconnected water service line in place.

D Measurement

The department will measure Remove Water Service as each location, 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.0060.27	Remove Water Service	Each

Payment is full compensation for excavating, removing, capping and backfilling; for disposing and scrapping of removed materials; and for furnishing all labor, tools, equipment, and incidentals necessary to complete the contract work.

79. Pavement Marking Grooved Preformed Thermoplastic Arrows Type 2, Item SPV.0060.28; Arrows Bike Lane, Item SPV.0060.29; Symbols Bike Lane, Item SPV.0060.30; Words, Item SPV.0060.31; Words Bike Lane, Item SPV.0060.32.

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 (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.0060.28	Pavement Marking Grooved Preformed Thermoplastic Arrows Type 2	Each
SPV.0060.29	Pavement Marking Grooved Preformed Thermoplastic Arrows Bike Lane	Each
SPV.0060.30	Pavement Marking Grooved Preformed Thermoplastic Symbols Bike Lane	Each
SPV.0060.31	Pavement Marking Grooved Preformed Thermoplastic Words	Each
SPV.0060.32	Pavement Marking Grooved Preformed Thermoplastic Words Bike Lane	Each

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

80. Adjusting Water Boxes – Milwaukee Water Works, Item SPV.0060.33.

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 manhole frames and lids 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 Jesse Hernandez, Milwaukee Water Works, at (414) 708-2670 (or 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 DPW Field Headquarters – Infrastructure, Operations, Water Works at 3850 N. 35th Street.

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 Boxes – Milwaukee Water Works 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.0060.33	Adjusting Water Boxes – Milwaukee Water Works	Each

Payment is full compensation for furnishing all excavation, backfilling, disposal of surplus materials, water box or manhole clean-out, and restoration of the work site; and for furnishing all labor, tools, equipment, and incidentals necessary to complete the work.

81. Removing Hydrant – Milwaukee Water Works, Item SPV.0060.34; Installing Hydrant – Milwaukee Water Works, Item SPV.0060.35.

A Description

This special provision describes removing existing hydrants, installing new hydrants.

A.1 General

Perform work under these items in accordance to the details as shown on the plans and the requirements of the City of Milwaukee Water Main Installation Specifications, dated January 2, 1987 (City Water Main Specifications). Additionally, perform all work in accordance to the "Milwaukee Water Works Standard Plan Notes for Water Main Construction", June 14, 2011. Notes 4, 6, 15 through 18 and 21 shall not apply to this project. In case of conflicts between the city Water Main Specifications and the standard specifications or these special provisions, the requirements of the standard specifications and the special provisions shall govern. Contact Ms. Angela Baldwin, at (414) 286-2813 to purchase copies of the required documents.

A.2 Sequence of Construction

Due to the nature of this work, including traffic staging and coordination with other work, the contractor is advised there may be multiple mobilizations to complete the water main work. No additional payment will be made by the department for said mobilizations.

Determine sequence and schedule for water main construction, subject to the requirements herein.

Prepare and submit for review by the Superintendent of Milwaukee Water Works a detailed construction schedule stating the anticipated dates and duration of all interruptions in water service necessary to complete the work under the contract, including the abandonment of existing water mains.

B Materials

B.1 General

The city will furnish hydrants, valves, and fittings for installation on this project. Contact Mr. Ricardo Lopez, Inventory Clerk, at (414) 286-6123 for material supplies. Contractor shall provide all water main materials conforming to the latest version of the City of Milwaukee's Material Specifications. Material specifications can be found at the following website, http://city.milwaukee.gov/water/business/standardspecs.htm. All materials will require inspection by the City of Milwaukee. Notify Mr. Patrick Pauly, (414) 286-8167, or Mr. Steve Brengosz, (414) 708-2808, for materials inspection and the City of Milwaukee's Construction Section, (414) 286-2497, for construction inspection, four working days prior to starting construction.

The contractor shall return all abandoned hydrants to the DPW Field Headquarters – Infrastructure, Operations, Water Works at 3850 N. 35th Street. Contact Mr. Ben Glatzel at (414) 708-2839, for additional information.

Contractor to provide all necessary information for furnished steel and iron items to comply with Wisconsin Department of Transportation DT2249, "Utility's Certificate of Compliance for Steel and Iron Items".

Milwaukee Water Works will test all pipe, in accordance to the City of Milwaukee Material Testing Specifications.

B.2 Valve Box Adapters
Install all valve boxes on gate valves with the use of valve box base adapters as detailed in the Standard Plan Notes Regarding Water Main Construction. Install the adapter in addition to the hardwood blocking.

C Construction
All costs for completing the work required for valve installations is to be included in the price for the Ductile Iron Hydrant Branch item(s).

Install fittings as shown on plans, incidental to respective ductile iron hydrant branch item. A list of fittings, provided by the City of Milwaukee, for each hydrant branch installation is provided on plans.

The Milwaukee Water Works will shut off the water main to be altered and provide temporary hose connections to affected services as required.

Provide all surveying required to layout and construct the hydrant relocations.

Unless shown otherwise, backfill all water main excavations with granular backfill as specified in Section 14 of the City of Milwaukee Standard Plan Notes Regarding Water Main Construction.

Consolidate all backfill by mechanical compaction per specification 2.6.14(B) of the Standard Specifications for Sewer and Water Construction in Wisconsin. Per specification, the initial compacted lift shall be 2 feet, and the specification shall be modified to read, “each subsequent compacted lift of material shall be 1 foot”. Costs are to be included in the unit price bid for the water main. Settling the trench by flooding the backfill will not be allowed.

D Measurement
The department will measure Removing Hydrant – Milwaukee Water Works as each individual hydrant, acceptably removed.

The department will measure Installing Hydrant – Milwaukee Water Works as each individual hydrant, acceptably installed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.34	Removing Hydrant – Milwaukee Water Works	Each
SPV.0060.35	Installing Hydrant – Milwaukee Water Works	Each

Payment is full compensation for providing all labor, equipment, materials (except hydrants, valves, and fittings provided by the city); for furnishing all surveying; excavating, for sheeting and shoring; for forming foundation; for laying pipe; for removing valves; for installing all valves and fittings; for concrete base, buttresses, and anchors; for bulkheading and abandoning existing water mains; for sealing joints and making connections to new or existing facilities; for providing granular backfill material, including bedding material; for backfilling; for removing sheeting and shoring; for cleaning out the site of the work and incidentals necessary to complete the work.

82. Connect Original Service, Item SPV.0060.36.

A Description

This special provision describes reconnecting existing services to new water main.

A.1 General

Perform work under these items in accordance to the details as shown on the plans and the requirements of the City of Milwaukee Water Main Installation Specifications, dated January 2, 1987 (City Water Main Specifications). Additionally, perform all work in accordance to the "Milwaukee Water Works Standard Plan Notes for Water Main Construction", June 14, 2011. Notes 4, 6, 15 through 18 and 21 shall not apply to this project. In case of conflicts between the City Water Main Specifications and the standard specifications or these special provisions, the requirements of the standard specifications and the special provisions shall govern. Contact Ms. Angela Baldwin, at (414) 286-2813 to purchase copies of the required documents.

B Materials

B.1 General

The city will furnish all fittings, adapters, piping and service insulators required for installation on this project. The contractor shall tap new water main and furnish all copper service piping. Contact Mr. Ricardo Lopez, Inventory Clerk, at (414) 286-6123 for material supplies. All materials will require inspection by the City of Milwaukee. Notify Mr. Patrick Pauly, (414) 286-8167 or Mr. Steve Brengosz, (414) 708-2808, for materials inspection and the City of Milwaukee's Construction Section, (414) 286-2497, for construction inspection, four working days prior to starting construction.

C Construction

When required and noted "C.O.S. on the plan(s), the contractor shall remove the service pipe from the old main and connect the service to the new main. The contractor shall furnish and install the copper service piping required to extend the service from the existing to the new main and all fittings required. Contractor shall be responsible for tapping the new water main for the C.O.S.

The Milwaukee Water Works will shut off the water main to be altered and provide temporary hose connections to affected services as required.

The contractor will be responsible for all surveying required to layout and locate the water services.

Unless shown otherwise, backfill all water main excavations with granular backfill as specified in Section 14 of the City of Milwaukee Standard Plan Notes Regarding Water Main Construction.

Consolidate all backfill by mechanical compaction per specification 2.6.14(B) of the Standard Specifications for Sewer and Water Construction in Wisconsin. Per specification, the initial compacted lift shall be 2 feet, and the specification shall be modified to read, "each subsequent compacted lift of material shall be 1 foot". Costs are to be included in the unit price bid for the water main. Settling the trench by flooding the backfill will not be allowed.

D Measurement

The department will measure Connect Original Service as each individual unit, acceptably completed, including all construction parameters and requirements as described in this special provision.

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	Connect Original Service	Each

Payment is full compensation for providing all labor, tools, equipment, materials (except those provided by the city) and accessories required; for furnishing all surveying; for furnishing all excavating, for sheeting and shoring; for forming foundation; for sealing joints and making connections to new or existing facilities; for providing granular backfill material, including bedding material; for backfilling; for removing sheeting and shoring; for cleaning out the site of the work and incidentals necessary to complete the work.

83. Signal Cabinet Screens Structure, Item SPV.0060.37; Sign Structure Wayfinding, Item SPV.0060.38; Median Monument Structure, Item SPV.0060.39; Greenscreen Structure, Item SPV.0060.40; Gateway Monument (Non-Electronic) Structure, Item SPV.0060.41; Crossroad Name Signs Special Sign Supports, Item SPV.0060.42.

A Description

This work consists of fabricating, galvanizing, delivering, pre-casting concrete posts and installing Sign Structures with greenscreens as shown on the plans and installation of Artwork Gateway Monument and Artwork Median Monument on structure.

B Materials

B.1 Steel Structures

Meet the requirements shown on the plans and the applicable provisions of the standard specifications as follows:

- Structural Steel: standard spec 506.2.2
- Painting: standard spec 517.2

Prior to fabrication, blast clean steel per SSPC-SP 6 and galvanize according to ASTM A 123. Hot-dip mechanically zinc-coat all bolts, nuts and washers as specified in standard spec 506.2.5.1. Repair zinc coating damaged during fabrication as specified in standard spec 635.2. Grind the welded joints to a smooth finish where shown in the plans.

Steel preparation includes the chamfering of sharp edges. All sharp edges shall be flattened by a single pass of a grinder or suitable device along the sharp edge. 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.

Paint colors are Federal Standard 595C Color 23448 (base color), 595C Color 23564 (accent color 1) and 595C Color 14062 (accent color 2). All paint finishes shall be a semi-gloss finish.

B.2 Concrete

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.

On exposed surfaces above the ground line, provide a sack rubbed finish conforming to standard spec 502.3.7.5.

Use concrete stain manufactured for use on exterior concrete surfaces, consisting of a base coat and a pigments sealer finish coat.

Concrete stain colors are Federal Standard 595C Color 33448 (base color) and 33564(accent color) with matte (lusterless) finish. Metal components shall be Federal Standard 595C Color 14062 (accent color 2) with a gloss finish.

B.3 Staining

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

On pertinent surfaces, use mortar for sack rubbing the concrete surfaces as given in standard spec 502.3.7.5 or use of the following products:

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

The mortar shall contain one of the following Acrylic Bonding Admixtures mixed and applied as given by the manufacturer:

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

Use concrete stain manufactured for use on exterior concrete surfaces, consisting of a base coat and a pigments 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 Urethane Anti-Graffiti Primer by TK Products
TK-5272 Tri-Sheen Pigmented Stain
Safe-Cure and Seal EPX by Chem Masters
H + C Shield Plus Ultra by Sherwin Williams
B-97 Series Concrete Sealer by Sherwin Williams
B-97-200 Series Concrete Stain by Sherwin Williams
(*Natural Look)

B.4 Greenscreen

Greenscreen panels shall be rigid, three-dimensional welded wire grid fabricated of 14-gage ASTM A641 galvanized steel wire.

Face Grid: Wires shall be welded at each intersection to form a 2 x 2 inch face grid on the front and back of panels.

Trusses: Face grids shall be separated by bent wire trusses spaced at 2-inch centers and welded to front and back face grids at each truss apex.

- Panel Thickness: 2 inches, as shown on drawings.
- Length and Width: Provide in 2-inch nominal increments.
- Tolerance: 1/8 inch in width and ¼ inch in length.

Clips and Straps: Provide manufacturer's standard types of clips and straps suitable for mounting conditions. Fabricate from ASTM A879 galvanized steel. Adjustable clips shall have ¼ inch diameter 18-8 stainless steel bolt, washer, and nut.

Plastic Spacers: Provide ½ inch thick black Ultra High Molecular Weight polyethylene (UHMW) washers, to hold clips away from mounting surface.

B.4 Finish
Metal components (except fasteners) shall be factory finished after fabrication.

Finish System: pretreat with general purpose, alkaline, water based cleaner / degreaser applied at 240 degrees F. prime with zinc-rich epoxy powder coat. Topcoat with polyester or polyester- urethane powder coat.

Powder coat shall be Federal Standard 595C Color 14062 (dark green) gloss finish.

Salt Spray Resistance: Finish shall remain rust free when tested 1680 hours in accordance to ASTM B117.

C Construction
C.1 Steel
Provide shop drawings (Sign Structure Wayfinding, Median Monument Structure and Crossroad, Name Signs Special Supports) in accordance to the requirements of standard spec 506.3.2. Shop drawings shall contain material sizes and types, weld sizes and locations, and all necessary details, dimensions, and information to allow fabrication of the sign structure in conformance with the requirements of the contract. Do not begin fabrication prior to shop drawing review and acceptance.

During construction and at the time of delivery the engineer shall inspect the sign structures for any shipping damage or construction defects. The engineer shall accept the product after the delivery is unloaded on the site. After the product is unloaded, the installation contractor will signify in writing that the sign structures were received in acceptable condition per the engineer's inspection. Any damage to the sign structures after the acceptable delivery will be the responsibility of the installation contractor.

All welding shall conform to the applicable requirements of standard spec 506. No field welding, field cutting, or drilling will be permitted without the approval of the engineer.

Provide the engineer with the name, address, and phone number of a representative of sign structure fabricator for future coordination.

During handling, protect finish coating from damage. If damaged during handling the sign structures may be rejected by the engineer or engineer may direct fabricator that the finish shall be repaired in accordance to the manufacturer's recommendations.

Contractor shall remove and dispose of all excess material from site.

See plans for specific locations of paint colors.

Contractor shall deliver two Crossroad Name Signs Special Sign Supports and one sign Structure Wayfinding to the City of Oak Creek D.P.W. yard.

C.2 Concrete
Provide shop drawings of complete structure (Signal Cabinet Screens Structure, Greenscreen Structure and Gateway Monument Non-Electronic Structure) for approval by engineer. Do not begin fabrication prior to shop drawing review and approval.

Prior to staining, clean all concrete surfaces to be stained to ensure that the surface is free of all laitance, dirt, dust, grease efflorescence, and any foreign material in order to accept the stain according to product requirements. 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.

Prior to applying the stain to concrete any surfaces, contractor shall provide a representative 2 foot tall test sample of a post with reveals and relief represented. Test sample shall be stained specified colors. The test segment shall be delivered to the job site within 60 days of the award of the contract. Contractor shall deliver the test segment to a location within the project area as designated by the engineer. Do not begin fabrication of sign structures prior to the test segment acceptance.

Test sample shall be approved by the engineer before any fabrication can begin. Accepted test segment shall be the standard for workmanship and color for the project.

Provide the engineer with the name, address, and phone number of a representative for the pre-cast posts and supplier of all structural components, for future coordination.

C.3 Staining
Furnish, prepare, apply, cure and store all materials according to product manufacture directions specified 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.

On pertinent surfaces, provide a sack rubbed finish as given in standard spec 502.3.7.5 using mortar as indicated above, on concrete surfaces with open voids or honeycombing. Fill all voids larger than ¾" diameter and finish to match surface pattern.

Prior to staining, clean all concrete surfaces to be stained to ensure that the surface is free of all laitance, dirt, dust, grease efflorescence, and any foreign material in order to accept the stain according to product requirements. At a minimum, the cleaning should consist of a 3000 psi water blast. Hold the nozzle of the water blaster approximately 6" 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.

Apply the stain in strict conformance with product manufacture requirements.

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

See plans for specific locations of stain colors.

C.3 Greenscreens
Greenscreens shall be mounted to concrete end posts as shown on plans.

Pull out resistance for greenscreen connection to concrete posts shall be 550 lbs.

Install panels plumb and square, centered within area designated for panels, and aligned to maintain modular grid.

Cutting greenscreen panels in the field is not allowed.

Install securely with fasteners located as shown on drawings.

Repair bent or damaged panels. If panels cannot be repaired to satisfaction of the engineer, remove from jobsite and replace with new panels.

D Measurement
The department will measure Signal Cabinet Screens Structure, Sign Structure Wayfinding, Median Monument Structure, Greenscreen, Gateway Monument (Non-Electric) and Crossroad Name Signs Special Sign Supports per each individual unit, acceptably completed and installed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.37	Signal Cabinet Screens Structure	Each
SPV.0060.38	Sign Structure Wayfinding	Each
SPV.0060.39	Median Monument Structure	Each
SPV.0060.40	Greenscreen	Each
SPV.0060.41	Gateway Monument (Non-Electric)	Each
SPV.0060.42	Crossroad Name Signs Special Sign Supports	Each

Payment is full compensation for fabricating, galvanizing, pre-casting and delivering sign structures, providing structure test segments and delivering to site; fabricating, furnishing, delivering and unloading sign structures, installing sign structures, aluminum signs and hardware; for preparing shop drawings, and galvanizing metal sign structures.

84. Concrete Foundation Signal Cabinet Screens, Item SPV.0060.43; Concrete Foundation Wayfinding, Item SPV.0060.44; Concrete Foundation Median Monument, SPV.0060.45; Concrete Foundation Greenscreen, SPV.0060.46; Concrete Foundation Gateway Monument (Non-Electronic), SPV.0060.47; Concrete Foundation Crossroad Name Signs Special Sign Supports, Item SPV.0060.48.

A Description

This special provision describes constructing concrete foundations at the locations as shown on the plans or as directed by the engineer

B Materials

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.

C Construction

Construct concrete foundations, 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 foundation locations. If foundations are shifted to avoid utilities, contractor shall receive written approval from the engineer for the new location.

Construct concrete foundations 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 foundations to support sign structures or banner posts with structures and posts bearing evenly on the foundation. Inspect the forming and applicable reinforcement for concrete foundations before pouring the concrete. Cure the foundations for five days before installing any structures.

Contractor shall remove and dispose of all excess material from site.

D Measurement

The department will measure Concrete Foundations (Type) as each individual foundation, 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.0060.43	Concrete Foundation Signal Cabinet Screens	Each
SPV.0060.44	Concrete Foundation Wayfinding	Each
SPV.0060.45	Concrete Foundation Median Monument	Each
SPV.0060.46	Concrete Foundation Greenscreen	Each
SPV.0060.47	Concrete Foundation Gateway Monument (Non-Electric)	Each
SPV.0060.48	Concrete Foundation Crossroad Name Signs Special Sign Supports	Each

Payment is full compensation for providing all materials including necessary hardware, anchor bolts, forms, bar steel reinforcement, and concrete; for excavating, backfilling, and for disposing of surplus materials.

85. Trash Receptacle, Item SPV.0060.49.

A Description

This special provision describes the furnishing and installation of Chase Park cast aluminum trash receptacles.

B Materials

Chase Park Trash Receptacle manufactured and available from:

Landscape Forms, Inc.
431 Lawndale Ave.
Kalamazoo, MI 49048
Phone: (800) 521-2546
Fax: (269) 381-3455

Trash receptacle shall be side opening cast aluminum with locking side door. All trash receptacles shall be keyed with the same locking mechanisms with one key cut that will open all trash receptacles. Contractor shall supply engineer with a total of six keys.

Finish shall be brushed aluminum with ultraviolet resistant, non-yellowing protective clear coat or silver powder coat. Contractor shall submit a sample of product material and finish for approval by engineer.

C Construction

Surface mount trash receptacle to concrete sidewalk with using manufacturer's mounting hardware and recommended mounting procedure.

D Measurement

The department will measure Trash Receptacle 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.0060.49	Trash Receptacle	Each

Payment is full compensation for furnishing all materials, labor, tools, keys, mounting hardware, equipment and incidentals as required for installation of Trash Receptacle per manufacturer's instructions.

86. Bench, Item SPV.0060.50.

A Description
This special provision describes the furnishing and installation of Chase Park, 74 inch, cast aluminum benches.

B Materials
Chase Park – 74 inch three seat model manufactured and available from:

Landscape Forms, Inc.
431 Lawndale Ave.
Kalamazoo, MI 49048
Phone: (800) 521-2546
Fax: (269) 381-3455

Finish shall be brushed aluminum with ultraviolet resistant, non-yellowing protective clear coat or silver powder coat. Contractor shall submit a sample of product material and finish for approval by engineer.

Bench shall have arms on both ends.

C Construction
Surface mount bench to concrete sidewalk with using manufacturer's mounting hardware and recommended mounting procedure.

D Measurement
The department will measure each Bench 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.0060.50	Bench	Each

Payment is full compensation for furnishing all materials, labor, tools, mounting hardware, equipment and incidentals as required for installation of bench per manufacturer's instructions.

87. Artwork Median Monument, Item SPV.0060.51; Artwork Gateway Monument (Non-Electronic), Item SPV.0060.52.

A Description

This special provision describes fabrication of Artwork for the Median Monument and Gateway Monument (non-electronic). Installation of Artwork is specified in sign structure SPV's.

B Materials

Sheet aluminum conforming to standard spec 637.2.1.3 (0.100 inch).

White, reflective sheeting suitable as substrate for Acrylic Ink.

Acrylic Ink shall match the color only (not finish) of the following Federal Standard 595C colors:

- Red, Federal Standard 595C Color 11120
- Yellow, Federal Standard 595C Color 13507
- Purple, Federal Standard 595C Color17100
- Dark Green, Federal Standard 595C Color 14062
- Leaf Green, Federal Standard 595C Color 14187
- Olive Green, Federal Standard 595C Color 34097
- White, Federal Standard 595C Color 37925

C Construction

Contractor shall prepare a 1' by 1' mockup with a sample of each color. Contractor shall also prepare shop drawing type.

No fabrication of the Artwork shall begin before approval of shop drawings and color selections by the engineer.

Color rendering PDF file of the banner is available from:

Tom Lazcano
Wisconsin Department of Transportation
141 NW Barstow Street
Waukesha, WI 53187
(262) 574-5437
Tom.Lazcano@dot.wi.gov

Artwork for Median Monument shall have the design on both sides of the panel (front and back of sign). Artwork for Gateway Monument shall have design on the roadway (front) side of the panel.

During construction and at the time of delivery the engineer shall inspect the artwork for any shipping damage or construction defects. The engineer shall accept the product after the delivery is unloaded on the site. After the product is unloaded, the installation contractor will signify in writing that the artwork was received in acceptable condition per the engineer's inspection. Any damage to the artwork after the acceptable delivery will be the responsibility of the installation contractor.

Provide the engineer with the name, address, and phone number of a representative of artwork fabricator for future coordination.

D Measurement

The department will measure Artwork Median Monument Sign and Artwork, Gateway Monument (Non-Electronic) 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.0060.51	Artwork Median Monument	Each
SPV.0060.52	Artwork Gateway Monument (Non-Electronic)	Each

Payment is full compensation for providing all sign materials including necessary hardware, rivets.

88. Adjusting Manhole Cover – Milwaukee Sanitary, Item SPV.0060.53.

A Description

This work includes adjusting existing sanitary manholes to the finish grade as shown in the plans, reinstalling the frame and cover, and installing internal frame/chimney seals. Follow the requirements of standard spec 611 and as here provided.

B Materials

B.1 Adjusting Rings

Concrete adjustment rings shall conform to Section 8.39.11 of the Standard Specifications for Sewer and Water Construction in Wisconsin and be 2 inches in thickness. Do not use any cracked or broken rings. All joints between the adjusting rings shall be filled with grout or mortar, including between the cone and the adjusting ring and the adjusting ring and the frame.

B.2 Manhole Seal

Use an internal manhole seal for City of Milwaukee sanitary manholes.

C Construction

The location of existing sanitary manholes to be adjusted is indicated in the plans. Remove and salvage the existing frame and cover. Thoroughly clean the mating surface on top of precast concrete corbel section.

Lay the precast concrete adjustment rings in full bed of mortar and completely fill the joints.

Furnish and use backfill slurry in any manhole excavation area to the existing surface or to the depth of the pavement base.

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 Adjusting Manhole Cover – Milwaukee Sanitary 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.0060.53	Adjusting Manhole Cover – Milwaukee Sanitary	Each

Payment is full compensation for providing all required materials, exclusive of frames or lids available and designated for adjusting; and for removing, reinstalling and adjusting the covers; for furnishing and installing internal rubber chimney seals; and for furnishing all labor, tools, equipment and incidentals necessary to complete the work. The contractor shall replace covers rendered unusable by the contractor's operations, at no expense to the department.

89. Replace Valve Box - Franklin, Item SPV.0060.54; Add Valve Box Extension – Franklin, Item SPV.0060.55; Remove Valve Box Extension – Franklin, Item SPV.0060.56; Adjust Valve Box – Franklin, Item SPV.0060.57; Replace Valve Box Top Section – Franklin, Item SPV.0060.58; Replace Valve Fasteners - Franklin, Item SPV.0060.59; Add Valve Box Sidewalk Casting – Franklin, Item SPV.0060.60; Add

Valve Stem Extension – Franklin, Item SPV.0060.61; Replace Curb Stop and Box – Franklin, Item SPV.0060.62; Adjust Curb Box – Franklin, Item SPV.0060.63; Add Curb Box Extension – Franklin, Item SPV.0060.64; Add Curb Box Paving Adaptor – Franklin, Item SPV.0060.65; Relocate Water Service – Franklin, Item SPV.0060.66; Relocate Gravity Drain – Franklin, Item SPV.0060.67.

A Description

This special provision describes adjusting, the grade of valve boxes and curb boxes, furnishing and installing valve box and curb box extensions, valve boxes, curb stops and boxes, water service pipe, valve box sidewalk castings, curb box paving adaptors and valve operating stem extensions, removal of the existing fasteners for the valve cover, follower plate and operating nut, furnishing and installing new fasteners for 8-inch through 12-inch resilient seated gate valves, relocating gravity drain pipeline, and protecting and maintaining accessibility for the duration of the paving project to all City of Franklin water valve boxes, curb boxes, and water valves located within the project limits.

B Materials

B.1 Valve Boxes

All valve boxes shall be cast iron, three piece screw type, with 5 ¼-inch shaft diameter and a number six base, as manufactured by Tyler or US manufactured equal. Valve box covers shall be 5¾ inch diameter and be marked "WATER", and shall be of stay put type.

Valve box mounting brackets shall be a fabricated steel assembly, with UV polyurethane protective coating.

B.2 Valve Box Sidewalk Castings

Valve boxes will be furnished by the Franklin Water and Sewer Utility for installation by the contractor. Valve box sidewalk castings shall be heavy duty cast iron castings with slab frame and solid lid. The slab frame shall have a clear opening of 8½-inches. Valve box sidewalk casting shall be Neenah Foundry R-5900-A.

B.3 Valve Fasteners

All fasteners for replacement of the existing hold down hex bolt and washer for the operating nut, two follower plate bolts and nuts, and eight cover bolts shall be AISI Type 304 stainless.

B.4 Valve Stem Extension

All valve stem extensions shall consist of a 2-inch square operating nut, centering ring, 1½-inch square stem and bottom socket with two hex head bolts to attach the extension to the existing operating nut of the valve. Valve stem extension shall be Diversified Fabricators, Inc., Adjustable Extension Stem or equal.

B.5 Curb Boxes
Curb boxes will be furnished by the Franklin Water and Sewer Utility for installation by the contractor. Curb boxes will be Minneapolis pattern base, 1¼-inch upper section, extension type, plug style lid with a brass 27/32-inch pentagon head bolt plug, model H-10388 as manufactured by Mueller, model EM 2 as manufactured by Ford or approved equal.

B.6 Curb Box Paving Adaptor
Curb box paving adaptor will be furnished by the Franklin Water and Sewer Utility for installation by the contractor. All curb box paving adaptors shall consist of a high grade ABS tube material conforming to the requirements of ASTM B-253, a cast iron or ductile iron lid with tensile strength conforming to the requirements of ASTM A-126-B, a 5-inch diameter top flange, and pentagon shaped locking bolt. Curb stop paving adaptors shall be Roadway Box magnetized tracer boxes as manufactured by Copperhead Industries, or equal.

B.7 Curb Stops
Curb stops will be furnished by the Franklin Water and Sewer Utility for installation by the contractor. Curb stops shall be Minneapolis pattern full port ball valves with tube compression inlets and outlets. Curb stops shall be shall be Ford B44-444M, B44-555M, B44-666M or B44-777M to match the existing water service size.

B.8 Pipe Bedding Sand
All pipe bedding sand shall be a clean gravel sand mixture free from organic matter and shall conform to the following requirements:

U.S. Standard Sieve Size	Percent by Wight Passing
1-inch	100
#16	45-80
#200	2-10

B.9 Gravel Backfill
All gravel backfill for water main shall be a select, hard, tough, durable crushed stone free from organic matter, and when tested in accordance to ASTM C117 and C136, shall conform to the following requirements:

U.S. Standard Sieve Size	Percent by Wight Passing
1-inch	100
#3/8-inch	45-75
#4	25-60
#10	15-45
#200	3-10

B.10 Water Service Pipe
All water service pipe shall be pressure Class 200 HDPE tubing conforming to the requirements of AWWA C901 and ASTM D 2737. Service pipe shall have a SDR of 9 and shall have outside diameter of copper tubing.

B.11 Couplings and Fittings
Couplings and fitting will be furnished by the Franklin Water and Sewer Utility for installation by the contractor. Couplings and fittings shall be cast brass, compression type, suitable for use with copper or polyethylene tubing. Insert stiffeners for plastic tubing be AISI Type 304 stainless steel, and will be dimpled and flanged to maintain placement within the service pipe. Couplings will be Ford Model C44 Pack Joint for copper or plastic (CTS) or equal.

B.12 Gravity Drain Pipe and Fittings
All gravity drain pipe and fittings shall be Sch. 40 drain, waste, and vent pipe and fittings that conform to the requirements of ASTM D2665. PVC gravity drain fitting shall conform to the requirements of ASTM D3311. All fittings and accessories shall the same strength and material as the pipe.

PVC gravity drain pipe and fittings shall have hub and spigot joints conforming to the requirements of ASTM D2665. The hub and spigot ends shall be integrally formed with the pip or fitting. Primer for solvent weld joints shall conform to the requirements of ASTM F656. Cement for solvent weld joints shall conform to the requirements of ASTM D2564.

B.12 Polyethylene Wrap
Polyethylene wrap shall meet the requirement of AWWA C105 (ANSI A21.5). Wrap shall be a high-density, cross-laminated polyethylene film with a minimum tensile strength of 5,000 psi and a nominal thickness of 4 mils.

C Construction
Load, transport, and unload all material and equipment furnished by the Franklin Water and Sewer Utility from the storage area to the construction site as required by the contractors operation. All material not incorporated in the work shall remain the property of the Franklin Water and Sewer Utility. Return all unused items to the Franklin Water and Sewer Utility. The Franklin Water and Sewer Utility will inspect and accept the material and equipment in the presence of the contractor. No material or equipment shall be returned to the storage site without written acknowledgement of the Franklin Water and Sewer Utility. The cost of any damaged or destroyed material and equipment will be deducted from the contract amount for the contractor. Contact the Franklin Water and Sewer Utility at 414-421-2613 to make arrangements to obtain or return material and equipment furnished for installation.

All metallic pipe, fittings, valve boxes and valves shall be wrapped with two layers of polyethylene. Polyethylene wrap shall be installed conforming to the requirements of Standard Specifications for Sewer and Water Construction in Wisconsin. All joints shall be restrained.

All curb stops and valves that are exposed during construction shall be inspected by the City of Franklin Water Utility. The City of Franklin Water Utility will require approximately 1 hour for inspection prior to installation by the contractor. Contact the City of Franklin Water Utility at (414) 421-2613 to schedule inspection.

Throughout the duration of the project ensure that all water valve boxes and curb boxes are located and identified by blue paint and that at all times, all water appurtenances remain accessible for operation by city staff. Exercise caution working adjacent to water facilities to avoid damage and ensure accessibility. All water valve boxes and curb boxes shall be installed to the finish grade as shown on the plans.

Bedding sand shall be compacted to 95 percent of the maximum dry density. Bedding sand shall have a minimum thickness of 4-inches under the barrel and shall extend up one-half the outside diameter of the pipe barrel at the sides.

Gravel backfill shall be placed in horizontal layers not exceeding 8-inches in loose depth. The material shall be moisture conditioned to within 3 percent of optimum moisture content so the required degree of compaction may be obtained. Each layer shall be compacted to 90 percent of maximum dry density, except when the backfill is the subgrade for walks, roadways, foundations, slabs, the upper three feet shall be compacted to 95 percent of the maximum dry density. The standard test to define maximum densities of all compaction work shall be ASTM D1557.

Replace Valve Box

Remove and salvage existing valve box for the City of Franklin Water Utility. Furnish and install new mounting bracket, valve box, and polyethylene wrap. Valve boxes shall be installed truly vertical and supported by valve box mounting brackets. Valve box sidewalk casting shall be installed when the valve box is located in sidewalks. Turn the upper segment of the valve box up to the proposed finish grade, minus ¼ inch. Valve box shall be wrapped in two layers of polyethylene.

Add Valve Box Extension

Remove and salvage the existing valve box lid and furnish and install a valve box extension or valve box top compatible with the existing valve box to place the valve box top and lid to the finish grade as shown on the plans. The portion of the valve box that is exposed during the addition of the valve box extension shall be wrapped in two layers of polyethylene. Valve box sidewalk casting shall be added when the valve box is located in sidewalks. The valve box sidewalk casting shall be placed to the finish grade as shown on the plans.

Remove Valve Box Extension

Remove and salvage the existing valve box top and lid, and remove valve box extensions for the existing valve box. Furnish and install a shorter valve box extension to place the valve box top to the finish grade as shown on the plans. The portion of the valve box that is exposed during the removal of the valve box extension shall be wrapped in two layers of polyethylene. Valve box sidewalk casting shall be added when the valve box is located in sidewalks. The valve box sidewalk casting shall be placed to the finish grade as shown on the plans.

Adjust Valve Box

Rotate the top section of valve box, and extensions as required, to place the valve box top section and lid to the finish grade as shown in the plans.

Replace Valve Box Top Section

Remove existing valve box top section and furnish and install a new valve box top section. The portion of the valve box that is exposed while replacing the valve box top shall be wrapped in two layers of polyethylene. Valve box sidewalk casting shall be added when the valve box is located in sidewalks.

Replace Valve Fasteners

Remove existing valve box. Furnish and install valve fasteners, new mounting bracket, valve box, and polyethylene wrap. Valve boxes shall be installed truly vertical and supported by valve box mounting brackets. Valve box paving adaptor shall be installed when the valve box is located in asphalt or concrete pavement or sidewalks. Turn the upper segment of the valve box up to the proposed finish grade, minus ¼ inch. Adjust all valve boxes, to finish grade as shown on the drawings. Valve box sidewalk casting shall be added when the valve box is located in sidewalks

Fasteners shall be installed and torqued to the valve manufacturer's recommendations. The existing valve and valve box shall be wrapped with two layers of polyethylene. Polyethylene wrap shall be installed conforming to the requirements of Standard Specifications for Sewer and Water Construction in Wisconsin.

Add Valve Stem Extension

An extension stem shall be furnished and installed where the depth to the invert of the valve is greater than ten feet below finished grade. The extension stem shall be sized to the operating nut is between five and six feet below finish grade.

Add Valve Box Sidewalk Casting

Rotate the top section of the valve box, and extensions as required, furnish and install a valve box sidewalk casting, to place the casting frame and lid to the finish grade as shown on the plans.

Replace Curb Stop and Box

Remove existing curb stop, curb box, three linear feet of existing water service pipe. Furnish and install new curb stop, three linear feet water service pipe, couplings, and curb

box. Curb box shall be installed truly vertical. Curb box paving adaptor shall be installed with the curb box when located in asphalt or concrete pavement or sidewalks. The lid section of the curb box shall be removed to accommodate installation of the curb box paving adaptor. Curb box shall be wrapped in two layers of polyethylene.

Adjust Curb Box

Adjust curb box includes raising or lowering the existing telescoping section of the curb box to place the lid of the curb box to the finish grade as shown in the plans.

Add Curb Box Extension

Add curb box extension includes removing and salvaging the existing curb stop lid, measure curb stop riser section and furnish and install an extension compatible with existing curb box, and install existing curb stop lid on extension. Curb box paving adaptors shall be installed with the curb stop extension when located in asphalt or concrete pavement or sidewalks. The portion of the curb box that is exposed during the addition of the curb box extension shall be wrapped in two layers of polyethylene.

Add Curb Box Paving Adaptor

Remove existing curb box lid, furnish and install curb box paving adaptor, and place the lid of the paving adaptor to the finish grade as shown on the plans.

Relocate Water Service

Relocate water service includes removal of the existing curb stop and box, furnish and install new 1 ¼-inch water service piping, curb stop and box, and couplings, connection to the existing water service pipe from the main with a coupling, and connection to the water service piping to the customer with a coupling. Reducing couplings shall be used when the existing water service pipe is not 1¼ -inch diameter.

Relocated water service shall include water service pipe, a curb stop and box, and a curb stop. Relocated water service shall be constructed with a minimum cover of 6 feet. Curb stop shall be placed at a depth between 6 and 6½ feet below finished grade. Insulation shall be provided where 6 feet of cover cannot be maintained. Curb box shall be wrapped in two layers of polyethylene.

Relocate Gravity Drain

Relocate gravity drain include of a portion of the existing gravity drain pipeline, connection to the existing gravity drain pipeline, furnishing and installing gravity drain pipeline and fittings, and connection to proposed storm sewer pipeline or inlet as shown on the plans.

Inlet connection shall be made with pipe connectors. A hub hole shall be added at each joint. The hub hole shall be no larger than necessary to accomplish proper joint assembly. The void under the hub shall be filled with bedding material to provide adequate support to the pipe.

D Measurement

The department will measure Replace Valve Box – Franklin, Add Valve Box Extension – Franklin, Remove Valve Box Extension - Franklin, Adjust Valve Box - Franklin, Replace Valve Box Top Section – Franklin, Replace Valve Fasteners – Franklin, Add Valve Box Sidewalk Casting – Franklin, Add Valve Stem Extension – Franklin, Replace Curb Stop and Box – Franklin, Adjust Curb Box – Franklin, Add Curb Box Extension – Franklin, Add Curb Box Paving Adaptor – Franklin, Relocate Water Service – Franklin, and Relocate Gravity Drain – Franklin, as each individual unit acceptably completed.

E Payment

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

Item Number	Description	Unit
SPV.0060.54	Replace Valve Box – Franklin	Each
SPV.0060.55	Add Valve Box Extension – Franklin	Each
SPV.0060.56	Remove Valve Box Extension- Franklin	Each
SPV.0060.57	Adjust Valve Box – Franklin	Each
SPV.0060.58	Replace Valve Box Top Section – Franklin	Each
SPV.0060.59	Replace Valve Fasteners – Franklin	Each
SPV.0060.60	Add Valve Box Sidewalk Casting –Franklin	Each
SPV.0060.61	Add Valve Stem Extension - Franklin	Each
SPV.0060.62	Replace Curb Stop and Box – Franklin	Each
SPV.0060.63	Adjust Curb Box – Franklin	Each
SPV.0060.64	Add Curb Box Extension – Franklin	Each
SPV.0060.65	Add Curb Box Paving Adaptor – Franklin	Each
SPV.0060.66	Relocate Water Service – Franklin	Each
SPV.0060.67	Relocate Gravity Drain – Franklin	Each

Payment is full compensation for furnishing all excavation, backfilling, disposal of surplus materials, installing valve boxes extensions, valve box tops, paving adaptors, curb boxes, curb stops, and couplings and fittings furnished by the Franklin Water and Sewer utility, furnishing and installing water service pipe and couplings, gravity drain pipe and fittings, water valve box cleanout and restoration of the work site; and for furnishing all labor, tools, equipment and incidentals necessary to complete the work.

90. Abandon Water Service - Franklin, Item SPV.0060.68; Remove Water Service – Franklin, Item SPV.0060.69; Remove Air Release – Franklin, Item SPV.0060.70; Remove Hydrant – Franklin, Item SPV.0060.71; Remove Valve Box – Franklin, SPV.0060.72.

A Description

This special provision describes permanently disconnecting the water service from the corporation stop at the water main and removing the curb stop and box near the right-of-way line, permanently disconnecting water service from the water main and furnishing and installing a repair clamp, and removing the curb stop and box near the right-of-way line, permanently removing air release assemblies from the water main,

permanently disconnecting hydrants at the water main, and removing hydrant lead and hydrant lead valve and valve box, and removing abandoned valve boxes.

B Materials

Repair clamps will be furnished by the Franklin Water Utility for installation by the contractor. Repair clamps will be nominal 8-inches wide, single band AISI Type 304 stainless steel with ductile iron lugs conforming to ASTM A536, 80-55-06, and AISI Type 304 stainless steel bolds with fluoropolymer coated nuts. Repair clamps shall be equipped with Buna N gasket material suitable for use in a temperature range of -20 degrees to 180 degrees F. Repair clamps shall be equipped with an AISI Type 304 stainless steel bridge plate recessed flush and fully bonded to the gasket at the opening of the lugs. Repair clamps shall be type 226 as manufactured by Smith Blair or equal.

Mechanical joint caps and plugs shall conform to the requirements of AWWA C110 (ANSI A21.10). Mechanical joints shall be made with tee-head bolds and hexagonal nuts conforming to the requirements of AWWA C111. Bolts and nuts shall be high-strength, low-alloy steel coated with a rust-resistant backed on ceramic filled fluoropolymer resin.

Polyethylene wrap shall meet the requirement of AWWA C105 (ANSI A21.5). Wrap shall be a high-density, cross-laminated polyethylene film with a minimum tensile strength of 5,000 psi and a nominal thickness of 4 mils.

All gravel backfill shall be a select, hard, tough, durable crushed stone free from organic matter, and when tested in accordance to ASTM C117 and C136, shall conform to the following requirements:

U.S. Standard Sieve Size	Percent by Wight Passing
1-inch	100
#3/8-inch	45-75
#4	25-60
#10	15-45
#200	3-10

C Construction

Load, transport, and unload all material and equipment furnished by the Franklin Water and Sewer Utility from the storage area to the construction site as required by the contractors operation. All material not incorporated in the work shall remain the property of the Franklin Water and Sewer Utility. Return all unused items to the Franklin Water and Sewer Utility. The Franklin Water and Sewer Utility will inspect and accept the material and equipment in the presence of the contractor. No material or equipment shall be returned to the storage site without written acknowledgement of the Franklin Water and Sewer Utility. The cost of any damaged or destroyed material and equipment will be deducted from the contract amount for the contractor. Contact the Franklin Water and Sewer Utility at (414) 421-2613 to make arrangements to obtain or return material and equipment furnished for installation.

Gravel backfill shall be placed in horizontal layers not exceeding 8-inches in loose depth. The material shall be moisture conditioned to within 3 percent of optimum moisture content so the required degree of compaction may be obtained. Each layer shall be compacted to 90 percent of maximum dry density, except when the backfill is the subgrade for walks, roadways, foundations, slabs, the upper three feet shall be compacted to 95 percent of the maximum dry density. The standard test to define maximum densities of all compaction work shall be ASTM D1557.

Abandon Water Service

Excavate down to the water main close the corporation stop, and disconnect the water service line from the water main at the corporation stop. Measure the existing corporation stop and provide a brass cap to abandon the corporation stop in place. Remove and dispose of the entire curb stop assembly. Properly dispose of removed materials. Wrap the corporation stop and cap in two layers of polyethylene. It is permissible to abandon the disconnected water service line in place.

Remove Water Service

Excavate down to the water main and disconnect the water service line from the water main at the corporation stop. Remove the corporation stop on the water main. Remove and dispose of the entire corporation stop and curb stop assembly. Properly dispose of removed materials. Install stainless steel repair clamp to cover tapped hole for corporation stop on water main. Wrap the stainless steel repair clamp in two layers of polyethylene. It is permissible to abandon the disconnected water service line in place.

Remove Air Release

Excavate down to the water main and disconnect the service line from the water main at the cap. Remove the thrust block, valve boxes, corporation stop, and tapped cap from the water main. Salvage valve boxes and tapped cap for the City of Franklin Water Utility. Remove and dispose of the entire curb stop and curb stop assembly. Remove manual air release valve, service line and casting. Properly dispose of removed materials not salvaged. Furnish and install cap on water main. Pipe cap and existing pipe shall be swabbed with a 1 to 5 percent sodium hypochlorite solution in conformance with AWWA C651 prior to final installation. Apply rubberized or tar based sealant to bolts on mechanical joint cap to prevent corrosion. Wrap the cap and exposed portion of the existing water main in two layers of polyethylene. Furnish and install new thrust block as shown on the plans.

Remove Hydrant

Excavate down to the water main and disconnect the hydrant lead from the anchoring tee on the water main. Remove the hydrant lead piping, valve, and hydrant. Remove and salvage the valve, and hydrant for the City of Franklin Water Utility. Properly dispose of removed materials. Install mechanical joint plug in water main anchoring tee. Mechanical joint plug and existing water main shall be swabbed with a 1 to 5 percent hypochlorite solution in conformance with AWWA C651 prior to final installation. Apply rubberized or tar based sealant to bolts on mechanical joint plug to prevent corrosion. Wrap the

anchoring tee and mechanical joint plug in two layers of polyethylene. Furnish and install new thrust block as shown on the plans.

Remove Valve Box
Excavate down 4 feet below top of valve box. Cut existing valve box at 4 feet below the top and remove. Properly dispose of removed materials.

D Measurement
The department will measure Abandon Water Service - Franklin, Remove Water Service – Franklin, Remove Air Release – Franklin, Remove Hydrant – Franklin, and Remove Valve Box- Franklin as each location, 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.0060.68	Abandon Water Service – Franklin	Each
SPV.0060.69	Remove Water Service – Franklin	Each
SPV.0060.70	Remove Air Release – Franklin	Each
SPV.0060.71	Remove Hydrant – Franklin	Each
SPV.0060.72	Remove Valve Box – Franklin	Each

Payment is full compensation for excavating, removing, capping, plugging, adding repair clamps, and backfilling; for disposing and scrapping of removed materials; and for furnishing all labor, tools, equipment, and incidentals necessary to complete the contract work.

91. Add Hydrant Extension – Franklin, Item SPV.0060.73; Raise Hydrant – Franklin, Item SPV.0060.74; Lower Hydrant – Franklin, Item SPV.0060.75, Extend Hydrant Lead – Franklin, Item SPV.0060.76; Shorten Hydrant Lead – Franklin, Item SPV.0060.77; Relocate Hydrant – Franklin, Item SPV.0060.78; Replace Hydrant – Franklin, Item SPV.0060.79; Replace Hydrant Lead Valve – Franklin, Item SPV.0060.80.

A Description
This special provision describes furnishing and installing hydrant extensions, pipe and fittings to raise and lower existing hydrants, pipe and fittings to extend, shorten existing hydrant leads, pipe and fitting to relocating the existing hydrants, and replacing existing hydrants and hydrant lead valves including, furnishing and installing reflectorized hydrant markers. All hydrants, fittings, valves, and joint restraint materials shall be manufactured in the United States unless written permission to use foreign made products is obtained from the City of Franklin.

B Materials

B.1 Hydrant Barrel Extensions

Hydrant extensions shall be suitable for use with the hydrant being modified. Hydrant extension length shall be in multiples of 6 inches and shall include a rod and coupling to increase barrel length.

B.2 Hydrant Lead Piping and Fittings

Polyvinyl Chloride (PVC) water pipe shall conform to requirements of AWWA C-900, Pressure Class 200, DR-14 with push-on joints. Push-on joint restraint system shall be a harness system consisting of a restraint ring, a retaining ring, and connecting rods. Restraint ring and retaining ring shall be ductile iron conforming to the requirements of ASTM A536. Connecting rods shall be high strength, low alloy steel conforming to the requirements of AWWA C111. Harness system shall be Uni-Flange Series 1350 or Series 1390, EBAA Iron Series 1600 or Series 2800 or equal.

Fittings shall be cement lined ductile iron mechanical joint type conforming to AWWA C110 (ANSI A21.10) with not less than a 250 psi pressure rating. Sleeves shall be ductile iron with mechanical joint ends and shall meet the requirements of AWWA C110 Sleeves shall be cement lined. Mechanical joint restraints shall be provided by wedge action retain gland. Gland and wedges shall be ASTM A536 ductile iron, that grip ductile iron or PVC pipe.

Mechanical joints shall be made with tee-head bolds and hexagonal nuts conforming to the requirements of AWWA C111. Bolts and nuts shall be high-strength, low-alloy steel coated with a rust-resistant backed on ceramic filled fluoropolymer resin

B.3 Hydrant Lead Valves

Hydrant lead valves shall be resilient seated gate valves conforming to the requirements AWWA C509. Valves shall have an epoxy coated ductile iron or cast iron body, mechanical joint end connections, non-rising stem, bronze stem, and O-ring seals designed for a working pressure of 200 psig. Bolts, nuts, washers, and other attachment hardware for the bonnet, stuffing box, and operating nut shall be AISI Type 304 stainless steel. Valves shall be equipped with a 2-inch square operating nut that is operated left (counterclockwise) to open the valve.

B.4 Pipe Bedding Sand

All Pipe bedding sand shall be a clean gravel sand mixture free from organic matter and shall conform to the following requirements:

U.S. Standard Sieve Size	Percent by Wight Passing
1-inch	100
#16	45-80
#200	2-10

B.5 Gravel Backfill
All gravel backfill for water main shall be a select, hard, tough, durable crushed stone free from organic matter, and when tested in accordance to ASTM C117 and C136, shall conform to the following requirements:

U.S. Standard Sieve Size	Percent by Wight Passing
1-inch	100
#3/8-inch	45-75
#4	25-60
#10	15-45
#200	3-10

At least 45 percent of the particles retained on the No. 4 U.S. Standard sieve shall have at least one fractured face.

B.6 Valve Box
Valve boxes will be furnished by the Franklin Water and Sewer Utility for installation by the contractor. Valve boxes shall be cast iron, three piece screw type, with 5 ¼-inch shaft diameter and a number six base, as manufactured by Tyler or US manufactured equal. Valve box covers shall be 5 ¾ diameter and be marked "WATER", and shall be of stay put type.

Valve box mounting brackets shall be a fabricated steel assembly, with UV polyurethane protective coating.

B.7 Valve Box Sidewalk Castings
Valve boxes sidewalk castings will be furnished by the Franklin Water and Sewer Utility for installation by the contractor. Valve box sidewalk castings shall be heavy duty cast iron castings with slab frame and solid lid. The slab frame shall have a clear opening of 8½-inches. Valve box sidewalk casting shall be Neenah Foundry R-5900-A.

B.8 Hydrants
Hydrants will be furnished by the Franklin Water and Sewer Utility for installation by the contractor. Hydrants will be traffic pattern, dry barrel fire hydrants conforming to the requirements of AWWA C502. The hydrant shall have a 5¼-inch main valve, 6-inch mechanical joint with a restraint system inlet, two 2½- inch hose connections and one 4½-inch pumper connection, O-ring seal, and compression type shutoff. Connections shall have National Standard hose coupling threads. All bolts, nuts washers, and other buried attachment hardware shall be AISI Type 304 stainless steel. Hydrants shall have a 1½-inch pentagon shape operating nut and outlet nozzle cap nuts. Hydrants shall be painted red.

B.9 Polyethylene Wrap
Polyethylene wrap shall meet the requirement of AWWA C105 (ANSI A21.5). Wrap shall be a high-density, cross-laminated polyethylene film with a minimum tensile strength of 5,000 psi and a nominal thickness of 4 mils.

B.10 Hydrant Markers
Hydrant Markers shall consist of a red, 4-feet high, with reflectorized bar and attachment bracket. Bar shall have a reflectorized hydrant decal at the upper end. The reflectorized logo shall be installed to face traffic on each hydrant.

B.11 Tracer Wire and Access Risers
Access risers will be furnished by the Franklin Water and Sewer Utility for installation by the contractor. Tracer wire shall be NEC Type THWN, 600V, No. 10 AWG solid copper wire. Tracer wire access risers will consist of a tracer wire access box and a 2-inch diameter PVC Sch. 40 DWV access pipe. Access box shall have a cast iron collar and cover, pentagon shape nut, and two AISI Type 304 stainless steel terminal bolts, as manufactured by Valvco, Inc. or equal.

Waterproof splice connectors will be furnished by the Franklin Water and Sewer Utility for installation by the contractor. Waterproof splice connectors will be suitable for use with 10 AWG solid copper wire. Waterproof splice connectors will be of the twist lock design and will be SnakeBite as manufactured by Copperhead Industries, LLC or equal.

B.12 Water Main Piping
All water main piping 16-inches and larger shall be class 52 ductile iron pipe and shall conform to the requirements of AWWA C151. Ductile iron pipe shall have a standard thickness cement-mortar lining in accordance to AWWA C104. The exterior of the pipe for buried service shall have an asphaltic coating.

All water main piping up to 12-inches in diameter shall be PVC, and shall conform to the requirements of AWWA C900. The pipe shall have the same outside diameter as ductile iron pipe. The pipe shall be pressure class 150 (DR18).

B.13 Water Main Fittings
All water main fittings shall have mechanical joints and shall meet the requirements of AWWA C153. Fittings shall be ductile iron or cast iron with a pressure rating of not less than 250 psi. All fittings shall have a standard thickness cement-mortar lining in accordance to AWWA C104.

C Construction
Load, transport, and unload all material and equipment furnished by the Franklin Water and Sewer Utility from the storage area to the construction site as required by the contractors operation. All material not incorporated in the work shall remain the property of the Franklin Water and Sewer Utility. Return all unused items to the Franklin Water and Sewer Utility. The Franklin Water and Sewer Utility will inspect and accept the material and equipment in the presence of the contractor. No material or equipment shall be returned to the storage site without written acknowledgement of the Franklin Water and Sewer Utility. The cost of any damaged or destroyed material and equipment will be deducted from the contract amount for the contractor. Contact the Franklin Water and

Sewer Utility at (414) 421-2613 to make arrangements to obtain or return material and equipment furnished for installation.

All metallic pipe, fittings, valves, valve boxes and hydrants shall be wrapped with two layers of polyethylene. Polyethylene wrap shall be installed conforming to the requirements of Standard Specifications for Sewer and Water Construction in Wisconsin. All joints shall be restrained.

All hydrants identified to be extended, raised or lowered shall be removed from the trench and inspected and repaired if necessary by the City of Franklin Water Utility. The City of Franklin Water Utility will require approximately 1 hour for inspecting and making any repairs to the existing hydrant prior to installation by the contractor. Contact the City of Franklin Water Utility at (414) 421-2613 to schedule inspection and any necessary repairs of hydrants.

All pipe, fittings, hydrants, and valves used for replacing hydrant lead valves, and extending, raising and lowering hydrants shall be thoroughly cleaned and swabbed with a 1 to 5 percent sodium hypochlorite solution in conformance with AWWA C651 prior to final installation.

Water main pipe, fittings, valves, hydrants, and hydrant lead piping used for hydrant relocation shall be thoroughly cleaned and disinfected in conformance with AWWA C651. A bacteriologically safe sample shall be obtained by the contractor in conformance with Section NR810.09(4) of the Wisconsin Administrative Code prior to placing in service.

Tracer wire shall be installed from the mainline to the hydrant. In the event the mainline does not have tracer wire, a ground rod shall be installed adjacent to the mainline, and one end of the tracer wire shall be connected to the ground rod. Tracer wire shall be taped at the center and each end of each length of pipe. Tracer wire access risers shall be proved at all hydrants. Tracer wire shall extend up the access riser to the terminal bolts on the access box cover with 2 feet of extra wire stored in the access pipe. Tracer wires splices shall be completed with a waterproof splice connector.

Bedding sand shall be compacted to 95 percent of the maximum dry density. Bedding sand shall have a minimum thickness of 4-inches under the barrel and shall extend up one-half the outside diameter of the pipe barrel at the sides.

Gravel backfill shall be placed in horizontal layers not exceeding 8-inches in loose depth. The material shall be moisture conditioned to within 3 percent of optimum moisture content so the required degree of compaction may be obtained. Each layer shall be compacted to 90 percent of maximum dry density, except when the backfill is the subgrade for walks, roadways, foundations, slabs, the upper three feet shall be compacted to 95 percent of the maximum dry density. The standard test to define maximum densities of all compaction work shall be ASTM D1557.

Add Hydrant Extension

A maximum of one extension per hydrant may be used. If an extension is necessary on a hydrant which has an existing extension, remove the existing extension and replace it with a single extension of appropriate length. Hydrants shall be installed in conformance with Hydrant Installation.

Raise or Lower Hydrant

Hydrant raising or lowering includes removal of the existing hydrant, hydrant lead and valve, furnishing and installing mechanical joint bends, hydrant lead piping, hydrant lead valve, and valve box, and reinstallation of the existing hydrant to the finish grade as shown on the plans.

Provide a clearance of at least 6 inches below and around each side of the pipe, valves and fittings from hard lumps of subsoil or rock. All piping and valves shall have restrained joints.

Secure the pipe in place with bedding material, placed by hand or by an equally careful means, keeping the pipe end open. Keep the interior and exterior of the pipe clean and free from foreign material before installation. Provide the necessary means to wipe, brush, swab or air blast the pipe to remove any foreign material from the interior of pipe as instructed by the pipe manufacturer and as directed by the engineer.

Hydrant lead valves shall be set on hardwood blocking 2 x 6 by 18 inches with the long side of the block set perpendicular to the water main. Pipe bedding sand shall be tamped in place from a point above the main to a point 6 inches above the bottom of the valve box base to prevent the valve box base from shifting. A sheet of polyethylene shall be placed under the mounting bracket to prevent bedding material from entering around the operating nut. Valve boxes and covers shall be centered over the valve operating nut and the entire box assembly secured in place before backfilling. Valve boxes that become shifted or filled during backfilling shall be entirely uncovered and reset. Valve box sidewalk casting shall be added when the valve box is located in sidewalks.

Extend or Shorten Hydrant Lead

Extending or shortening the hydrant lead piping includes furnishing and installing pipe, fittings, restraints, and reinstallation of the existing hydrant, or removal of a portion of the existing hydrant lead pipe, furnishing and installing fittings and restraints, and reinstallation of the existing hydrant. Provide a clearance of at least 6 inches below and around each side of the pipe, valves and fittings from hard lumps of subsoil or rock.

Extend Hydrant Lead: Determine length of branch piping needed from the existing end of the lead to the new location for the existing hydrant. Cut the pipe accordingly and connect existing and new pipe with a sleeve. Provide 6-inches of bedding sand. All joints shall be restrained

Shorten Hydrant Lead: Determine length of branch piping needed from the existing valve to the new hydrant location and cut existing branch pipe accordingly for connection to the new location for the existing hydrant.

Lower hydrant lead piping, fittings and hydrants carefully into the trench. With the hydrant valve closed, disconnect and remove the existing hydrant.

Secure the pipe in place with bedding material, placed by hand or by an equally careful means, keeping the pipe end open. Remove the pipe and fittings that do not allow sufficient and uniform space for joints and replace it with pipe and fittings of proper dimensions to ensure such uniform space.

Keep the interior and exterior of the pipe clean and free from foreign material before installation. Provide the necessary means to wipe, brush, swab or air blast the pipe to remove any foreign material from the interior of pipe as instructed by the pipe manufacturer and as directed by the engineer.

Existing hydrant shall be installed in conformance with Hydrant Installation.

Relocate Hydrant

Hydrant relocations includes removal of the existing hydrant, hydrant lead and valve, and anchoring tee on the water main, furnishing and installing a solid sleeve or duo-sleeve, water main piping, anchoring tee, hydrant lead valve, valve box, hydrant lead piping, and reinstallation of the existing hydrant.

Provide a clearance of at least 6 inches below and around each side of the pipe, valves and fittings from hard lumps of subsoil or rock. All piping and valves shall have restrained joints.

Secure the pipe in place with bedding material, placed by hand or by an equally careful means, keeping the pipe end open. Keep the interior and exterior of the pipe clean and free from foreign material before installation. Provide the necessary means to wipe, brush, swab or air blast the pipe to remove any foreign material from the interior of pipe as instructed by the pipe manufacturer and as directed by the engineer.

Hydrant lead valves shall be set on hardwood blocking 2 x 6 by 18 inches with the long side of the block set perpendicular to the water main. Pipe bedding sand shall be tamped in place from a point above the main to a point 6 inches above the bottom of the valve box base to prevent the valve box base from shifting. A sheet of polyethylene shall be placed under the mounting bracket to prevent bedding material from entering around the operating nut. Valve boxes and covers shall be centered over the valve operating nut and the entire box assembly secured in place before backfilling. Valve boxes that become shifted or filled during backfilling shall be entirely uncovered and reset. Valve box sidewalk casting shall be added when the valve box is located in sidewalks

Existing hydrant shall be installed in conformance with Hydrant Installation.

Replace Hydrant

Replace hydrant includes removal and salvaging the existing hydrant and furnishing and installing a hydrant as shown in the plans. The existing hydrant shall be salvaged for the City of Franklin Water Utility. Hydrant shall be installed in conformance with Hydrant Installation.

Replace Hydrant Lead Valve

Replace hydrant lead valve includes removing the existing gate valve and valve box and furnishing and installing a hydrant lead valve, and valve box, and sidewalk casting where required. Existing gate valve and valve box shall be salvaged for the City of Franklin Water Utility. Hydrant lead valves shall be set on hardwood blocking 2 x 6 by 18 inches with the long side of the block set perpendicular to the water main. Pipe bedding sand shall be tamped in place from a point above the main to a point 6 inches above the bottom of the valve box base to prevent the valve box base from shifting. A sheet of polyethylene shall be placed under the mounting bracket to prevent bedding material from entering around the operating nut. Valve boxes and covers shall be centered over the valve operating nut and the entire box assembly secured in place before backfilling. Valve boxes that become shifted or filled during backfilling shall be entirely uncovered and reset. Valve box sidewalk casting shall be added when the valve box is located in sidewalks.

Hydrant Installation

Hydrants shall be installed to have the nozzles parallel with or at right angles to the roadway with the pumper nozzle facing the roadway. Hydrant barrel shall be set not less than 4½ feet from back of curb when installed behind the curb. When set in lawn space between the curb and the sidewalk, or between the sidewalk and the property line, no portion of the hydrant or nozzle cap shall be within 6 inches of the sidewalk

Hydrants shall be set on concrete blocking. Place crushed clear stone below base of the hydrant to a minimum of 6 inches above the drain holes in the hydrant, and at least 1-foot around the hydrant. The crushed clear stone shall be covered with a sheet of polyethylene.

A maximum of one extension per hydrant may be used. If an extension is necessary on a hydrant which has an existing extension, remove the existing extension and replace it with a single extension of appropriate length.

Set the centerline of the hydrant to be vertical and plumb using blocking against firm trench walls.

Set the lowest hose connection of the hydrant 18 to 24 inches above the finished grade. The hydrant break away flange and coupling shall be located within 4 inches of final grade.

Notify the City of Franklin Water utility three days in advance of hydrant installation work so that a city inspector to be on site during relocation work.

D Measurement

The department will measure Add Hydrant Extension – Franklin, Raise Hydrant – Franklin, Lower Hydrant – Franklin, Extend Hydrant Lead – Franklin, Shorten Hydrant Lead – Franklin, Relocate Hydrant – Franklin, Replace Hydrant – Franklin, and Replace Hydrant Lead Valve – Franklin by each location of acceptably completed extension or relocation.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.73	Add Hydrant Extension – Franklin	Each
SPV.0060.74	Raise Hydrant – Franklin	Each
SPV.0060.75	Lower Hydrant – Franklin	Each
SPV.0060.76	Extend Hydrant Lead – Franklin	Each
SPV.0060.77	Shorten Hydrant Lead – Franklin	Each
SPV.0060.78	Relocate Hydrant – Franklin	Each
SPV.0060.79	Replace Hydrant – Franklin	Each
SPV.0060.80	Replace Hydrant Lead Valve – Franklin	Each

Payment is full compensation for furnishing materials not supplied by the city and installing all materials, including branch pipe, valves, anchor tees, fittings, valve boxes, sidewalk castings, restraints, tracer wire, polyethylene wrap, buttresses and hydrant marker; for removing, relocating, modifying, and reinstalling the existing hydrant, furnishing and installing hydrants; for furnishing all necessary excavation and backfill; and for furnishing all labor, tools, equipment and incidentals to complete the work.

92. Lower Water Main – Franklin, Item SPV.0060.81; Offset Water Main – Franklin, Item SPV.0060.82; Replace Valve – Franklin, Item SPV.0060.83; Relocate Valve – Franklin, Item SPV.0060.84

A Description

This special provision describes furnishing and installing water main piping, fittings, and insulation to adjust the location and profile of existing water main pipelines to the location and finish grade as shown on the plans to avoid conflict with proposed storm sewer facilities, furnishing and installing new water main valves, and relocation of existing water main valves. All water main materials shall be manufactured in the United States unless written permission to use foreign made products is obtained from the City of Franklin.

B Materials

B.1 Water Main Piping

All water main piping 16-inches and larger shall be class 52 ductile iron pipe and shall conform to the requirements of AWWA C151. Ductile iron pipe shall have a standard thickness cement-mortar lining in accordance to AWWA C104. The exterior of the pipe for buried service shall have an asphaltic coating.

All water main piping up to 12-inches in diameter shall be PVC, and shall conform to the requirements of AWWA C900. The pipe shall have the same outside diameter as ductile iron pipe. The pipe shall be pressure class 150 (DR18).

B.2 Fittings

All fittings shall have mechanical joints and shall meet the requirements of AWWA C153. Fittings shall be ductile iron or cast iron with a pressure rating of not less than 250 psi. All fittings shall have a standard thickness cement-mortar lining in accordance to AWWA C104.

All mechanical joints shall be made with tee-head bolts and hexagonal nuts conforming to the requirements of AWWA C111. Bolts and nuts shall be high-strength, low-alloy steel coated with a rust-resistant backed on ceramic filled fluoropolymer resin.

All joint restraints for mechanical joints shall be provided by wedge action retainer glands. Gland and wedges shall be ductile iron conforming to ASTM A536. Wedge action retainer glands for ductile iron pipe shall be Uni-Flange series 1400 or EBAA Iron Series 1100 or equal. Wedge action retainer glands for PVC pipe shall be Uni- Flange Series 1500 or EBAA Iron Series 2000PV.

B.3 Valves

Valves for water main 12-inches and smaller shall be resilient seated gate valves conforming to the requirements AWWA C509. Valves shall have an epoxy coated ductile iron or cast iron body, mechanical joint end connections, non-rising stem, bronze stem, and O-ring seals designed for a working pressure of 200 psig. Bolts, nuts, washers, and other attachment hardware for the bonnet, stuffing box, and operating nut shall be AISI Type 304 stainless steel. Valves shall be equipped with a 2-inch square operating nut that is operated left (counterclockwise) to open the valve.

B.4 Valve Box

Valve boxes will be furnished by the Franklin Water and Sewer Utility for installation by the contractor. Valve boxes shall be cast iron, three piece screw type, with 5 ¼-inch shaft diameter and a number six base, as manufactured by Tyler or US manufactured equal. Valve box covers shall be 5 ¾ diameter and be marked "WATER", and shall be of stay put type.

Valve box mounting brackets shall be a fabricated steel assembly, with UV polyurethane protective coating.

B.5 Insulation
All rigid insulation shall be extruded polystyrene foam insulation with a minimum "R" value of 5.0 per inch (at 75 degrees Fahrenheit mean temperature). Insulation shall have a minimum compressive strength of 40 psi. Insulation shall be Styrofoam High Load 40 as manufactured by the Dow Chemical Company or equal.

B.6 Polyethylene Wrap
Polyethylene wrap shall meet the requirement of AWWA C105(ANSI A21.5). Wrap shall be a high-density, cross-laminated polyethylene film with a minimum tensile strength of 5,000 psi and a nominal thickness of 4 mils.

B.7 Concrete
Concrete for thrust collars shall have a minimum compressive strength of 4000 psi. Reinforcing steel shall consist of deformed bars of the size shown in the drawings and shall be Grade 60 conforming to the requirements of ASTM A615.

B.8 Tracer Wire
All tracer wire shall be NEC Type THWN, 600V, No. 10 AWG solid copper wire.

Waterproof splice connectors will be furnished by the Franklin Water and Sewer Utility for installation by the contractor. Waterproof splice connectors will be suitable for use with 10 AWG solid copper wire. Waterproof splice connectors will be of the twist lock design and will be SnakeBite as manufactured by Copperhead Industries, LLC or equal.

B.9 Pipe Bedding Sand
All pipe bedding sand shall be a clean gravel sand mixture free from organic matter and shall conform to the following requirements:

U.S. Standard Sieve Size	Percent by Wight Passing
1-inch	100
#16	45-80
#200	2-10

B.10 Gravel Backfill
All gravel backfill for water main shall be a select, hard, tough, durable crushed stone free from organic matter, and when tested in accordance to ASTM C117 and C136, shall conform to the following requirements:

U.S. Standard Sieve Size	Percent by Wight Passing
1-inch	100
#3/8-inch	45-75
#4	25-60
#10	15-45
#200	3-10

At least 45 percent of the particles retained on the No. 4 U.S. Standard sieve shall have at least one fractured face.

C Construction

Load, transport, and unload all material and equipment furnished by the Franklin Water and Sewer Utility from the storage area to the construction site as required by the contractors operation. All material not incorporated in the work shall remain the property of the Franklin Water and Sewer Utility. Return all unused items to the Franklin Water and Sewer Utility. The Franklin Water and Sewer Utility will inspect and accept the material and equipment in the presence of the contractor. No material or equipment shall be returned to the storage site without written acknowledgement of the Franklin Water and Sewer Utility. The cost of any damaged or destroyed material and equipment will be deducted from the contract amount for the contractor. Contact the Franklin Water and Sewer Utility at (414) 421-2613 to make arrangements to obtain or return material and equipment furnished for installation.

Water main pipe, fittings, and valves used for lowering or offsetting water main shall be thoroughly cleaned and disinfected with calcium hypochlorite tablets in conformance with AWWA C651. All pipe, fittings, and valves used for replacing valves, and relocating valves shall be thoroughly cleaned and swabbed with a 1 to 5 percent sodium hypochlorite solution in conformance with AWWA C651 prior to final installation. A bacteriologically safe sample shall be obtained by the contractor in conformance with Section NR810.09(4) of the Wisconsin Administrative Code prior to placing in service.

Bedding sand shall be compacted to 95 percent of the maximum dry density. Bedding sand shall have a minimum thickness of 4-inches under the barrel and shall extend up one-half the outside diameter of the pipe barrel at the sides. Insulation shall be added as shown on the plans.

Gravel backfill shall be placed in horizontal layers not exceeding 8-inches in loose depth. The material shall be moisture conditioned to within 3 percent of optimum moisture content so the required degree of compaction may be obtained. Each layer shall be compacted to 90 percent of maximum dry density, except when the backfill is the subgrade for walks, roadways, foundations, slabs, the upper 3 feet shall be compacted to 95 percent of the maximum dry density. The standard test to define maximum densities of all compaction work shall be ASTM D1557.

Apply rubberized or tar based sealant to bolts on all mechanical joints to prevent corrosion. All metallic pipe, fittings, valves, valve boxes, and hydrants shall be wrapped with two layers of polyethylene. Polyethylene wrap shall be installed conforming to the requirements of Standard Specifications for Sewer and Water Construction in Wisconsin.

<u>Lower and Offset Water Main</u>

Water main shall be lowered or offset as shown on the plans. Field verify the location and elevation of all water mains identified to be lowered or offset as shown in the plans. Furnish and install pipe, fittings, insulation, and thrust collars to line and grade as shown

on the plans. Existing valves and fittings may be reused upon inspection and approval by the City of Franklin Water Utility.

Water main that is shown on the plans to be abandoned in place shall be filled with a sand slurry when shown with an offset water main.

Tracer wire shall be added for all water main installed. Tracer wire shall be connected to the existing tracer wire at the connection point to the existing water main. Tracer wire shall be taped at the center and each end of each length of pipe. Tracer wires splices shall be completed with a waterproof splice connector.

Replace Valve

Remove and salvage existing valve and valve box for the City of Franklin Water Utility. Furnish and install a solid sleeve, water main pipe, valve, and valve box. Adjust valve box to the finish grade as shown on the plans. Valves shall be set on hardwood blocking 2 x 6 by 18 inches with the long side of the block set perpendicular to the water main. Pipe bedding sand shall be tamped in place from a point above the main to a point 6 inches above the bottom of the valve box base to prevent the valve box base from shifting. A sheet of polyethylene shall be placed under the mounting bracket to prevent bedding material from entering around the operating nut. Valve boxes and covers shall be centered over the valve operating nut and the entire box assembly secured in place before backfilling. Valve boxes that become shifted or filled during backfilling shall be entirely uncovered and reset. Valve box sidewalk casting shall be added when the valve box is located in sidewalks.

Relocate Valve

Remove and reuse existing valve remove and salvage valve box for the City of Franklin Water Utility. Furnish and install solid sleeves, water main pipe and valve box, and install existing valve. Adjust valve box to the finish grade as shown on the plans. Valves shall be set on hardwood blocking 2 x 6 by 18 inches with the long side of the block set perpendicular to the water main. Pipe bedding sand shall be tamped in place from a point above the main to a point 6 inches above the bottom of the valve box base to prevent the valve box base from shifting. A sheet of polyethylene shall be placed under the mounting bracket to prevent bedding material from entering around the operating nut. Valve boxes and covers shall be centered over the valve operating nut and the entire box assembly secured in place before backfilling. Valve boxes that become shifted or filled during backfilling shall be entirely uncovered and reset. Valve box sidewalk casting shall be added when the valve box is located in sidewalks.

D Measurement

The department will measure Lower Water Main – Franklin, Offset Water Main – Franklin, Replace Valve – Franklin and Relocate Valve - Franklin as each individual unit as 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	Lower Water Main – Franklin	Each
SPV.0060.82	Offset Water Main - Franklin	Each
SPV.0060.83	Replace Valve – Franklin	Each
SPV.0060.84	Relocate Valve – Franklin	Each

Payment is full compensation for installing tracer wire splice connectors furnished by the Franklin Water and Sewer Utility, furnishing and installing all materials, all excavation, pipeline installation, bedding, backfilling, disposal of surplus materials, and restoration of the work site; and for furnishing all labor, tools, equipment, and incidentals necessary to complete the work.

93. Replace Curb Box - Franklin, Item SPV.0060.85.

A Description

This special provision describes replacing curb boxes and protecting and maintaining accessibility for the duration of the paving project to all City of Franklin water valve boxes, curb boxes, and water valves located within the project limits.

B Materials

B.1 Curb Boxes

Curb boxes will be furnished by the Franklin Water and Sewer Utility for installation by the contractor. Curb boxes will be Minneapolis pattern base, 1¼-inch upper section, extension type, plug style lid with a brass 27/32-inch pentagon head bolt plug, model H-10388 as manufactured by Mueller, model EM 2 as manufactured by Ford or approved equal.

B.2 Pipe Bedding Sand

All pipe bedding sand shall be a clean gravel sand mixture free from organic matter and shall conform to the following requirements:

U.S. Standard Sieve Size	Percent by Wight Passing
1-inch	100
#16	45-80
#200	2-10

B.3 Gravel Backfill

All gravel backfill for water main shall be a select, hard, tough, durable crushed stone free from organic matter, and when tested in accordance to ASTM C117 and C136, shall conform to the following requirements:

U.S. Standard Sieve Size	Percent by Wight Passing
1-inch	100
#3/8-inch	45-75
#4	25-60
#10	15-45
#200	3-10

B.4 Couplings and Fittings
Couplings and fitting will be furnished by the Franklin Water and Sewer Utility for installation by the contractor. Couplings and fittings shall be cast brass, compression type, suitable for use with copper or polyethylene tubing. Insert stiffeners for plastic tubing be AISI Type 304 stainless steel, and will be dimpled and flanged to maintain placement within the service pipe. Couplings will be Ford Model C44 Pack Joint for copper or plastic (CTS) or equal.

B.5 Polyethylene Wrap
Polyethylene wrap shall meet the requirement of AWWA C105 (ANSI A21.5). Wrap shall be a high-density, cross-laminated polyethylene film with a minimum tensile strength of 5,000 psi and a nominal thickness of 4 mils.

C Construction
Load, transport, and unload all material and equipment furnished by the Franklin Water and Sewer Utility from the storage area to the construction site as required by the contractors operation. All material not incorporated in the work shall remain the property of the Franklin Water and Sewer Utility. Return all unused items to the Franklin Water and Sewer Utility. The Franklin Water and Sewer Utility will inspect and accept the material and equipment in the presence of the contractor. No material or equipment shall be returned to the storage site without written acknowledgement of the Franklin Water and Sewer Utility. The cost of any damaged or destroyed material and equipment will be deducted from the contract amount for the contractor. Contact the Franklin Water and Sewer Utility at (414) 421-2613 to make arrangements to obtain or return material and equipment furnished for installation.

All metallic pipe, fittings, valve boxes and valves shall be wrapped with two layers of polyethylene. Polyethylene wrap shall be installed conforming to the requirements of Standard Specifications for Sewer and Water Construction in Wisconsin. All joints shall be restrained.

All curb stops and valves that are exposed during construction shall be inspected by the City of Franklin Water Utility. The City of Franklin Water Utility will require approximately 1 hour for inspection prior to installation by the contractor. Contact the City of Franklin Water Utility at (414) 421-2613 to schedule inspection.

Throughout the duration of the project ensure that all water valve boxes and curb boxes are located and identified by blue paint and that at all times, all water appurtenances remain accessible for operation by city staff. Exercise caution working adjacent to water

facilities to avoid damage and ensure accessibility. All water valve boxes and curb boxes shall be installed to the finish grade as shown on the plans.

Bedding sand shall be compacted to 95 percent of the maximum dry density. Bedding sand shall have a minimum thickness of 4-inches under the barrel and shall extend up one-half the outside diameter of the pipe barrel at the sides.

Gravel backfill shall be placed in horizontal layers not exceeding 8-inches in loose depth. The material shall be moisture conditioned to within 3 percent of optimum moisture content so the required degree of compaction may be obtained. Each layer shall be compacted to 90 percent of maximum dry density, except when the backfill is the subgrade for walks, roadways, foundations, slabs, the upper three feet shall be compacted to 95 percent of the maximum dry density. The standard test to define maximum densities of all compaction work shall be ASTM D1557.

Replace Curb Box

Remove and salvage existing curb box for the City of Franklin Water Utility. Furnish and install new curb box. Curb box paving adaptor shall be installed with the curb box when located in asphalt or concrete pavement or sidewalks. The lid section of the curb box shall be removed to accommodate installation of the curb box paving adaptor. Curb box shall be wrapped in two layers of polyethylene.

Curb stop shall be replaced if the existing curb stop has flared end connections.

D Measurement

The department will measure Replace Curb Box – Franklin, as each individual unit, acceptably completed.

E Payment

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

Item Number	Description	Unit
SPV.0060.85	Replace Curb – Franklin	Each

Payment is full compensation for furnishing all excavation, backfilling, disposal of surplus materials, installing curb boxes and fittings furnished by the Franklin Water and Sewer utility and for furnishing all labor, tools, equipment and incidentals necessary to complete the work.

94. Adjust Valve Box - Oak Creek; Item SPV.0060.86.

A Description

This work includes adjusting valve boxes vertically to the required finish elevation. This work shall be done in accordance to the Standard Specifications for Sewer and Water Construction in Wisconsin, latest edition and amendments (SSSW).

B Materials

B.1 Valve Boxes

All valve boxes within the project limits are existing.

If the existing valve box falls in a large cut section, or a section needs to be replaced, valve boxes shall be cast iron and be 5-1/4 inch diameter (minimum) shaft, round base, 3 piece box; 5-1/4 drop lid marked "WATER"; length of assembly sized to span top of main to finished grade with a minimum remaining adjustment of 3 inches. Contractor shall furnish Cast Iron Valve Boxes Series 8560 for the valve box and Series 6800 Lid as manufactured by East Jordan Iron works or approved equal. Cast iron valve boxes shall receive a single layer of 6-mil poly wrapping.

C Construction

C.1 General

The location of existing valve boxes to be adjusted is indicated on the plans. Adjust these items as shown in the plan to ¼" below finish grade/elevation and in accordance to Section B.1 of this specification. Furnish and use compacted granular backfill in the excavation area. Any damage to a mainline valve box resulting from construction under this contract shall be replaced at the contractor's expense.

D Measurement

The department will measure Adjust Valve Box - Oak Creek as a unit per each adjustment, 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.0060.86	Adjust Valve Box - Oak Creek	Each

Payment is full compensation for adjusting the valve boxes to ¼" below finish grade.

95. Pull Boxes, Non-Metallic 13x24x18-Inch, Item SPV.0060.88.

A Description

This special provision describes pull boxes to be installed for the municipal lighting system.

B Materials

Non-metallic pull boxes shall be constructed from precast polymer resin material. Boxes shall be ANSI Tier 22, and open bottomed. Covers shall be ANSI Tier 22, extra heavy duty, with 2 bolts, minimum 0.50 coefficient of friction, and "ELECTRIC" logo.

The size of the pull boxes shall be 13" wide by 24" long by 18" deep.

C Construction
Under the Pull Boxes Non-metallic and bid items, provide pull boxes with open bottoms and solid lids. Excavate, place coarse aggregate drain material, and backfill as the plan details show and as specified in standard spec 653. Dispose of surplus or unsuitable material. Use covers stamped "ELECTRIC" for pull boxes for lighting.

Provide a supplemental 8'-0" long, 5/8" diameter, copper clad ground rod at each Pull Box; bond ground rod to equipment grounding conductors.

D Measurement
The department will measure Pull Boxes, Non-Metallic 13x24x18-Inch as each 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.0060.88	Pull Boxes, Non-Metallic 13x24x18-Inch	Each

Payment is full compensation for providing pull boxes; for materials including aggregate; spare wire loop; pull box enclosure and covers; conduit extensions less than 10 feet long including fittings; and for furnishing all excavating, backfilling, and disposing of surplus material.

96. Street Sweeping, Item SPV.0075.01.

A Description
This special provision describes removing dirt and dust particles from the roadway using a street sweeper periodically during the project as directed by the engineer.

B Materials
Provide a mechanical, vacuum-assisted or regenerative street sweeper capable of collecting debris within an enclosed collection bin or hopper and disposing of the debris.

C Construction
Remove the debris from the roadway using the street sweeper periodically during the project as directed by the engineer.

Provide logged hours of street sweeping to the engineer for approval on a weekly basis.

D Measurement
The department will measure Street Sweeping by the hour that the street sweeper is on the project picking up and removing debris from the roadway, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0075.01	Street Sweeping	HRS

Payment is full compensation for furnishing all tools, materials, labor and incidentals required to complete the work.

97. Pond Edge Seeding, Item SPV.0085.01.

A Description

This section describes preparing seed beds and furnishing and sowing the required seed along the edge of the permanent pool in a wet detention pond, located east of STH 241 and south of Drexel Avenue.

B Materials

B.1 Seed

B.1.1 General Requirements

Conform to the Wisconsin statutes and Wisconsin administrative code chapter ATCP 20 regarding noxious weed seed content and labeling. Use seed within one year of the test date appearing on the label.

The seed mix includes wild type sedges, rushes and grasses. Wild type is defined as seed that is derived directly from native, wild stock, including seed that was wild collected and placed into production or has been harvested directly from native stands.

B.1.2 Purity and Germination

Test seed according to the methods and procedures used for sampling and analyzing seed for purity, germination, and noxious weed seed content specified in the current edition of Rules for Testing Seed, published by the Association of Official Seed Analysts.

B.1.3 Storing Seed

Store any seed delivered before use in a way that protects it from damage by heat, moisture, rodents, or other causes. Discard and replace any previously tested and accepted seed that becomes damaged.

B.1.4 Seed Mix Composition

Seed mix shall be composed of seeds of the purity, germination, and proportions, by weight, as given in the following table.

Scientific Name	Common Name	Purity and Germination minimum %	Mix Portion in Percent by Weight
Calamagrostis canadensis	Blue Joint Grass	Pure Live Seed	2.8
Carex comosa	Bristly Sedge	Pure Live Seed	11.0
Carex crinita	Fringed Sedge	Pure Live Seed	4.4
Carex hystericina	Porcupine Sedge	Pure Live Seed	11.0
Glyceria grandis	Reed Manna Grass	Pure Live Seed	6.6
Glyceria striata	Fowl Manna Grass	Pure Live Seed	4.4
Juncus effusus	Common Rush	Pure Live Seed	0.7
Leersia oryzoides	Rice Cut Grass	Pure Live Seed	8.9
Scirpus acutus	Hard-Stemmed Bulrush	Pure Live Seed	2.2
Scirpus atrovirens	Dark Green Bulrush	Pure Live Seed	4.4
Scirpus cyperinus	Wool Grass	Pure Live Seed	1.7
Scirpus fluviatilis	River Bulrush	Pure Live Seed	5.5
Scirpus pendulus	Red Bulrush	Pure Live Seed	2.2
Scirpus validus	Soft-Stem Bulrush	Pure Live Seed	5.5
Spartina pectinata	Prairie Cord Grass	Pure Live Seed	28.7

C Construction

C.1 General

The contractor may perform seeding at any time soil conditions are suitable, except between June 15 and October 15, unless the engineer allows otherwise. Sow seed at the specified rate. Complete grading before permanent seeding.

C.2 Sowing

The seed mix shall be sown using equipment adapted to the purpose, or by scattering it uniformly over the areas to be seeded. Lightly rake or drag to cover the seed with approximately 1/4 inch of soil. After seeding, lightly roll or compact the areas using suitable equipment, preferably the cultipacker type, when the engineer judges the seedbed too loose, or if the seedbed contains clods that might reduce seed germination.

If scattering seed by hand, perform this work with satisfactory hand seeders and only when the air is calm enough to prevent seeds from blowing away.

C.3 Seeding Rate
Sow mixture at a rate of 25 pounds/acre.

C.4 Eradication of Invasive Species
During the growing season after planting the Pond Edge seed mixture, eradicate the following species from the seeded areas as soon as they become evident:

SPECIES COMMON NAME	SPECIES BOTANICAL NAME
Musk thistle	Carduus nutans
Spotted knapweed	Centaurea maculosa
Canada thistle	Cirsium arvense
Bull thistle	Cirsium vulgare
Field bindweed	Convolvulus arvensis
Leafy spurge	Euphorbia esula
Sweetclover	Melilotus species
Wild parsnip	Pastinaca sativa

Eradicate by hand pulling individual plants.

D Measurement
The department will measure Pond Edge Seeding by the pound, acceptably completed.

The department will measure quantities based on net weights of seed shipments, or on quantities weighed on department-approved scales the contractor furnishes. The department will make deductions for all quantities wasted or not actually incorporated in the work according to the contract. The department will determine the equivalent pounds of seed furnished and applied by dividing the actual pounds of seed applied by the sum of the unadjusted and adjusted percentages of the various species in the seed mixture sown.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0085.01	Pond Edge Seeding	LB

Payment for the Pond Edge Seeding is full compensation for providing, handling, and storing all seed; for providing the required culture as specified; and for preparing the seed bed, sowing, covering and firming the seed.

98. Concrete Curb and Gutter Modified Type G, Item SPV.0090.01; Concrete Curb and Gutter Modified Type A, Item SPV.0090.02; Concrete Curb and Gutter Modified Type D, Item SPV.0090.03.

A Description

This special provision describes concrete curb and gutter, type G, A and D with a modified pan, as shown on the plans and as herein provided.

B Materials

The materials furnished and used in the work shall conform to standard spec 601.2

C Construction

The construction methods employed in the work shall conform to standard spec 601.3

D Measurement

The department will measure Concrete Curb and Gutter Modified (Type) by the linear foot, acceptably completed.

The length measured equals the distance along the base of the curb face, or along the flow line of the gutter. The department will measure continuously along a line extended across driveway and alley entrance returns or ramps.

The department will not make deductions in length for drainage structures installed in the curbing such as drop inlets, etc.

The department will measure all excavation required for and performed during this work, if covered by a bid item in the contract, as specified in the specifications. However, if the contract does not provide a bid item for excavation, it is incidental to the work.

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 Modified Type G	LF
SPV.0090.02	Concrete Curb and Gutter Modified Type A	LF
SPV.0090.03	Concrete Curb and Gutter Modified Type D	LF

Payment is full compensation for furnishing all foundation excavation and preparation; all special construction required at driveway and alley entrances, or curb ramps; for providing all materials; and for disposing of surplus excavation material, and restoring the work site. However, if the contract provides a bid item for excavation, then the department will pay for the excavation required for this work as specified in the contract. Payment includes providing tie bars in unhardened concrete.

The department will adjust pay for crack repairs on concrete built under this specification as specified in standard spec 416.5.2 for ancillary concrete.

99. Fence Chain Link Polymer Coated 4-Ft, Item SPV.0090.04.

A Description

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

B Materials

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

B.1 Fabric

Provide steel chain link fence fabric that conforms to the requirements of ASTM F668, Class 2b, a polymer-coating fused and adhered to wire that is zinc-coated. Provide fabric woven from 9-gage wire using plan specified mesh size, diamond pattern, with both the top and bottom selvages knuckled. The minimum breaking strength of the wire shall be 1290 lbs. the color of polymer-coating shall conform to the requirements of ASTM F934.

B.2 Framework

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

B.3 Fittings

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

moisture intrusion. Supply dome style caps for end posts and loop type caps for line posts. The color of polymer-coating shall conform to the requirements of ASTM F934, and match the color of the other fence components.

B.4 Bolts

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

B.5 Tests

B5.1 Fabric and Tie Wire

Breaking Strength:	ASTM A370	
Zinc-Coating Requirements		
Weight of Zinc-Coating:	ASTM A90	
Polymer-Coating Requirements		
Thickness of Polymer-Coating:	ASTM F668	
Adhesion:	ASTM F668	
Accelerated Aging Test:	ASTM F668, D1499	
Mandrel Bend Test:	ASTM F668	

B5.2 Framework

Tensile and Yield Strength:	ASTM E8	
Zinc-Coating Requirements		
Weight of Zinc-Coating:	ASTM A90	
Polymer-Coating Requirements		
Thickness of Polymer-Coating:	ASTM E376	
Adhesion:	ASTM F1043	
Accelerated Aging Test:	ASTM F1043, D1499	

B5.3 Fittings

Zinc-Coating Requirements		
Weight of Zinc-Coating:	ASTM A90	
Polymer-Coating Requirements		
Thickness of Polymer-Coating:	ASTM F626	
Adhesion:	ASTM F1043	(same test as for framework)
Accelerated Aging Test:	ASTM F1043, D1499	(same test as for framework)

B6 Submittals

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

David Nelson
WisDOT (Bureau of Structures)
4802 Sheboygan Avenue (Room 601)
PO Box 7916
Madison, WI 53707

B.6.1 Shop Drawings

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

B.6.2 Specification Compliance

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

C Construction

C.1 Delivery, Storage and Handling

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

C.2 Touch-up and Repair

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

C.3 General

Install the chain link fence in accordance to ASTM F567 and the manufacturer’s instructions. The contractor shall provide staff that is thoroughly familiar with the type of construction involved and materials and techniques specified. Chain link fabric shall be installed on the side of the posts indicated on the plans. Fabric shall be attached to the end posts with tension bars and tension bands. It shall be attached to rails, and posts without tension bands, with tie wires. The fabric shall be installed and pulled taut to provide a

smooth and uniform appearance free from sag, without permanently distorting the fabric diamond or reducing the fabric height. Install top rail to pass through line post caps and form a continuous brace between end posts. Minimum length of top rail between splices shall be 20-feet. Splice top rail at joints with sleeves for a rigid connection. Locate splices near ¼ point of post spacing. Heads of bolts shall be on the side of the fence adjacent to pedestrian traffic.

D Measurement

The department will measure Fence Chain Link Polymer-Coated 4-Ft. by the linear foot, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.04	Fence Chain Link Vinyl Coated 4-Ft	LF

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

100. Pavement Marking Grooved Preformed Thermoplastic Stop Line 18-Inch, Item SPV.0090.05; Diagonal 12-Inch, Item SPV.0090.06; Crosswalk 6-Inch, Item SPV.0090.07; Yield Line 18-Inch, Item SPV.0090.08.

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 (Type) or 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 items:

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.05	Pavement Marking Grooved Preformed Thermoplastic Stop Line 18-Inch	LF
SPV.0090.06	Pavement Marking Grooved Preformed Thermoplastic Diagonal 12-Inch	LF
SPV.0090.07	Pavement Marking Grooved Preformed Thermoplastic Crosswalk 6-Inch	LF
SPV.0090.08	Pavement Marking Grooved Preformed Thermoplastic Yield Line 18-Inch	LF

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

101. Ductile Iron Water Main 8-Inch, Item SPV.0090.09, Ductile Iron Water Main 12-Inch, Item SPV.0090.10, Ductile Iron Water Main 16-Inch, Item SPV.0090.11.

A Description

This special provision describes the installation of 8-inch, 12-inch and 16-inch diameter Ductile Iron water main alterations as shown on the plans.

A.1 General

Perform work under these items in accordance to the details as shown on the plans and the requirements of the City of Milwaukee Water Main Installation Specifications, dated January 2, 1987 (City Water Main Specifications). Additionally, perform all work in accordance to the "Milwaukee Water Works Standard Plan Notes for Water Main Construction", June 14, 2011. Notes 4, 6, 15 through 18 and 21 shall not apply to this project. In case of conflicts between the City Water Main Specifications and the standard specifications or these special provisions, the requirements of the standard specifications

and the special provisions shall govern. Contact Ms. Angela Baldwin, at (414) 286-2813, to purchase copies of the required documents.

A.2 Submittals

Address all required submittals to Milwaukee Water Works as follows:

Superintendent
Milwaukee Water Works
Zeidler Municipal Building
841 North Broadway, Room 409
Milwaukee, WI 53202

A.3 Sequence of Construction

Due to the nature of this work, including traffic staging and coordination with other work, the contractor is advised there may be multiple mobilizations to complete the water main work. No additional payment will be made by the department for said mobilizations.

Determine sequence and schedule for water main construction, subject to the requirements herein.

Prepare and submit for review by the Superintendent of Milwaukee Water Works a detailed construction schedule stating the anticipated dates and duration of all interruptions in water service necessary to complete the work under the contract, including the abandonment of existing water mains.

B Materials

B.1 General

The City of Milwaukee shall furnish valves, hydrants and all fittings required for installation on this project. Contact Mr. Ricardo Lopez, Inventory Clerk, at (414) 286-6123 for material supplies. Contractor shall provide all ductile iron water main conforming to the latest version of the City of Milwaukee's Material Specifications. Material specifications can be found at the following website: http://city.milwaukee.gov/water/business/standardspecs.htm.

All materials will require inspection by the City of Milwaukee. Notify Mr. Patrick Pauly, (414) 286-8167 or Mr. Steve Brengosz, (414) 708-2808, for materials inspection and the City of Milwaukee's Construction Section, (414) 286-2497, for construction inspection, four working days prior to starting construction.

Contractor to provide all necessary information for furnished steel and iron items to comply with Wisconsin Department of Transportation DT2249, "Utility's Certificate of Compliance for Steel and Iron Items".

Milwaukee Water Works will test all pipe, in accordance to the City of Milwaukee Material Testing Specifications.

B.2 Valve Box Adapter
Install all valve boxes on gate valves with the use of valve box base adapters as detailed in the Standard Plan Notes Regarding Water Main Construction. Install the adapter in addition to the hardwood blocking.

C Construction
All costs for completing the work required for valve installations is to be included in the price for the Ductile Iron Water Main item(s).

Install fittings as shown on plans, incidental to respective ductile iron water main item. A list of fittings for each water main installation is provided on plans.

Abandon existing water mains as shown on plans. All costs for the abandonment of existing water main are to be included in the price for the Ductile Iron Water Main item(s).

The Milwaukee Water Works will shut off the water main to be altered and provide temporary hose connections to affected services as required.

Provide all surveying required to layout and construct the water main relocations.

Unless shown otherwise, backfill all water main excavations with granular backfill as specified in Section 14 of the City of Milwaukee Standard Plan Notes Regarding Water Main Construction.

Consolidate all backfill by mechanical compaction per specification 2.6.14(B) of the Standard Specifications for Sewer and Water Construction in Wisconsin. Per specification, the initial compacted lift shall be 2 feet, and the specification shall be modified to read, "each subsequent compacted lift of material shall be 1 foot". Costs are to be included in the unit price bid for the water main. Settling the trench by flooding the backfill will not be allowed.

D Measurement
The department will measure Ductile Iron Water Main 8-Inch, Ductile Iron Water Main 12-Inch, Ductile Iron Water Main 16-Inch, by the linear foot of water main of the type and diameter specified, 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.0090.09	Ductile Iron Water Main 8-Inch	LF
SPV.0090.10	Ductile Iron Water Main 12-Inch	LF
SPV.0090.11	Ductile Iron Water Main 16-Inch	LF

Payment is full compensation for providing all labor, equipment, materials (except hydrants, valves, and fittings provided by the city) ; for furnishing all surveying; excavating, for sheeting and shoring; for forming foundation; for laying pipe; for removing valves; for installing all valves and fittings; for concrete base, buttresses, and anchors; for bulkheading and abandoning existing water mains; for sealing joints and making connections to new or existing facilities; for providing granular backfill material, including bedding material; for backfilling; for removing sheeting and shoring; for cleaning out the site of the work and incidentals necessary to complete the work.

102. Ductile Iron Hydrant Branch 6-Inch, Item, SPV.0090.12.

A Description

This special provision describes installing 6" diameter hydrant branch alterations.

A.1 General

Perform work under these items in accordance to the details as shown on the plans and the requirements of the City of Milwaukee Water Main Installation Specifications, dated January 2, 1987 (City Water Main Specifications). Additionally, perform all work in accordance to the "Milwaukee Water Works Standard Plan Notes for Water Main Construction", June 14, 2011. Notes 4, 6, 15 through 18 and 21 shall not apply to this project. In case of conflicts between the city Water Main Specifications and the standard specifications or these special provisions, the requirements of the standard specifications and the special provisions shall govern. Contact Ms. Angela Baldwin, at (414) 286-2813 to purchase copies of the required documents.

A.2 Sequence of Construction

Due to the nature of this work, including traffic staging and coordination with other work, the contractor is advised there may be multiple mobilizations to complete the water main work. No additional payment will be made by the department for said mobilizations.

Determine sequence and schedule for water main construction, subject to the requirements herein.

Prepare and submit for review by the Superintendent of Milwaukee Water Works a detailed construction schedule stating the anticipated dates and duration of all interruptions in water service necessary to complete the work under the contract, including the abandonment of existing water mains.

B Materials

B.1 General

The city will furnish hydrants, valves, and fittings for installation on this project. Contact Mr. Ricardo Lopez, Inventory Clerk, at (414) 286-6123 for material supplies. Contractor shall provide all water main materials conforming to the latest version of the City of Milwaukee's Material Specifications. Material specifications can be found at the following website, http://city.milwaukee.gov/water/business/standardspecs.htm. All materials will require inspection by the City of Milwaukee. Notify Mr. Patrick Pauly, (414) 286-8167, or Mr. Steve Brengosz, (414) 708-2808, for materials inspection and the

City of Milwaukee's Construction Section, (414) 286-2497, for construction inspection, four working days prior to starting construction.

The contractor shall return all abandoned hydrants to the DPW Field Headquarters – Infrastructure, Operations, Water Works at 3850 N. 35th Street. Contact Mr. Ben Glatzel at (414) 708-2839, for additional information.

Contractor to provide all necessary information for furnished steel and iron items to comply with Wisconsin Department of Transportation DT2249, "Utility's Certificate of Compliance for Steel and Iron Items".

Milwaukee Water Works will test all pipe, in accordance to the City of Milwaukee Material Testing Specifications.

B.2 Valve Box Adapters
Install all valve boxes on gate valves with the use of valve box base adapters as detailed in the Standard Plan Notes Regarding Water Main Construction. Install the adapter in addition to the hardwood blocking.

C Construction
All costs for completing the work required for valve installations is to be included in the price for the Ductile Iron Hydrant Branch item(s).

Install fittings as shown on plans, incidental to respective ductile iron hydrant branch item. A list of fittings, provided by the City of Milwaukee, for each hydrant branch installation is provided on plans.

The Milwaukee Water Works will shut off the water main to be altered and provide temporary hose connections to affected services as required.

Provide all surveying required to layout and construct the hydrant relocations.

Unless shown otherwise, backfill all water main excavations with granular backfill as specified in Section 14 of the City of Milwaukee Standard Plan Notes Regarding Water Main Construction.

Consolidate all backfill by mechanical compaction per specification 2.6.14(B) of the Standard Specifications for Sewer and Water Construction in Wisconsin. Per specification, the initial compacted lift shall be 2 feet, and the specification shall be modified to read, "each subsequent compacted lift of material shall be 1 foot". Costs are to be included in the unit price bid for the water main. Settling the trench by flooding the backfill will not be allowed.

D Measurement
The department will measure Ductile Iron Hydrant Branch 6-Inch by the linear foot of water main, and hydrant branch of the type and diameter specified, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.12	Ductile Iron Hydrant Branch 6-Inch	LF

Payment is full compensation for providing all labor, equipment, materials (except hydrants, valves, and fittings provided by the city); for furnishing all surveying; excavating, for sheeting and shoring; for forming foundation; for laying pipe; for removing valves; for installing all valves and fittings; for concrete base, buttresses, and anchors; for bulkheading and abandoning existing water mains; for sealing joints and making connections to new or existing facilities; for providing granular backfill material, including bedding material; for backfilling; for removing sheeting and shoring; for cleaning out the site of the work and incidentals necessary to complete the work.

103. Detention Pond Dewatering, Item SPV.0105.01.

A Description

This work shall consist of furnishing all labor, tools, equipment, and materials to install, maintain, operate, and remove all necessary systems to fully dewater a wet detention pond, located east of STH 241 and south of Drexel Avenue, that is being modified through this contract.

B Materials

B.1 General

The contractor shall be responsible for the choice of the product(s) and equipment for the dewatering systems.

The contractor shall submit to the engineer for review a description of dewatering techniques and equipment to be used, together with detail drawings showing items such as, but not limited to type of wells, well size, type of pumps, pump sizes, lengths and sizes of discharge piping, berms and points(s) of discharge including erosion control procedures.

The contractor shall select the wells and pumps he/she desires to use and the rate at which the pumps discharge, but adequate protection at the pump discharge shall be provided by the contractor, subject to review by engineer.

C Construction

C.1 General

Prior to any dewatering work associated with the project, the contractor shall identify the proposed dewatering methods to be used and obtain approval from the engineer. Dewatering shall be in accordance to the Erosion Control Implementation Plan (ECIP).

Prior to performing dewatering work associated with the project, the contractor shall obtain any required Wisconsin Department of Natural Resources permits for dewatering wells (if required). The contractor shall be solely responsible for compliance with all permit conditions.

The pond shall be fully dewatered, to a hydrostatic level of 24" below the bottom of clay liner, prior to beginning earthwork modifications to pond. Where no liner will be installed, the pond shall be fully dewatered to a hydrostatic level of 24" below proposed surface grade. The dewatering systems shall be operated to maintain a fully dewatered state in the pond until the pond modifications are complete. The dewatering systems shall address the permanent pond pool, any inflowing storm runoff into the pond, and groundwater sources. The contractor shall deal with and divert all inflow to the pond.

The contractor shall be responsible for the dewatering systems and their safety and conformity with state and local codes and regulations. All products shall be adequate for the intended use/application and within the construction limits present at the site. The engineer's review does not relieve the contractor from compliance with the contract requirements. Changes to the dewatering plan are to be approved by the engineer.

The contractor shall ensure that downstream water quality will not be impaired. Water pumped or drained from the required work shall be disposed of in a safe and suitable manner without damage to adjacent property or streets or to other areas under construction. No water shall be discharged onto the ground, onto streets or into sanitary sewers. No water containing settleable solids shall be discharged into storm sewers. Water shall be filtered or run through adequately-sized sediment tanks and filter bags prior to discharge into storm sewers. Any and all damages caused by dewatering work shall be promptly repaired by the contractor.

D Measurement

The department will measure Detention Pond Dewatering as a single lump sum unit of work for the furnishing, installing, maintaining, operating, and removing of the dewatering systems, 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	Detention Pond Dewatering	LS

Payment is full compensation for furnishing all labor, tools, equipment, and materials to install, maintain, operate and remove all necessary systems to fully dewater a wet detention pond as necessary to complete the contract work.

104. Remove Traffic Signals STH 241 and W. Drexel Avenue, Item SPV.0105.02; STH 241 and Northwestern Mutual Way, Item SPV.0105.03; STH 241 and W. Rawson Avenue (CTH BB), SPV.0105.04; STH 241 and S. Riverwood Boulevard, Item SPV.0105.05; STH 241 and W. Sycamore Avenue/Street, Item SPV.0105.06; STH 241 and W. College Avenue (CTH ZZ), Item SPV.0105.07.

A Description

This special provision describes removing existing traffic signals at the department owned intersections of STH 241 and W. Drexel Avenue, STH 241 and Northwestern Mutual Way, STH 241 and W. Rawson Avenue (CTH BB), STH 241 and S. Riverwood Boulevard, STH 241 and W. Sycamore Avenue/Street, and STH 241 and W. College Avenue (CTH ZZ) 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.

Department Owned Traffic Signals

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.

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, 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.

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

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

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.02	Remove Traffic Signals STH 241 and W. Drexel Avenue	LS
SPV.0105.03	Remove Traffic Signals STH 241 and Northwestern Mutual Way	LS
SPV.0105.04	Remove Traffic Signals STH 241 and W. Rawson Avenue (CTH BB)	LS
SPV.0105.05	Remove Traffic Signals STH 241 and S. Riverwood Boulevard	LS
SPV.0105.06	Remove Traffic Signals STH 241 and W. Sycamore Avenue/Street	LS
SPV.0105.07	Remove Traffic Signals STH 241 and W. College Avenue (CTH ZZ)	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.

105. Transporting Signal and Lighting Materials STH 241 and W. Drexel Avenue, Item SPV.0105.08; STH 241 and Northwestern Mutual Way, Item SPV.0105.09; STH 241 and W. Rawson Avenue (CTH BB), SPV.0105.10; STH 241 and S. Riverwood Boulevard, Item SPV.0105.11; STH 241 and W. Sycamore Avenue/Street, Item SPV.0105.12; STH 241 and W. College Avenue (CTH ZZ), Item SPV.0105.13.

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 (to be installed on monotube assemblies).

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 as a single lump sum unit of work, acceptably completed.

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.08	Transporting Signal and Lighting Materials STH 241 and W. Drexel Avenue	LS
SPV.0105.09	Transporting Signal and Lighting Materials STH 241 and Northwestern Mutual Way	LS
SPV.0105.10	Transporting Signal and Lighting Materials STH 241 and W. Rawson Avenue (CTH BB)	LS
SPV.0105.11	Transporting Signal and Lighting Materials STH 241 and S. Riverwood Boulevard	LS
SPV.0105.12	Transporting Signal and Lighting Materials STH 241 and W. Sycamore Avenue/Street	LS
SPV.0105.13	Transporting Signal and Lighting Materials STH 241 and W. College Avenue (CTH ZZ)	LS

Payment is full compensation for transporting the monotube poles, monotube arms and luminaire arms (to be installed on monotubes). Installation of these materials is included under a separate pay item.

106. Install State Furnished Traffic Signal Cabinet STH 241 and W. Drexel Avenue, Item SPV.0105.14; STH 241 and Northwestern Mutual Way, Item SPV.0105.15; STH 241 and W. Rawson Avenue (CTH BB), SPV.0105.16; STH 241 and S. Riverwood Boulevard, Item SPV.0105.17; STH 241 and W. Sycamore Avenue/Street, Item SPV.0105.18; STH 241 and W. College Avenue (CTH ZZ), Item SPV.0105.19.

A Description
This special provision describes the installing of the state furnished Traffic Signal Cabinet for traffic signals.

B Materials
Use materials furnished by the department including: the traffic signal controller and the traffic signal cabinet. 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 department furnished materials at the department's Electrical Shop located at 935 South 60th Street, West Allis. Notify the department's Electrical Field Unit at (414) 266-1170 and make arrangements for picking up the department furnished materials five working days prior to picking up the materials.

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 to 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.

Request a signal inspection of the completed signal installation to the engineer at least five working days prior to the time of the requested inspection. The department's Region Electrical personnel will perform the inspection.

Coordinate directly with the department's Traffic Signal Cabinet vendor to schedule the cabinet acceptance testing. Notify the department's Electrical Field Unit at (414) 266-1170 and participate in the acceptance testing. The department has the final determination of the cabinet acceptance testing date and time. The acceptance testing procedures will be provided by the department. The department shall not be responsible for project delays and costs due to the delays of delivery by the vendor or by the failure of the Traffic Signal Cabinet to pass acceptance testing.

D Measurement

The department will measure Install State Furnished Traffic Signal Cabinet [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.0105.14	Install State Furnished Traffic Signal Cabinet STH 241 and W. Drexel Avenue	LS
SPV.0105.15	Install State Furnished Traffic Signal Cabinet STH 241 and Northwestern Mutual Way	LS
SPV.0105.16	Install State Furnished Traffic Signal Cabinet STH 241 and W. Rawson Avenue (CTH BB)	LS
SPV.0105.17	Install State Furnished Traffic Signal Cabinet STH 241 and S. Riverwood Boulevard	LS
SPV.0105.18	Install State Furnished Traffic Signal Cabinet STH 241 and W. Sycamore Avenue/Street	LS
SPV.0105.19	Install State Furnished Traffic Signal Cabinet STH 241 and W. College Avenue (CTH ZZ)	LS

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

107. Install State Furnished EVP Detector Heads STH 241 and W. Drexel Avenue, Item SPV.0105.20; STH 241 and Northwestern Mutual Way, Item SPV.0105.21; STH 241 and W. Rawson Avenue (CTH BB), SPV.0105.22; STH 241 and S. Riverwood Avenue, Item SPV.0105.23; STH 241 and W. Sycamore Avenue/Street, Item SPV.0105.24; STH 241 and W. College Avenue (CTH ZZ), Item SPV.0105.25.

A Description

This special provision describes the transporting and installing of department furnished Emergency Vehicle Preemption (EVP) Detector Heads and EVP Detector Head Mounting Brackets.

B Materials

Use materials furnished by the department including: 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 Install State Furnished EVP Detector Heads (Location) as a single lump sum unit of work, acceptably completed.

E Payment

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.20	Install State Furnished EVP Detector Heads STH 241 and W. Drexel Avenue	LS
SPV.0105.21	Install State Furnished EVP Detector Heads STH 241 and Northwestern Mutual Way	LS
SPV.0105.22	Install State Furnished EVP Detector Heads STH 241 and W. Rawson Avenue (CTH BB)	LS
SPV.0105.23	Install State Furnished EVP Detector Heads STH 241 and S. Riverwood Avenue	LS
SPV.0105.24	Install State Furnished EVP Detector Heads STH 241 and W. Sycamore Avenue/Street	LS
SPV.0105.25	Install State Furnished EVP Detector Heads STH 241 and W. College Avenue (CTH ZZ)	LS

Payment is full compensation for transporting and installing of department furnished Emergency Vehicle Preemption (EVP) Detector Heads and EVP Detector head Mounting Brackets.

108. Install Fiber Optic Communications in Cabinet STH 241 and W. Drexel Avenue, Item SPV.0105.26; STH 241 and Northwestern Mutual Way, Item SPV.0105.27; STH 241 and W. Rawson Avenue (CTH BB), SPV.0105.28; STH 241 and S. Riverwood Boulevard, Item SPV.0105.29; STH 241 and W. Sycamore Avenue/Street, Item SPV.0105.30; STH 241 and W. College Avenue (CTH ZZ), Item SPV.0105.31.

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 14 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 (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.0105.26	Install Fiber Optic Communications in Cabinet STH 241 and W. Drexel Avenue	LS
SPV.0105.27	Install Fiber Optic Communications in Cabinet STH 241 and Northwestern Mutual Way	LS
SPV.0105.28	Install Fiber Optic Communications in Cabinet STH 241 and W. Rawson Avenue (CTH BB)	LS
SPV.0105.29	Install Fiber Optic Communications in Cabinet STH 241 and S. Riverwood Boulevard	LS
SPV.0105.30	Install Fiber Optic Communications in Cabinet STH 241 and W. Sycamore Avenue/Street	LS
SPV.0105.31	Install Fiber Optic Communications in Cabinet STH 241 and W. College Avenue (CTH ZZ)	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.

109. Fiber Optic Communications System Training, Item SPV.0105.32.

A Description

This work shall consist of providing training and instruction relating to the installation, splicing, termination, and testing of fiber optic communications systems.

B Materials

Provide demonstration samples of connector cleaning devices and materials to the department. Provided demonstration samples of OTDR testing unit(s) used to teach testing and troubleshooting techniques. Supply handouts of products demonstrated, up to a maximum of 20 participants. Electronic resources are sufficient.

C Construction

Provide a competent representative capable of instructing the operators of the system in (a) fiber optic transmission theory; (b) fiber cable installation; (c) termination and splicing; and (d) field testing. Conduct instruction and training at the State Electrical Shop, 935 South 60th Street, West Allis, WI, or other approved location, and supply demonstration samples of the cleaning materials and devices along with an OTDR testing unit to assist in teaching the operators in theory, installation, splicing, termination and testing for class room training. Provide a minimum of two identical 8-hour training sessions to be scheduled on consecutive days, either Tuesday/Wednesday or Wednesday/Thursday, unless otherwise approved by the department.

D Measurement

The department will measure Fiber Optic Communication System Training as a single complete 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.0105.32	Fiber Optic Communications System Training	LS

Payment is full compensation for furnishing the instructor, teaching theory, installation, splicing, termination and testing of fiber systems, and all training material; for providing a training venue if the State Electrical Shop is not used; and for providing training.

110. Remove Loop Detector Wire and Lead-in Cable STH 241 and W. Drexel Avenue, Item SPV.0105.33; STH 241 and Northwestern Mutual Way, Item SPV.0105.34; STH 241 and W. Rawson Avenue (CTH BB), Item SPV.0105.35; STH 241 and S. Riverwood Boulevard, Item SPV.0105.36; STH 241 and W. Sycamore Avenue/Street, Item SPV.0105.37; STH 241 and W. College Avenue (CTH ZZ), Item SPV.0105.38.

A Description

This special provision describes removing loop detector wire and lead-in cable at the state owned intersections of STH 241 and W. Drexel Avenue, STH 241 and Northwestern Mutual Way, STH 241 and W. Rawson Avenue (CTH BB), STH 241 and S. Riverwood Boulevard, STH 241 and W. Sycamore Avenue/Street, and STH 241 and W. College Avenue (CTH ZZ). Removal shall 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. WisDOT forces shall disconnect the lead-in cable from the cabinet equipment.

Remove and dispose of detector lead-in cable and 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 (Location) as a single lump sum unit of work for each intersection, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0105.33	Remove Loop Detector Wire and Lead-in Cable STH 241 and W. Drexel Avenue	LS
SPV.0105.34	Remove Loop Detector Wire and Lead-in Cable STH 241 and Northwestern Mutual Way	LS
SPV.0105.35	Remove Loop Detector Wire and Lead-in Cable STH 241 and W. Rawson Avenue (CTH BB)	LS
SPV.0105.36	Remove Loop Detector Wire and Lead-in Cable STH 241 and S. Riverwood Boulevard	LS
SPV.0105.37	Remove Loop Detector Wire and Lead-in Cable STH 241 and W. Sycamore Avenue/Street	LS
SPV.0105.38	Remove Loop Detector Wire and Lead-in Cable STH 241 and W. College Avenue (CTH ZZ)	LS

Payment is full compensation for removing loop detector wire and lead-in cable; for scrapping of some materials; and for disposing of scrap material.

111. Relocate Tracer Wire Terminal, Item SPV.0105.39.

A Description

This special provision describes relocating the tracer wire terminal for the Milwaukee Metropolitan Sewerage District (MMSD) landfill gas line test station on W. College Avenue (CTH ZZ). The test station terminal post contains the tracer wire leads.

B Materials

Submit the catalogue cuts and manufacturers information to the engineer for review prior to the relocation activities for the following items: tracer wire, compression connections, epoxy splice kit, electrical tape and steel U-channel post.

TRACER WIRE TERMINAL POST
Milwaukee Metropolitan Sewerage District will supply a new terminal post if it is determined in the field that the existing terminal post cannot be reused.

TRACER WIRE
Conform to applicable requirements of NEMA WC 70.

Single-conductor, 8 AWG stranded copper wire with 600-volt XHHW insulation.

COMPRESSION CONNECTORS
Furnish "C" taps made of conductive wrought copper, sized to fit wires being spliced and designed for installation only with manufacturer's high-compression tool.

Manufacturer and Product:
Burndy; Type "YC" or
T+B; Type C-TAP or
NSI Industries; Type CT

EPOXY SPLICE KIT
The splice kit shall consist of a rigid polypropylene mold body with a built-in spacer web to automatically provide for cable centering and proper compound coverage; the mold body shall be filled with a flexible polyurethane electrical compound capable of continuous operation at 90°C (194°F), with an emergency overload temperature rating of 130°C (266°F).

Splices must have provisions for inline splicing of shielded or unshielded, plastic or rubber jacketed, plastic or rubber insulated, signal and control cables. The splices shall be rated for direct burial applications. Size the splice kit as required for the wire splice.

Examples of acceptable products for the epoxy splice kit include but are not limited to 3M Scotchcast Inline Resin Splice Kit, 85 Series or Morris, ES series, or another product of equal or better specifications, sized as required for the wire splice.

ELECTRICAL TAPE
Linerless rubber high-voltage splicing tape and vinyl electrical tape suitable for moist and wet environments.

STEEL U-CHANNEL POST
U-Channel shall post be 1.12 pound steel, painted with protective coating to resist long-term corrosion. U-channel post length shall be 72".

C Construction
Persons performing work on the landfill gas pipeline shall be qualified per federal regulations or be observed by a qualified person (see Code of Federal Regulations: 49 CFR Part 192 – Subpart N for personnel qualifications).

EXISTING TERMINAL POST REMOVAL
Remove existing terminal post and related appurtenances. Preserve and protect existing tracer wires. Use care during removal and when excavating to avoid damage to wires. Hand excavate if necessary.

TRACER WIRE TERMINAL POST INSTALLATION
Inspect existing tracer wires for damage to insulation or conductor as necessary for new installation. Undamaged wires may be reused. Replace damaged wires.

Minimum tracer wire bury depth shall be 18 inches.

Existing tracer wires in good condition may be extended underground with new wire as required to reach terminal block of terminal post at the new location. Make wire splices with suitable sized compression connectors or mechanically secure and solder with rosin cored 50/50 solder. Splices shall be approved by engineer.

Insulate splices with epoxy kits if located below grade following manufacturer's instructions. Do not move cables or splice until resin has completely cured and hardened.

Wire splices within terminal posts may be insulated with multiple layers of electrical tape by spirally wrapping (50 percent overlap, minimum) with two layers of high-voltage rubber splicing tape followed by two layers of vinyl electrical tape.

Reuse or install new terminal post on steel U-channel post following terminal manufacturer's instructions. Place terminal post outside clear zone or in an area which could be impacted by snow removal. Place terminal post in a protected area such as at fence lines wherever possible.

1. Drive U-channel post 24" into ground.
2. Slide the tracer wire terminal post over the u-channel post.
3. Fasten the terminal post to the u-channel post with fastener provided by the manufacturer or with bolts.

TESTING
The new tracer wire access location shall be tested and approved by the Milwaukee Metropolitan Sewerage District before final acceptance of the work.

D Measurement
The department will measure Relocate Tracer Wire Terminal 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.0105.39	Relocate Tracer Wire Terminal	LS

Payment is full compensation for relocating the tracer wire terminal; for scrapping of some materials; and for disposing of scrap material.

112. Temporary Non-Intrusive Vehicle Detection System, STH 241 and W. Drexel Ave, Item SPV.0105.40, STH 241 and Northwestern Mutual, Item SPV.0105.41, STH 241 and W. Rawson Ave, Item SPV.0105.42, STH 241 and S. Riverwood Blvd, Item SPV.0105.43, STH 241 and S. Sycamore Ave, Item SPV.0105.44, and STH 241 and W. College Avenue, Item SPV.0105.45.

A Description
This special provision describes furnishing, installing, maintaining and placing into operation 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 non-intrusive vehicle detection 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 temporary NIVDS.

The temporary 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 shown on the temporary traffic signal 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 properly 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.

D Measurement

The department will measure Temporary Non-Intrusive Vehicular Detection System (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.0105.40	Temporary Non-Intrusive Vehicle Detection System, STH 241 and W. Drexel Ave	LS
SPV.0105.41	Temporary Non-Intrusive Vehicle Detection System, STH 241 and Northwestern Mutual	LS
SPV.0105.42	Temporary Non-Intrusive Vehicle Detection System, STH 241 and W. Rawson Ave	LS
SPV.0105.43	Temporary Non-Intrusive Vehicle Detection System, STH 241 and S. Riverwood Blvd	LS
SPV.0105.44	Temporary Non-Intrusive Vehicle Detection System, STH 241 and S. Sycamore Ave	LS
SPV.0105.45	Temporary Non-Intrusive Vehicle Detection System, STH 241 and W. College Avenue	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; periodic checking and resetting of detection zones; periodic cleaning for dirt and dust build-up; and for removing all equipment at the completion of the project.

113. Concrete Pavement Joint Layout, Item SPV.0105.46.

A Description

This special provision describes providing a concrete pavement or concrete base joint layout design for intersections and marking the location of all joints in the field.

B (Vacant)

C Construction

Plan and locate all points necessary to establish the horizontal position of the transverse and longitudinal joints in the concrete to prevent uncontrolled cracking. Submit a joint layout design to the engineer before paving each intersection. Mark the location of all concrete joints in the field. Follow the plan details for joints in concrete making adjustments as required to fit field conditions.

D Measurement

The department will measure Concrete Pavement Joint Layout as a single lump sum unit for all joint layout designs and marking, acceptably completed under 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
SPV.0105.46	Concrete Pavement Joint Layout	LS

Payment is full compensation for providing the intersection joint layout designs and marking all joints in the field.

The department will adjust pay for crack repairs as specified in standard spec 415.5.3.

114. Salvage and Replace Landscaping Boulders, Item SPV.0105.47.

A Description
This special provision describes salvaging and replacing the landscaping boulders in the median along Northwestern Mutual Way from Station 359+00'NM' to Station 361+00'NM'.

B (Vacant)

C Construction
Note locations of the landscaping boulders in the median along Northwestern Mutual Way from Station 359+00'NM' to Station 361+00'NM'.

Salvage boulders and store in a secure location to prevent loss or theft.

Replace boulders in approximately the same locations in the median after the median is reconstructed.

D Measurement
The department will measure Salvage and Replace Landscaping Boulders 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.0105.47	Salvage and Replace Landscaping Boulders	LS

Payment is full compensation for removing, storing and replacing landscaping boulders.

115. Remove and Replace Landscaping Items, Item SPV.0105.48.

A Description
This special provision describes the removal, salvage and replacement of existing landscaping elements in the median STH 241 from Station 1323+50 to Station 1334+60, to accommodate temporary pavement for construction staging. Landscaping elements include concrete planter with sign, flag poles, median safety island and water hose connection.

B Materials
B.1 Concrete Planter
Use materials as described in the construction detail shown in the plans and as described in standard specs 501, 502, and 505.

Use materials for the concrete bases as described in the construction detail and standard spec 654.2.

Use materials for the architectural surface treatment as described in the construction detail and the special provision Architectural Surface Treatment. Pattern to match the existing planter.

Use materials for concrete staining multi-color as described in the construction detail and the special provision Concrete Staining Multi-Color.

Use materials for topsoil and plantings as described in the construction detail and standard specs 625 and 632.

B.2 Flag Poles
Use materials for the concrete bases as described in the construction detail and standard spec 654.2.

B.3 Median Safety Island
Use materials for the median safety island as described in standard spec 602 and special provision Concrete Sidewalk 5-Inch Colored.

Color of concrete sidewalk to match existing color.

C Construction
C.1 Concrete Planter
Remove sign and sign supports from existing planter. Inform the engineer of any existing damage to sign and supports. Store all removed materials at a safe and secure location. Protect from theft and damage. Contact the engineer to coordinate inspection of the sign, sign supports and brass plaque, prior to re-installation. All items that are determined to have been damaged during storage are to be replaced in kind at the contractor's expense.

Construct concrete planter according to construction detail and standard specs 502 and 505.

Construct concrete bases according to construction detail and standard spec 654.3. Re-install sign supports and sign, ensuring the supports are installed plumb.

Place topsoil and plantings according to construction detail and standard specs 625 and 632.

C.2 Flag Poles
Remove flags and flag poles from the median. Inform the engineer of any existing damage to flags and flag poles. Store all removed materials at a safe and secure location. Protect from theft and damage. Contact the engineer to coordinate inspection of the flags and flag poles, prior to re-installation. All items that are determined to have been damaged during storage are to be replaced in kind at the contractor's expense.

Construct concrete bases according to construction detail and standard spec 654.3.

Re-install flag poles, ensuring the centerline of the pole is vertical. Replace flags on poles.

C.3 Median Safety Island
Note locations of crosswalk in median and dimensions of colored concrete sidewalk.

Replace crosswalk and colored concrete sidewalk as described in standard spec 602 and special provision Concrete Sidewalk 5-Inch Colored.

C.4 Water Hose Connection
Shut off service to water hose connection. Disconnect elements above the point of connection indicated in the construction detail. Salvage water hose connection and valve box. Store all removed materials at a safe and secure location. Protect from theft and damage. Contact the engineer to coordinate inspection of the water hose connection and valve box, prior to re-installation. All items that are determined to have been damaged during storage are to be replaced in kind at the contractor's expense.

Lower curb stop valve to pavement elevation prior to installation of temporary pavement for construction staging.

Replace water hose connection and valve box and shown in the construction detail, when the temporary pavement is no longer needed for construction staging. Turn water service to water hose connection back on.

D Measurement
The department will measure Remove and Replace Landscaping Items as a lump sum, 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.0105.48	Remove and Replace Landscaping Items	LS

Payment is full compensation for removing and installing materials, including sign, sign supports, concrete planter, flags, flag poles, water hose connection, valve box, for constructing new concrete bases with new anchor bolts and conduit, for constructing new median safety island and colored concrete sidewalk.

116. Wall Modular Block Mechanically Stabilized Earth LRFD, Structure R-40-0585, Item SPV.0165.01; Structure R-40-0586, Item SPV.0165.02; Structure R-40-0587, Item SPV.0165.03; Structure R-40-0589, Item SPV.0165.04; Structure R-40-0590, Item SPV.0165.05.

A Description

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

B Materials

B.1 Proprietary Mechanically Stabilized Earth Modular Block Wall Systems

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

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

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

B.2 Design Requirements

It is the responsibility of the contractor to supply a design and supporting documentation as required by this special provision for review by the department to show the proposed wall design is in compliance with the design specifications.

The design/shop plans shall be prepared on reproducible sheets 11 inch x 17 inch, including borders. Each sheet shall have a title block in the lower right corner. The title block shall include the project identification number and structure number. Design calculations and notes shall be on 8 ½ inch x 11 inch sheets, and shall contain the project identification number, name or designation of the wall, date of preparation, initials of designer and checker, and page number at the top of the page. All plans and calculations shall be signed, sealed and dated by a professional engineer licensed in the State of Wisconsin.

The wall shall be designed for the heights shown on the plans. The design shall be in compliance with the *AASHTO LRFD Design Specifications* 5th *Edition* 2010 (AASHTO LRFD) with latest interim specifications for Mechanically Stabilized Earth Walls, WisDOT's current *Standard Specifications for Highway and Structure Construction (*Standard Specifications), Chapter14 of the WisDOT LRFD Bridge Manual and standard design procedures as determined by the department. Loads, load combinations and load

and resistance factors shall be as specified in AASHTO LRFD Section 11. The associated resistance factors shall be defined in accordance to Table 11.5.6-1 in AASHTO LRFD.

The design shall include a minimum overburden surcharge of 100 psf in accordance to Chapter 14 of the WisDOT LRFD Bridge Manual or as shown on the plans. The maximum value of the angle of internal friction of the wall backfill material used for design shall be assumed to be 30 degrees without a certified report of tests. If a certified report of tests yields an angle of internal friction greater than 30 degrees, the larger test value may be used for design, up to a maximum value of 36 degrees.

An external stability check at critical wall stations is performed by the department or its design consultant and the Capacity Demand Ratio (CDR) for sliding, eccentricity, and bearing check is provided by the department or its consultant and shown on the plans.

The design of the Wall Modular Block Mechanically Stabilized Earth shall consider the internal stability of the wall mass (tensile stress, pullout resistance, and tensile stress at the connection with the facing) within each layer of reinforcement for the applicable strength limit and extreme event limit states. Maximum factored loads applied to reinforcements for pullout and the connection to the wall face shall be calculated using the Simplified Method or Coherent Gravity Method, as presented in AASHTO LRFD. In addition, compound stability shall be computed for the applicable strength limit and extreme event limit states in accordance to AASHTO LRFD.

The minimum embedment to the top of the leveling pad shall be as specified in the plans. Potential depth of frost penetration at the wall location shall not be considered in designing the wall for depth of leveling pad.

100% of the soil reinforcement shall be connected to the wall facings. The minimum length of soil reinforcement measured from the back face of the wall shall be equal to 0.7 of the wall height or as shown on the plans. In no case shall this length be less than 6 feet. The soil reinforcement shall extend a minimum of 3 feet beyond the theoretical failure plane in all cases. The maximum vertical spacing of soil reinforcement layers shall be two times the block depth (front face to back face) or 32 inches, whichever is less. The first (bottom) layer of reinforcement shall be placed no further than 12 inches above the top of the leveling pad or the height of the block, but at least one block height above the leveling pad. The last (top) layer of soil reinforcement shall be no further than 21 inches below the top of the uppermost block.

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

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

B.3 Wall System Components

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

B.3.1 Leveling Pad

The leveling pad shall step to follow the general slope of the ground line. The leveling pad steps shall keep the bottom of the wall below the minimum embedment. Additional embedment that is greater than the minimum embedment will not be measured for payment. The leveling pad shall be as wide as the proposed blocks or a minimum of 12 inches, whichever is greater. The bottom row of blocks shall be horizontal and 100% of the block surface shall bear on the leveling pad.

Provide a 6 inches deep by 12 inch (minimum) wide wall leveling pad that consists of poured concrete masonry, Grade A , A-FA, A-S, A-T, A-IS, or A-IP concrete conforming to standard spec 501 as modified in standard spec 716. Provide QMP for leveling pad concrete as specified in the standard specifications. A concrete leveling pad shall be provided in following scenarios:

a. When the wall height measured from the top of the leveling pad to the top of the wall exceeds 5 feet at any point along the entire wall length.
b. A structure number has been assigned (such as R-XX-XXX), regardless of wall height.

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

B.3.2 Wall Facing

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

The top course of facing units shall be a solid precast concrete unit designed to be compatible with the remainder of the wall. The finishing course shall be bonded to the underlying facing units with a durable, high strength, flexible adhesive compound compatible with the block material. A formed cast-in-place concrete cap may also be used to finish the wall. A cap of this type shall be designed to have texture, color, and appearance that complement the remainder of the wall. The vertical dimension of the cap

shall not be less than 3½ inches. Expansion joints shall be placed in the cap to correspond with each 24 inch change in vertical wall height and at maximum spacing of 10 feet. Concrete for all cast-in-place caps shall be Grade A and shall conform to the requirements of standard spec 501.

Block dimensions may vary no more than ±1/8 inch from the standard values published by the manufacturer in accordance to ASTM C1372. Blocks must have a minimum depth (front face to back face) of 12 inches. The minimum front face thickness of blocks shall be 4 inches measured perpendicular from the front face to inside voids greater than 4 square inches. The minimum allowed thickness of any other portions of the block is 1¾ inches. The front face of the blocks shall conform to plan requirements for color, texture, or patterns.

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

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

[1] Test shall be run using a 3% saline solution.

[2] Test results that meet either of the listed requirements for Freeze-Thaw Loss are acceptable.

All blocks shall be certified as to strength, absorption, and freeze-thaw requirements unless, due to contract changes after letting, certified blocks are not available when required. At the time of delivery of certified blocks, furnish the engineer a certified test report from a department-approved independent testing laboratory for each lot of modular blocks. The certified test report shall clearly identify the firm conducting the sampling and testing, the type of block, the date sampled, the name of the person who conducted the sampling, the represented lot, the number of blocks in the lot, and the specific test results for each of the stated requirements of this specification. The tests should have been conducted not more than 18 months prior to delivery. A lot shall not exceed 5000 blocks or fraction thereof produced in day. The certified test results will represent all blocks within the lot. Each pallet of blocks delivered shall bear lot identification information. Block lots that do not meet the requirements of this specification or blocks without supporting certified test reports will be rejected and shall be removed from the project at no expense to the department.

A department-approved independent testing laboratory shall control and conduct all modular block sampling and testing for certification. Prior to sampling, the manufacturer's representative shall identify all pallets of modular blocks contained in

each lot. All pallets of blocks within the lot shall be numbered and marked to facilitate random sample selection.

The representative of the independent testing laboratory shall identify five pallets of blocks by random numbers and shall then select one block from each of these pallets. Solid blocks used as a finishing or top course shall not be selected. The selected blocks shall remain under the control of the person who conducted the sampling until shipped or delivered to the testing laboratory. All pallets of blocks within a lot shall be strapped or wrapped to secure the contents and tagged or marked for identification. The engineer will reject any pallet of blocks delivered to the project without intact security measures. At no expense to the department, the contractor shall remove all rejected blocks from the project.

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

B.3.3 Geogrids

Geogrid supplied as reinforcing members shall be manufactured from long chain polymers limited to polypropylene, high-density polyethylene, polyaramid, and polyester. Geogrids shall form a uniform rectangular grid of bonded, formed, or fused polymer tensile strands crossing with a nominal right angle orientation. The minimum grid aperture shall be 0.5 inch. The geogrid shall maintain dimension stability during handling, placing, and installation. The geogrid shall be insect, rodent, mildew, and rot resistant. The geogrid shall be furnished in a protective wrapping that shall prevent exposure to ultraviolet radiation and damage from shipping or handling. The geogrid shall be kept dry until installed. Each roll shall be clearly marked to identify the material contained.

The wall supplier shall provide the nominal long-term design strength (T_{al}) and nominal long-term connection strength, T_{alc} as discussed below.

Nominal Long-Term Design Strength (T_{al})

The wall supplier shall supply the nominal long-term design strength (T_{al}) used in the design for each reinforcement layer and shall be determined by dividing the Ultimate Tensile Strength (T_{ult}) by the factors RF_{ID}, RF_{CR}, RF_{D}.

Hence,

$$T_{al} = \frac{T_{ult}}{RF_{ID} x RF_{CR} x RF_{D}}$$

where:

T_{ult} = ultimate tensile strength of the reinforcement determined from wide width tensile tests (ASTM D6637) for geogrids based on the minimum average roll value (MARV) for the product

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

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

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

Values for RF_{ID}, RF_{CR}, and RF_{D} shall be determined from product specific test results. Guidelines for determining RF_{ID}, RF_{CR}, and RF_{D} from product specific data are provided in FHWA Publication No. FHWA-NHI-10-024 and FHWA –NHI-10-025 "Design and Construction of Mechanically Stabilized Earth Walls and Reinforced Soil Slopes".

Nominal Long-term Connection Strength T_{ac}

The nominal long term connection strength, $T_{ac,}$ shall be based on laboratory geogrid connection tests between wall facing and geogrids. T_{ac} shall be as given below

$$T_{ac} = \frac{T_{ult} * CR_{cr}}{RF_{D}}$$

where:

T_{ac} = nominal long-term reinforcement facing connection strength per unit reinforcment width at a specified confining pressure

T_{ult} = ultimate tensile strength of the reinforcement for geogrids defined as the minimum average roll value (MARV) for the product

CR_{cr} = long term connection strength reduction factor to account for reduced ultimate strength resulting from connection.

RF_D = strength reduction factor to prevent rupture of the reinforcement due to chemical and biological degradation.

T_{ac} shall be developed from the tests conducted by an independent laboratory on the same facing blocks and geogrids as proposed for the wall and shall cover a range of overburden pressures comparable to those anticipated in the proposed wall. The connection strength reduction factor CR_{cr} shall be determined in accordance to long-term connection test as described in Appendix B of FHWA Publication No. FHWA-NHI 10-025 "Design and Construction of Mechanically Stabilized Earth Walls and Reinforced Soil Slopes". CR_{cr} may also be obtained from the short term connection test meeting the requirements of NCMA test method SRWU-1 in Simac et al 1993 or ASTM D4884.

The contractor shall provide a manufacturer's certificate that the Tult (MARV) of the supplied geogrid has been determined in accordance to ASTM D4595 or ASTM D6637 as appropriate. Contractor shall also provide block to block and block to reinforcement connection test reports prepared and certified by an independent laboratory. Also provide calculations in accordance to AASHTO LRFD, and using the results of laboratory tests, that the block-geogrid connections shall be capable of resisting 100% of the maximum tension load in the soil reinforcements at any level within the wall, for the design life of the wall system.

B.3.4 Galvanized Metal Reinforcement

In lieu of polymeric geogrid earth reinforcement, galvanized metal reinforcement may be used. Design and materials shall be in accordance to Section 11.10.6.4.2 of the current *AASHTO LRFD* Specifications. The design life of steel soil reinforcements shall also comply with AASHTO LRFD.

B.3.5 Pins

If pins are used to align modular block facing units, they shall consist of a non-degrading polymer, or hot dipping galvanized steel and be made for the express use with the modular block units supplied, to develop mechanical interlock between facing unit block layers. Connecting pins shall be capable of holding the geogrid in the proper position during backfilling. Furnish documentation that establishes and substantiates the design life of such devices.

B.3.6 Backfill Materials

Wall Backfill, Type A, shall comply with the requirements for Coarse Aggregate No. 1 as given in standard spec 501.2.5.4.4. All backfill placed within a zone from the base of the leveling pad to the top of the final layer of wall facing units and within 1 foot behind the back face of the wall shall be Wall Backfill, Type A. This includes all material used to fill openings in the wall facing units.

Wall Backfill, Type B, shall comply with the requirements for Grade 1 Granular Backfill as contained in standard spec 209.2.2. All backfill placed in a zone extending horizontally from 1 foot behind the back face of the wall to 1 foot beyond the end of the reinforcement

and extending vertically from the base of the leveling pad to the top of the final layer of all facing units shall be Wall Backfill, Type B.

Backfill within the reinforced zone shall meet the following requirements:

Test	Method	Value
pH	AASHTO T-289	4.5 – 9.0
Sulfate content[1]	AASHTO T-290	200 ppm max.
Chloride content[1]	AASHTO T-291	100 ppm max.
Electrical Resistivity[1]	AASHTO T-288	3000 ohm/cm min.
Angle of Internal Friction	AASHTO T-236	30 degrees min.
Organic Content[1]	AASHTO T-267	1.0% max.

[1] Requirement does not apply to walls with non-metallic reinforcement.

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

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

C Construction

C.1 General

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

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

All excavation for the Wall Modular Block Mechanically Stabilized Earth shall conform to standard spec 206. At the end of each working day, provide good temporary drainage such that the backfill shall not become contaminated with run-off soil or water if it should rain. Do not stockpile or store materials or large equipment within 10 feet of the back face of the wall.

C.2 Backfill

Place backfill materials in the areas as indicated on the plans and as detailed in this specification. Backfill lifts shall be no more than 8-inches in depth. Backfilling shall closely follow erection of each course of wall facing units. Compact wall backfill Type A with at least three passes of lightweight manually operated compaction equipment acceptable to the engineer.

Compact wall backfill Type B as specified in 207.3.6. Compact Wall Backfill Type B to 95.0% of maximum density as determined by AASHTO T-99, Method C. Perform compaction testing on the backfill. When performing nuclear testing, use a nuclear gauge from the department's approved list, ensure that the operator is a HTCP certified Nuclear Density Technician I, and conform to CMM 8.15 for testing and gauge monitoring methods. Conduct testing at a minimum frequency of 1 test per 2 feet of vertical wall height, per 200 feet length of wall, or major portion thereof. A minimum of one test for every 2-foot layer of vertical wall height is required. Test sites shall be selected using ASTM Method D3665. Deliver documentation of all compaction testing results to the engineer at the time of testing.

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

Place and compact the MSE backfill to the level of the next higher layer of MSE reinforcement before placing the MSE reinforcement or connecting it to the wall facing. The MSE reinforcement shall lay horizontally on top of the most recently placed and compacted layer of MSE backfill.

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

C.3 Soil Reinforcement

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

C.4 Geogrid Layers

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

C.5 Steel Layers
Place the steel reinforcement full width in one piece as shown on the plans. No splicing will be allowed. Maintain elements in position during backfilling.

C.6 Geotechnical Information
Geotechnical data to be used in the design of the wall is given on the wall plan. After completion of wall excavation, notify the department and allow 2 days for the Regional Soil Engineer to review the foundation.

D Measurement
The department will measure Wall Modular Block Mechanically Stabilized Earth LRFD (Structure) in area by the square foot, acceptably completed, measured as the vertical area within the pay limits the contract plan show. No other measurement of quantities shall be made in the field unless the engineer directs in writing a change to the limits indicated on the contract 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.0165.01	Wall Modular Block Mechanically Stabilized Earth LRFD, Structure R-40-0585	SF
SPV.0165.02	Wall Modular Block Mechanically Stabilized Earth LRFD, Structure R-40-0586	SF
SPV.0165.03	Wall Modular Block Mechanically Stabilized Earth LRFD, Structure R-40-0587	SF
SPV.0165.04	Wall Modular Block Mechanically Stabilized Earth LRFD, Structure R-40-0589	SF
SPV.0165.05	Wall Modular Block Mechanically Stabilized Earth LRFD, Structure R-40-0590	SF

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

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

117. Add Insulation – Franklin, Item SPV.0165.06.

A Description

This special provision describes furnishing and installing insulation as shown in the plans to protect existing water mains and water services from freezing conditions in locations where proposed finish grade will provide less than 6 feet of cover over the water main or water service, or at locations where proposed storm sewer crosses over an existing water main as shown in the plans.

B Materials

All rigid insulation shall be extruded polystyrene foam insulation with a minimum "R" value of 5.0 per inch (at 75 degrees Fahrenheit mean temperature). Insulation shall have a minimum compressive strength of 40 psi. Insulation shall be Styrofoam High Load 40 as manufactured by the Dow Chemical Company or equal.

C Construction

Field verify the location and elevation of all water mains and water services identified to be insulated as shown in the drawings. The field location and depth of water main shall be performed at a minimum of every 20 feet. No machine shall be used to excavate within 3 inches of the pipeline. All rips or tears in the existing polyethylene wrap shall be sealed.

D Measurement

The department will measure Add Insulation – Franklin by the square foot, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0165.06	Add Insulation – Franklin	SF

Payment is full compensation for furnishing and installing all materials including insulation, all excavation, backfilling, disposal of surplus materials, and restoration of the work site.

118. Concrete Sidewalk 5-Inch Colored, Item SPV.0165.07.

A Description

This special provision describes furnishing materials and installing colored concrete sidewalk at the locations specified in the plan.

B Materials

Furnish concrete that is according to the pertinent requirements of standard spec 602.2.

Provide coloring that is integral to the concrete and not applies separately to the top surface.

Provide colorant and curing compounds in accordance to the manufacturers' requirements, which are homogeneous throughout the mixture and resistant to fading. Provide colorant conforming to standard spec 602.2 requirements and of a nature which will not cause harm to the strength of the concrete or increase susceptibility to flaking, chipping or freeze-thaw action.

Color for the medians and right turn islands shall be Federal Color No. 33564. Color for the sidewalk on the intersection corners shall be Federal Color No. 33448.

C Construction
Provide color that is integral to the concrete and not applied separately to the top surface.

Provide construction methods and equipment conforming to all requirements described in standard spec 602.3.2.3. Construct colored sidewalk as a separate pour from remainder of the sidewalk and provide construction joints conforming to all requirements described in standard spec 602.3.2.5.

Conduct installation operations consistent to standard spec 602.3.2.6 in such a manner as to prevent damage to the concrete surface. At no expense to the department, correct any such damage as directed by the engineer.

D Measurement
The department will measure Concrete Sidewalk 5-Inch Colored in area by the square foot as required and shown on the plans, 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.0165.07	Concrete Sidewalk 5-Inch Colored	SF

Payment is full compensation for preparing the site, supplying and installing all necessary materials (including the concrete).

119. Curb Ramp Detectable Warning Field – Oak Creek, Item SPV.0165.08.

A Description
This special provision describes obtaining and installing curb ramp detectable warning fields provided by the City of Oak Creek.

B (Vacant)

C Construction
Contact Mike Simmons, City Engineer, at (414) 768-5859 to coordinate pick-up of curb ramp detectable warning fields provided by the City of Oak Creek.

Install detectable warning fields according to standard spec 602.3.

D Measurement
The department will measure Curb Ramp Detectable Warning Field – Oak Creek by the square foot, acceptably completed**.**

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0165.08	Curb Ramp Detectable Warning Field – Oak Creek	SF

Payment is full compensation for obtaining and installing curb ramp detectable warning fields provided by the City of Oak Creek.

120. Concrete Pavement 8-Inch Colored, Item SPV.0180.01.

A Description
This special provision describes furnishing and installing concrete pavement with a dry shake color hardener at the crosswalks indicated in the plans.

B Materials
B.1 General
Furnish concrete pavement that is according to the pertinent requirements of standard spec 415.2.

At least fifteen working days prior to the start of concrete paving, supply one 4-foot x 4-foot concrete test panel with the dry shake color surface hardener treatment. Obtain approval from the engineer for the final color prior to placing any colored surface treatment in the field.

B.2 Water Evaporative Reducer
Use a water evaporative reducer to hold in the bleed water for dry shake color hardener application. Contractor shall confirm the type of water evaporative reducer to be used with the manufacturer of color hardener.

B.3 Dry Shake Color Hardener
Use a dry shake color hardener with a color similar to Federal Color No. 33448. Color hardener shall be a heavy duty grade suitable for vehicular traffic.

B.4 Curing Compound
The curing compound shall meet the specifications of ASTM C 1315 Type I Class A clear non-yellowing curing compound.

C Construction
Install concrete pavement along with adjacent pavement according to standard spec 415.3.

Saw cut a ¼ inch wide by ¼ -inch deep joint for color control, parallel to and along the edge of the colored stripe adjacent to the natural color concrete crosswalk.

Protect crosswalk stripe area to receive color treatment and apply standard curing compound in accordance to standard spec 415 to adjacent concrete pavement.

Contractor shall coordinate with integral concrete color (admix) to achieve color match.

Apply water evaporative reducer to area receiving color hardener, in accordance to manufacturer's recommendations.

Finish concrete within crosswalk colored stripe area and apply dry shake color hardener in accordance to manufacturer's recommendations.

Protect adjacent concrete pavement from drifting or excess applications of color hardener.

Hand-broadcast the color hardener uniformly across the concrete in two separate broadcasting operations. Apply two-thirds of the material in the first application and withhold one-third of the material for the second application and final touch-up, as necessary. Make the two applications at 90 degrees to each other.

After each application, the dry shake color hardener must be thoroughly worked into the surface with a wooden hand float or similar finishing tool in accordance to the manufacturer's recommendations.

The necessary moisture for wetting the dry shake color hardener must come from the concrete substrate. Do not add water to the concrete surface to work in the dry shake color hardener. Apply curing compound in accordance to manufacturer's recommendations.

Concrete pavement with colored concrete surface treatment shall match test panel. Replace pavement not conforming to the test panel at contractor expense.

D Measurement

The department will measure Concrete Pavement 8-Inch Colored 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.0180.01	Concrete Pavement 8-Inch Colored	SY

Payment is full compensation for furnishing and installing concrete pavement, test panel, shake on color.

121. Geotextile Fabric Type FF, Item SPV.0180.02.

A Description

This special provision describes furnishing, installing and removing geotextile fabric and fabric hold down systems for filtering storm water, as shown in the plans and as hereinafter provided.

B Materials

Furnish type FF geotextile fabrics conforming to standard spec 645.2.1 except use a woven polypropylene fabric. Furnish type FF geotextile fabrics selected from the department's erosion control product acceptability list (PAL). Obtain copies of the erosion control PAL and prequalification procedure from the Bureau of Technical Services.

C Construction

Meet the pertinent requirements as set forth in standard spec 645.3 and as follows:

Install in accordance to the plan details for the intended use in such manner to preclude ripping and tearing of the fabric, or otherwise rendering the fabric or assembly ineffective for its intended use.

D Measurement

The department will measure Geotextile Fabric Type FF by the square yard of surface area of the fabric, placed and accepted in accordance to 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
SPV.0180.02	Geotextile Fabric Type FF	SY

Payment is full compensation for furnishing, transporting, installing and removing the fabric and fabric hold down systems.

122. Management of Solid Waste, Item SPV.0195.01.

A General

A.1 Description

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.

Solid waste may be encountered within the construction limits. The solid waste contains NR 500 non-exempt industrial waste including solid mixed with foundry sand and slag. Impacted waste material excavated during construction which cannot in the opinion of the environmental consultant be managed as common excavation or as petroleum-contaminated soil will be managed as solid waste.

The work consists of excavating, segregating, temporary stockpiling, loading, hauling, and disposing of solid waste material at a WDNR-approved disposal facility. The nearest WDNR-approved disposal facilities are:

Advanced Disposal Emerald Park Landfill, LLC
W124 S10629 S. 124th St.
Muskego, WI 53150
Phone (414) 529-1360

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

Provide information to the environmental consultant and engineer that indicates the WDNR-approved disposal facility that the contractor will use.

A.2 Notice to the Contractor – Solid Waste Locations

The department and others completed hazardous materials assessment for locations within this project where excavation is required. Investigation for soil and groundwater contamination was conducted at select locations. Results indicate that solid waste is present at the following locations as shown on the plans:

- South 27th Street Station 1265+85 to 1267+00, from approximately 50 feet to 165 feet right of reference line, from approximately 3 to 7 feet bgs. Approximately 75 cubic yards (approximately 128 tons at an estimated 1.7 tons per cubic yard) of non-exempt solid waste will be excavated from this area. Soil at this location is contaminated with foundry waste and lead.

- South 27th Street Station 1279+25 to 1280+00, from reference approximately 45 feet left of reference line to project limits left, from approximately 1 to 5 feet bgs. Approximately 295 cubic yards (approximately 500 tons at an estimated 1.7 tons per cubic yard) of non-exempt solid waste will be excavated from this area. Soil at this location is contaminated with lead.

- South 27th Street Station 1282+10 to 1283+00, from project limits left to 25 feet right of reference line from approximately 1 to 5 bgs. Approximately 765 cubic yards (approximately 1,300 tons at an estimated 1.7 tons per cubic yard) of non-exempt solid waste will be excavated from this area. Soil at this location is contaminated with petroleum and lead.

- South 27th Street Station 1315+10 to 1315+75, from 10 feet left of reference line to project limits left from approximately 2 to 6 feet bgs. Approximately 42 cubic yards (approximately 72 tons at an estimated 1.7 tons per cubic yard) of non-exempt solid waste will be excavated from this area. Soil at this location is contaminated with lead.

- South 27th Street Station 1315+50 to 1316+20, from 65 feet right of reference line to 120 feet right of reference line from approximately 2 to 6 feet bgs. Approximately 39 cubic yards (approximately 67 tons at an estimated 1.7 tons per cubic yard) of non-exempt solid waste will be excavated from this area. Soil at this location is contaminated with cis-1,2-dichloroethene.

- College Avenue Station 522+45 to 523+00, from 25 feet right of reference line to project limits right from approximately 2 to 6 feet bgs. Approximately 23 cubic yards (approximately 39 tons at an estimated 1.7 tons per cubic yard) of non-exempt solid waste will be excavated from this area. Soil at this location is contaminated with diesel range organics.

Directly load fill with solid waste excavated by the project at the above locations into trucks that will transport the material to a WDNR-licensed landfill facility for landfill disposal.

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 present beyond the construction limits at the locations listed below:

- Station 1245+00 to 1250+00, beyond project limits left (Franklin Park Amusement, 7333 S. 27th Street, (BRRTS #03-41-001893),

- Station 1262+50 to 1265+00, beyond project limits left (Plath Property, 7103 S. 27th Street (BRRTS #03-41-000092),

- Station 1266+00 to 1268+00, beyond project limits left (Clark Gas Station #714, 7071 S. 27th Street, (BRRTS #03-41-554870),

- Station 1275+75 to 1279+75, beyond project limits left (GFS Marketplace, 6919 S. 27th Street, (BRRTS #02-41-558318), and

- Station 1303+50 to 1305+75, beyond project limits left (Dreamland Enterprises, 6461 S. 27th Street, (BRRTS #02-41-113174)

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

If obviously contaminated soils or other signs of NR 500 non-exempt solid waste and hazardous materials are unexpectedly encountered elsewhere on the project, terminate excavation activities in the area and notify the engineer. Examples of these unexpected conditions may include, but are not limited to, buried containers or tanks, noxious odors and fumes, stained soils, sheen on ground water, other industrial wastes, and significant volumes of municipal or domestic garbage.

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.

A.4 Excavation Management Plan Approval

The excavation management plan for this project has been designed to minimize the off-site disposal of contaminated waste. The excavation management plan including those 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 in these areas 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.5 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. Bryan Bergmann, P.G.
Phone:	(262) 901-2126
Fax:	(262) 879-1220
E-mail:	bbergmann@trcsolutions.com

The role of the environmental consultant will be limited to:

- Determining the location and limits of solid waste to be excavated based on soil analytical results from previous investigations, visual observations, and field screening of soil that is excavated;

- Identifying soils to be hauled to the landfill facility;

- Documenting that activities associated with management of solid waste are in conformance with the solid waste management methods for this project as specified herein; and

- Obtaining the necessary approvals for disposal of solid waste from the landfill facility.

Provide at least 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 area of solid waste fill described in A.2 to the environmental consultant. Identify the WDNR licensed landfill facility that will be used for disposal of solid waste, and provide this information to the environmental consultant no later than 30 calendar days prior to commencement of excavation in the impacted area 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 the solid waste.

Coordinate with the environmental consultant to ensure that the environmental consultant is present during excavation in the impacted area. Notify the environmental consultant at least three calendar days prior to commencement of excavation in the impacted area. Perform excavation in the impacted area on a continuous basis until excavation work is completed. Do not transport soil containing solid waste offsite without prior approval from the environmental consultant.

A.6 Health and Safety Requirements
Supplement standard spec 107.1 with the following:

During excavation activities, except to encounter historic fill contaminated with industrial wastes (foundry sand and slag) and associated regulated metals and organic compounds.

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 impacted area 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 impacted area to minimize the quality of soil excavated.

The environmental consultant will periodically monitor soil excavated from the areas identified in A.2 above. The environmental consultant will evaluated 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 solid waste designated by the environmental consultant for offsite disposal to the WDNR approved landfill facility. Use loading and hauling practices that are appropriate to prevent any spills or releases of the material. Prior to transport, sufficiently dewater soils designated for off-site disposal so as not to contain free liquids.

Verify that the vehicles used to transport material are licensed for such activity in accordance to the applicable state and federal regulations. Obtain the necessary disposal facility approvals and WDNR approvals for disposal. Do not transport regulated solid waste off-site without the approval of the environmental consultant and engineer and notifying the disposal facility.

During excavations in the areas of known contamination, large chunks of clean concrete (~2 cubic feet), asphalt and bricks will 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 engineer as fill on the project, or it will be disposed of off-site at the contractor's disposal site(s).

If dewatering is required in areas of known contamination, water generated from dewatering activities may contain VOCs and/or metals. Such water may, with approval of the Milwaukee Metropolitan Sewerage District (MMSD), be discharged to the sanitary sewer as follows:

- Meet all applicable requirements of the MMSD including the control of suspended solids. Perform all necessary monitoring to document compliance with MMSD's requirements. Furnish, install, operate, maintain, disassemble, and remove treatment equipment necessary to comply with MMSD's requirements.

- Ensure continuous dewatering and excavation safety at all times. Provide, operate, and maintain adequate pumping equipment and drainage and disposal facilities.

Notify the engineer of any dewatering activities, and obtain any permits necessary to discharge water. Provide copies of such permits to the engineer. 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 contaminated areas 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, loading, hauling, and landfill disposal of solid waste; obtaining solid waste collection and transportation service operating licenses; assisting in the collection of soil samples for field evaluation; dewatering of soils prior to transport, if necessary.

123. Rebuild Manhole - Oak Creek Sanitary, Item SPV.0200.01.

A Description
This work includes rebuilding existing sanitary manholes to grade as shown in the plans, removing manhole barrel sections, reinstalling the cone section, installing new adjusting

rings, frame and cover, and installing external frame/chimney seal, in accordance to the Standard Specifications for Sewer and Water Construction in Wisconsin, latest edition and amendments (SSSW).

B Materials

B.1 Precast Sections

Precast sections shall as shown in File No. 12 of the SSSW and be furnished and installed by the contractor to match the diameter of the existing manhole.

B.1 Cones

All Cone sections shall be salvaged and re-used. Sections damaged during construction operations shall be replaced by the contractor at no cost to the department.

B.2 Adjusting Rings

Adjustment rings shall be precast concrete rings and shall have an inside diameter to match the manhole opening. Do not use any cracked or broken rings. The individual adjusting rings shall have a maximum height of 8 inches and a minimum of 2 inches and shall be sealed with bituminous or plastic mastic to assure water tightness. The minimum chimney height shall be no less than 2 inches and the maximum chimney height shall not exceed 24 inches from the top of the pre-cast section to the bottom of the casting.

B.2 Manhole Seal

Each sanitary manhole within the paving limits shall receive an internal/external adaptor furnished by the Oak Creek Water and Sewer Utility. Coordinate delivery/pick-up with Mr. Bryan Jahns, (414) 852-3917, of the Oak Creek Water and Sewer Utility.

Manholes outside of the paving limits shall be bolted down in accordance to File No. 32 of the SSSW using stainless steel hardware. The contractor shall drill four holes in the casting spaced as per File No. 32 of the SSSW.

C Construction

C.1 General

Rebuilding sanitary sewer manholes includes removing existing barrel sections as needed, removal of the frame, cover, casting, adjusting rings and cone, placing new barrel sections, salvaging and resetting the cone section, placement of new undamaged adjusting rings, and resetting of the frame and cover. No steps shall be installed in the chimney section. Install seals in accordance to the manufacturer's recommended installation procedures. Remove existing frames, covers, castings and manhole cone sections with care to prevent damage. Reuse the existing frame and cover. All joints shall be water tight at the time of construction. Furnish and use compacted granular backfill.

Contractor shall furnish and install 9-inch macwrap exterior joint sealer at all barrel joints and the barrel – cone joint in addition to the requirements of the SSSW.

Contractor shall install EZ-STIK all-weather butyl sealant or approved equal on all manhole joints.

If the contractor damages a frame and cover or barrel section that is to be salvaged, they shall provide and install a new one at no cost to the department. The casting shall be a Neenah Foundry R-1661 with self sealing lid.

D Measurement

The department will measure Rebuild Manhole - Oak Creek Sanitary per vertical foot, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0200.01	Rebuild Manhole - Oak Creek Sanitary	VF

Payment is full compensation for removal of existing manhole barrel sections, cone section, adjusting rings, frames, cover and castings; for reinstalling cone section; for installing adjustment rings and frame/chimney seals; for reinstalling the frame and cover; for disposal of surplus material, cleanup, and for restoring site work. No additional monies will be paid to the contractor for replacement of existing manhole barrel sections, cone sections, or frame and cover due to damage caused by the contractor's removal operations.

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 15 *(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 __8__ *(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.wi.gov/business/dbe/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 PROVISIONS 5

Fuel Cost Adjustment

A Description

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

B Categories of Work Items

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

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

C Fuel Index

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

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

D Computing the Fuel Cost Adjustment

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

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

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

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

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

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

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

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

E Payment

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

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

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

Make the following revisions to the standard specifications:

450.3.2.1 General

Replace the entire text with the following effective with the January 2015 letting:

(1) Do not place asphaltic mixture when the air temperature approximately 3 feet above grade, in shade, and away from artificial heat sources is less than 36 F for upper layers or 32 F for lower layers unless the engineer allows in writing. The contractor should place HMA pavement for projects on or north of STH 29 between May 1 and October 15 inclusive and for projects south of STH 29 between April 15 and November 1 inclusive. Notify the engineer at least one business day before paving.

(2) Unless the contract specifies otherwise, conform to the following:

- Keep the road open to all traffic during construction.
- Prepare the existing foundation for treatment as specified in 211.
- Incorporate loose roadbed aggregate as a part of preparing the foundation, in shoulder construction, or dispose of as the engineer approves.

(3) Place asphaltic mixture only on a prepared, firm, and compacted base, foundation layer, or existing pavement substantially surface-dry and free of loose and foreign material. Do not place over frozen subgrade or base, or where the roadbed is unstable.

450.5 Payment

Replace the entire text with the following effective with the January 2015 letting:

(1) All costs of furnishing, maintaining, and operating the truck scale or other weighing equipment and furnishing the weigh tickets are incidental to the contract.

(2) Nonconforming material allowed to remain in place is subject to price adjustment under 105.3.2.

(3) Full-depth sawing to remove integrally placed safety edge where not required is incidental to the contract.

(4) The contractor is responsible for pavement performance. If because of an excusable compensable delay under 108.10.3, the engineer directs the contractor to pave when the temperature is less than 36 F for the upper layer or less than 32 F for lower layers, the department:

- Will relieve the contractor of responsibility for damage and defects the engineer attributes to cold weather paving.
- Will not assess disincentives for density or ride.

455.3.2.1 General

Replace paragraphs one and two with the following effective with the January 2015 letting:

(1) Apply tack coat only when the air temperature is 32 F or more unless the engineer approves otherwise in writing. Before applying tack coat ensure that the surface is dry and reasonably free of loose dirt, dust, or other foreign matter. Do not apply if weather or surface conditions are unfavorable or before impending rains.

(2) Use tack material of the type and grade the contract specifies. The contractor may, with the engineer's approval, dilute tack material as allowed under 455.2.4. Provide calculations using the asphalt content as-received from the supplier and subsequent contractor dilutions to show that as-placed material has 50 percent or more residual asphalt content. Apply at 0.050 to 0.070 gallons per square yard, after dilution, unless the contract designates otherwise. The engineer may adjust the application rate based on surface conditions. Limit application each day to the area the contractor expects to pave during that day.

460.2.2.3 Aggregate Gradation Master Range

Replace paragraph one with the following effective with the December 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-0.3 and E-3 mixes.

[2] 15.5 for E-0.3 and E-3 mixes.

460.3.4 Cold Weather Paving

Add a new subsection as follows effective with the January 2015 letting:

460.3.4 Cold Weather Paving

460.3.4.1 Cold Weather Paving Plan

(1) Submit a written cold weather paving plan to the engineer at the preconstruction meeting. In that plan outline material, operational, and equipment changes for paving when the air temperature approximately 3 feet above grade, in shade, and away from artificial heat sources is less than 40 F. Include the following:

- Use a department-accepted HMA mix design that incorporates a warm mix additive from the department's approved products list. Do not use a foaming process.
- Use additional rollers.

(2) Engineer written acceptance is required for the cold weather paving plan. Engineer acceptance of the plan does not relieve the contractor of responsibility for pavement performance except as specified in 450.5(4).

460.3.4.2 Cold Weather Paving Operations

(1) Do not place asphaltic mixture when the air temperature approximately 3 feet above grade, in shade, and away from artificial heat sources is less than 40 F unless a valid engineer-accepted cold weather paving plan is in effect.

(2) If the national weather service forecast for the construction area predicts ambient air temperature less than 40 F at the projected time of paving within the next 24 hours, confirm or submit revisions to a previously engineer-accepted cold weather paving plan for engineer validation. Upon validation of the plan, the engineer will allow paving for the next day. Once in effect, pave conforming to the engineer-accepted cold weather paving plan for the balance of that work day or shift regardless of the temperature at the time of paving.

460.4 Measurement

Add paragraph two as follows effective with the January 2015 letting:

(2) The department will measure HMA Cold Weather Paving by the ton of HMA mixture for pavement placed conforming to an engineer-accepted cold weather paving plan.

460.5.1 General

Revise paragraph one as follows effective with the January 2015 letting:

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

ITEM NUMBER	DESCRIPTION	UNIT
460.1100	HMA Pavement Type E-0.3	TON
460.1101	HMA Pavement Type E-1	TON
460.1103	HMA Pavement Type E-3	TON
460.1110	HMA Pavement Type E-10	TON
460.1130	HMA Pavement Type E-30	TON
460.1132	HMA Pavement Type E-30X	TON
460.1700	HMA Pavement Type SMA	TON
460.2000	Incentive Density HMA Pavement	DOL
460.4000	HMA Cold Weather Paving	TON

460.5.2.2 Disincentive for HMA Pavement Density

Revise paragraph two as follows effective with the January 2015 letting:

(2) The department will not assess density disincentives for pavement placed in cold weather because of a department-caused delay as specified in 450.5(4).

460.5.2.4 Cold Weather Paving

Add a new subsection as follows effective with the January 2015 letting:

460.5.2.4 Cold Weather Paving

(1) Payment for HMA Cold Weather Paving is full compensation for additional materials and equipment specified for cold weather paving under 460.3.4 including costs for preparing, administering, and following the contractor's cold weather paving plan.

(2) If HMA pavement is placed under 460.3.4 and the HMA Cold Weather Paving bid item is not in the contract, the department will pay for the additional costs specified in 460.5.2.4(1) as extra work. The department will pay separately for HMA pavement under the appropriate HMA Pavement bid items.

465.2 Materials

Replace paragraph two with the following effective with the December 2014 letting:

(2) Under the other section 465 bid items, the contractor need not submit a mix design. Furnish aggregates mixed with a type AC asphaltic material, except under the Asphaltic Curb bid item furnish PG58-28 asphaltic material. Use coarse and fine mineral aggregates uniformly coated and mixed with the asphaltic material in an engineer-approved mixing plant. The contractor may include reclaimed asphaltic pavement materials in the mixture.

Bid Items Added

Add the following new bid item effective with the January 2015 letting:

ITEM NUMBER	DESCRIPTION	UNIT
460.4000	HMA Cold Weather Paving	TON

Errata

Make the following corrections to the standard specifications:

501.3.2.4.4 Water Reducer

Correct errata by deleting the reference to footnote 6 for grade D concrete.

(1) Add a water reducing admixture conforming to 501.2.3. Determine the specific type and rate of use based on the atmospheric conditions, the desired properties of the finished concrete and the manufacturer's recommended rate of use. The actual rate of use shall at least equal the manufacturer's recommended rate, and both the type and rate used require the engineer's approval before use.

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://www.dot.wi.gov/business/civilrights/laborwages/index.htm

(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://www.dot.wi.gov/business/civilrights/laborwages/docs/crc-payroll-manual.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 May 1, 2014

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	35.80	16.87	52.67
Carpenter	33.68	19.81	53.49
Future Increase(s): 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	31.56	18.53	50.09
Future Increase(s): 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	32.82	22.61	55.43
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.			
Fence Erector	16.00	3.33	19.33
Ironworker	30.51	23.23	53.74
Line Constructor (Electrical)	38.25	17.63	55.88
Painter	21.87	11.37	33.24
Pavement Marking Operator	30.00	0.00	30.00
Piledriver	27.67	25.64	53.31
Roofer or Waterproofer	29.40	15.55	44.95
Teledata Technician or Installer	24.75	16.08	40.83
Tuckpointer, Caulker or Cleaner	34.57	16.42	50.99
Underwater Diver (Except on Great Lakes)	34.48	15.90	50.38
Heavy Equipment Operator - ELECTRICAL LINE CONSTRUCTION ONLY	34.43	15.24	49.67

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
	$	$	$
Light Equipment Operator -ELECTRICAL LINE CONSTRUCTION ONLY	30.60	15.07	45.67
Heavy Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	26.78	13.58	40.36
Light Truck Driver - ELECTRICAL LINE CONSTRUCTION ONLY	24.86	12.97	37.83
Groundman - ELECTRICAL LINE CONSTRUCTION ONLY	21.04	11.74	32.78
TRUCK DRIVERS			
Single Axle or Two Axle	34.22	19.90	54.12
Three or More Axle	25.24	15.20	40.44
Articulated, Euclid, Dumptor, Off Road Material Hauler	29.27	20.40	49.67
Future Increase(s): Add $1.75/hr on 6/1/14); Add $1.25/hr on 6/1/15); Add $1.30/hr on 6/1/16); Add $1.25/hr on 6/ 1/ 17. 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:/ / www.dot.wi.gov/ business/ civilrights/ laborwages/ pwc. htm.			
Pavement Marking Vehicle	25.24	15.20	40.44
Shadow or Pilot Vehicle	34.22	19.90	54.12
Truck Mechanic	25.24	15.20	40.44
LABORERS			
General Laborer	26.06	19.43	45.49
Future Increase(s): 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	19.00	0.00	19.00
Landscaper	26.06	19.43	45.49
Future Increase(s): 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	22.55	19.43	41.98
Future Increase(s): Add $1.60/hr on 6/1/2014. Premium Pay: DOT PREMIUMS: 1) Pay two times the hourly basic rate on Sunday, New Year’s Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day & Christmas Day. 2) Add $1.25/hr when the Wisconsin Department of Transportation or responsible governing agency requires that work be performed at night under artificial illumination with traffic control and the work is completed after sunset and before sunrise.			
Fiber Optic Laborer (Outside, Other Than Concrete Encased)	17.69	15.50	33.19
Railroad Track Laborer	13.50	4.06	17.56

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY $	HOURLY FRINGE BENEFITS $	TOTAL $
HEAVY EQUIPMENT OPERATORS			
Crane, Tower Crane, Pedestal Tower or Derrick, With Boom, Leads &/or Jib Lengths Measuring 176 Ft or Over; Crane, Tower Crane, Pedestal Tower or Derrick, With or Without Attachments, With a Lifting Capacity of Over 100 Tons, Self-Erecting Tower Crane With a Lifting Capacity Of Over 4,000 Lbs., Crane With Boom Dollies; Traveling Crane (Bridge Type). Future Increase(s): Add $1.75/hr on 6/1/2014); Add $1.25/hr on 6/1/2015); Add $1.30/hr on 6/1/2016); Add $1.25/hr on 6/ 1/ 2017. 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:/ / www.dot.wi.gov/ business/ civilrights/ laborwages/ pwc. htm.	36.72	20.40	57.12
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 $1.75/hr on 6/1/2014); Add $1.25/hr on 6/1/2015); Add $1.30/hr on 6/1/2016); Add $1.25/hr on 6/ 1/ 2017. 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:/ / www.dot.wi.gov/ business/ civilrights/ laborwages/ pwc. htm.	36.22	20.40	56.62
Air Track, Rotary or Percussion Drilling Machine &/or Hammers, Blaster; Asphalt Heater, Planer & Scarifier; Asphalt Milling Machine; Asphalt Screed; Automatic Subgrader (Concrete); Backhoe (Track Type) Having a Mfgr.'s Rated Capacity of Under 130,000 Lbs., Backhoe (Mini, 15,000 Lbs. & Under); Bituminous (Asphalt) Plant & Paver, Screed; Boatmen (NOT Performing Work on the Great Lakes); Boring Machine (Directional, Horizontal or Vertical); Bridge (Bidwell) Paver; Bulldozer or Endloader; Concrete Batch Plant, Batch Hopper; Concrete Breaker (Large, Auto, VIbratory/Sonic, Manual or Remote); Concrete Bump Cutter, Grinder, Planing or Grooving Machine; Concrete Conveyor System; Concrete Laser/Screed; Concrete Paver (Slipform); Concrete Pump, Concrete Conveyor (Rotec or Bidwell Type); Concrete Slipform Placer Curb & Gutter Machine; Concrete Spreader & Distributor; Crane (Carry Deck, Mini) or Truck Mounted Hydraulic Crane (10 Tons or Under); Crane WIth a Lifting Capacity of 25 Tons or Under; Forestry Equipment, Timbco, Tree Shear, Tub Grinder, Processor; Gradall (Cruz-Aire Type); Grader or Motor Patrol; Grout Pump; Hydro-Blaster (10,000 PSI or Over); Loading Machine (Conveyor); Material or Stack Hoist; Mechanic or Welder; Milling Machine; Post Hole Digger or Driver; Roller (Over 5 Ton); Scraper (Self Propelled or Tractor Drawn) 5 cu yds or More Capacity; Shoulder Widener; Sideboom; Skid Rig; Stabilizing or Concrete Mixer (Self-Propelled or 14S or Over); Straddle Carrier or Travel Lift; Tractor (Scraper, Dozer, Pusher, Loader); Tractor or Truck Mounted Hydraulic Backhoe; Trencher (Wheel Type or Chain Type); Tube Finisher; Tugger (NOT Performing Work on the Great Lakes); Winches	35.72	20.40	56.12

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
	$	$	$
& A- Frames. Future Increase(s): Add $1.75/hr on 6/1/2014); Add $1.25/hr on 6/1/2015); Add $1.30/hr on 6/1/2016); Add $1.25/hr on 6/ 1/ 2017. 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:/ / www.dot.wi.gov/ business/ civilrights/ laborwages/ pwc. htm.			
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 $1.75/hr on 6/1/2014); Add $1.25/hr on 6/1/2015); Add $1.30/hr on 6/1/2016); Add $1.25/hr on 6/ 1/ 2017. 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:/ / www.dot.wi.gov/ business/ civilrights/ laborwages/ pwc. htm.	35.46	20.40	55.86
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 $1.75/hr on 6/1/2014); Add $1.25/hr on 6/1/2015); Add $1.30/hr on 6/1/2016); Add $1.25/hr on 6/ 1/ 2017. 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:/ / www.dot.wi.gov/ business/ civilrights/ laborwages/ pwc. htm.	35.17	20.40	55.57
Fiber Optic Cable Equipment.	26.69	16.65	43.34
Work Performed on the Great Lakes Including Diver; Wet Tender or Hydraulic Dredge Engineer.	38.80	20.17	58.97
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.	38.80	20.17	58.97
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.	34.50	20.04	54.54
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.	34.50	20.04	54.54

TRADE OR OCCUPATION	HOURLY BASIC RATE OF PAY	HOURLY FRINGE BENEFITS	TOTAL
	$	$	$

SUPERSEDES DECISION WI20120010
U. S. DEPARTMENT OF LABOR
(DAVIS-BACON ACT, MINIMUM WAGE RATES)

STATE: Wisconsin
GENERAL DECISION NUMBER: WI140010
DATE: November 28, 2014
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	$27.06	18.73
Group 2: Air Tool Operator; Joint Sawer and Filler (Pavement); Vibrator or Tamper Operator (Mechanical Hand Operated); Chain Saw Operator; Demolition Burning Torch Laborer	27.21	18.73
Group 3: Bituminous Worker (Raker and Luteman); Formsetter (Curb, Sidewalk, and Pavement); Strike Off man	27.41	18.73
Group 4: Line and Grade Specialist	27.56	18.73
Group 5: Blaster and Powderman	27.71	18.73
Group 6: Flagperson traffic control person	23.55	18.73

CLASSES OF LABORER AND MECHANICS

Bricklayer	35.37	18.47
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	40.81	32% + 5.00
Heavy Equipment Operator	38.77	32% + 5.00
Equipment Operator	32.65	32% + 5.00
Heavy Groundman Driver	26.78	14.11
Light Groundman Driver	24.86	13.45
Groundsman	22.45	32% + 5.00
Millwrights	26.32	13.98
Painter, Brush	29.52	20.04
Painter, Spray and Sandblaster	30.27	20.04
Painter, Bridge	29.87	20.04
Well Drilling:		
Well Driller	16.52	3.70

	Basic Hourly Rates	Fringe Benefits
Truck Drivers:		
1 & 2 Axles	25.18	18.31
Three or More Axles; Euclids, Dumptor & Articulated, Truck Mechanic	25.38	18.31

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 3, 2014; Modification #1, dated February 7, 2014; Modification #2, dated March 14, 2014; Modification #3, dated May 2, 2014; Modification #4, dated June 27, 2014; Modification #5, dated July 4, 2014; Modification #6, dated July 25, 2014; Modification #7, dated August 1, 2014; Modification #8, dated November 28, 2014.

SUPERSEDES DECISION WI20120010
U. S. DEPARTMENT OF LABOR
(DAVIS-BACON ACT, MINIMUM WAGE RATES)

STATE: Wisconsin
GENERAL DECISION NUMBER: WI140010
DATE: November 28, 2014
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	$37.72	$20.93
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.	$37.22	$20.93
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.	$36.72	$20.93
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.	$36.46	$20.93
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.	$36.17	$20.93
Group 6: Off – road material hauler with or without ejector	$30.27	$20.93

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: WI140010
DATE: November 28, 2014
DESCRIPTION OF WORK: Highways and Airport Runway and Taxiway Construction

LABORERS CLASSIFICATION:	Rates	Benefits
Electricians		
Area 1	$29.00	26.5%+ 9.15
Area 2:		
Electricians	30.59	18.43
Area 3:		
Electrical contracts under $130,000	26.24	16.85
Electrical contracts over $130,000	29.41	16.97
Area 4:	28.50	28.75% + 9.27
Area 5	28.96	24.85% + 9.70
Area 6	35.25	19.30
Area 8		
Electricians	31.10	24.95% + 10.41
Area 9:		
Electricians	34.82	19.575
Area 10	29.64	20.54
Area 11	32.54	24.07
Area 12	32.87	19.23
Area 13	33.93	22.67
Teledata System Installer		
Area 14		
Installer/Technician	22.50	12.72
Sound & Communications		
Area 15		
Installer	16.47	14.84
Technician	25.63	17.21

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: 20150210013 PROJECT(S): 2265-16-70 FEDERAL ID(S): WISC 2015006

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
	SECTION 0001 Roadway					
0010	201.0105 Clearing	8.000 STA		.		.
0020	201.0110 Clearing	12,427.000 SY		.		.
0030	201.0120 Clearing	1,640.000 ID		.		.
0040	201.0205 Grubbing	8.000 STA		.		.
0050	201.0210 Grubbing	6,927.000 SY		.		.
0060	201.0220 Grubbing	1,640.000 ID		.		.
0070	203.0100 Removing Small Pipe Culverts	32.000 EACH		.		.
0080	203.0200 Removing Old Structure (station) 01. 1226+70ml	LUMP	LUMP			.
0090	203.0200 Removing Old Structure (station) 02. 1248+27ml	LUMP	LUMP			.
0100	203.0200 Removing Old Structure (station) 03. 1261+00ml	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
0110	203.0200 Removing Old Structure (station) 04. 1266+60ml	LUMP	LUMP			.
0120	203.0200 Removing Old Structure (station) 05. 1283+90ml	LUMP	LUMP			.
0130	203.0200 Removing Old Structure (station) 06. 1306+60ml	LUMP	LUMP			.
0140	204.0100 Removing Pavement	80,396.000 SY		.		.
0150	204.0150 Removing Curb & Gutter	70,654.000 LF		.		.
0160	204.0155 Removing Concrete Sidewalk	11,405.000 SY		.		.
0170	204.0165 Removing Guardrail	603.000 LF		.		.
0180	204.0170 Removing Fence	452.000 LF		.		.
0190	204.0185 Removing Masonry	50.000 CY		.		.
0200	204.0195 Removing Concrete Bases	176.000 EACH		.		.
0210	204.0210 Removing Manholes	26.000 EACH		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0220	204.0220 Removing Inlets	142.000 EACH		.		.
0230	204.0245 Removing Storm Sewer (size) 01. 6-Inch	73.000 LF		.		.
0240	204.0245 Removing Storm Sewer (size) 02. 12-Inch	8,354.000 LF		.		.
0250	204.0245 Removing Storm Sewer (size) 03. 15-Inch	900.000 LF		.		.
0260	204.0245 Removing Storm Sewer (size) 04. 18-Inch	2,819.000 LF		.		.
0270	204.0245 Removing Storm Sewer (size) 05. 24-Inch	2,801.000 LF		.		.
0280	204.0245 Removing Storm Sewer (size) 06. 27-Inch	175.000 LF		.		.
0290	204.0245 Removing Storm Sewer (size) 07. 30-Inch	1,563.000 LF		.		.
0300	204.0245 Removing Storm Sewer (size) 08. 36-Inch	409.000 LF		.		.
0310	204.0245 Removing Storm Sewer (size) 09. 43x54 Elliptical	135.000 LF		.		.
0320	204.0265 Abandoning Wells	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
0330	204.9060.S Removing (Item Description) 01. Overhead Sign Support	2.000 EACH		.		.
0340	204.9060.S Removing (Item Description) 02. Light Pole	69.000 EACH		.		.
0350	204.9090.S Removing (Item Description) 01. Stone Retaining Wall	861.000 LF		.		.
0360	204.9090.S Removing (Item Description) 02. Block Retaining Wall	228.000 LF		.		.
0370	204.9105.S Removing (Item Description) 01. Sheet Pile Retaining Wall Sta 416+20'Rs'	LUMP	LUMP			.
0380	205.0100 Excavation Common	310,852.000 CY		.		.
0390	205.0501.S Excavation, Hauling, and Disposal of Petroleum Contaminated Soil	1,000.000 TON		.		.
0400	206.3000 Excavation for Structures Retaining Walls (structure) 01. R-40-0588	LUMP	LUMP			.
0410	206.3000 Excavation for Structures Retaining Walls (structure) 02. R-40-0612	LUMP	LUMP			.
0420	210.0100 Backfill Structure	1,550.000 CY		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0430	213.0100 Finishing Roadway (project) 01. 2265-16-70	1.000 EACH		.		.
0440	305.0110 Base Aggregate Dense 3/4-Inch	30.000 TON		.		.
0450	305.0120 Base Aggregate Dense 1 1/4-Inch	84,700.000 TON		.		.
0460	311.0110 Breaker Run	189,085.000 TON		.		.
0470	415.0080 Concrete Pavement 8-Inch	173,358.000 SY		.		.
0480	415.0210 Concrete Pavement Gaps	17.000 EACH		.		.
0490	415.1080 Concrete Pavement HES 8-Inch	8,354.000 SY		.		.
0500	416.0170 Concrete Driveway 7-Inch	3,699.500 SY		.		.
0510	416.0270 Concrete Driveway HES 7-Inch	909.500 SY		.		.
0520	440.4410.S Incentive IRI Ride	33,250.000 DOL	1.00000		33250.00	
0530	455.0120 Asphaltic Material PG64-28	341.000 TON		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0540	455.0605 Tack Coat	759.000 GAL		.		.
0550	460.1101 Hma Pavement Type E-1	3,144.000 TON		.		.
0560	460.1110 Hma Pavement Type E-10	2,152.000 TON		.		.
0570	460.2000 Incentive Density HMA Pavement	3,390.000 DOL	1.00000		3390.00	
0580	460.4000 HMA Cold Weather Paving	803.000 TON		.		.
0590	465.0105 Asphaltic Surface	928.500 TON		.		.
0600	465.0120 Asphaltic Surface Driveways and Field Entrances	1,227.600 TON		.		.
0610	465.0125 Asphaltic Surface Temporary	22,110.000 TON		.		.
0620	504.0500 Concrete Masonry Retaining Walls	315.000 CY		.		.
0630	505.0415 Bar Steel Reinforcement HS Retaining Walls	10,020.000 LB		.		.
0640	505.0615 Bar Steel Reinforcement HS Coated Retaining Walls	13,080.000 LB		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0650	512.0500 Piling Steel Sheet Permanent Delivered	2,201.000 SF		.		.
0660	512.0600 Piling Steel Sheet Permanent Driven	2,201.000 SF		.		.
0670	513.2050.S Railing Pipe	12.000 LF		.		.
0680	516.0500 Rubberized Membrane Waterproofing	78.000 SY		.		.
0690	517.1015.S Concrete Staining Multi-Color (structure) 01. R-40-0588	1,350.000 SF		.		.
0700	517.1015.S Concrete Staining Multi-Color (structure) 02. R-40-0612	655.000 SF		.		.
0710	517.1050.S Architectural Surface Treatment (structure) 01. R-40-0588	1,350.000 SF		.		.
0720	517.1050.S Architectural Surface Treatment (structure) 02. R-40-0612	655.000 SF		.		.
0730	520.8000 Concrete Collars for Pipe	4.000 EACH		.		.
0740	521.0118 Culvert Pipe Corrugated Steel 18-Inch	99.000 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
0750	521.1018 Apron Endwalls for Culvert Pipe Steel 18-Inch	8.000 EACH		.		.
0760	522.0124 Culvert Pipe Reinforced Concrete Class III 24-Inch	182.000 LF		.		.
0770	522.1012 Apron Endwalls for Culvert Pipe Reinforced Concrete 12-Inch	1.000 EACH		.		.
0780	522.1018 Apron Endwalls for Culvert Pipe Reinforced Concrete 18-Inch	1.000 EACH		.		.
0790	522.1024 Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	2.000 EACH		.		.
0800	522.1036 Apron Endwalls for Culvert Pipe Reinforced Concrete 36-Inch	2.000 EACH		.		.
0810	523.0134 Culvert Pipe Reinforced Concrete Horizontal Elliptical Class HE-III 34x53-Inch	398.000 LF		.		.
0820	523.0534 Apron Endwalls for Culvert Pipe Reinforced Concrete Horizontal Elliptical 34x53-Inch	4.000 EACH		.		.
0830	532.0200.S Wall Modular Block Gravity	1,370.000 SF		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0840	601.0105 Concrete Curb Type A	1,427.000 LF		.		.
0850	601.0205 Concrete Gutter 24-Inch	23.000 LF		.		.
0860	601.0331 Concrete Curb & Gutter 31-Inch	10,491.000 LF		.		.
0870	601.0405 Concrete Curb & Gutter 18-Inch Type A	129.000 LF		.		.
0880	601.0407 Concrete Curb & Gutter 18-Inch Type D	2,329.000 LF		.		.
0890	601.0409 Concrete Curb & Gutter 30-Inch Type A	27,979.000 LF		.		.
0900	601.0411 Concrete Curb & Gutter 30-Inch Type D	3,187.000 LF		.		.
0910	601.0413 Concrete Curb & Gutter 6-Inch Sloped 30-Inch Type G	13,786.000 LF		.		.
0920	601.0415 Concrete Curb & Gutter 6-Inch Sloped 30-Inch Type J	1,021.000 LF		.		.
0930	601.0454 Concrete Curb & Gutter Integral 30-Inch Type J	363.000 LF		.		.
0940	601.0600 Concrete Curb Pedestrian	1,550.000 LF		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
0950	602.0410 Concrete Sidewalk 5-Inch	214,487.000 SF		.		.
0960	602.0415 Concrete Sidewalk 6-Inch	244.000 SF		.		.
0970	602.0515 Curb Ramp Detectable Warning Field Natural Patina	856.000 SF		.		.
0980	602.1500 Concrete Steps	96.000 SF		.		.
0990	602.2400 Concrete Safety Islands	2,777.000 SF		.		.
1000	603.8000 Concrete Barrier Temporary Precast Delivered	5,785.000 LF		.		.
1010	603.8125 Concrete Barrier Temporary Precast Installed	5,785.000 LF		.		.
1020	606.0200 Riprap Medium	54.000 CY		.		.
1030	608.0312 Storm Sewer Pipe Reinforced Concrete Class Iii 12-Inch	7,371.000 LF		.		.
1040	608.0315 Storm Sewer Pipe Reinforced Concrete Class Iii 15-Inch	1,277.000 LF		.		.
1050	608.0318 Storm Sewer Pipe Reinforced Concrete Class Iii 18-Inch	2,093.000 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
1060	608.0324 Storm Sewer Pipe Reinforced Concrete Class Iii 24-Inch	4,170.000 LF		.		.
1070	608.0330 Storm Sewer Pipe Reinforced Concrete Class Iii 30-Inch	2,891.000 LF		.		.
1080	608.0336 Storm Sewer Pipe Reinforced Concrete Class Iii 36-Inch	1,700.000 LF		.		.
1090	608.0342 Storm Sewer Pipe Reinforced Concrete Class Iii 42-Inch	2,643.000 LF		.		.
1100	608.0348 Storm Sewer Pipe Reinforced Concrete Class Iii 48-Inch	1,313.000 LF		.		.
1110	610.0119 Storm Sewer Pipe Reinforced Concrete Horizontal Elliptical Class He-Iii 19x30-Inch	789.000 LF		.		.
1120	610.0124 Storm Sewer Pipe Reinforced Concrete Horizontal Elliptical Class He-Iii 24x38-Inch	473.000 LF		.		.
1130	610.0129 Storm Sewer Pipe Reinforced Concrete Horizontal Elliptical Class He-Iii 29x45-Inch	259.000 LF		.		.
1140	610.0134 Storm Sewer Pipe Reinforced Concrete Horizontal Elliptical Class He-Iii 34x53-Inch	1,237.000 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
1150	610.0138 Storm Sewer Pipe Reinforced Concrete Horizontal Elliptical Class He-Iii 38x60-Inch	177.000 LF		.		.
1160	611.0530 Manhole Covers Type J	71.000 EACH		.		.
1170	611.0612 Inlet Covers Type C	5.000 EACH		.		.
1180	611.0624 Inlet Covers Type H	305.000 EACH		.		.
1190	611.0636 Inlet Covers Type Hm-S	5.000 EACH		.		.
1200	611.2004 Manholes 4-Ft Diameter	30.000 EACH		.		.
1210	611.2005 Manholes 5-Ft Diameter	26.000 EACH		.		.
1220	611.2006 Manholes 6-Ft Diameter	25.000 EACH		.		.
1230	611.2007 Manholes 7-Ft Diameter	23.000 EACH		.		.
1240	611.2008 Manholes 8-Ft Diameter	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
1250	611.3230 Inlets 2x3-Ft	273.000 EACH		.		.
1260	611.8110 Adjusting Manhole Covers	3.000 EACH		.		.
1270	611.8120.S Cover Plates Temporary	4.000 EACH		.		.
1280	611.9800.S Pipe Grates	9.000 EACH		.		.
1290	612.0406 Pipe Underdrain Wrapped 6-Inch	2,245.000 LF		.		.
1300	614.0905 Crash Cushions Temporary	7.000 EACH		.		.
1310	616.0700.S Fence Safety	7,500.000 LF		.		.
1320	618.0100 Maintenance And Repair Of Haul Roads (Project) 01. 2265-16-70	1.000 EACH		.		.
1330	619.1000 Mobilization	1.000 EACH		.		.
1340	620.0100 Concrete Corrugated Median	5,310.000 SF		.		.
1350	620.0300 Concrete Median Sloped Nose	6,482.000 SF		.		.

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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	624.0100 Water	550.000 MGAL		.		.
1370	625.0100 Topsoil	103,821.000 SY		.		.
1380	625.0500 Salvaged Topsoil	6,600.000 SY		.		.
1390	628.1104 Erosion Bales	50.000 EACH		.		.
1400	628.1504 Silt Fence	25,622.000 LF		.		.
1410	628.1520 Silt Fence Maintenance	12,800.000 LF		.		.
1420	628.1905 Mobilizations Erosion Control	12.000 EACH		.		.
1430	628.1910 Mobilizations Emergency Erosion Control	12.000 EACH		.		.
1440	628.2006 Erosion Mat Urban Class I Type A	6,370.000 SY		.		.
1450	628.2008 Erosion Mat Urban Class I Type B	43,396.000 SY		.		.
1460	628.7005 Inlet Protection Type A	33.000 EACH		.		.

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1470	628.7010 Inlet Protection Type B	92.000 EACH		.		.
1480	628.7015 Inlet Protection Type C	642.000 EACH		.		.
1490	628.7020 Inlet Protection Type D	64.000 EACH		.		.
1500	628.7504 Temporary Ditch Checks	568.000 LF		.		.
1510	628.7555 Culvert Pipe Checks	77.000 EACH		.		.
1520	629.0210 Fertilizer Type B	65.000 CWT		.		.
1530	630.0110 Seeding Mixture No. 10	90.000 LB		.		.
1540	630.0120 Seeding Mixture No. 20	555.000 LB		.		.
1550	630.0140 Seeding Mixture No. 40	408.000 LB		.		.
1560	630.0171 Seeding Mixture No. 70a	4.000 LB		.		.
1570	630.0200 Seeding Temporary	1,181.000 LB		.		.

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1580	631.0300 Sod Water	3.100 MGAL		.		.
1590	631.1000 Sod Lawn	52,173.000 SY		.		.
1600	634.0616 Posts Wood 4x6-Inch X 16-Ft	443.000 EACH		.		.
1610	634.0618 Posts Wood 4x6-Inch X 18-Ft	241.000 EACH		.		.
1620	634.0816 Posts Tubular Steel 2x2-Inch X 16-Ft	1.000 EACH		.		.
1630	637.1220 Signs Type I Reflective Sh	266.500 SF		.		.
1640	637.2210 Signs Type Ii Reflective H	4,209.250 SF		.		.
1650	637.2215 Signs Type Ii Reflective H Folding	410.300 SF		.		.
1660	637.2230 Signs Type Ii Reflective F	406.750 SF		.		.
1670	638.2102 Moving Signs Type II	32.000 EACH		.		.
1680	638.2602 Removing Signs Type II	361.000 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
1690	638.3000 Removing Small Sign Supports	287.000 EACH		.		.
1700	640.1303.S Pond Liner Clay	3,730.000 CY		.		.
1710	641.8100 Overhead Sign Support (Structure) 01. S-40-997	LUMP	LUMP			.
1720	641.8100 Overhead Sign Support (Structure) 02. S-40-998	LUMP	LUMP			.
1730	641.8100 Overhead Sign Support (Structure) 03. S-40-999	LUMP	LUMP			.
1740	642.5401 Field Office Type D	1.000 EACH		.		.
1750	643.0200 Traffic Control Surveillance And Maintenance (Project) 01. 2265-16-70	510.000 DAY		.		.
1760	643.0300 Traffic Control Drums	568,133.000 DAY		.		.
1770	643.0420 Traffic Control Barricades Type Iii	23,074.000 DAY		.		.
1780	643.0500 Traffic Control Flexible Tubular Marker Posts	3,439.000 EACH		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
1790	643.0600 Traffic Control Flexible Tubular Marker Bases	3,439.000 EACH		.		.
1800	643.0705 Traffic Control Warning Lights Type A	1,080.000 DAY		.		.
1810	643.0715 Traffic Control Warning Lights Type C	128,317.000 DAY		.		.
1820	643.0800 Traffic Control Arrow Boards	1,587.000 DAY		.		.
1830	643.0900 Traffic Control Signs	51,876.000 DAY		.		.
1840	643.1050 Traffic Control Signs PCMS	510.000 DAY		.		.
1850	643.2000 Traffic Control Detour (Project) 01. 2265-16-70	1.000 EACH		.		.
1860	643.3000 Traffic Control Detour Signs	46,200.000 DAY		.		.
1870	645.0120 Geotextile Fabric Type Hr	91.000 SY		.		.
1880	646.0106 Pavement Marking Epoxy 4-Inch	46,408.000 LF		.		.
1890	646.0600 Removing Pavement Markings	145,214.000 LF		.		.

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1900	646.0841.S Pavement Marking Grooved Wet Reflective Contrast Tape 4-Inch	37,120.000 LF		.		.
1910	646.0843.S Pavement Marking Grooved Wet Reflective Contrast Tape 8-Inch	31,888.000 LF		.		.
1920	647.0456 Pavement Marking Curb Epoxy	1,325.000 LF		.		.
1930	647.0606 Pavement Marking Island Nose Epoxy	43.000 EACH		.		.
1940	649.0100 Temporary Pavement Marking 4-Inch	161,260.000 LF		.		.
1950	649.0400 Temporary Pavement Marking Removable Tape 4-Inch	329,357.000 LF		.		.
1960	649.0701 Temporary Pavement Marking 8-Inch	15,308.000 LF		.		.
1970	649.0801 Temporary Pavement Marking Removable Tape 8-Inch	27,773.000 LF		.		.
1980	649.1100 Temporary Pavement Marking Stop Line 18-Inch	803.000 LF		.		.
1990	649.1200 Temporary Pavement Marking Stop Line Removable Tape 18-Inch	1,876.000 LF		.		.

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CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2000	650.4000 Construction Staking Storm Sewer	382.000 EACH		.		.
2010	650.4500 Construction Staking Subgrade	19,575.000 LF		.		.
2020	650.5000 Construction Staking Base	19,575.000 LF		.		.
2030	650.5500 Construction Staking Curb Gutter And Curb & Gutter	76,691.000 LF		.		.
2040	650.6000 Construction Staking Pipe Culverts	8.000 EACH		.		.
2050	650.6500 Construction Staking Structure Layout (Structure) 01. R-40-0585	LUMP	LUMP			.
2060	650.6500 Construction Staking Structure Layout (Structure) 02. R-40-0586	LUMP	LUMP			.
2070	650.6500 Construction Staking Structure Layout (Structure) 03. R-40-0587	LUMP	LUMP			.
2080	650.6500 Construction Staking Structure Layout (Structure) 04. R-40-0588	LUMP	LUMP			.
2090	650.6500 Construction Staking Structure Layout (Structure) 05. R-40-0589	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	650.6500 Construction Staking Structure Layout (Structure) 06. R-40-0590	LUMP	LUMP			.
2110	650.6500 Construction Staking Structure Layout (Structure) 07. R-40-0612	LUMP	LUMP			.
2120	650.7000 Construction Staking Concrete Pavement	19,575.000 LF		.		.
2130	650.9910 Construction Staking Supplemental Control (Project) 01. 2265-16-70	LUMP	LUMP			.
2140	650.9920 Construction Staking Slope Stakes	19,575.000 LF		.		.
2150	652.0225 Conduit Rigid Nonmetallic Schedule 40 2-Inch	55,851.000 LF		.		.
2160	652.0235 Conduit Rigid Nonmetallic Schedule 40 3-Inch	11,970.000 LF		.		.
2170	652.0800 Conduit Loop Detector	14,274.000 LF		.		.
2180	653.0135 Pull Boxes Steel 24x36-Inch	63.000 EACH		.		.
2190	653.0140 Pull Boxes Steel 24x42-Inch	111.000 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
2200	653.0905 Removing Pull Boxes	163.000 EACH		.		.
2210	654.0101 Concrete Bases Type 1	28.000 EACH		.		.
2220	654.0102 Concrete Bases Type 2	9.000 EACH		.		.
2230	654.0105 Concrete Bases Type 5	248.000 EACH		.		.
2240	654.0110 Concrete Bases Type 10	14.000 EACH		.		.
2250	654.0113 Concrete Bases Type 13	20.000 EACH		.		.
2260	654.0217 Concrete Control Cabinet Bases Type 9 Special	12.000 EACH		.		.
2270	655.0230 Cable Traffic Signal 5-14 Awg	5,371.000 LF		.		.
2280	655.0240 Cable Traffic Signal 7-14 Awg	4,798.000 LF		.		.
2290	655.0260 Cable Traffic Signal 12-14 Awg	21,060.000 LF		.		.
2300	655.0320 Cable Type Uf 2-10 Awg Grounded	7,441.000 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
2310	655.0515 Electrical Wire Traffic Signals 10 Awg	19,831.000 LF		.		.
2320	655.0610 Electrical Wire Lighting 12 Awg	20,790.000 LF		.		.
2330	655.0615 Electrical Wire Lighting 10 Awg	8,500.000 LF		.		.
2340	655.0620 Electrical Wire Lighting 8 Awg	115,425.000 LF		.		.
2350	655.0700 Loop Detector Lead In Cable	50,811.000 LF		.		.
2360	655.0800 Loop Detector Wire	48,896.000 LF		.		.
2370	655.0900 Traffic Signal Evp Detector Cable	9,106.000 LF		.		.
2380	656.0200 Electrical Service Meter Breaker Pedestal (Location) 01. Sth 241 & W Drexel Ave	LUMP	LUMP			.
2390	656.0200 Electrical Service Meter Breaker Pedestal (Location) 02. Sth 241 & Northwestern Mutual Way	LUMP	LUMP			.
2400	656.0200 Electrical Service Meter Breaker Pedestal (Location) 03. Sth 241 & W Rawson 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
2410	656.0200 Electrical Service Meter Breaker Pedestal (Location) 04. Sth 241 & S Riverwood Blvd	LUMP	LUMP			.
2420	656.0200 Electrical Service Meter Breaker Pedestal (Location) 05. Sth 241 & W Sycamore Ave/St	LUMP	LUMP			.
2430	656.0200 Electrical Service Meter Breaker Pedestal (Location) 06. Sth 241 & W College Ave	LUMP	LUMP			.
2440	656.0200 Electrical Service Meter Breaker Pedestal (Location) 07. Lighting Cabinet No. A	LUMP	LUMP			.
2450	656.0200 Electrical Service Meter Breaker Pedestal (Location) 08. Lighting Cabinet No. B	LUMP	LUMP			.
2460	656.0200 Electrical Service Meter Breaker Pedestal (Location) 09. Lighting Cabinet No. 90	LUMP	LUMP			.
2470	656.0200 Electrical Service Meter Breaker Pedestal (Location) 10. Lighting Cabinet No. 91	LUMP	LUMP			.
2480	656.0200 Electrical Service Meter Breaker Pedestal (Location) 11. Lighting Cabinet No. E	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
2490	656.0200 Electrical Service Meter Breaker Pedestal (Location) 12. Lighting Cabinet No. F	LUMP	LUMP			.
2500	657.0100 Pedestal Bases	28.000 EACH		.		.
2510	657.0255 Transformer Bases Breakaway 11 1/2-Inch Bolt Circle	28.000 EACH		.		.
2520	657.0305 Poles Type 2	2.000 EACH		.		.
2530	657.0315 Poles Type 4	7.000 EACH		.		.
2540	657.0322 Poles Type 5-Aluminum	17.000 EACH		.		.
2550	657.0405 Traffic Signal Standards Aluminum 3.5-Ft	2.000 EACH		.		.
2560	657.0420 Traffic Signal Standards Aluminum 13-Ft	18.000 EACH		.		.
2570	657.0425 Traffic Signal Standards Aluminum 15-Ft	5.000 EACH		.		.
2580	657.0430 Traffic Signal Standards Aluminum 10-Ft	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
2590	657.0609 Luminaire Arms Single Member 4-Inch Clamp 6-Ft	13.000 EACH		.		.
2600	657.0610 Luminaire Arms Single Member 4 1/2-Inch Clamp 6-Ft	23.000 EACH		.		.
2610	657.1345 Install Poles Type 9	3.000 EACH		.		.
2620	657.1350 Install Poles Type 10	11.000 EACH		.		.
2630	657.1355 Install Poles Type 12	18.000 EACH		.		.
2640	657.1360 Install Poles Type 13	2.000 EACH		.		.
2650	657.1515 Install Monotube Arms 15-Ft	2.000 EACH		.		.
2660	657.1520 Install Monotube Arms 20-Ft	4.000 EACH		.		.
2670	657.1525 Install Monotube Arms 25-Ft	5.000 EACH		.		.
2680	657.1530 Install Monotube Arms 30-Ft	3.000 EACH		.		.
2690	657.1535 Install Monotube Arms 35-Ft	1.000 EACH		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
2700	657.1540 Install Monotube Arms 40-Ft	2.000 EACH		.		.
2710	657.1545 Install Monotube Arms 45-Ft	13.000 EACH		.		.
2720	657.1550 Install Monotube Arms 50-Ft	2.000 EACH		.		.
2730	657.1555 Install Monotube Arms 55-Ft	2.000 EACH		.		.
2740	657.1808 Install Luminaire Arms Steel 8-Ft	23.000 EACH		.		.
2750	657.1815 Install Luminaire Arms Steel 15-Ft	1.000 EACH		.		.
2760	658.0110 Traffic Signal Face 3-12 Inch Vertical	115.000 EACH		.		.
2770	658.0115 Traffic Signal Face 4-12 Inch Vertical	11.000 EACH		.		.
2780	658.0215 Backplates Signal Face 3 Section 12-Inch	115.000 EACH		.		.
2790	658.0220 Backplates Signal Face 4 Section 12-Inch	11.000 EACH		.		.
2800	658.0416 Pedestrian Signal Face 16-Inch	44.000 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
2810	658.0500 Pedestrian Push Buttons	58.000 EACH		.		.
2820	658.0600 Led Modules 12-Inch Red Ball	84.000 EACH		.		.
2830	658.0605 Led Modules 12-Inch Yellow Ball	77.000 EACH		.		.
2840	658.0610 Led Modules 12-Inch Green Ball	77.000 EACH		.		.
2850	658.0615 Led Modules 12-Inch Red Arrow	42.000 EACH		.		.
2860	658.0620 Led Modules 12-Inch Yellow Arrow	60.000 EACH		.		.
2870	658.0625 Led Modules 12-Inch Green Arrow	49.000 EACH		.		.
2880	658.0635 Led Modules Pedestrian Countdown Timer 16-Inch	44.000 EACH		.		.
2890	658.5069 Signal Mounting Hardware (Location) 01. Sth 241 & W Drexel Ave	LUMP	LUMP			.
2900	658.5069 Signal Mounting Hardware (Location) 02. Sth 241 & Nw Mutual Way	LUMP	LUMP			.
2910	658.5069 Signal Mounting Hardware (Location) 03. Sth 241 & W Rawson 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
2920	658.5069 Signal Mounting Hardware (Location) 04. Sth 241 & S Riverwood Blvd	LUMP	LUMP			.
2930	658.5069 Signal Mounting Hardware (Location) 05. Sth 241 & W Sycamore Ave/St	LUMP	LUMP			.
2940	658.5069 Signal Mounting Hardware (Location) 06. Sth 241 & W College Ave	LUMP	LUMP			.
2950	659.1125 Luminaires Utility Led C	60.000 EACH	.			.
2960	661.0200 Temporary Traffic Signals For Intersections (Location) 01. Sth 241 & W Drexel Ave	LUMP	LUMP			.
2970	661.0200 Temporary Traffic Signals For Intersections (Location) 02. Sth 241 & Nw Mutual Way	LUMP	LUMP			.
2980	661.0200 Temporary Traffic Signals For Intersections (Location) 03. Sth 241 & W Rawson Ave	LUMP	LUMP			.
2990	661.0200 Temporary Traffic Signals For Intersections (Location) 04. Sth 241 & S Riverwood Blvd	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
3000	661.0200 Temporary Traffic Signals For Intersections (Location) 05. Sth 241 & W Sycamore Ave/St	LUMP	LUMP			.
3010	661.0200 Temporary Traffic Signals For Intersections (Location) 06. Sth 241 & W College Ave	LUMP	LUMP			.
3020	661.0300 Generators	12.000 DAY		.		.
3030	670.0100 Field System Integrator 01. Traffic Signals Interconnect	LUMP	LUMP			.
3040	670.0100 Field System Integrator 02. Cctv	LUMP	LUMP			.
3050	670.0200 Its Documentation 01. Traffic Signals Interconnect	LUMP	LUMP			.
3060	670.0200 Its Documentation 02. Cctv	LUMP	LUMP			.
3070	673.0105 Communication Vault Type 1	10.000 EACH		.		.
3080	677.0200 Install Camera Assembly	3.000 EACH		.		.
3090	677.0300.S Install Video Encoder	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
3100	678.0036 Install Fiber Optic Cable Outdoor Plant 36-Ct	13,981.000 LF		.		.
3110	678.0200 Fiber Optic Splice Enclosure	10.000 EACH		.		.
3120	678.0300 Fiber Optic Splice	186.000 EACH		.		.
3130	678.0500 Communication System Testing 01. Traffic Signals Interconnect	LUMP	LUMP			.
3140	690.0150 Sawing Asphalt	12,722.000 LF		.		.
3150	690.0250 Sawing Concrete	51,918.000 LF		.		.
3160	715.0415 Incentive Strength Concrete Pavement	11,615.000 DOL	1.00000		11615.00	
3170	715.0502 Incentive Strength Concrete Structures	1,890.000 DOL	1.00000		1890.00	
3180	999.1500.S Crack And Damage Survey	LUMP	LUMP			.
3190	ASP.1T0A On-The-Job Training Apprentice At $5.00/Hr	4,000.000 HRS	5.00000		20000.00	

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
3200	ASP.1T0G On-The-Job Training Graduate At $5.00/Hr	10,000.000 HRS	5.00000		50000.00	
3210	SPV.0035 Special 01. Slurry Backfill	75.000 CY	.		.	
3220	SPV.0045 Special 01. Temporary Crosswalk And Bus Stop Access	856.000 DAY	.		.	
3230	SPV.0060 Special 01. Manhole 10-Ft Diameter Special	4.000 EACH	.		.	
3240	SPV.0060 Special 02. Reconnect Storm Sewer Laterals	7.000 EACH	.		.	
3250	SPV.0060 Special 03. Reconstruct Sanitary Manhole - Oak Creek	7.000 EACH	.		.	
3260	SPV.0060 Special 04. Adjusting Sanitary Manhole Cover - Oak Creek	20.000 EACH	.		.	
3270	SPV.0060 Special 05. Adjust Manhole Casting - Franklin	8.000 EACH	.		.	
3280	SPV.0060 Special 06. Replace Casting - Franklin	5.000 EACH	.		.	
3290	SPV.0060 Special 07. Replace Lid - Franklin	2.000 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
3300	SPV.0060 Special 08. Add Clean Out Caps - Franklin	1.000 EACH		.		.
3310	SPV.0060 Special 09. Raise Manhole - Franklin	5.000 EACH		.		.
3320	SPV.0060 Special 10. Lower Manhole - Franklin	10.000 EACH		.		.
3330	SPV.0060 Special 11. Rotate Conical Section - Franklin	7.000 EACH		.		.
3340	SPV.0060 Special 12. Watermain Protection	12.000 EACH		.		.
3350	SPV.0060 Special 14. Circuit Breaker Panel And Photo Control System	6.000 EACH		.		.
3360	SPV.0060 Special 15. Lighting Control Cabinet Type 3060	6.000 EACH		.		.
3370	SPV.0060 Special 16. Municipal Luminaire Led, Type A3	191.000 EACH		.		.
3380	SPV.0060 Special 17. Municipal Luminaire Led, Type A4	38.000 EACH		.		.
3390	SPV.0060 Special 18. Municipal Luminaire Led, Type B4	2.000 EACH		.		.
3400	SPV.0060 Special 19. Removing Monotube Bases	6.000 EACH		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
3410	SPV.0060 Special 20. Municipal Light Pole - 30-Feet	228.000 EACH		.		.
3420	SPV.0060 Special 21. Municipal Transformer Base	228.000 EACH		.		.
3430	SPV.0060 Special 22. Removing Communications Vault	1.000 EACH		.		.
3440	SPV.0060 Special 23. Salvage And Replace Street Light	12.000 EACH		.		.
3450	SPV.0060 Special 24. Salvage And Replace Light - Greenfield	6.000 EACH		.		.
3460	SPV.0060 Special 25. Temporary Cover Plate Storm Sewer	113.000 EACH		.		.
3470	SPV.0060 Special 26. Welded Stud Shear Connectors 1/2 X 4-Inch	801.000 EACH		.		.
3480	SPV.0060 Special 27. Remove Water Service	1.000 EACH		.		.
3490	SPV.0060 Special 28. Pavement Marking Grooved Preformed Thermoplastic Arrows Type 2	132.000 EACH		.		.
3500	SPV.0060 Special 29. Pavement Marking Grooved Preformed Thermoplastic Arrows Bike Lane	57.000 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
3510	SPV.0060 Special 30. Pavement Marking Grooved Preformed Thermoplastic Symbols Bike Lane	57.000 EACH		.		.
3520	SPV.0060 Special 31. Pavement Marking Grooved Preformed Thermoplastic Words	96.000 EACH		.		.
3530	SPV.0060 Special 32. Pavement Marking Grooved Preformed Thermoplastic Words Bike Lane	12.000 EACH		.		.
3540	SPV.0060 Special 33. Adjusting Water Boxes - Milwaukee Water Works	22.000 EACH		.		.
3550	SPV.0060 Special 34. Removing Hydrant - Milwaukee Water Works	9.000 EACH		.		.
3560	SPV.0060 Special 35. Installing Hydrant - Milwaukee Water Works	11.000 EACH		.		.
3570	SPV.0060 Special 36. Connect Original Service	2.000 EACH		.		.
3580	SPV.0060 Special 37. Signal Cabinet Screens Structure	4.000 EACH		.		.
3590	SPV.0060 Special 38. Sign Structure Wayfinding	6.000 EACH		.		.
3600	SPV.0060 Special 39. Median Monument Structure	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
3610	SPV.0060 Special 40. Greenscreen Structure	2.000 EACH		.		.
3620	SPV.0060 Special 41. Gateway Monument (Non-Electronic) Structure	2.000 EACH		.		.
3630	SPV.0060 Special 42. Crossroad Name Signs Special Sign Supports	11.000 EACH		.		.
3640	SPV.0060 Special 43. Concrete Foundation Signal Cabinet Screens	16.000 EACH		.		.
3650	SPV.0060 Special 44. Concrete Foundation Wayfinding	5.000 EACH		.		.
3660	SPV.0060 Special 45. Concrete Foundation Median Monument	4.000 EACH		.		.
3670	SPV.0060 Special 46. Concrete Foundation Greenscreen	2.000 EACH		.		.
3680	SPV.0060 Special 47. Concrete Foundation Gateway Monument (Non Electronic)	2.000 EACH		.		.
3690	SPV.0060 Special 48. Concrete Foundation, Crossroad Name Signs Special Sign Supports	18.000 EACH		.		.
3700	SPV.0060 Special 49. Trash Receptacle	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
3710	SPV.0060 Special 50. Bench	12.000 EACH		.		.
3720	SPV.0060 Special 51. Artwork Median Monument	4.000 EACH		.		.
3730	SPV.0060 Special 52. Artwork Gateway Monument (Non-Electronic)	2.000 EACH		.		.
3740	SPV.0060 Special 53. Adjusting Manhole Cover - Milwaukee Sanitary	5.000 EACH		.		.
3750	SPV.0060 Special 54. Replace Valve Box - Franklin	12.000 EACH		.		.
3760	SPV.0060 Special 55. Add Valve Box Extension - Franklin	1.000 EACH		.		.
3770	SPV.0060 Special 56. Remove Valve Box Extension - Franklin	9.000 EACH		.		.
3780	SPV.0060 Special 57. Adjust Valve Box - Franklin	24.000 EACH		.		.
3790	SPV.0060 Special 58. Replace Valve Box Top Section - Franklin	2.000 EACH		.		.
3800	SPV.0060 Special 59. Replace Valve Fasteners - Franklin	7.000 EACH		.		.
3810	SPV.0060 Special 60. Add Valve Box Sidewalk Casting - Franklin	7.000 EACH		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
3820	SPV.0060 Special 61. Add Valve Stem Extension - Franklin	4.000 EACH		.		.
3830	SPV.0060 Special 62. Replace Curb Stop And Box - Franklin	3.000 EACH		.		.
3840	SPV.0060 Special 63. Adjust Curb Box - Franklin	5.000 EACH		.		.
3850	SPV.0060 Special 64. Add Curb Box Extension - Franklin	1.000 EACH		.		.
3860	SPV.0060 Special 65. Add Curb Box Paving Adaptor - Franklin	1.000 EACH		.		.
3870	SPV.0060 Special 66. Relocate Water Service - Franklin	3.000 EACH		.		.
3880	SPV.0060 Special 67. Relocate Gravity Drain - Franklin	2.000 EACH		.		.
3890	SPV.0060 Special 68. Abandon Water Service - Franklin	1.000 EACH		.		.
3900	SPV.0060 Special 69. Remove Water Service - Franklin	2.000 EACH		.		.
3910	SPV.0060 Special 70. Remove Air Release - Franklin	1.000 EACH		.		.
3920	SPV.0060 Special 71. Remove Hydrant - Franklin	1.000 EACH		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
3930	SPV.0060 Special 72. Remove Valve Box - Franklin	5.000 EACH		.		.
3940	SPV.0060 Special 73. Add Hydrant Extension - Franklin	11.000 EACH		.		.
3950	SPV.0060 Special 74. Raise Hydrant - Franklin	3.000 EACH		.		.
3960	SPV.0060 Special 75. Lower Hydrant - Franklin	3.000 EACH		.		.
3970	SPV.0060 Special 76. Extend Hydrant Lead - Franklin	8.000 EACH		.		.
3980	SPV.0060 Special 77. Shorten Hydrant Lead - Franklin	2.000 EACH		.		.
3990	SPV.0060 Special 78. Relocate Hydrant - Franklin	4.000 EACH		.		.
4000	SPV.0060 Special 79. Replace Hydrant - Franklin	4.000 EACH		.		.
4010	SPV.0060 Special 80. Replace Hydrant Lead Valve - Franklin	5.000 EACH		.		.
4020	SPV.0060 Special 81. Lower Water Main - Franklin	4.000 EACH		.		.
4030	SPV.0060 Special 82. Offset Water Main - Franklin	1.000 EACH		.		.

CONTRACT: 20150210013 PROJECT(S): 2265-16-70 FEDERAL ID(S): WISC 2015006

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
4040	SPV.0060 Special 83. Replace Valve - Franklin	2.000 EACH		.		.
4050	SPV.0060 Special 84. Relocate Valve - Franklin	2.000 EACH		.		.
4060	SPV.0060 Special 85. Replace Curb Box - Franklin	2.000 EACH		.		.
4070	SPV.0060 Special 86. Adjust Valve Box - Oak Creek	29.000 EACH		.		.
4080	SPV.0060 Special 88. Pull Boxes Non-Metallic 13x24x18-Inch	139.000 EACH		.		.
4090	SPV.0075 Special 01. Street Sweeping	1,500.000 HRS		.		.
4100	SPV.0085 Special 01. Pond Edge Seeding	3.000 LB		.		.
4110	SPV.0090 Special 01. Concrete Curb & Gutter Modified Type G	6,757.000 LF		.		.
4120	SPV.0090 Special 02. Concrete Curb & Gutter Modified Type A	7,567.000 LF		.		.
4130	SPV.0090 Special 03. Concrete Curb & Gutter Type D	32.000 LF		.		.
4140	SPV.0090 Special 04. Fence Chain Link Polymer Coated 4-Ft	1,937.000 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
4150	SPV.0090 Special 05. Pavement Marking Grooved Preformed Thermoplastic Stop Line 18-Inch	1,457.000 LF		.		.
4160	SPV.0090 Special 06. Pavement Marking Grooved Preformed Thermoplastic Diagonal 12-Inch	358.000 LF		.		.
4170	SPV.0090 Special 07. Pavement Marking Grooved Preformed Thermoplastic Crosswalk 6-Inch	5,488.000 LF		.		.
4180	SPV.0090 Special 08. Pavement Marking Grooved Preformed Thermoplastic Yield Line 18-Inch	108.000 LF		.		.
4190	SPV.0090 Special 09. Ductile Iron Water Main 8-Inch	351.000 LF		.		.
4200	SPV.0090 Special 10. Ductile Iron Water Main 12-Inch	212.000 LF		.		.
4210	SPV.0090 Special 11 Ductile Iron Water Main 16-Inch	598.000 LF		.		.
4220	SPV.0090 Special 12. Ductile Iron Hydrant Branch 6-Inch	135.000 LF		.		.
4230	SPV.0105 Special 01. Detention Pond Dewatering	LUMP	LUMP			.
4240	SPV.0105 Special 02. Remove Traffic Signals Sth 241 & W Drexel Ave	LUMP	LUMP			.

CONTRACT: 20150210013 PROJECT(S): 2265-16-70 FEDERAL ID(S): WISC 2015006

CONTRACTOR :_____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
4250	SPV.0105 Special 03. Remove Traffic Signals Sth 241 & Nw Mutual Way	LUMP	LUMP			.
4260	SPV.0105 Special 04. Remove Traffic Signals Sth 241 & W Rawson Ave	LUMP	LUMP			.
4270	SPV.0105 Special 05. Remove Traffic Signals Sth 241 & S Riverwood Blvd	LUMP	LUMP			.
4280	SPV.0105 Special 06. Remove Traffic Signals Sth 241 & W Sycamore Ave/St	LUMP	LUMP			.
4290	SPV.0105 Special 07. Remove Traffic Signals Sth 241 & W College Ave	LUMP	LUMP			.
4300	SPV.0105 Special 08. Transporting Signal & Lighting Materials Sth 241 & W Drexel Ave	LUMP	LUMP			.
4310	SPV.0105 Special 09. Transporting Signal & Lighting Materials Sth 241 & Nw Mutual Way	LUMP	LUMP			.
4320	SPV.0105 Special 10. Transporting Signal & Lighting Materials Sth 241 & W Rawson Ave	LUMP	LUMP			.
4330	SPV.0105 Special 11. Transporting Signal & Lighting Materials Sth 241 & S Riverwood Blvd	LUMP	LUMP			.

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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
4340	SPV.0105 Special 12. Transporting Signal & Lighting Materials Sth 241 & W Sycamore Ave/St	LUMP	LUMP			.
4350	SPV.0105 Special 13. Transporting Signal & Lighting Materials Sth 241 & W College Ave	LUMP	LUMP			.
4360	SPV.0105 Special 14. Install State Furnished Traffic Signal Cabinet Sth 241 & W Drexel Ave	LUMP	LUMP			.
4370	SPV.0105 Special 15. Install State Furnished Traffic Signal Cabinet Sth 241 & Nw Mutual Way	LUMP	LUMP			.
4380	SPV.0105 Special 16. Install State Furnished Traffic Signal Cabinet Sth 241 & W Rawson Ave	LUMP	LUMP			.
4390	SPV.0105 Special 17. Install State Furnished Traffic Signal Cabinet Sth 241 & Riverwood Blvd	LUMP	LUMP			.
4400	SPV.0105 Special 18. Install State Furnished Traffic Signal Cabinet Sth 241 & W Sycamore Ave	LUMP	LUMP			.
4410	SPV.0105 Special 19. Install State Furnished Traffic Signal Cabinet Sth 241 & W College Ave	LUMP	LUMP			.

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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
4420	SPV.0105 Special 20. Install State Furnished Evp Detector Heads Sth 241 & W Drexel Ave	LUMP	LUMP			.
4430	SPV.0105 Special 21. Install State Furnished Evp Detector Heads Sth 241 & Nw Mutual Way	LUMP	LUMP			.
4440	SPV.0105 Special 22. Install State Furnished Evp Detector Heads Sth 241 & W Rawson Ave	LUMP	LUMP			.
4450	SPV.0105 Special 23. Install State Furnished Evp Detector Heads Sth 241 & S Riverwood Ave	LUMP	LUMP			.
4460	SPV.0105 Special 24. Install State Furnished Evp Detector Heads Sth 241 & W Sycamore Ave/St	LUMP	LUMP			.
4470	SPV.0105 Special 25. Install State Furnished Evp Detector Heads Sth 241 & W College Ave	LUMP	LUMP			.
4480	SPV.0105 Special 26. Install Fiber Optic Communications In Cabinet Sth 241 & W Drexel Ave	LUMP	LUMP			.
4490	SPV.0105 Special 27. Install Fiber Optic Communications In Cabinet Sth 241 & Nw Mutual Way	LUMP	LUMP			.

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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
4500	SPV.0105 Special 28. Install Fiber Optic Communications In Cabinet Sth 241 & W Rawson Ave	LUMP	LUMP			.
4510	SPV.0105 Special 29. Install Fiber Optic Communications In Cabinet Sth 241 & S Riverwood Blvd	LUMP	LUMP			.
4520	SPV.0105 Special 30. Install Fiber Optic Communications In Cabinet Sth 241 & W Sycamore Ave/St	LUMP	LUMP			.
4530	SPV.0105 Special 31. Install Fiber Optic Communications Incabinet Sth 241 & W College Ave	LUMP	LUMP			.
4540	SPV.0105 Special 32. Fiber Optic Communications System Training	LUMP	LUMP			.
4550	SPV.0105 Special 33. Remove Loop Detector Wire & Lead In Cable Sth 241 & W Drexel Ave	LUMP	LUMP			.
4560	SPV.0105 Special 34. Remove Loop Detector Wire & Lead In Cable Sth 241 & Nw Mutual Way	LUMP	LUMP			.
4570	SPV.0105 Special 35. Remove Loop Detector Wire & Lead In Cable Sth 241 & W Rawson Ave	LUMP	LUMP			.

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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
4580	SPV.0105 Special 36. Remove Loop Detector Wire & Lead In Cable Sth 241 & S Riverwood Blvd	LUMP	LUMP			.
4590	SPV.0105 Special 37. Remove Loop Detector Wire & Lead In Cable Sth 241 & W Sycamore Ave/St	LUMP	LUMP			.
4600	SPV.0105 Special 38. Remove Loop Detector Wire & Lead In Cable Sth 241 & W College Ave	LUMP	LUMP			.
4610	SPV.0105 Special 39. Relocate Tracer Wire Terminal	LUMP	LUMP			.
4620	SPV.0105 Special 40. Temp Non-Intrusive Vehicle Detection System Sth 241 & W Drexel Ave	LUMP	LUMP			.
4630	SPV.0105 Special 41. Temp Non-Intrusive Vehicle Detection System Sth 241 & Nw Mutual Way	LUMP	LUMP			.
4640	SPV.0105 Special 42. Temp Non-Intrusive Vehicle Detection System Sth 241 & W Rawson Ave	LUMP	LUMP			.
4650	SPV.0105 Special 43. Temp Non-Intrusive Vehicle Detection System Sth 241 & S Riverwood Blvd	LUMP	LUMP			.

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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
4660	SPV.0105 Special 44. Temp Non-Intrusive Vehicle Detection System Sth 241 & W Sycamore Ave/St	LUMP	LUMP			.
4670	SPV.0105 Special 45. Temp Non-Intrusive Vehicle Detection System Sth 241 & W College Ave	LUMP	LUMP			.
4680	SPV.0105 Special 46. Concrete Pavement Joint Layout	LUMP	LUMP			.
4690	SPV.0105 Special 47. Salvage And Replace Landscaping Boulders	LUMP	LUMP			.
4700	SPV.0105 Special 48. Remove And Replace Landscaping Items	LUMP	LUMP			.
4710	SPV.0165 Special 01. Wall Modular Block Mechanically Stab Ilized Earth Lrfd, Structure R-40-0585	1,428.000 SF		.		.
4720	SPV.0165 Special 02. Wall Modular Block Mechanically Stab Ilized Earth Lrfd, Structure R-40-0586	491.000 SF		.		.
4730	SPV.0165 Special 03. Wall Modular Block Mechanically Stab Ilized Earth Lrfd, Structure R-40-0587	1,400.000 SF		.		.

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LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE DOLLARS	UNIT PRICE CTS	BID AMOUNT DOLLARS	BID AMOUNT CTS
4740	SPV.0165 Special 04. Wall Modular Block Mechanically Stab Ilized Earth Lrfd, Structure R-40-0589	1,613.000 SF		.		.
4750	SPV.0165 Special 05. Wall Modular Block Mechanically Stab Ilized Earth Lrfd, Structure R-40-0590	653.000 SF		.		.
4760	SPV.0165 Special 06. Add Insulation - Franklin	9,337.000 SF		.		.
4770	SPV.0165 Special 07. Concrete Sidewalk 5-Inch Colored	52,750.000 SF		.		.
4780	SPV.0165 Special 08. Curb Ramp Detectable Warning Field - Oak Creek	608.000 SF		.		.
4790	SPV.0180 Special 01. Concrete Pavement 8-Inch Colored	2,527.000 SY		.		.
4800	SPV.0180 Special 02. Geotextile Fabric Type FF	175.000 SY		.		.
4810	SPV.0195 Special 01. Management Of Solid Waste	2,106.000 TON		.		.
4820	SPV.0200 Special 01. Rebuild Sanitary Manhole - Oak Creek	13.000 VF		.		.
	SECTION 0001 TOTAL					.
	TOTAL BID					.

PLEASE ATTACH SCHEDULE OF ITEMS HERE