HIGHWAY WORK PROPOSAL

Wisconsin Department of Transportation
DT1502 01/2020 s.66.0901(7) Wis. Stats

Proposal Number: 014

STATE ID	FEDERAL ID	PROJECT DESCRIPTION	HIGHWAY	COUNTY
2410-10-70	WISC 2026258	C Milwaukee, W National Ave, 39th St to 27th St	STH 059	Milwaukee

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: $340,000.00 Payable to: Wisconsin Department of Transportation	Attach Proposal Guaranty on back of this PAGE.
Bid Submittal Date: February 10, 2026 Time (Local Time): 11:00 am	Firm Name, Address, City, State, Zip Code **SAMPLE** **NOT FOR BIDDING PURPOSES**
Contract Completion Time May 15, 2027	
Assigned Disadvantaged Business Enterprise Goal 0%	This contract is exempt from federal oversight.

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

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

Subscribed and sworn to before me this date _____

(Signature, Notary Public, State of Wisconsin)	(Bidder Signature)
(Print or Type Name, Notary Public, State Wisconsin)	(Print or Type Bidder Name)
(Date Commission Expires)	(Bidder Title)

Notary Seal

Type of Work: **For Department Use Only**

Removals, Grading, Aggregate, Concrete Pavement, Asphalt Pavement, Curb and Gutter, Concrete Sidewalk, Storm Sewer, Erosion Control, Permanent Signing, Traffic Control, Pavement Marking, Lighting, Traffic Signals, Restoration.

Notice of Award Dated	Date Guaranty Returned

PLEASE ATTACH
PROPOSAL GUARANTY HERE

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.

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:

https://wisconsindot.gov/Pages/doing-bus/contractors/hcci/bid-let.aspx

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 PM local time on the Thursday before the letting. Check the department's web site after 5:00 PM 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 PM 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:

https://wisconsindot.gov/Pages/doing-bus/contractors/hcci/bid-let.aspx

or by calling the department at (608) 266-1631. Addenda can ONLY be obtained from the department's web site listed above or by picking up the addenda at the Bureau of Highway Construction, 4th floor, 4822 Madison Yards Way, Madison, WI, during regular business hours.

(7) Addenda posted after 5:00 PM on the Thursday before the letting will be emailed to the eligible bidders for that proposal. All eligible bidders shall acknowledge receipt of the addenda whether they are bidding on the proposal or not. Not acknowledging receipt may jeopardize the awarding of the project.

B. Submitting Electronic Bids

B.1 On the Internet

(1) Do the following before submitting the bid:

4. Have a properly executed annual bid bond on file with the department.
5. 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:

https://wisconsindot.gov/Pages/doing-bus/contractors/hcci/bid-let.aspx

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.

B 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)

Effective with March 2010 Letting

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

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

Instructions for Certification

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Special Provisions

Table of Contents

SPECIAL PROVISIONS

1. General.

Perform the work under this construction contract for Project ID 2410-10-70; C Milwaukee W National Ave; 39th St to 27th St; STH 59; 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, 2025 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 (20250701)

2. Scope of Work.

The work under this contract shall consist of pavement removal, excavation common, contaminated soil removal, storm sewer, city underground conduit, select crushed material, base aggregate dense, concrete curb and gutter, concrete pavement, asphalt pavement, concrete sidewalk, signing, pavement marking, street lighting, traffic signals, traffic control, erosion control, restoration, and all incidental items necessary to complete the work as shown on the plans and included in the proposal and contract.

104-005 (20090901)

3. Prosecution and Progress.

Begin work within 10 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.

Protection of Endangered Bats (Tree Clearing)

Federally protected bats have the potential to inhabit the project limits because they roost in trees, bridges and culverts. Roosts may not have been observed on this project, but conditions to support the species exist. The species and all active roosts are protected by the federal Endangered Species Act. If an individual bat or active roost is encountered during construction operations, stop work, and notify the engineer and the WisDOT Regional Environmental Coordinator (REC).

Ensure all operators, employees, and subcontractors working in areas of known or presumed bat habitat are aware of environmental commitments and avoidance and minimization measures (AMMs) to protect both bats and their habitat.

Direct temporary lighting, if used, away from wooded areas during the bat active season April 15 to October 31, both dates inclusive.

The department has contracted with others and will perform the following operations after October 31 and prior to April 15:

- Cutting down and removing trees.

Contractor means and methods to remove additional trees will not be allowed. If it is determined that additional trees with a 3-inch or greater diameter at breast height (dbh) need to be removed beyond contractor means and methods, notify the engineer to coordinate with the WisDOT REC to determine if consultation with United States Fish and Wildlife Service (USFWS) is required. The contractor must be aware that the WisDOT REC and/or USFWS may not permit modifications.

Schedule of Operations

Stage 1

Reconstruct the eastbound lanes of STH 59. The south legs of the intersections of 35th Street and S Layton Boulevard shall remain fully open to traffic at all times with the following exceptions. The south legs of the intersections of 35th Street and S Layton Boulevard may be closed for up to 21 consecutive calendar days to reconstruct the intersections. Notify engineer 14 calendar days before closure. The 35th Street and S Layton Boulevard intersections shall not be closed at the same time.

Stage 2

Reconstruct the westbound lanes of STH 59. The north legs of the intersections of 35th Street and S Layton Boulevard shall remain open to traffic at all times with the following exceptions. The intersection of 35th Street may be reduced to one lane in each direction for up to 35 consecutive calendar days to reconstruct the intersection. The north leg of the intersection of S Layton Boulevard may be closed for up to 21 consecutive calendar days to reconstruct the intersection. Notify engineer 14 calendar days before closure of S Layton Boulevard or lane reductions on 35th Street.

Tree Plantings

Do not commence tree plantings and landscape surveillance and care cycles until May 1, 2027. Complete tree plantings by May 15, 2027. Continue landscape surveillance and care cycle work according to standard spec 632.3 until October 15, 2027.

01 Interim Completion and Liquidated Damages – 35th Street South Leg Intersection Closure.

Complete construction operations as shown in Stage 1A and 1B on the south leg of 35th Street to the stage necessary to reopen it to through traffic within 21 calendar days. Do not reopen until completing project work to a stage such that one through lane in each direction and a left-turn lane in each direction are open to traffic.

If the contractor fails to reopen the south leg of the 35th Street intersection to a minimum of one through lane in each direction with a left turn lane after 21 calendar days, the department will assess the contractor $7,000 in interim liquidated damages for each calendar day the intersection remains closed beyond 12:01 AM. An entire calendar day will be charged for any period of time within a calendar day that the intersection remains closed beyond 12:01 AM.

02 Interim Completion and Liquidated Damages – S Layton Boulevard South Leg Intersection Closure.

Complete construction operations as shown in Stage 1A and 1B on the south leg of S Layton Boulevard to the stage necessary to reopen it to through traffic within 21 calendar days. Do not reopen until completing project work to a stage such that one through lane in each direction and a left-turn lane in each direction are open to traffic.

If the contractor fails to reopen the south leg of the S Layton Boulevard intersection to a minimum of one through lane in each direction with a left turn lane after 21 calendar days, the department will assess the contractor $7,000 in interim liquidated damages for each calendar day the intersection remains closed beyond 12:01 AM. An entire calendar day will be charged for any period of time within a calendar day that the intersection remains closed beyond 12:01 AM.

03 Interim Completion and Liquidated Damages – S Layton Boulevard North Leg Intersection Closures.

Complete construction operations on S Layton Boulevard (north leg) to the stage necessary to reopen it to through traffic within 21 calendar days after closing the respective legs. Do not reopen until completing project work to a stage such that one through lane in each direction and a left-turn lane in each direction are open to traffic.

If the contractor fails to reopen the north leg of S Layton Boulevard intersection to a minimum of one through lane in each direction with a left turn lane after 21 calendar days, the department will assess the contractor $1,500 in interim liquidated damages for each calendar day the intersection remains closed beyond 12:01 AM. An entire calendar day will be charged for any period of time within a calendar day that the intersection remains closed beyond 12:01 AM

04 Interim Completion and Liquidated Damages – 35th Street North Leg Intersection Closure.

Complete construction operations as shown in Stage 2B and 2C on 35th Street (north leg) to the stage necessary to reopen all lanes to through traffic within 35 calendar days after closing the north leg. Do not

reopen until completing project work to a stage such that two through lanes in each direction and a left-turn lane in each direction are open to traffic.

If the contractor fails to reopen the north leg of the 35th Street intersection to two through lanes in each direction with a left turn lane after 35 calendar days, the department will assess the contractor $3,000 in interim liquidated damages for each calendar day the intersection remains only one lane in each direction beyond 12:01 AM. An entire calendar day will be charged for any period of time within a calendar day that the intersection remains only one lane in each direction beyond 12:01 AM.

Interim Completion and Liquidated Damages – STH 59 Stage 1, Station 14+99 to Station 18+00: July 2, 2026

Complete construction operations on STH 59 in Stage 1 from Station 14+99 to Station 18+00 to the stage necessary to reopen it to through traffic by July 2, 2026. Do not reopen until completing project work such that the westbound lane on STH 59 can be shifted to a paved asphaltic surface on the south side of the road.

If the contractor fails to complete the work necessary to reopen STH 59 to traffic by July 2, 2026, the department will assess the contractor $2,185 in interim liquidated damages for each calendar day the contract work remains incomplete beyond 12:01 AM on July 3, 2026. An entire calendar day will be charged for any period of time within a calendar day that the road remains closed beyond 12:01 AM.

Interim Completion and Liquidated Damages – All Work Except Tree Plantings: October 30, 2026

Complete all work except tree plantings by October 30, 2026.

If the contractor fails to complete all work except tree plantings by October 30, 2026, the department will assess the contractor $5,000 in interim liquidated damages for each calendar day the contract work remains incomplete beyond 12:01 AM on October 31, 2026. An entire calendar day will be charged for any period of time within a calendar day that the road remains closed beyond 12:01 AM.

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

Hollow Sidewalks

Generally, hollow sidewalks are private basement entrances or cavities under the sidewalk within public right of way. Coordinate with the City of Milwaukee and the property owner to determine the exact extents and status of the hollowed areas. These areas may or may not have been abandoned by others prior to construction. Exercise caution when working on or near them. Coordinate any repairs that will be done in conjunction with the project with the engineer and property owner. Notify the property owner and the engineer at least 5 working days prior to working on or near the hollow sidewalks.

Known and potential locations of hollow sidewalks are as follows.

- 3830 W National Avenue: trap door along S 39th Street frontage
- 3822 W National Avenue: metal plate next to gas meter
- 3749 W National Avenue: window wells along S 38th Street frontage
- 3726 W National Avenue: trap door along S 38th Street frontage
- 3630 W National Avenue: trap door along S 37th Street frontage
- 3531 W National Avenue: metal lid along W National Avenue frontage
- 3501 W National Avenue: metal lid between window wells along S 35th Street frontage
- 3401 W National Avenue: trap door along S 34th Street frontage
- 3303 W National Avenue: vent pipe along S 33rd Street frontage
- 3231 W National Avenue: trap door along S 33rd Street frontage
- 3102 W National Avenue: grates along S 31st Street frontage

Driveway Construction

Maintain access to driveways and alleys at all times except as noted below.

Notify residential property owners at least 48 hours prior to removing a driveway approach from service. Notify businesses at least 7 calendar days prior to removing a driveway approach from service. Confirm the closure with the business owner 2 calendar days prior to the closure. Schedule removal and construction of driveways such that the time between the removal and construction is minimized. If a business has two driveways, keep one open while constructing the other driveway. If a property has one driveway, construct one half at a time or coordinate closure with the property owner.

Construction of driveways shall include, but is not limited to, the following three methods:

1. HES Concrete: construct driveway and curb and gutter with high early strength concrete.
2. Halves: construct driveway one half at a time.
3. No Restrictions.

Address	Location	Construction Method
3818 W National Avenue	Station 16+50, LT	No Restrictions
3726 W National Avenue	Station 19+81, LT	Halves
3615 W National Avenue	Station 22+90, RT	No Restrictions
3610 W National Avenue	Station 23+59, LT	Halves
3422 W National Avenue	Station 29+36, LT	HES Concrete
3423 W National Avenue	Station 29+50, RT	HES Concrete
3412 W National Avenue	Station 30+14, LT	HES Concrete
3400 W National Avenue	Station 30+72, LT	No Restrictions
3335 W National Avenue	Station 31+79, RT	No Restrictions
3300 W National Avenue	Station 33+93, LT	Halves
3240 W National Avenue	Station 34+40, LT	HES Concrete
3236 W National Avenue	Station 35+11, LT	HES Concrete
3227 W National Avenue	Station 35+64, RT	HES Concrete
3111 W National Avenue	Station 40+33, RT	HES Concrete
2701 W National Avenue	Station 52+43, RT	Halves
715 S Layton Blvd	Station 53+55, LT	No Restrictions
2625 W National Avenue	Station 55+75, RT	No Restrictions
812 S Layton Boulevard	Station 56+00, LT	Halves
Alley	Station 15+50 A, RT	No Restrictions
2625 W National Avenue	Station 15+50 LAY, RT	No Restrictions
Alley	Station 15+62 LAY, LT	No Restrictions
2701 W National Avenue	Station 16+00 LAY, LT	Halves
812 S Layton Boulevard	Station 18+40 LAY, RT	No Restrictions

Driveways designated to be constructed in halves may be constructed with HES concrete. Driveways designated to be constructed with HES concrete shall be constructed the same day the existing driveway pavement is removed.

The contractor may make other arrangements with individual property owners and businesses prior to driveway removal. The arrangement shall be in writing, signed by the contractor and property/business owner, and approved by the engineer.

Pedestrian Access at Properties/Businesses

Maintain pedestrian access to adjacent properties and businesses at all times as the plans show and as directed by the engineer. Coordinate with each property owner and/or business to determine delivery schedules and peak time periods of usage near, into, and out of doorway access points. Notify property owners and businesses at least 48 hours prior to removal and construction of sidewalk near their access point.

Perform removal and construction of sidewalk in such a way that minimizes impacts to the adjacent property or business operations. Schedule removal and construction of sidewalk near doorway access points such that the time period between the removal and construction is minimized.

The contractor may make other arrangements with individual property owners and businesses prior to construction. The arrangement shall be in writing, signed by the contractor and property/business owner, and approved by the engineer.

City of Milwaukee Forestry

When necessary, all cutting for the removal of sod and soil in order to establish a finished grade within 6 feet of existing trees shall be done manually.

No construction equipment, cars, trucks, or materials shall be parked or stored on any median or tree border.

Root systems of street trees shall not be cut for the installation of any type of cable. Contact the City of Milwaukee Forestry Division at (414) 708-2428 for directional boring specifications.

Use caution to avoid damage to tree roots, trunks, and branches for any trees to remain. Damage caused to existing trees or irrigation systems will be repaired by the Forestry Division and the costs of repair, rejuvenation, and/or value will be billed to the contractor or credited against the contractor at the option of the City.

Sidewalks and carriage walks adjacent to existing trees are to be removed, and roots cut, by use of hand implements only.

Tree root systems on the sidewalk side or carriage walk side of the tree shall be cut not deeper than 9 inches below the finished grade of the new sidewalk and not more than 5 inches from the edge of the new sidewalk. Roots within the sidewalk area shall be removed to a depth 9 inches below finished grade of the new sidewalk.

When replacing sidewalk adjacent to the following trees, use a slip or thin form and arc the sidewalk. Soil disturbance in the tree border should be limited to not more than ¼" beyond the edge of the new sidewalk.

Station 31+54 LT

Station 15+35 LAY LT

Where sidewalks are to be narrowed, all old sidewalks shall be removed prior to any root cutting. If necessary, cut the root system within ¼" of the edge of the new sidewalk and not more than 9 inches below the finished grade of the new sidewalk.

The root system on the curb side of the tree shall be cut not more than 2 inches behind the back edge of the new curb, and not more than 18 inches below the gutter flow line.

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

At locations where these specifications have not been complied with, a minimum credit to the City of $50.00 per location will be taken. The credit will increase in proportion to the excess distance beyond clearance allowed. The credit will be $50.00 for each 2-inch increment or part thereof in excess of the initial clearance allowed. Any damage to the tree's structure totaling 15 percent of the tree's value will be billed on prorated basis. If, in the opinion of the Forestry Division, the tree has been damaged to the point that it warrants removal, the credit will be $100.00 per inch diameter of the tree. A field measurement will be taken to determine the tree size. In addition, a $900.00 tree replacement cost will be assessed to the contractor.

Milwaukee Police Department Cameras

The Milwaukee Police Department (MPD) has existing security cameras and other equipment mounted on poles at the southeast corner of S 30th Street and the northeast corner of S Layton Boulevard. MPD will remove the cameras prior to construction and will reinstall them after construction.

Bicycle Racks

The City of Milwaukee will remove bicycle racks during construction. Contact James Washington at (414) 286-3982 at least 3 days prior to needing the racks removed.

Decorative Concrete Planters

The City of Milwaukee will remove the decorative concrete planters prior to construction.

City of Milwaukee Parking Meters

Prior to construction, the City of Milwaukee will remove the existing parking meters. Contact Natalie Herman (414) 286-5929 three weeks prior to the construction start date.

Prior to the construction of the sidewalk, City of Milwaukee forces will place sign sockets for the new parking meters to be poured around. Contact Natalie Herman 10 working days prior to the commencement of sidewalk construction. This is incidental to the concrete sidewalk item.

Milwaukee County Transit System

The Milwaukee County Transit System (MCTS) operates the following bus routes within the construction limits:

18 (National-Greenfield)
35 (35th Street)
Purple (27th Street)

Existing bus stops are located at the following intersections:

S 37th Street (SW and NE corners)
S 35th Street (all four corners)
S 31st Street (SW and NE corners)
S Layton Boulevard (all four corners)

Except as noted in this subsection, maintain transit access at all times on all roadways within the project limits to existing bus stops. Changes to access must be approved by the Milwaukee County Transit System and the Engineer.

In the final condition, MCTS plans to permanently close the bus stops at S 37th Street. The eastbound and westbound stops at S 35th Street will be relocated to the SE and NW corners, respectively. The stops at S 31st Street will remain at their same locations. The eastbound and westbound stops at S Layton Boulevard will be relocated to the SE and NW corners, respectively.

Invite MCTS to all coordination meetings between the contractor, the department, local officials, and business stakeholders to discuss the project schedule of operations including vehicular and pedestrian access during construction operations.

Notify MCTS at least 10 business days prior to beginning project work, at least 10 business days prior to work impacting bus stop shelters, and at least 5 business days prior to work impacting MCTS-owned signs and posts. If necessary, MCTS will remove their existing bus stop signs and shelters before work begins and reinstall or replace bus stop signs and shelters before new pavement opens to vehicular traffic.

Occasions may arise when project work necessitates MCTS to temporarily suspend service at a bus stop location. Notify MCTS at least 5 business days prior to the site-specific occasion, and MCTS will sign appropriately to instruct passengers to board at a temporary bus stop. Notify MCTS upon completion of work. MCTS will resume service to any suspended bus stop locations when it is safe to do so.

MCTS has not requested that this project provide temporary boarding pads. However, in the event that they are needed, MCTS will designate temporary bus stop boarding locations using MCTS temporary signs. Temporary bus stops will be in existing right-of-way at ADA-accessible locations outside the project's construction zone.

The MCTS contacts are:

Dan Adams
Transportation Manager (Planning & Design)
Phone: (414) 937-3273
dadams@mcts.org

Armond Sensabaugh
Transportation Coordinator (Detours)
Phone: (414) 343-1728
asensabaugh@mcts.org

David Locher
Transportation Manager (Bus Stops)
Phone: (414) 343-1727
dlocher@mcts.org

4. Traffic.

Perform all work according to the requirements of standard spec 643, as detailed in the Traffic Control Plans and as hereinafter described.

Designate an individual responsible for traffic control maintenance including access of local traffic, and 24-hour emergency traffic control repair. Provide the name and telephone number of this individual to the engineer.

Conduct operations in a manner that will cause the least interference to traffic movements and adjacent business and residential access within the construction areas.

Add the following to standard spec 643.3.1:

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

Do not park or store equipment, contractor's and personal vehicles or construction materials within the clear zone or on any roadway carrying traffic during working and non-working hours except at locations and periods of time approved by the engineer.

Do not permit construction or personnel equipment or vehicles to directly cross the live traffic lanes of National Avenue. Yield to all through traffic at all locations. Equip all vehicles or equipment operating in the live traffic lanes with a hazard identification beam (flashing yellow signal light) that is visible from 360 degrees. Operate the flashing yellow beam only when merging or exiting live traffic lanes or when parked or operating on shoulders, except when parked behind barrier wall.

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

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

Ensure that flagging operations conform to standard spec 104.6.1.2.2 and chapter 6D of the WMUTCD.

Public Access

Maintain pedestrian access to businesses within the work zone on existing sidewalk or other ADA compliant surfaces until the new roadway pavement is constructed.

Maintain emergency vehicular access at all times to roadways located within the project limits.

Existing parking spaces on the north side of STH 59 in Stage 1 and final proposed parking spaces on the south side of STH 59 in Stage 2 shall remain open unless shown as closed on the plans or as directed by the engineer. If parking spaces need to be closed due to traffic shifts or as directed by the engineer, contact Mr. Cameron Potter at (414) 286-3276 before posting any "no parking" signs. If posted, "no parking" signs shall be R7-1D, R7-1L or R7-1R and 18"x24". Any "no parking" signage attached to city street trees shall be of a temporary method (nails or spikes are not allowed).

Traffic Control and Staging

The construction sequence, including the associated traffic control, shall be substantially accomplished as detailed in the Traffic Control Plans and the article Prosecution and Progress, and as described herein.

Sign lane drop-offs according to Standard Detail Drawing "Traffic Control, Drop-off Signing" if needed.

Temporary or permanent markings must be placed prior to opening to traffic.

Stage the work as shown on the plans or as directed by the engineer. Notify the engineer at least 7 days before switching stages. Do not conduct traffic control stage changes during peak hours.

Provide temporary pedestrian accommodations, as shown on the plans or directed by the engineer, prior to constructing curb ramp replacements.

<u>Stage 1</u>

Close the eastbound lanes of STH 59 to all traffic. Maintain westbound traffic only with a minimum of one 11-foot lane in the westbound direction.

Remove existing rails in the center of the roadway. Shift westbound traffic as needed to remove the rails and apply temporary asphalt to any areas that will be used by westbound traffic. Protect drop-offs in accordance with standard spec 104.6.1.2.3.

Construct the roadway while maintaining pedestrians on the existing sidewalk. Once the roadway is complete, redirect pedestrians into the roadway as shown on the plans to construct the area behind the curb.

All side streets may be closed with the exception of 35th Street and S Layton Boulevard. Reconstruct these intersections in Stage 1B and 1C.

Stage 1B

Close the south legs of the 35th Street and S Layton Boulevard intersections at separate times for reconstruction.

Stage 1C

The south leg of the 35th Street intersection remains closed from Stage 1B. Redirect pedestrians onto the finished roadway while the sidewalks are reconstructed.

Stage 2

Close the westbound lanes of STH 59 to all traffic. Maintain eastbound traffic only with a minimum of one 11-foot lane in the eastbound direction.

Construct the roadway while maintaining pedestrians on the existing sidewalk. Once the roadway is complete, redirect pedestrians into the roadway as shown on the plans to construct the area behind the curb.

All side streets may be closed with the exception of 37th Street, 35th Street, Shea Avenue, 32nd Street and S Layton Boulevard. The 37th Street, Shea Avenue and 32nd Street intersections shall be reconstructed under traffic but may be closed for paving operations but not at the same time. Reconstruct the 35th Street and S Layton Boulevard intersections in Stage 2B and 2C.

Stage 2B

Maintain one 11-foot lane in each direction of 35th Street while constructing the east side of the intersection. Close the north leg of the S Layton Boulevard intersection for reconstruction.

Stage 2C

Maintain one 11-foot lane in each direction of 35th Street while constructing the west side of the intersection.

Portable Changeable Message Signs (PCMS)

Traffic Control Signs PCMS shall be installed in advance of the start of Stages and detours to alert drivers of upcoming traffic changes, following the table below. Obtain acceptance from the engineer regarding the wording of all messages on portable changeable message signs prior to placing the message.

Wisconsin Lane Closure System Advance Notification

Provide the following advance notification to the engineer for incorporation into the Wisconsin Lane Closure System (LCS).

TABLE 108-1 CLOSURE TYPE AND REQUIRED MINIMUM ADVANCE NOTIFICATION

Closure type with height, weight, or width restrictions (available width, all lanes in one direction < 16 feet)	**MINIMUM NOTIFICATION**
Lane and shoulder closures	7 calendar days
Full roadway closures	7 calendar days
Ramp closures	7 calendar days
Detours	7 calendar days
Closure type without height, weight, or width restrictions (available width, all lanes in one direction ≥ 16 feet)	**MINIMUM NOTIFICATION**
Shoulder Closures	3 calendar days
Lane closures	3 business days
Ramp closures	3 business days
Modifying all closure types	3 business days

Discuss LCS completion dates and provide changes in the schedule to the engineer at weekly project meetings in order to manage closures nearing their completion date.

Speed Radar Trailers

Provide a speed trailer from WisDOT's approved products list that conforms to the appropriate requirements of standard spec 643 and the Manual on Uniform Traffic Control Devices for portable changeable message signs.

Coordinate the placement and duration of the trailer with the engineer at least 24 hours before its intended use within the project.

The flash rate for the speed trailer's sign should be between 50 and 60 cycles per minute.

Place the trailer so the bottom of the message panel is five feet or higher above the top of curb or near edge of pavement when in operating mode.

Orient the message panel so the message is legible from 850 feet under both day and night conditions.

Space five traffic control drums at 10-foot intervals in a taper in front of the trailer.

Furnishing, placing, and operation of the trailers are incidental to the Traffic Control bid item.

The department will pay separately for drums.

5. Holiday and Special Event Work Restrictions.

Do not perform work on, nor haul materials of any kind along or across any portion of the highway carrying STH 59, S 35th Street, and S Layton Boulevard 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 and special event periods:

- From noon Friday, May 22, 2026 to 6:00 AM Tuesday, May 26, 2026 (Memorial Day);
- From noon Friday, July 3, 2026 to 6:00 AM Monday, July 6, 2026 (Independence Day);
- From noon Friday, September 4, 2026 to 6:00 AM Tuesday, September 8, 2026 (Labor Day);
- From noon Friday, May 28, 2027 to 6:00 AM Tuesday, June 1, 2027 (Memorial Day);
- From noon Friday, July 2, 2027 to 6:00 AM Tuesday, July 6, 2027 (Independence Day);
- From noon Friday, September 3, 2027 to 6:00 AM Tuesday, September 7, 2027 (Labor Day);
- From noon Friday, May 26, 2028 to 6:00 AM Tuesday, May 30, 2028 (Memorial Day);
- From noon Friday, June 30, 2028 to 6:00 AM Wednesday, July 5, 2028 (Independence Day);
- From noon Friday, September 1, 2028 to 6:00 AM Tuesday, September 5, 2028 (Labor Day).

stp-107-005 (20210113)

6. Utilities.

This contract does not come under the provision of Administrative Rule Trans 220.

This contract does not come under the provision of Administrative Rule Trans 220.

The utility work plan includes additional detailed information regarding the location of known discontinued, relocated, or removed utility facilities. These can be requested from the department during the bid preparation process or from the project engineer after the contract has been awarded and executed. Some of the utility work described below is dependent on prior work being performed by the contractor at a specific site. 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 this notice 14 to 16 calendar days in advance of when the prior work will be completed and 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.

stp-107-066 (20240703)

Any utility facility locations (stations, offsets, elevations, depths) listed in this article are approximate.

AT&T Wisconsin – Communications

AT&T Wisconsin operates facilities within the project limits that are in conflict with the project.

AT&T will make the following utility relocations prior to construction:

- Directional bore new 2-4" PVC conduits from an existing manhole at station 15+35.5, 17.5' LT to an existing cabinet at station 15+30, 50' RT.
- Directional bore new 2-4" PVC conduits from existing cabinet at station 15+30, 50' RT to a new 4x4x4 concrete manhole in 38th Street at station 17+05, 40' RT. Continue boring 2-4" PVC conduits east to 8' back of existing curb then continue south on the east side of 38th Street to the alley.
- Discontinue the inactive laterals at stations 28+00 and 31+30.
- Place new conduit in the alley south of National Avenue to reroute cables.

The work prior to construction is anticipated to take 65 working days to complete.

Utility manhole adjustments will be made during construction following a two-step process. In Step 1, after the pavement has been removed, the existing casting will be removed and a cover plate installed. In Step 2, after the lower layers of asphalt are placed, the pavement will be saw cut, the cover plate removed, the casting set to finished grade, and a monolithic concrete shim will be poured to match the top of the lower asphalt layers.

AT&T will make the following utility relocations during Stage 1 of construction:

- Install a new duct package in the alley south of National Ave, extending from 38th Street to 27th Street, then south to Mineral Street, east to 26th Street, then north to the existing manhole at station 58+15, 29' RT.
- Adjust the frame and cover to the new grade for the manhole at station 17+05, 40' RT.
- Directional bore 2-2" PVC conduits across National Avenue at the following locations, stations 31+50, 38+30, and 47+95. Each of these will be at a depth of 6 feet.
- Laterals at stations 15+35,17+40, 21+75, 24+75, 31+50, 38+20, 41+75, 47+80, 51+00, 54+50, and 54+75 will remain in service until the end of Stage 1 when they will be discontinued. Work around these laterals until they are discontinued.
- The duct package from station 50+90 to station 58+15 will remain in place and active until the end of Stage 1 when it will be discontinued.
- Expose and protect conduit for the installation of storm sewer structures 214 and 222.
- Install and splice new fiber from the existing manhole at station 15+35.5, 17.5' LT to the existing manhole at station 58+15, 29' RT.
- Discontinue and remove the conduit system from the manhole at station 50+93, 27.6' RT to the manholes at station 54+71, 27' RT and station 54+64, 52' LT after splicing is completed.
- Discontinue the conduit system from the manhole at station 54+71, 27' RT to the manhole at station 58+15, 29' RT after splicing is completed.
- Discontinue and remove the following manholes to 2 feet below the proposed subgrade by July 31, 2026: station 50+93, 27.6' RT, station 50+95, 17.6' LT, station 54+66, 31.5' RT, and station 54+71, 27' RT, and.

Provide advance notice of when storm sewer structures 214 and 222 are to be installed. AT&T will need 3 working days to expose and protect their conduit prior to each structure installation.

The work during Stage 1 construction is anticipated to take 75 working days to complete. This includes time needed to expose and protect the conduit for storm sewer structures. Additionally, 1 working day for each initial manhole adjustment and 1 working day for each final manhole adjustment will be needed.

AT&T will make the following utility relocations during Stage 2 of construction:

- Discontinue the shallow conduit running north–south on 27th Street and the manhole at the southeast corner of National Avenue and 27th Street.
- Remove existing cables and discontinue the conduit system from the manhole at station 15+35, 17.5' LT to the manhole at station 50+95, 17.6' LT.

- Replace the chimneys for manhole MH 4A22 located at the northeast corner of National Avenue and 27th Street at station 54+64, 59' LT and station 54+65, 66.3' LT. This replacement will take place after the pavement is removed during Stage 2 and prior to plating the manholes.
- Adjust the following existing manholes to grade:

Station/Offset			
15+35.5, 15.6’ LT	15+35.5,17.5’ LT	54+64, 59’ LT	54+65, 66.3’ LT

- Discontinue and remove manholes to 2 feet below proposed subgrade at the following locations:

Station/Offset			
17+33, 13.7’ LT	24+75,13.4' LT	34+78, 9.7' LT	41+70,12.4' LT
18+59,12.5' LT	27+98, 12' LT	38+19, 12.2' LT	44+57,17.6' LT
21+65, 10.5' LT	31+41, 7.8' LT	41+61, 15.7' LT	47+83,18.5' LT

- Remove existing cable and discontinue existing conduit laterals at the following locations:

Station/Offset			
15+30, LT & RT	21+65 LT & RT	31+50 LT & RT	47+80 LT & RT
17+40, LT & RT	24+70 LT & RT	38+20 LT & RT	50+95 LT & RT
18+60 LT	27+95 LT	41+70 LT & RT	54+60 LT & RT

Provide advance notice of when the site will be available to perform this work.

The work during Stage 2 construction is anticipated to take 30 working days to complete. The chimney replacements at structure MH 4A22 is anticipated to take 2 working days. Additionally, 1 working day will be needed for each initial manhole adjustment and 1 working day for each final manhole adjustment.

City of Milwaukee – Communications

The City of Milwaukee has communications facilities within the project limits that are in conflict with the project.

The City removed the following call boxes prior to construction:

35th & National NE Corner - station 28+50, 64’ LT

32nd & National - station 38+19.7, 40.6’ RT

30th & National SE Corner station 44+70, 30.2’ RT

27th & National NW Corner – station. 53+82, 45.5’ LT

The existing conduit to the call boxes has been discontinued in place.

The City will make the following utility relocations prior to construction:

- MPD Pole Cameras to be removed:

  35th & National – Camera C41 – station 28+42, 5.6’ RT

  27th & National – Camera C11 - station 54+83, 49.22’ LT

The work prior to construction is anticipated to take 20 working days to complete.

Install fiber optic lines in the City of Milwaukee CUC conduits as shown in the plans and in the bid items for this project.

The City of Milwaukee will make the following utility relocations during construction:

- Splice fiber optic cable at the following CUC manholes:
  - 37th & National, station 21+72.61, 31.64’ LT

- o 35th & National, station 28+09.39, 33.85' LT
- o 27th & National, station 54+02.50, 36.12' LT

- Connect to the following Traffic Control Cabinets:
  - o 37th & National
  - o 35th & National
  - o 27th & National

Provide advance notice of when the site will be available to perform this work.

The work during construction is anticipated to take 6 working days to complete.

City of Milwaukee CUC – Conduit

City of Milwaukee CUC has underground facilities located in the eastbound travel lanes of National Avenue with crossings at 38th Street, 37th Street, 36th Street, 35th Street, 32nd Street and Layton Boulevard.

Construct new CUC facilities and adjust all manholes to match the new finished pavement elevation as shown in the plans and in the bid items for this project.

City of Milwaukee – Sewer

City of Milwaukee – Sewer has combined sewer facilities within the project limits.

Construct new storm sewer and adjust all manholes to match the new finished pavement elevation as shown in the plans and in the bid items for this project.

City of Milwaukee – Water

The City of Milwaukee has water facilities within the project limits.

The City of Milwaukee will remove the following hydrants prior to construction:

Station/Offset			
15+71, 28' LT	27+29, 38' RT	38+40, 30.5' LT	53+61, 36' RT
18+78, 31' LT	27+31, 38' LT	44+63, 50.6' LT	53+99, 51.1' LT
21+86, 30.5' LT	31+63, 31.5' LT	47+89, 51.4' LT	54+96, 36' RT
24+93, 30' LT	34+90, 25.2' LT	51+06, 50.6' LT	55+05, 38.3' LT

The City of Milwaukee will install the following hydrants prior to construction:

Station/Offset		
15+86.6, 25.9' LT	34+89.5, 38.1' LT	47+94.2, 56.9' LT
17+32.1, 51.1' RT	37+91.4, 59.2' LT	51+10.4, 51.2' LT
31+32.3, 48.4' LT	44+68.5, 65.0' LT	55+17.2, 44.0' LT

The work prior to construction is anticipated to take 30 working days to complete.

Adjust water gate valve boxes and insulate water main as shown in the plans and in the bid items for the project.

The City of Milwaukee will make the following water main alterations during construction:

Station/Offset	
18+25, 23.9' LT	44+21.4, 25' LT
18+72.8, 24' LT	47+48, 25.4' LT
32+73.7, 17.3' LT	50+64, 26.8' LT
35+02.2, 19.1'LT	52+05, 20.4' LT

Provide advance notice to Milwaukee Water Works (MWW) of when the site will be available to perform this work. Contact MWW Control Center at 414-286-3710.

The work during construction is anticipated to take 15 working days to complete.

Everstream – Communications

Everstream has facilities within the project limits that are in conflict with the project.

Everstream will make the following utility relocations prior to construction:

- Install 3-1.25" HDPE conduit at a depth of 54" across National Avenue from an existing handhole at station 14+79.29, 33.6' RT to station 15+26.65, 50.0' LT and connect to the existing fiber at a new handhole on the west side of 39th Street at station 15+29, 58.6' LT. The existing conduit will be discontinued in place.
- Remove cables from the CUC duct on 35th Street from CUC manhole 3430, station 28+13, 63.8' LT, north to the viaduct.
- Remove cables from the conduit along National Avenue between 35th Street and 34th Street, from station 28+13, 63.8' LT to station 31+13, 25.2' LT. The existing conduit will be discontinued in place.
- Install 2-1.25" HDPE conduit 90" deep across National Avenue along the west side of 31st Street from the existing handhole at station 41+26, 120.6' LT to existing handhole at station 41+35, 76.2' RT. The existing conduit will be discontinued in place.
- Remove cable from the conduit along National Avenue between 31st Street and 30th Street, from the small cell node at station 41+36, 63.1' LT to the handhole at station 44+14, 61.2' RT. The existing conduit will be discontinued in place.
- Remove small cell equipment from the traffic signal pole at station 54+92, 38.7' LT.
- Remove cables from the conduit on the east side of Layton Boulevard from the traffic signal pole at station 54+92, 38.7' LT, north to Pierce Street, and along National Avenue from the traffic signal pole, east to 26th Street. The existing conduit will be discontinued in place.

The work prior to construction is anticipated to take 10 working days to complete per location, for a total of 70 working days.

Everstream will make the following utility relocations during construction:

- Lower the existing conduit crossing 39th Street from station 15+27, 50.0' LT to station 15+68, 38.7' LT to a depth of 54".
- Lower the existing conduit along National Avenue from station 19+32, 39.1' LT to station 19+52, 39.2' LT to a depth of 54".
- Lower the existing conduit on the west side of 34th Street from station 31+10, 15.4' LT to station 31+23, 63.8' LT to a depth of 84".

Provide advance notice to Everstream when the site will be available to perform this work.

The work during construction is anticipated to take 5 working days to complete per location, for a total of 15 working days.

Level 3 – Communications

Level 3 has fiber optic facilities with the project limits that are in conflict with the project.

Level 3 will make the following utility relocations during construction in coordination with AT&T Wisconsin:

- Install new fiber in AT&T's new conduit from the existing AT&T manhole at station 15+35.5, 17.5' LT, south to station 15+36, 38' RT, to a new AT&T manhole at station 17+05, 40' RT.
- Install new fiber in AT&T's new conduit from the new AT&T manhole at station 17+05, 40' RT, east to 8' back of existing curb, then continue south along the east side of 38th Street to the alley south of National Avenue, east through the alley to 27th Street, then north in AT&T's existing conduit on the east side of 27th Street to the existing AT&T manhole at station 54+64, 59' LT.
- Splice fiber at the existing AT&T manholes at station 15+35.5, 17.5' LT and station 54+64, 59' LT.
- Remove cable from AT&T Wisconsin conduit on National Avenue from the existing AT&T manhole at station 15+35.5, 17.5' LT, to the existing AT&T manhole at station 50+95,17.6' LT, to the existing AT&T manhole at station 50+93, 27.6' RT, to the existing AT&T manhole at station 54+64, 59' LT.
- Remove cable from conduit from the existing AT&T manhole at station 41+70, 12.4' LT to the existing handhole at station 41+92, 40' RT. The existing conduit will be discontinued in place.

This work is dependent upon AT&T Wisconsin's relocation work. Level 3 cannot pull new cable, splice fiber, or remove existing cable until AT&T's new conduit system is installed. Level 3 will pull new cable in coordination with AT&T Wisconsin. Splicing at the existing AT&T manhole at station 15+35.5, 17.5' LT will take place after AT&T has completed their splicing. After the new fiber is operational, the existing cable will be removed.

The work during construction is anticipated to take 10 working days to complete.

Milwaukee Metropolitan Sewerage District – Sewer

Milwaukee Metropolitan Sewerage District (MMSD) has underground facilities located within the project limits within the westbound travel lanes.

MMSD will make the following relocations prior to construction:

- MMSD will remove flow monitoring equipment at manhole 06302 at station 19+36.4, 34' LT

MMSD has a discontinued concrete base at station 19+33.6, 40' LT. From the base to MH 06302 at station 19+36.4, 34' LT, MMSD has empty conduit that has been discontinued in place.

MMSD will make the following manhole adjustments during construction:

- MH 06302 at station 19+36.4, 34' LT
- MH IS357-2 at station 27+79, 83' LT
- MH IS357-1 at station 27+88, 83' LT
- MH 06301 at station 28+03, 24' LT
- MH DC0602 at station 28+30, 24' LT
- MH 06207 at station 35+36, 20.4' LT
- MH 06206 at station 43+68, 28' LT
- MH 06205 at station 53+69, 27' LT
- MH 06210 at station 53+78, 22' LT
- MH IS358 at station 54+15.5, 34' LT
- MH IS358A at station 54+16, 15' LT

Utility manhole adjustments will be made during construction following a two-step process. In Step 1, after the pavement has been removed, the existing casting will be removed and a cover plate installed. In Step 2, after the lower layers of asphalt are placed, the pavement will be saw cut, the cover plate removed, the casting set to finished grade, and a monolithic concrete shim will be poured to match the top of the lower asphalt layers.

Provide advance notice to MMSD of when the site will be available to perform this work. During construction it is anticipated to take 5 working days to initially adjust all manholes and 5 working days to complete all final adjustments.

Verizon Business – Communications

Verizon Business has fiber optic facilities within the project limits that are in conflict with the project.

Verizon will make the following utility relocations prior to construction:

- Install new conduit and fiber along the north side of National Avenue from the existing handhole at station 13+77, 32’ LT to station 27+50, 45’ LT.
- Install new conduit and fiber along the west side of 35th Street from station 27+50, 45’ LT to station 19+55 A, 35’ LT.
- Install new conduit and fiber across 35th Street from station 19+55 A, 35’ LT to a new handhole at station 19+55 A, 33’ RT.
- Install new conduit and fiber on 35th Street from the new handhole at Station 19+55 A, 33’ RT to the existing CUC manhole at station 19+60 A, 29’ RT.
- Splice fiber at the existing handhole at station 13+77, 32’ LT and at the existing CUC manhole at station 19+60 A, 29' RT.
- Remove cable from the conduit along the north side of National Avenue from the existing handhole at station 13+77, 32’ LT to the existing manhole at station 28+03, 41’ LT. The existing conduit will be discontinued in place.
- Remove cable from the conduit on the east side of 35th Street from the existing manhole at station 28+03, 41’ LT to the existing CUC manhole at station 17+95 A, 24’ RT. The existing conduit will be discontinued in place.
- Remove cable from the conduit along the east side of 35th Street from the existing CUC manhole at station 28+13, 64’ LT to the existing CUC manhole at station 19+60 A, 29’ RT. The existing conduit will be discontinued in place.

The work prior to construction is anticipated to take 15 working days to complete.

Verizon will make the following utility relocations during construction:

- Remove the existing manhole at station 28+03, 41’ LT.

Verizon will remove the existing manhole after the existing pavement is removed. Provide advance notice of when the site will be available to perform this work. The work during construction is anticipated to take 1 working day to complete.

Village of West Milwaukee – Sewer

The Village of West Milwaukee has an existing sanitary manhole at station 15+02.5, 8’ RT within the project limits that is in conflict with the project.

Adjust the manhole to match the new finished pavement elevation as shown in the plans and in the bid items for this project.

Village of West Milwaukee – Water

The Village of West Milwaukee has water facilities within the project limits that are in conflict with the project.

The Village will make the following adjustments during construction:

- Adjust curb stop at station 15+78.5, 37’ RT to final grade

Provide advance notice to the Village of West Milwaukee of when the site will be available to perform this work. The work during construction is anticipated to take 1 working day to complete.

We Energies – Electric

We Energies – Electric operates facilities within the project limits that are in conflict with the project.

We Energies will make the following utility relocations prior to construction:

- Remove the existing manholes and existing concrete encased duct packages between the manholes at the following locations:

Station/Offset	
15+23, 24’ RT	27+59, 23.5’ RT
17+29, 27’ RT	31+11, 25.5’ RT
21+38, 25’ RT	34+55, 28’ RT
24+49, 27’ RT	

- Install new manholes and new concrete encased duct package between manholes at the following locations:

Station/Offset	
15+11, 23’ RT	27+09, 18.5’ RT
19+73, 22’ RT	30+36, 19’ RT
23+64, 23’ RT	35+70, 21’ RT

The work prior to construction is anticipated to take 65 working days to complete.

We Energies will make the following utility relocations during construction:

- Remove the existing manholes and existing concrete encased duct packages manholes at the following locations:

Station/Offset	
37+98, 27’ RT	47+62, 20.3’ RT
41+49, 23’ RT	50+77, 20’ RT
44+40, 19.3’ RT	54+14, 22’ RT

- Remove the following conduit laterals:

Station/Offset	
21+38, LT & RT	34+55, RT
24+49, LT & RT	37+98, LT & RT
27+59, LT & RT	41+50, LT & RT
31+11, LT & RT	54+14, LT & RT

- Install new manholes and new concrete encased duct package between manholes at the following locations:

Station/Offset	
39+48, 20’ RT	49+71, 14’ RT
42+09, 15’ RT	53+36, 16’ RT
46+52, 15’ RT	

- Install new conduit laterals at the following locations:

Station/Offset		
37+98, LT & RT	41+50, LT & RT	54+14, LT & RT

- Adjust manholes to final grade

Utility manhole adjustments will be made during construction following a two-step process. In Step 1, after the pavement has been removed, the existing casting will be removed and a cover plate installed. New manholes will also have a cover plate installed. In Step 2, after the lower layers of asphalt are placed, the pavement will be saw cut, the cover plate removed, the casting set to finished grade, and a monolithic concrete shim will be poured to match the top of the lower asphalt layers.

Provide advance notice to We Energies - Electric of when the site will be available to perform this work.

The work during construction is anticipated to take 65 working days to complete. Each initial manhole adjustment will take 1 working day to complete, and each final manhole adjustment will take 1 working day to complete.

Testing, removal, and disposal of hazardous materials will require 3 working days to complete for each area of contamination encountered.

It is imperative to contact We Energies before removing any electrical underground cables to verify that they have been discontinued and carry no electrical current. Do not assume that unmarked facilities have been discontinued. At no time is it acceptable to push, pull, cut, or drill an unmarked facility without explicit consent from We Energies. Call We Energies 24-hour Dispatch lines to arrange for this verification.

We Energies Electric Dispatch #1-800-662-4797

We Energies – Gas

We Energies – Gas operates facilities within the project limits that are in conflict with the project.

We Energies will make the following utility relocations prior to construction:

- Discontinue the existing gas main on the south side of National Avenue from west of 39th Street to east of 27th Street.
- Remove the discontinued 10” and 12” asbestos-wrapped mains on the south side of National Avenue, from 39th Street to 33rd Street, in conjunction with, and just ahead of, installation of the new We Energies – Electric duct package described above.
- Discontinue and leave in place the following existing gas facilities:
    - Main that crosses National Avenue on the west side of 39th Street.
    - Main on the north side of National Avenue from 39th Street to 38th Street (south).
    - Main on the west side of 38th Street (south).
    - Main that crosses National Avenue on the west side of 38th Street (north).
    - Service lateral that crosses National Avenue near station 20+10.
    - Main that crosses National Avenue on the west side of 37th Street.
    - Main on the west side of 36th Street at back of sidewalk heading south.
    - Main that crosses National Avenue on the west side of 36th Street.
    - Main on the north side of National Avenue from 36th Street to 35th Street.
    - Main on the east side of 35th Street heading south.
    - Main on the north side of National Avenue from 35th Street to east of 34th Street heading northeast to Shea Avenue.
    - Main that crosses National Avenue on the west side of 34th Street.
    - Main on the west side of 33rd Street.
    - Main that crosses National Avenue on the west side of 32nd Street.

- Main on the north side of National Avenue from east of 32nd Street to 30th Street.
- Main that crosses National Avenue on the west side of 31st Street.
- Main on the south side of National Avenue from east of 33rd Street to 27th Street.
- Main that crosses National Avenue on the west side of 30th Street.
- Main that crosses National Avenue near station 46+30.
- Main on the north side of National Avenue from station 45+90 to station 46+80.
- Main that crosses National Avenue on the west side of 29th Street.
- Main on the north side of National Avenue from station 48+85 to station 49+55.
- Main that crosses National Avenue near station 49+15.
- Main that crosses National Avenue on the west side of 28th Street.
- Mains on the north and south sides of National Avenue from the 27th Street to end of project.

- Install the following gas facilities:
  - New main along the south right-of-way of National Avenue from the beginning of the project to 36th Street, where the line will head south and continue east through the alley to the east side of 34th Street. The new main will head north along the east right-of-way of 34th Street, then continue east along the south right-of-way of National Avenue to 28th Street. The main will head south on the west side of 28th Street and continue east through the alley to the east side of 27th Street. The new main will head north along the east right-of-way of 27th Street, then continue east along the south right-of-way of National Avenue to the end of the project.
  - New main on the east side of 39th Street starting north of National Avenue.
  - New main along the west right-of-way of 38th Street (north) that crosses National Avenue.
  - New service lateral that crosses National Avenue near station 20+25.
  - New main that crosses National Avenue along the west right-of-way of 36th Street.
  - New main along the north right-of-way of National Avenue from 35th Street to 34th Street.
  - New main along the north right-of-way of National Avenue from Shea Avenue to 28th Street.
  - New main that crosses National Avenue near station 40+90.
  - New main that crosses National Avenue along the west right-of-way of 28th Street.

The installation of new gas facilities prior to construction is anticipated to take 120 working days to complete.

Removal of the asbestos-wrapped gas mains prior to construction is dependent upon We Energies Electric relocation work. Refer to the We Energies – Electric discussion for schedule.

We Energies will make the following utility relocations during construction:

- Remove the discontinued 10” and 12” asbestos-wrapped mains on the south side of National Avenue, from 33rd Street to 27th Street, in conjunction with, and just ahead of, installation of the new We Energies – Electric duct package described above.

- Adjust the following gas valves and test stands to final grade:

Stage 1 - Station/Offset	
16+83.8, 77.9’ RT	40+89.9, 38.7’ RT
21+18.5, 75.7’ RT	41+21.8, 57’ RT
24+38.8, 63.7’ RT	44+12.7, 54.3’ RT
34+39.5, 66.6’ RT	47+38.6, 52.3’ RT
37+62.8, 44’ RT	50+56.1, 49’ RT

Stage 2 - Station/Offset	
18+23.2, 61.5’ LT	44+21.4, 55.4’ LT
24+36.4, 53.3’ LT	47+46.6, 55.3’ LT
40+65.9, 38.4’ LT	50+64.7, 56.8’ LT
41+30, 48.3’ LT	

Provide advance notice to We Energies - Gas of when the site will be available to perform this work by contacting the dispatch number below.

Removal of the asbestos-wrapped gas mains during construction is dependent upon We Energies Electric relocation work. Refer to the We Energies – Electric discussion for schedule.

It is anticipated to take 1 working day per valve box or test stand to adjust if not damaged. Damaged valve boxes or test stands are anticipated to take 5 working days per valve box or test stand to adjust.

The existing 20” main along the median of Layton Boulevard is not in conflict and will remain in place as is.

It is imperative to contact We Energies before removing any gas facilities to verify that they have been discontinued and carry no natural gas. Do not assume that unmarked facilities have been discontinued. At no time is it acceptable to push, pull, cut, or drill an unmarked facility without explicit consent from We Energies. Call We Energies 24-hour Dispatch lines to arrange for this verification.

We Energies Gas Dispatch #1-800-261-5325

The following utilities have facilities within the project area. However, no adjustments are anticipated:

AT&T Local Network – Communications

Midwest Fiber Networks – Communications

Spectrum – Communications

7. Other Contracts.

Coordinate project work in accordance with standard spec 105.5.

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

The following projects may be under construction concurrently with the work under this contract. Coordinate activities, detours, work zone traffic control, roadway, lane and intersection closures, and other work items as required with other contracts. Give 14 calendar days’ notice for all Stage switches including the 35th Street and S Layton Boulevard intersection closures or lane reductions.

Below are nearby projects to coordinate with:

Project 1060-27-74
I-94 E-W Early East Leg
WisDOT Contact: Eric Hanson, (414) 840-9341, ericd.hanson@dot.wi.gov

8. Railroad Insurance and Coordination - Soo Line Railroad Company (CP)

A. Description

Comply with standard spec 107.17 for all work affecting Soo Line Railroad Company (CP) property and any existing tracks.

A.1 Railroad Insurance Requirements

In addition to standard spec 107.26, provide railroad protective liability insurance coverage as specified in standard spec 107.17.3 Insurance is filed in the name of Soo Line Railroad Company d/b/a Canadian Pacific.

Notify evidence of the required coverage, and duration to Brian Osborne, Manager Public Works; Canadian Pacific Plaza, 120 South 6th Street, Suite 700, Minneapolis, MN 55402; Telephone (612) 760-2945; E-mail: Brian.Osborne@cpkcr.com

Also send a copy to the following: Jason Kazmierski, SE Region Railroad Coordinator, 141 N. Barstow Street, Waukesha, WI 53188; Telephone (262)548-6700; E-mail jason.kazmierski@dot.wi.gov

Include the following information on the insurance document:

- Project ID: 2410-10-70
- Project Location: Milwaukee, Wisconsin
- Route Name: 35th Street, Milwaukee County
- Crossing ID: 386510V
- Railroad Subdivision: Watertown Sub
- Railroad Milepost: MP 87.31
- Work Performed on or within 50’ of RR ROW: Traffic control.

A.2 Train Operation

Approximately 4 passenger trains and 21 through freight trains operate daily through the construction site. Passenger trains operate at up to 40 mph. Through freight trains operate at up to 40 mph. There are no switching movements at this location.

A.3 Names and Addresses of Railroad Representatives for Consultation and Coordination

Construction Contact

Brian Osborne, Manager Public Works; Canadian Pacific Plaza, 120 South 6th Street, Suite 700, Minneapolis, MN 55402; Telephone (612) 760-2945; E-mail brian_osborne@cpkcr.com for consultation on railroad requirements during construction.

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

Flagging Contact

Greda Lynn, Grade Crossing Coordinator; Canadian Pacific Plaza, 120 South 6th Street, Suite 700, Minneapolis, MN 55402; Telephone (612) 258-6619; E-mail greda_lynn@cpkcr.com a minimum of 40 working days in advance to arrange for a railroad flagger. Reference the Crossing ID, Wisconsin Milepost and Subdivision found in A.1.

* Contact SOO Line (CPKC) prior to letting for flagman work hour availability.

Cable Locate Contact

In addition to contacting Diggers Hotline, contact CPKC Call Before You Dig line at (866) 291-0741, five working days before the locate is needed. Reference the Crossing ID, Wisconsin Milepost and Subdivision found in A.1.

SOO Line (CPKC) will only locate railroad owned facilities located in the railroad right-of-way. The railroad does not locate any other utilities.

cc: WisDOT Region Railroad Coordinator referenced in A.1 on all written correspondence with the railroads.

A.4 Work by Railroad

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

A.5 Temporary Grade Crossing

If a temporary grade crossing is desired, submit a written request to the railroad representative named in A.3 at least 40 days prior to the time needed. Approval is subject to the discretion of the railroad. The department has made no arrangements for a temporary grade crossing.

stp-107-026 (20250701)

9. Hauling Restrictions.

Conduct operations in a manner that will cause a minimum of inconvenience to the free flow of vehicles on sideroads near the work zone. The contractor will be allowed access to these roads at locations approved by the engineer.

Hauling will not be allowed on any sideroads within the project limits except for S 35th Street, Shea Avenue, and S Layton Boulevard.

10. Information to Bidders, WPDES Transportation Construction General Permit (TCGP) for Storm Water Discharges.

The calculated land disturbance for the project site is 10.4 acres.

The department has obtained permit coverage through the Wisconsin Department of Natural Resources to discharge storm water associated with land disturbing construction activities under this contract. Conform to all permit requirements for the project.

This permit is the Wisconsin Pollutant Discharge Elimination System, Transportation Construction General Permit, (WPDES Permit No. WI-S066796-2). The permit can be found at:

https://widnr.widen.net/s/s5mwp2gd7s/finalsignedwisdotcsgp

A “Certificate of Permit Coverage” is available from the regional office by contacting Debra Tarnow at (262) 548-6768. Post the “Certificate of Permit Coverage” in a conspicuous place at the construction site.

Permit coverage for additional land disturbing construction activities related to contractor means and methods will be considered as part of the ECIP review and approval process. Coverage under the TCGP for additional land disturbance areas will be considered if the areas meet all of the following:

- Must meet the permit’s applicability criteria.
- Must be for the exclusive use of a WisDOT project.
- Land disturbance first commences after the ECIP approval, and the areas are fully restored to meet the final stabilization criteria of the permit upon completion of the work.

The contractor is responsible for obtaining any permits for areas that are not approved by the department for coverage under the TCGP.

stp-107-056 (20250108)

11. Erosion Control.

Supplement standard spec 107.20 with the following:

Erosion control best management practices (BMP’s) shown on the plans are at suggested locations. The actual locations will be determined by the contractor’s ECIP and by the engineer. Include dust control and

each dewatering or by-pass (mechanical pumping) operation in the ECIP submittal. The ECIP will supplement information shown on the plans and not reproduce it. The ECIP will identify how to implement the project's erosion control plan. ECIP will demonstrate timely and diligently staged operations, continuing all construction operations methodically from the initial removals and topsoil stripping operations through the subsequent grading, paving, re-application of top soil, and restoration of permanent vegetation to minimize the period of exposure to possible erosion.

Provide the ECIP 14 days prior to the pre-construction meeting. Provide 1 copy of the ECIP to the department and 1 copy of the ECIP to the WDNR Liaison Ryan Pappas, (414) 750-7495, ryan.pappas@wisconsin.gov. Do not implement the ECIP without department approval and perform all work conforming to the approved ECIP.

Maintain Erosion Control BMP's until permanent vegetation is established or until the engineer determines that the BMP is no longer required.

Stockpile excess materials or spoils on upland areas away from wetlands, floodplains, and waterways. Immediately install perimeter silt fence protection around stockpiles. If stockpiled materials will be left for more than 14 days, install temporary seed or other temporary erosion control measures the engineer orders.

Re-apply topsoil on graded areas, as the engineer directs, immediately after the grading is completed within those areas. Seed, fertilize, and mulch/erosion mat top-soiled areas, as the engineer directs, within 5 days after placement of topsoil. If graded areas are left not completed and exposed for more than 14 days, seed those areas with temporary seed and mulch.

Dewatering (Mechanical Pumping) for Bypass Water (sediment-free) Operations

If dewatering bypass operations are required from one pipe structure to another downstream pipe structure or from the upstream to downstream end of a culvert and the bypass flow is not transporting sediments (sand, silt, and clay particles) from a tributary work site area, bypass pumping operations will be allowed provided that the department has been made aware of and approves operation. When pumping bypass flows, the discharge location will need to be stable and not produce any erosion from the discharge velocity that would cause release of sediment downstream. Dewatering is considered incidental to the contract.

Dewatering (Mechanical Pumping) for Treatment Water (sediment-laden) Operations

If dewatering operations require pumping of water containing sediments (sand, silt, and clay particles), the discharge will not be allowed to leave the work site or discharge to a storm water conveyance system without sediment removal treatment. Do not allow any excavation for; structures, utilities, grading, maintaining drainage that requires dewatering (mechanical pumping) of water containing sediments (sand, silt, and clay particles) to leave the work site or discharge to a storm water conveyance system without sediment removal treatment.

Prior to each dewatering operation, submit to the department a separate ECIP amendment for sediment removal. Guidance on dewatering can be found on the Wisconsin DNR website located in the Storm Water Construction Technical Standards, Dewatering Code #1061,

http://dnr.wi.gov/topic/stormwater/standards/const_standards.html.

Include reasoning, location, and schedule duration proposed for each operation. Per Code 1061, include all selection criteria: site assessment, dewatering practice selection, calculations, plans, specifications, operations, maintenance, and location of proposed treated water discharge. Provide a stabilized discharge area. If directing discharge towards or into an inlet structure, provide additional inlet protection for back-up protection. Dewatering is considered incidental to the contract.

Maintaining Drainage

Maintain drainage at and through worksite during construction conforming to standard spec 107.20, 204.3.2.1(3), 205.3.3 and 520.3.1(2). Use existing storm sewers, existing culvert pipes, existing drainage channels, temporary culvert pipes, or temporary drainage channels to maintain existing surface and pipe drainage. Pumps may be required to drain the surface, pipe, and structure discharges during construction. Costs for furnishing, operating, and maintaining the pumps is considered incidental to the contract.

Saw Cut Slurry

Saw cut slurry that may be generated as part of this contract shall be collected and actively managed. Take appropriate measures to prevent saw cut slurry from entering inlets, wetlands, waterways, and other natural areas.

SER-107-003 (20161220)

12. Archaeological Sites.

MI-0057/BMI-0104 Trowbridge-Carey site is located approximately from Station 17+50 and extending west off the project limits along STH 59, and south along S 38th Street, as shown on the plans.

MI-0055/BMI-0103 National Avenue site is located approximately from Station 36+50 to Station 50+50 within the limits as shown on the plans.

Notify the Bureau of Technical Services – Environmental Process and Document Section (BTS-EPDS) at (608) 266-0099 at least two weeks before commencement of any ground disturbing activities. BTS-EPDS will determine if a qualified archaeologist will need to be on site during construction of this area.

All ground-disturbing activities that occur within the boundaries of the human burial site shall be monitored by a qualified archaeologist. The monitor for this project is Brian Nicholls from the University of Wisconsin-Milwaukee (nicholls@uwm.edu and uwmcrm-monitorrequest@uwm.edu).

Do not use the sites for borrow or waste disposal. Do not use the site area not currently capped by asphalt/concrete for the staging of personnel, equipment and/or supplies. Use of a hydrovac is not permitted within the boundaries of the human burial sites.

13. Notice to Contractor – Creosote Lumber.

The Wisconsin Department of Natural Resources requires proper disposal of the creosote timbers that will result from the removal of the track zone. Proper disposal includes, but is not limited to, land filling or use as landscape timbers. Under no circumstances should this material be burned or buried on site. Beneficial re-use of this material is an option, and the contractor may contact Ryan Pappas at the WDNR Southern Region Headquarters for additional information on disposal options.

Disposal shall be incidental to Excavation, Hauling, and Disposal of VOC Contaminated Soil.

stp-107-130 (20220628)

14. Notice to Contractor, City of Milwaukee Street Lighting Coordination.

Prior to construction, City of Milwaukee personnel will energize newly located permanent street lighting power distribution cabinets for temporary street lighting and permanent project use.

City of Milwaukee street lighting personnel will remove the decorative Milwaukee harp and lantern fixtures prior to stripping and removing light poles. Contact the City of Milwaukee Street Lighting Field Supervisors to schedule this work.

Install, service, and maintain temporary overhead street lighting throughout the project limits as shown on the plans. Notify the City of Milwaukee when there is any damage to temporary street lighting during construction. Provide a 24-hour contact name and number to the City. Only the City of Milwaukee Street Lighting personnel will service and maintain the high voltage series circuitry that falls within the project limits.

The City of Milwaukee personnel will make the final terminations (Cut-Ins) back into street lighting circuitry for both the temporary and permanent lighting, including inside CUC manhole #617, along with inspecting the contractor-installed temporary and permanent street lighting facilities.

Notify the City of Milwaukee Street Lighting Field Supervisor at least 10 working days prior to needing Cut-In work.

Notify the City of Milwaukee Street Lighting Field Supervisor 3 working days prior to needing circuitry tag-out for CUC manhole #617. See Notice to Contractor, City of Milwaukee Underground Conduit Coordination.

The electrical contractor must have all temporary or permanent street lighting installed for the entire project and ready for Cut-In before the City of Milwaukee Street Lighting crews will make final terminations.

Some work locations have traffic signals attached to the street lighting facilities as shown on the plans.

Complete the permanent underground street lighting installation, ensuring that they are fully operational. Obtain approval from the City of Milwaukee street lighting personnel prior to removing the temporary overhead street lighting facilities. Remove temporary overhead street lighting as shown on the plans, and leave in place temporary overhead street lighting designated to be removed by the City of Milwaukee as shown on the plans.

Construction time for final terminations by the City of Milwaukee personnel is anticipated to be 5 to 10 business days for each of the temporary street lighting and permanent street lighting.

To obtain and submit the Inventory Transaction Report for City-furnished materials, contact Denis Kozelek.

The City of Milwaukee street lighting contacts are as follows:

Neal Karweik
Street Lighting Field Supervisor
(414) 708-4245 (mobile)
(414) 286-5943 (office)

Steven Rhoda
Street Lighting Field Supervisor
(414) 708-4251 (mobile)
(414) 286-5942 (office)

Denis Kozelek
Street Lighting Project Manager
(414) 286-3252 (office)
dkozel@milwaukee.gov

15. Notice to Contractor, City of Milwaukee Underground Conduit (CUC) Coordination.

The City of Milwaukee street lighting personnel will install wood poles and temporary overhead high voltage cables along the east side of S Layton Boulevard, including a pole and cable riser adjacent to proposed CUC manhole #617, prior to construction. Street lighting personnel will run the cables down the riser and into CUC manhole #617 during construction.

As soon as possible after contract award, submit shop drawings for CUC manhole #617 to Karen Rogney. Install this manhole and the 1-duct CUC conduit stub to the wood pole prior to any other roadway removals, sawing or excavation occurring on the contract. The installation of manhole #617 and lateral to the street lighting wood pole must be completed prior to City street lighting personnel performing series high voltage cable cut over work which must be completed prior to any other roadway construction. See Notice to Contractor, City of Milwaukee Street Lighting Coordination.

Manhole #617 is to be installed over an active conduit package.

Notify the City of Milwaukee Street Lighting Field Supervisor 3 working days prior to needing circuitry tag-out for CUC manhole #617. The active high voltage series street lighting cables can be tagged out during working daylight hours and re-energized at the end of each workday. Contact the Street Lighting Field Supervisor before the end of the working day to re-energize the high voltage cables and arrange for de-energizing the cables if needed for the following work day.

Notify Karen Rogney upon completion of manhole #617 and conduit lateral installation.

The City of Milwaukee City Underground Conduit contacts are as follows:

Karen Rogney
CUC Project Manager
(414) 286-3243 (office)
krogne@milwaukee.gov

Eng-Kie Lee
CUC & Street Lighting Manager
(414) 286-2174 (office)
elee@milwaukee.gov

16. Municipality Acceptance of Water Main Construction.

Both the department and City of Milwaukee personnel will inspect materials placement of water main under this contract. However, construction staking, post-placement testing of the system, and final acceptance of the water main construction will be by the City of Milwaukee.

stp-105-001 (20250701)

17. Referenced Construction Specifications.

Construct the work enumerated below 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.

Conform to the referenced construction specifications for the following:

Adjusting Water Valve Boxes

stp-105-002 (20130615)

18. Coordination with Businesses and Residents.

The department will arrange and conduct a meeting between the contractor, the department, affected residents, local officials and business people to discuss the project schedule of operations including vehicular and pedestrian access during construction operations. Hold the first meeting at least one week before the start of work under this contract and hold one meeting per month thereafter. The department will arrange for a suitable location for meetings that provides reasonable accommodation for public involvement. The department will prepare and coordinate publication of the meeting notices and mailings for meetings. The contractor shall schedule meetings with at least 2 weeks' prior notice to the engineer to allow for these notifications.

stp-108-060 (20141107)

19. 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 9:00 PM until the following 7:00 AM, unless prior written approval is obtained from the engineer.

stp-107-001 (20060512)

20. Abandoning Sewer, Item 204.0291.S.

A Description

This special provision describes abandoning existing sewer by filling it with flowable grout as the plans show and conforming to standard spec 204 and standard spec 501 as modified in this special provision.

B Materials

B.1 Cement

Furnish cement meeting the requirements of standard spec 501.2.4.1 for Type I or II Portland Cement or Type IL Portland-Limestone Cement.

B.2 Fly Ash

Furnish Class C or F Fly Ash meeting the requirements of standard spec 501.2.4.2.2.

B.3 Sand

Furnish natural sand meeting the fine aggregate requirements of standard spec 501.2.7.2 and the size requirements of standard spec 501.2.7 except the percent passing the number 200 sieve shall be 0-5 percent by weight.

B.4 Water

Furnish water meeting the requirements of standard spec 501.2.6.

B.5 Mix Design

Use the basic proportions of dry materials per cubic yard of grout as follows:

- Cement 100 pounds
- Fly Ash 400 pounds
- Fine Aggregate 2600 pounds

or an engineer approved equal.

In addition the grout shall conform to the following:

Compressive Strength	ASTM C495	300 psi @ 28 day min
Density	ASTM C495 (no oven drying)	50 pcf min
Shrinkage	ASTM	1% by volume
Flow	ASTM C939	35 sec max

Air entraining and chemical admixtures to control fluidity of the grout are allowable. Ten days before placement, furnish to the engineer a design mix detailing all components and their proportions in the mix.

B.6 Cellular Grout

Alternatively, the contractor may use, or if the manufacturer recommends, an engineer-approved commercial cellular concrete grout conforming to the following:

Cement	ASTM C150/ ASTM C595	Type I or II/Type IL
Density	ASTM C495 (no oven drying)	50 pcf min
Compressive Strength	ASTM C495	300 psi @ 28 day min 100 psi in 24 hours
Shrinkage	ASTM C157	1% by volume
Flow	ASTM C939	35 sec max

C Construction

Fill the abandoned sewer pipe with flowable grout as the engineer directs. In the event that the sewer cannot be completely filled from existing manholes, tap the sewer where necessary and fill from these locations.

D Measurement

The department will measure Abandoning Sewer in volume by the cubic yard as specified in standard spec 109.1.3.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
204.0291.S	Abandoning Sewer	CY

Payment is full compensation for furnishing all materials and excavating and backfilling where necessary.

stp-204-050 (20250701)

21. Removing Traffic Signals W National Ave & S 37th St, Item 204.9060.S.201; Removing Traffic Signals W National Ave & S 35th St, Item 204.9060.S.202; Removing Traffic Signals W National Ave & S 30th St, Item 204.9060.S.203; Removing Traffic Signals W National Ave & S Layton Blvd, Item 204.9060.S.204.

A Description

This special provision describes removing existing traffic signals conforming to standard spec 204.

B (Vacant)

C Construction

Notify the City of Milwaukee's Traffic Signal Field Operations at (414) 286-5941 at least 5 business days prior to the removal of the traffic signals. Complete the removal work as soon as possible following shut down of this equipment.

The City assumes that all signal equipment not being removed at the intersection 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 not identified on the plans as a removal to the engineer. Any equipment not identified as damaged or not working prior to removal, and subsequently damaged by the contractor's operations, will be replaced by the contractor at no cost to the City.

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, emergency vehicle preemption heads (evp), 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.

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

D Measurement

The department will measure Removing Traffic Signals (Location) by each intersection, acceptably completed.

E Payment

Add the following to standard spec 204.5:

ITEM NUMBER	DESCRIPTION	UNIT
204.9060.S.201	Removing Traffic Signals W National Ave & S 37th St	EACH
204.9060.S.202	Removing Traffic Signals W National Ave & S 35th St	EACH
204.9060.S.203	Removing Traffic Signals W National Ave & S 30th St	EACH
204.9060.S.204	Removing Traffic Signals W National Ave & S Layton Blvd	EACH

22. Removing Poles, Item 204.9060.S.310.

A Description

This special provision describes removing existing concrete, wood, steel, and aluminum poles, and safely disposing of materials.

B (Vacant)

C Construction

Disconnect and strip all cables and wiring that are mounted on or inside the pole and carefully remove the bracket arm(s), clamp(s), luminaire(s), and other non-street lighting materials from the pole. Remove the pole and backfill the resulting hole according to standard spec 204.3.1.2.

Disposing of Materials

Materials for disposing of safely:

Concrete, Aluminum, Steel, wood pole(s)
Bracket arm(s), Bracket Arm Clamp(s) and hardware.
LED luminaires, and decorative luminaires.
All ballasts (High Pressure Sodium & LED “OV20”)
Breakaway transformer Pedestal(s)
Side Pole Mounted Wiring Pedestal(s) (Green in Color)
Stone and brick
Conduit and Cabling
High- and Low-Pressure Sodium Luminaires
And other material not designated for salvage.

D Measurement

The department will measure Removing Poles as each pole acceptably completed.

E Payment

Add the following to standard spec 204.5:

ITEM NUMBER	DESCRIPTION	UNIT
204.9060.S.310	Removing Poles	EACH

stp-204-025 (20230113)

23. Removing Aerial Cable, Item 204.9090.S.314.

A Description

This special provision describes removing temporary overhead service lines conforming to standard spec 204 and as shown on the plans.

B (Vacant)

C Construction

Dispose of materials off site.

D Measurement

The department will measure Removing Aerial Cable by the linear foot acceptably completed.

E Payment

Add the following to standard spec 204.5:

ITEM NUMBER	DESCRIPTION	UNIT
204.9090.S.314	Removing Aerial Cable	LF

stp-204-025 (20230113)

24. QMP Base Aggregate Dense 1 1/4-Inch Compaction, Item 371.2000.S.

A Description

(1) This special provision describes modifying the compaction and density testing and documentation requirements of work done under the Base Aggregate Dense 1 1/4-Inch bid items. Conform to standard spec 305 as modified in this special provision and to the contract QMP Base Aggregate article.

(2) Provide and maintain a quality management program. A quality management program is defined as all activities, including process control, inspection, sampling and testing, and necessary adjustments in the process related to construction of dense graded base which meets all the requirements of this provision.

(3) Chapter 8 of the department's construction and materials manual (CMM) provides additional detailed guidance for QMP work and describes sampling and testing procedures.

http://wisconsindot.gov/rdwy/cmm/cm-08-00toc.pdf

(4) This special provision applies to Base Aggregate Dense 1 1/4-Inch material placed: above at least 16 inches of subgrade improvement, 12 inches of subgrade improvement and geogrid or QMP subgrade provisions, between shoulder hinge points and lower than mainline pavement. Unless otherwise specified by the contract, all Base Aggregate Dense 1 1/4-Inch material placed on side roads, private and public entrances, individual ramps less than 1500 feet, passing lanes less than 1500 feet, tapers, turn lanes, and other undefined locations are exempt from the compaction and density requirement modifications and testing contained within this special provision.

B (Vacant)

C Construction

C.1 General

(1) The engineer shall approve the grade before placement of the base. Approval of the grade shall be in accordance with applicable provisions of the standard specifications.

Add the following to standard spec 305.3.2.2:

(3) For 1 1/4-Inch dense graded base composed of < or = 20% reclaimed asphaltic pavement (RAP) or crushed concrete (RCA), as determined by classification of material (aggregate or RAP and/or RCA) and percentage by weight of each material type retained on the No. 4 Sieve, the contractor must determine the material target density in accordance with:

Method 1: Maximum dry density in accordance with AASHTO T-180, Method D, with correction for coarse particles and modified to require determination of Bulk Specific Gravity (Gm) in accordance with AASHTO T 85. Bulk Specific Gravities determined in accordance with standard spec 106.3.4.2.2 for aggregate source approval may be utilized.

(4) For 1 1/4-Inch dense graded base composed of >20% RAP or RCA, as determined by classification of material (aggregate or RAP and/or RCA) and percentage by weight of each material type retained on the No. 4 Sieve, the contractor may choose from the following options to determine the material target density:

Method 2: Maximum dry density as determined by AASHTO T-180, Method D, with correction for coarse particles, and modified to require determination of Bulk Specific Gravity (G_m) in accordance with AASHTO T 85.

Method 3: Maximum wet density as determined by AASHTO T-180, Method D, modified to define *Maximum Density* as the wet density in pounds per cubic foot of soil at optimum moisture content using Method D specified compaction, with correction for coarse particles, and modified to require determination of Bulk Specific Gravity (G_m) in accordance with AASHTO T 85.

Method 4: Average of 10 random control strip wet density measurements as described in section C.2.5.1.

(5) Compact the 1 1/4-Inch dense graded base to a minimum of 93.0% of the material target density for methods 1, 2 and 3. Compact 1 ¼-inch dense graded base to a minimum of 96% of the material target density for method 4. Ensure that adequate moisture is present during placement and compaction operations to prevent segregation and to help achieve compaction.

(6) Base Aggregate Dense 1 1/4-Inch will be accepted for compaction on a lot basis.

(7) Field density tests on materials using contractor elected target density methods 3 or 4 will not be considered for lot acceptance on the basis of compaction under the requirements of this provision until the moisture content of the in-place material is less than 2.0 percentage points above the maximum wet density optimum moisture or 2.0 percentage points of the average moisture content of the 10 density tests representing a control strip, respectively. Determine moisture content using AASHTO T255 as

modified in CMM chapter 8 or a nuclear density gauge. If conducting AASHTO T255, sample materials after watering but before compaction.

C.2 Quality Management Program

C.2.1 Quality Control Plan

(1) Submit a comprehensive written quality control plan to the engineer no later than 10 business days before placement of material. Do not place any dense graded base before the engineer reviews and accepts the plan. Construct the project as the plan provides.

(2) Do not change the quality control plan without the engineer's review and acceptance. Update the plan with changes as they become effective. Provide a current copy of the plan to the engineer and post in the contractor's laboratory 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 process that will be used, and action time frames.
3. A list of source locations, section and quarter descriptions, for all aggregate materials requiring QC testing.
4. Descriptions of stockpiling and hauling methods.
5. An outline for resolving a process control problem. Include responsible personnel, required documentation, and appropriate communication steps.
6. Location of the QC laboratory, retained sample storage, and other documentation.
7. Lot layout and random test location plan.
8. A description of placement methods and operations. Including, but not limited to: staging, construction of an initial working platform, lift thicknesses, and equipment.

C.2.1 Pre-Placement Meeting

A minimum of two weeks before placement of Base Aggregate Dense 1 1/4-Inch material, hold a pre-placement meeting at a mutually agreed upon time and location. Present the Quality Control Plan at the meeting. Attendance at the pre-placement meeting is mandatory for the project superintendent, quality control manager, project inspection and testing staff, all appropriate contractor personnel involved in the sampling, testing, and quality control including subcontractors, and the engineer or designated representatives.

C.2.2 Personnel

(1) Perform the quality control sampling, testing, and documentation required under this provision using technicians certified by the Department's Highway Technician Certification Program (HTCP). Have a HTCP Nuclear Density Technician I, or ACT certified technician, perform field density and field moisture content testing. Adhere to the minimum required certifications for aggregate testing per part 7 of the standard specification. AASHTO T180 proctor testing requires a minimum certification level of AGGTEC-1.

(2) If an ACT is performing sampling or testing, a certified technician must coordinate and take responsibility for the work an ACT performs. Have a certified technician ensure that all sampling and testing is performed correctly, analyze test results, and post resulting data. No more than one ACT can work under a single certified technician.

C.2.3 Equipment

(1) Furnish the necessary equipment and supplies for performing quality control testing. Ensure that all testing equipment conforms to the equipment specifications applicable to the required testing methods. The engineer may inspect the measuring and testing devices to confirm both calibration and condition. Calibrate all testing equipment according to the CMM and maintain a calibration record at the laboratory.

(2) Furnish nuclear gauges from the department's approved product list at:

http://wisconsindot.gov/Pages/doing-bus/eng-consultants/cnslt-rsrces/tools/appr-prod/default.aspx

(3) Ensure that the nuclear gauge manufacturer or an approved calibration service calibrates the gauge the same calendar year it is used on the project. Retain a copy of the calibration certificate with the gauge.

(4) For all target density methods, conform to AASHTO T310 and CMM 8-15 for wet density testing and gauge monitoring methods.

(5) For the specified target density determined using method 1 in section C.1, compute the dry densities for the compacted dense graded base, composed of < or = 20% RAP or RCA, according to AASHTO T310.

(6) For contractor elected target density method 2 in section C.1, compute dry densities of dense graded base composed of >20% RAP or RCA using a moisture correction factor and the nuclear wet density value. Determine the moisture correction value, for each Proctor produced under the requirements of C.2.5, using the moisture bias as shown in CMM 8.15.12.1 and 8.15.12.2, except the one-point Proctor tests of the 5 random tests is not required. Conduct a moisture bias test for every 7500 feet of Base Aggregate Dense 1 1/4-Inch placed. Determine natural moistures in the laboratory.

(7) Perform nuclear gauge measurements using gamma radiation in the backscatter or direct transmission position. Backscatter may be used only if the material being tested cannot reliably maintain an undistorted direct transmission test hole. Direct transmission tests must be performed at the greatest possible probe depth of 2 inches, 4 inches, or 6 inches, but not to exceed the depth of the compacted layer being tested. Perform each test for at least one minute of nuclear gauge count time.

C.2.5 Contractor Testing

(1) Perform compaction testing on the mainline dense graded base material, as defined by A.(4). Perform the quality control sampling, testing, and documentation required under this provision using HTCP certified technicians as required in C.2.3. Conform to CMM 8-15 for testing and gauge monitoring methods.

(2) Select test sites randomly using ASTM Method D3665. Random numbers may be determined using an electronic random number generator. Guidance for determining test locations can be found in section 8-30.9 of the Construction and Materials Manual (CMM). Test locations must be kept a minimum of 3 feet from the unsupported edge of dense graded base layers.

(3) When a density target is determined in accordance methods 3 or 4 in section C.1, conduct density testing on same date of final compaction.

C.2.5.1 Contractor Required Quality Control (QC) Testing

(1) Conduct testing at a minimum frequency of one test per lot. A lot is 1500 feet for each layer with a maximum width of 18 feet, minimum width of 6 feet, and minimum lift thickness of 2" of Base Aggregate Dense 1 1/4-Inch material placed. Each lot of compacted Base Aggregate Dense 1 1/4-Inch material, as defined by A.(4), will be accepted when the lot field density meets the required minimum density. Lots that don't achieve density requirements must be addressed and approved in accordance with C.2.7.

(2) Add separate lots for passing lanes and individual ramps greater than 1500 feet.

(3) Combine partial lots less than 750 feet with the previous lot. Partial lots greater than or equal to 750 feet are standalone lots.

(4) Notify the engineer, if a lot field density test falls below the required minimum value. Document and perform corrective actions in accordance with C.2.7. Deliver documentation of all compaction testing results to the engineer at the time of testing.

C.2.5.1.1 Target Density Determination

C.2.4.1.1.1 Maximum Wet and/or Dry Density Methods

(1) For contractor elected target density methods 2 and 3 in section C.1, and contractually specified target density method 1 in section C.1; perform one gradation and 5-point Proctor test before placement of 1 ¼-Inch dense graded base. Perform additional gradations every 3000 tons in accordance with standard spec 305 and 730. If sampling requirements are identical, samples/testing performed for the QMP Base Aggregate specification may be used to fulfill the gradation testing requirements of this specification.

(2) Perform additional 5-point Proctor tests, at a minimum, when:

1. The four point moving average gradation on any one sieve differs from the original gradation test result for that sieve, by more than 10 percentage points. The original gradation test is defined as the gradation of the material used to create a 5-point Proctor. Each 5-point Proctor test will remain valid for any material with gradation for all sieves within 10.0 percentage points of that Proctor's original gradation test.
2. The source of base aggregate changes.
3. Percent target density exceeds 103.0% on two consecutive density tests.

(3) Provide Proctor test results to the engineer within two business days of sampling. Provide gradation test results to the engineer within one business day of sampling.

(4) Split each contractor QC Proctor sample and identify it according to CMM 8-30. Deliver the split to the engineer within one business day for department QV Proctor testing.

(5) Split each non-Proctor 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.

C.2.5.1.1.2 Density Control Strip Method

(1) For contractor elected target density method 4 in section C.1, construct a control strip for each layer of placement to identify the target wet density for the base aggregate dense material. The control strip construction and density testing will occur under the direct observation and/or assistance of the department QV personnel. For blended material, reprocessed material and crushed concrete, perform additional gradations every 3000 tons in accordance with standard spec 305 and 730. If sampling frequencies are identical, samples/testing performed for the QMP Base Aggregate specification may be used to fulfill the gradation testing requirements of this specification.

(2) Unless the engineer approves otherwise, construct control strips to a minimum dimension of 300 feet long and one full lane width.

(3) Completed control strips may remain in-place to be incorporated into the final roadway cross-section.

(4) Construct additional control strips, at a minimum, when:

1. The source of base aggregate changes.
2. The four point moving average percentage of blended recycled materials, from classification of material retained on the No. 4 sieve in the original gradation test, differs by more than 10 percentage points. The original gradation test is defined as the gradation of the material used to construct the control strip.
3. The layer thickness changes more than 2.0 inches.
4. The percent target density exceeds 103.0% on two consecutive density measurements.

(5) Construct control strips using equipment and methods representative of the operations to be used to place and compact the remaining 1 1/4–Inch Base Aggregate Dense material. Wet the base, as mutually agreed upon by the contractor and engineer, to obtain and/or maintain adequate moisture content to ensure proper compaction. Discontinue water placement if the base begins to exhibit signs of saturation or instability.

(6) After compacting the control strip with a minimum of 2 passes, mark and take density measurements at 3 random locations. Subsequent density measurements will be taken at the same 3 locations. Test locations must be kept a minimum of 3 feet from the unsupported edge of dense graded base layers.

(7) After each subsequent pass of compaction equipment over the entirety of the control strip, take wet density measurements at the 3 marked locations. Continue compacting and testing until the increase in wet density measurements are less than 2.0 lb/ft^3, or the density measurements begin to decrease.

(8) Upon completion of control strip compaction, take 10 randomly located wet density measurements within the limits of the control strip. The final measurements recorded at the 3 locations under article C.2.4.1.1.2 may be included as 3 of the 10 measurements. Average the ten measurements to obtain the control strip target density and target moisture for use in contractor elected method 4 in section C.1. Test locations must be kept a minimum of 3 feet from the unsupported edge of dense graded base layers.

C.2.6 Department Testing

C.2.6.1 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 two business days after the department obtains the sample.

(2) When a density target is determined in accordance methods 3 and 4 in section C.1, conduct density testing on same date of final compaction.

C.2.6.2 Quality Verification (QV) Testing

(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 C.2.3 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 at the minimum frequency of 20% of the required gradation, density and Proctor contractor tests.

(3) The department will utilize contractor's QC Proctor results for determination of the material target density. The department will verify QC Proctor values by testing QC Proctor split sample. The department will use QC Proctor value as a target density if the QC and QV Proctor test results meet the tolerance requirements specified in section C.2.6.2(7).

(4) The department will locate gradation and nuclear density test samples, at locations independent of the contractor's QC work, collecting one sample at each QV location. Sampling for gradation may be done independently of nuclear density tests, before watering and before compacting. The department will split each QV sample, test half for QV, and retain the remaining half for 10 calendar days.

(5) 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.

(6) The department will utilize control strip target density testing results in lieu of QV Proctor sampling and testing when the contractor elected target density method 4 in section C.1 is used.

(7) The department will assess QV results by comparing to the appropriate specification limits. If QV test results conform to this special provision, the department will take no further action. If QV test results are nonconforming, take corrective actions in accordance with C.2.7 until the requirements of this special provision are met. Differing QC and QV nuclear density values of more than 2.0 pcf will be investigated and resolved. Differing QC and QV Proctor values of more than 3.0 pcf will be investigated and resolved.

C.2.6.3 Independent Assurance (IA)

(1) Independent 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. 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 C.2.6.4.

C.2.6.4 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 shall review the data, examine data reduction and analysis methods, evaluate sampling and testing methods/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 project personnel cannot resolve a dispute, and the dispute affects payment or could result in incorporating non-conforming product or work, 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.2.7 Corrective Action

(1) Lots not achieving the minimum density requirements may be addressed and accepted for compaction in accordance with the requirements of this section. Unless directed by the engineer, corrective actions taken to address an unacceptable lot must be applied to the entire lot corresponding to the non-conforming test.

(2) Investigate the moisture content of material in an unacceptable lot. Moisture content testing/samples collected under the QC and/or QV testing articles of this specification may be used to complete this

investigation. Obtain moisture content readings in accordance with ASTM D 6938. For material composed of >20% RAP or RCA, correct the moisture content with the moisture correction value using the moisture bias, as shown in CMM 8.15.12.1 and 8.15.12.2, except the one-point Proctor tests of the 5 random tests is not required.

(3) Lots with moisture contents within 2.0 percentage points of optimum moisture for target density methods 1, 2 and 3 in section C.1, or within 2.0 percentage points of the target moisture content for target density method 4 in section C.1, and exhibiting no signs of deflection when subjected to loading by the heaviest roller used in the placement and compaction operations, shall be compacted a minimum of one more pass using equipment and methods representative of the operations used to place and compact the Base Aggregate Dense 1 1/4–Inch, and density tested at the same location (station and offset) as the failing QC and/or QV density tests. If the change in density exceeds 2.0 lb/ft^3 continue subsequent compactive efforts and density testing on that lot, at no additional cost to the department. If the change in density is less than or equal to 2.0 lb/ft^3, the lot is accepted as satisfying the compaction requirements of this provision.

(4) Lots with moisture contents within 2.0 percentage points of optimum moisture for target density methods 1, 2, or 3 in section C.1, or within 2.0 percentage points of the target moisture content for target density method 4 in section C.1 and exhibiting signs of deflection when subjected to loading by the heaviest roller used in the placement and compaction operations, will be reviewed by the engineer. The engineer may request subgrade improvement methods, such as excavation below subgrade (EBS), installation of geotextile fabrics, installation of breaker run material, or others to be completed, or may request an additional pass of compactive effort using equipment and methods representative of the operations used to place and compact the base aggregate dense and density test.

1. If, after an additional pass, the change in density at the same location (station and offset) as the failing QC and/or QV density tests exceeds 2.0 lb/ft^3 in a lot continue subsequent compactive efforts and density testing on that lot. If the change in density at the same location (station and offset) as the failing QC and/or QV density tests is less than or equal to 2.0 lb/ft^3, and subgrade improvement methods are not requested by the engineer, the lot is accepted as satisfying the compaction requirements of this provision.
2. If subgrade improvement methods are requested by the engineer, upon completion, including compaction of the restored base material, conduct a density test within the improved subgrade limits. This density test result will replace the prior field density value. If the lot field density equals or exceeds the minimum density requirement defined in section C.1, the lot is accepted as satisfying the compaction requirements of this provision. If the lot field density fails to achieve the minimum density requirement defined in section C.1, compact the lot a minimum of one more pass using equipment and methods representative of the operations used to place and compact the base aggregate dense; and density test at the same location (station and offset) as the failing QC and/or QV density tests. If the change in density exceeds 2.0 lb/ft^3 continue subsequent compactive efforts and density testing on that lot, at no additional cost to the department. If the change in density is less than or equal to 2.0 lb/ft^3, the lot is accepted as satisfying the compaction requirements of this provision.

(5) Unacceptable lots, with moisture contents in excess of 2.0 percentage points above or below optimum moisture for target density methods 1, 2 or 3 in section C.1; or in excess of 2.0 percentage points above or below the target moisture content for target density method 4 in section C.1; shall receive contractor performed and documented corrective action; including additional density testing.

(6) Density tests completed subsequent to any corrective action will replace previous field density test results for that lot. Continue corrective actions until the minimum density requirement is achieved or an alternate compaction acceptance criteria is met in accordance with this section.

(7) Field moisture contents of materials tested using contractor elected target density methods 3 or 4 in section C.1 cannot exceed 2.0 percentage points of the optimum moisture content or 2.0 percentage points of the target moisture content, respectively. Density tests on materials using contractor elected target density methods 3 or 4 in section C.1 will not be considered for lot compaction acceptance until the moisture content of the corresponding density test of the in-place material is less than 2.0 percentage points above of the optimum moisture content or 2.0 percentage points of the target moisture content, respectively.

D Measurement

(1) The department will measure the QMP Base Aggregate Dense 1 1/4-Inch Compaction bid item by each lot, acceptably completed per C.2.5.1.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
371.2000.S	QMP Base Aggregate Dense 1 1/4-Inch Compaction	EACH

(2) Payment is full compensation for performing compaction testing; for sampling and laboratory testing; and for developing, completing, and documenting the compaction quality management program. The department will pay separately for providing aggregate under the Base Aggregate Dense 1 1/4-Inch bid item.

(3) The department will pay for additional tests directed by the engineer. One engineer directed test is equal to one acceptably completed lot of the QMP Base Aggregate Dense 1 1/4 -Inch Compaction bid item. The department will not pay for additional corrective action tests required due to unacceptable material.

stp-370-010 (20210113)

25. Coloring Concrete Custom, Item 405.0200.

This special provision describes coloring concrete Dark Gray for incorporation full-depth in work constructed under other contract bid items. Conform to standard spec 405 as modified in this special provision.

Replace standard spec 405.2.1.1(1) with the following:

(1) Integrally color concrete using non-fading pigments conforming to ASTM C979.

- For Dark Gray: use synthetic mineral-oxide pigments or colored water-reducing admixtures, color stable, free of carbon black, non-fading, and resistant to lime and other alkali pigments, at a loading by weight of total cementitious material in the mix. Match the concrete color in reasonably close conformance with Dark Gray color, which is similar to Federal Standard 595 - FS 26008.

Replace standard spec 405.2.1.1(3) with the following:

(3) The department will accept the color based on comparison to color samples available for viewing along W Lisbon Avenue between N 100th Street and W Burleigh Street in the City of Milwaukee.

stp-405-020 (20190618)

26. QMP HMA Pavement Nuclear Density.

A Description

Replace standard spec 460.3.3.2 (1) and standard spec 460.3.3.2 (4) with the following:

(1) This special provision describes density testing of in-place HMA pavement with the use of nuclear density gauges. Conform to standard spec 460 except as modified in this special provision.

(2) Provide and maintain a quality control program defined as all activities and documentation of the following:

1. Selection of test sites.
2. Testing.
3. Necessary adjustments in the process.
4. Process control inspection.

(3) Chapter 8 of the department's construction and materials manual (CMM) provides additional detailed guidance for QMP work and describes required procedures.

https://wisconsindot.gov/rdwy/cmm/cm-08-00.pdf

(4) The department's Materials Reporting System (MRS) software allows contractors to submit data to the department electronically, estimate pay adjustments, and print selected reports. Qualified personnel may obtain MRS software from the department's web site at:

http://www.atwoodsystems.com/

B Materials

B.1 Personnel

(1) Nuclear gauge owners and personnel using nuclear gauges shall comply with WisDOT requirements according to 460.3.3 and CMM 815.

B.2 Testing

(1) Conform to WTM T355 and CMM 815 for density testing and gauge monitoring methods. Conform to CMM 815.10.4 for test duration and gauge placement.

B.3 Equipment

B.3.1 General

(1) Furnish nuclear gauges according to CMM 815.2.

(2) Furnish nuclear gauges from the department's approved product list at

https://wisconsindot.gov/Pages/doing-bus/eng-consultants/cnslt-rsrces/tools/appr-prod/default.aspx

B.3.2 Comparison of Nuclear Gauges

B.3.2.1 Comparison of QC and QV Nuclear Gauges

(1) Compare QC and QV nuclear gauges according to WTM T355.

B.3.2.2 Reference Site Monitoring

(1) Conduct reference site monitoring for both QC and QV gauges according to WTM T355.

B.4 Quality Control Testing and Documentation

B.4.1 Lot and Sublot Requirements

B.4.1.1 Mainline Traffic Lanes, Shoulders, and Appurtenances

(1) Divide the pavement into lots and sublots for nuclear density testing according to CMM 815.10.2.

(2) Determine required number of tests according to CMM 815.10.2.1.

(3) Determine random testing locations according to CMM 815.10.3.

B.4.1.2 Side Roads, Crossovers, Turn Lanes, Ramps, and Roundabouts

(1) Divide the pavement into lots and sublots for nuclear density testing according to CMM 815.10.2.

(2) Determine required number of tests according to CMM 815.10.2.2.

(3) Determine random testing locations according to CMM 815.10.3.

B.4.2 Pavement Density Determination

B.4.2.1 Mainline Traffic Lanes and Appurtenances

(1) Calculate the average sublot densities using the individual test results in each sublot.

(2) If all sublot averages are no more than one percent below the target density, calculate the daily lot density by averaging the results of each random QC test taken on that day's material.

(3) If any sublot average is more than one percent below the target density, do not include the individual test results from that sublot when computing the lot average density and remove that sublot's tonnage from the daily quantity for incentive. The tonnage from any such sublot is subject to disincentive pay as specified in standard spec 460.5.2.2.

B.4.2.2 Mainline Shoulders

B.4.2.2.1 Width Greater Than 5 Feet

(1) Determine the pavement density as specified in B.4.2.1.

B.4.2.2.2 Width of 5 Feet or Less

(1) If all sublot test results are no more than 3.0 percent below the minimum target density, calculate the daily lot density by averaging all individual test results for the day.

(2) If a sublot test result is more than 3.0 percent below the target density, the engineer may require the unacceptable material to be removed and replaced with acceptable material or allow the nonconforming

material to remain in place with a 50 percent pay reduction. Determine the limits of the unacceptable material according to B.4.3.

B.4.2.3 Side Roads, Crossovers, Turn Lanes, Ramps, and Roundabouts

(1) Determine the pavement density as specified in B.4.2.1.

B.4.2.4 Documentation

(1) Document QC density test data as specified in CMM 815. Provide the engineer with the data for each lot within 24 hours of completing the QC testing for the lot.

B.4.3 Corrective Action

(1) Notify the engineer immediately when an individual test is more than 3.0 percent below the specified minimum in standard spec 460.3.3.1. Investigate and determine the cause of the unacceptable test result.

(2) The engineer may require unacceptable material specified in B.4.3(1) to be removed and replaced with acceptable material or allow the nonconforming material to remain in place with a 50 percent pay reduction. Determine limits of the unacceptable area by measuring density of the layer at 50-foot increments both ahead and behind the point of unacceptable density and at the same offset as the original test site. Continue testing at 50-foot increments until a point of acceptable density is found as specified in standard spec 460.5.2.2(1). Removal and replacement of material may be required if extended testing is in a previously accepted sublot. Testing in a previously accepted sublot will not be used to recalculate a new lot density.

(3) Compute unacceptable pavement area using the product of the longitudinal limits of the unacceptable density and the full sublot width within the traffic lanes or shoulders.

(4) Retesting and acceptance of replaced pavement will be as specified in standard spec 105.3.

(5) Tests indicating density more than 3.0 percent below the specified minimum, and further tests taken to determine the limits of unacceptable area, are excluded from the computations of the sublot and lot densities.

(6) If two consecutive sublot averages within the same paving pass and same target density are more than one percent below the specified target density, notify the engineer and take necessary corrective action. Document the locations of such sublots and the corrective action that was taken.

B.5 Department Testing

B.5.1 Verification Testing

(1) The department will have a HTCP certified technician, or ACT working under a certified technician, perform verification testing. The department will test randomly at locations independent of the contractor's QC work. The department will perform verification testing at a minimum frequency of 10 percent of the sublots and a minimum of one sublot per mix design. The sublots selected will be within the active work zone. The contractor will supply the necessary traffic control for the department's testing activities.

(2) The QV tester will test each selected sublot using the same testing requirements and frequencies as the QC tester.

(3) If the verification sublot average is not more than one percent below the specified minimum target density, use the QC tests for acceptance.

(4) If the verification sublot average is more than one percent below the specified target density, compare the QC and QV sublot averages. If the QV sublot average is within 1.0 lb/ft^3 of the QC sublot average, use the QC tests for acceptance.

(5) If the first QV/QC sublot average comparison shows a difference of more than 1.0 lb/ft^3 each tester will perform an additional set of tests within that sublot. Combine the additional tests with the original set of tests to compute a new sublot average for each tester. If the new QV and QC sublot averages compare to within 1.0 lb/ft^3, use the original QC tests for acceptance.

(6) If the QV and QC sublot averages differ by more than 1.0 lb/ft^3 after a second set of tests, resolve the difference with dispute resolution specified in B.6. The engineer will notify the contractor immediately when density deficiencies or testing precision exceeding the allowable differences are observed.

B.5.2 Independent Assurance Testing

(1) Independent assurance is unbiased testing the department performs to evaluate the department's verification and the contractor's QC sampling and testing including personnel qualifications, procedures,

and equipment. The department will perform the independent assurance review according to the department's independent assurance program.

B.6 Dispute Resolution

(1) The testers may perform investigation in the work zone by analyzing the testing, calculation, and documentation procedures. The testers may perform gauge comparison according to B.3.2.1.

(2) The testers may use comparison monitoring according to B.3.2.2 to determine if one of the gauges is out of tolerance. If a gauge is found to be out of tolerance with its reference value, remove the gauge from the project and use the other gauge's test results for acceptance.

(3) If the testing discrepancy cannot be identified, the contractor may elect to accept the QV sublot density test results or retesting of the sublot in dispute within 48 hours of paving. Traffic control costs will be split between the department and the contractor.

(4) If investigation finds that both gauges are in error, the contractor and engineer will reach a decision on resolution through mutual agreement.

B.7 Acceptance

(1) The department will not accept QMP HMA Pavement Nuclear Density if a non-compared gauge is used for contractor QC tests.

C (Vacant)

D (Vacant)

E Payment

E.1 QMP Testing

(1) Costs for all sampling, testing, and documentation required under this special provision are incidental to the work. If the contractor fails to perform the work required under this special provision, the department may reduce the contractor's pay. The department will administer pay reduction under the Non-performance of QMP administrative item.

E.2 Disincentive for HMA Pavement Density

(1) The department will administer density disincentives as specified in standard spec 460.5.2.2.

E.3 Incentive for HMA Pavement Density

(1) The department will administer density incentives as specified in standard spec 460.5.2.3.

stp-460-020 (20230629)

27. Concrete Sidewalk 5-Inch, Item 602.0410.

Add the following to standard spec 602.3.1:

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

Add the following to standard spec 602.3.2.5.1:

(9) For concrete sidewalk within a raised cycle track bike lane, contraction joints shall be formed by sawing joints no less than ¼ of the depth and no more than 1/8 inch wide. Perform the sawing as soon as possible after the concrete sets sufficiently to prevent raveling during sawing and before shrinkage cracking occurs.

28. Storm Sewer Pipe Composite 12-Inch, Item 608.6012.

Replace the references to polyethylene and polypropylene pipes and joints in standard spec 608.2.1(2) with the following:

Furnish composite pipe, couplings, fittings, and joint materials meeting ASTM D3034 with dimensions meeting SDR 35 or higher and gasketed joints meeting ASTM D3212.

29. Adjusting Manhole Covers, Item 611.8110.

Add the following to standard spec 611.2:

(5) For sanitary sewer manholes furnish an external chimney seal.

Add the following to standard spec 611.3.7:

(4) For sanitary sewer manholes, remove existing chimney seals. Install new chimney seals according to manufacturer instructions.

Add the following to standard spec 611.5.5:

(2) For adjustment of sanitary sewer manholes, payment also includes removing existing chimney seals and providing new chimney seals.

30. Topsoil.

Replace 625.2 (1) with the following:

(1) Topsoil consists of loam, sandy loam, silt loam, silty clay loam, or clay loam humus-bearing soils adapted to sustain plant life, and ensure the topsoil consists of the following:

Topsoil Requirements	Minimum Range	Maximum Range
pH	6.0	8.0
Organic Matter*	5%	20%
Clay	5%	30%
Silt	10%	70%
Sand	10%	70%

*Organic matter determined by loss on ignition test of samples oven dried to constant weight at 212 F (100 C).

Add the following to standard spec 625.2:

(3) Furnish material that is free from large roots, sticks, weeds, brush, stones, litter, and waste products.

(4) Do not furnish surface soils from ditch bottoms, drained ponds, and eroded areas, or soils which are supporting growth of NR 40 listed plants and noxious weeds or other undesirable vegetation.

Replace 625.3.3 (3) with the following:

(3) Ensure that for the upper 2 inches, 100 percent of the material passes a one-inch sieve and at least 90 percent passes the No. 10 sieve.

SER-625-001 (20221007)

31. Landscape Planting Surveillance and Care Cycles.

If the care specialist fails to perform any of the required care cycles as specified in standard spec 632.3.19.1, the department will assess daily damages in the amount of $100 to cover the cost of performing the work with other forces. The department will assess these damages for each day the requirements of the care cycle remain incomplete, except when the engineer extends the required time period.

stp-632-005 (20070510)

A plant establishment period of 1 year shall follow the completion of planting.

32. Signs Type II.

Replace standard spec 637.2.3.5 with the following:

(1) Affix identification code and installation date stickers on the back of signs in the lower right corner. Stickers will be provided at the pre-construction meeting or by the engineer.

(2) Record the location, type, and installation date of the signage using the provided Sign Installation Log (L-101).

Replace standard spec 637.2.4.2 with the following:

(1) Provide sign mounting hardware as shown on the plans and as follows:

5/16-inch x 1 ¼-inch stainless steel fender washers
5/16-inch-18 x ¾-inch stainless steel hex head bolts
201 stainless steel banding ¾-inch x 0.20
Stainless steel flared leg sign mount bracket for ¾-inch banding
201 stainless steel wing seal (buckle) for ¾-inch banding
One- or two-sided sign mounting Z-brackets that fit a 2 3/8-inch post
Street name sign 24-inch wing L-brackets

33. Temporary Audible Message Devices, Item 644.1900.S.

A Description

This special provision describes providing, maintaining, and removing temporary audible message devices. These devices are used on temporary pedestrian facilities to guide individuals with sight disabilities.

B Materials

Furnish temporary audible message devices from the approved products lists.

C Construction

Provide and maintain temporary audible message device. Maintain and repair devices within two hours of being notified by the project engineer of an issue.

Contractors record messages as approved by the engineer.

Mount temporary audible message devices on drums, temporary sign supports, or other locations approved by the engineer. Locate motion detection areas that will be effective in activating the device to operate properly. Avoid locating motion detection areas that will cause activation by trees, traffic, or other known regular activity.

Move and adjust devices after disruptions by the work or the public.

Maintain devices in a working condition and replace batteries as needed. Replace any devices that are not working properly within 2 hours of being notified of an issue.

Use tamper-proof hardware for mounting.

D Measurement

The department will measure temporary audible message devices by the day, 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
644.1900.S	Temporary Audible Message Devices	DAY

Payment is full compensation for providing, maintaining, and removing temporary audible message device.

The department will not pay for devices that are inoperable.

stp-644-190 (20250108)

34. Marking Line MMA 4-Inch, Item 646.1060.S; Marking Arrow MMA, Item 646.5060.S; Marking Symbol MMA, Item 646.5260.S.

A Description

This special provision describes furnishing and installing Methyl Methacrylate (MMA) pavement marking as shown on the plans, according to standard spec 646 of the standards specifications, and as hereinafter provided.

B Materials

Furnish one of the following 98:2 MMA products listed below or equivalent:

- Extended Season MMAX-ES
- Geveko PlastiRoute SprayPlast (98:2 Mix)
- Geveko PlastiRoute RollPlast (98:2 Mix)
- Geveko PlastiRoute CSP (98:2 Mix)
- Everline Coatings and Services - TBL Durables MMA (98:2 Mix)

C Construction

Furnish and install 25-30 mils of MMA Pavement Marking product listed above in a 98:2 ratio and as the plan specifies. Apply Potters Visiblend DC BG 2000 Premium Highway Spheres or equivalent accepted by MMA manufacturer evenly across the line at or exceeding 10 – 12 pounds per 100 square feet.

Repair or replace pavement marking that was improperly applied or that fails during the proving period as specified in standard spec 646.3.1.5.

D Measurement

The department will measure the LF bid items under this section by the linear foot of line acceptably completed.

The department will measure the EACH bid items under this section 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
646.1060.S	Marking Line MMA 4-Inch	LF
646.5060.S	Marking Arrow MMA	EACH
646.5260.S	Marking Symbol MMA	EACH

Payment is full compensation for cleaning and preparing the pavement surface, furnishing and installing the material, and for any repairs or replacement during the proving period.

stp-646-100 (20250701)

35. Electrical, General.

Add the following to standard specs 651, 652, 653, 654, 655, 656, 657 and 659:

All the work necessary to comply with revisions to standard specifications mentioned herewith shall be incidental to associated pay items or to the project including coordination, materials, and labor. No additional payment will be made to the contractor.

Add the following to standard spec 651.3.1:

(8) Any circuit that the contractor does not tag out at the disconnect shall be considered live and will be subject to being activated by another person with no notice to the contractor. Make tag-outs with manufactured tags and endorse them with the date and the name of the contractor. Clear tag-outs at the end of the workday. Each electrical worker is responsible for their own protection from automatic switching and from switching by others.

Add the following to standard spec 651.5:

(2) Work to disconnect and connect electrical system, splice through, or to connect conductors are incidental to the installation or removal of the lighting pay items included in this contract. The department will not measure conductors or conduits that have been abandoned in place or removed for scrap. The department will allow, at the contractor's discretion, for the salvaging of conductors to be abandoned, if possible.

Add the following to standard spec 652.3.1.4:

(4) Support conductors at the top of the vertical raceway or as close as practical if the vertical rise exceeds 40-feet. Provide additional supports as shown; in no case shall the distance between supports exceed that shown in Table 300.19(A) of the Wisconsin State Electric Code.

Add the following to standard spec 655.3.7:

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

Add the following to standard spec 659.3.1:

(2) Maintain adequate lighting during all the construction stages not shown on the temporary lighting plans, but which are necessitated by field conditions or by any construction phasing changes. Coordinate with the City of Milwaukee for the existing poles with luminaires to remain in place until new lighting is installed and operational. Submit a redline markup plan for any additional temporary lighting to the Engineer for approval prior to installation.

36. Traffic Signals, General.

Notify the city's Traffic Signal Field Operations at (414) 286-5941 (office) or (414) 708-5148 (mobile) at least 3 weeks prior to the beginning of the traffic signal work.

37. Electrical Service Meter Breaker Pedestal W National Ave & S 37th St, Item 656.0201.001; Electrical Service Meter Breaker Pedestal W National Ave & S 35th St, Item 656.0201.002; Electrical Service Meter Breaker Pedestal W National Ave & S 33rd St, Item 656.0201.003; Electrical Service Meter Breaker Pedestal W National Ave & S 30th St, Item 656.0201.004; Electrical Service Meter Breaker Pedestal W National Ave & S Layton Blvd, Item 656.0201.005.

Add the following to standard spec 656.2.3:

The City will be responsible for the electric service installation request for any City maintained facility.

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

Add the following to standard spec 656.3.4:

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.

Add the following to standard spec 656.5(3):

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.

38. Pedestal Bases, Item 657.0100;
Poles Type 3, Item 657.0310;
Poles Type 10, Item 657.0350;
Poles Type 10 Special, Item 657.0352;
Poles Type 13, Item 657.0360;
Traffic Signal Standards Aluminum 3.5-FT, Item 657.0405;
Traffic Signal Standards Aluminum 13-FT, Item 657.0420;
Traffic Signal Standards Aluminum 10-FT, Item 657.0430;
Monotube Arms 30-FT, Item 657.0530;
Monotube Arms 35-FT Special, Item 657.0536;
Monotube Arms 40-FT Special, Item 657.0541;
Monotube Arms 45-FT Special, Item 657.0546;
Monotube Arms 50-FT, Item 657.0550;
Monotube Arms 55-FT, Item 657.0555;
Luminaire Arms Single Member 4-Inch Clamp 6-FT, Item 657.0609.

Add the following to standard spec 657.2.1.1:

(7) Pedestal Bases, Poles Type 3, Poles Type 10, Poles Type 10 Special, Poles Type 13, Traffic Signal Standards Aluminum 3.5-FT, Traffic Signal Standards Aluminum 13-FT, Traffic Signal Standards Aluminum 10-FT, Monotube Arms 30-FT, Monotube Arms 35-FT Special, Monotube Arms 40-FT Special, Monotube Arms 45-FT Special, Monotube Arms 50-FT, Monotube Arms 55-FT, and Luminaire Arms Single Member 4-Inch Clamp 6-FT shall have a black exterior finish, factory applied and powder-coated.

39. Signal Housings.

Replace standard spec 658.2(3) with the following:

Furnish signal housings, visors, LED modules, backplates, and cutaway visors as the plans show. Furnish black housings, backplates, and visors for all traffic signal faces.

40. Signal Mounting Hardware W National Ave & S 37th St, Item 658.5070.001;
Signal Mounting Hardware W National Ave & S 35th St, Item 658.5070.002;
Signal Mounting Hardware W National Ave & S Layton Blvd, Item 658.5070.003;

Replace standard spec 658.2(7) with the following:

For signal mounting hardware: furnish black weather tight mounting hardware for all traffic signal equipment. Protect mounting hardware from the elements before installation. Use corrosion resistant poly bracket shims.

41. Lamp, Ballast, LED, Switch Disposal by Contractor, Item 659.5000.S.

A Description

This special provision describes the detachment and packaging of lamps, ballasts, LEDs, and mercury containing switches (e.g., overhead roadway lighting, underdeck bridge, wall packs, pedestrian signals, traffic control stop lights and warning flashers, fluorescent bulbs, and thermostats) removed under this contract for disposal as hazardous materials.

For Lamp, Ballast, LED, Switch Disposal by Contractor, coordinate removal from the work site by the department's hazardous waste disposal vendor. Disposal will be billed to the department by the hazardous waste disposal vendor.

B Materials

B.1 Disposal by Contractor

Items removed under this contract will be considered the property of the department for waste generator identification.

The contractor is responsible for coordinating with the department's hazardous waste vendor for disposal:

https://wisconsindot.gov/Documents/doing-bus/eng-consultants/cnslt-rsrces/environment/hazwaste-contacts.pdf

C Construction

C.1 Removal

Arrange for the de-energizing of luminaires after receiving approval from the engineer that the existing luminaires can be removed. Do not remove luminaires that cannot be replaced with proposed LED units and operational within the same workday. The new LED units need to be operational prior to sunset of the same workday.

Detach and remove luminaires and lamps from the existing traffic signal poles or respective structure. Avoid breaking fixtures whenever possible.

Lamps, ballasts, LED, and switches will become property of the department, and will be disposed of in an environmentally sound manner.

C.2 Packaging of Hazardous Materials

Provide a secure, level location removed from the travelled way for storage of the material for disposal.

Pack intact fixtures in the packaging of the new lamps used to replace them, or packaging affording the equivalent protection. Place in full, closed stackable cartons.

Pile cartons no more than four high if palletized and secure cartons with shrink wrap to prevent shifting or falling of the loads. Clearly mark each pallet with the words "Universal Waste Lamps" or "Universal Waste Ballasts", the date, and the number of fixtures on each pallet.

Pack broken fixtures into (min.) 6 mil thick plastic bags and place inside sturdy cardboard boxes or the equivalent. Mark the outer packaging with the term "Broken Fixtures/Lamps", the date and the number of broken fixtures clearly marked on the box.

The hazardous waste vendor will not accept fixtures improperly packaged. The vendor will reject any fixtures not removed as part of a contract pay item or otherwise required under this contract.

Pack ballasts and mercury containing switches in appropriate containers.

C.3 Disposal by Contractor

Complete the lamp and ballast inventory (https://wisconsindot.gov/Documents/doing-bus/eng-consultants/cnslt-rsrces/environment/dotlampballastinventory.dotx) and contact the hazardous waste vendor to coordinate pickup and disposal at a location specified by the contractor. Consolidate all pallets and boxes from one project at a single location. Contact the hazardous waste vendor to set up an appointment for pickup. The hazardous waste vendor requires a minimum of one week advance notice to schedule pickup.

D Measurement

The department will measure Lamp, Ballast, LED, Switch Disposal by Contractor as each individual unit removed and received by the hazardous waste vendor, properly packaged and acceptably completed, matching the total number of units provided on the inventory form. The department will not measure broken fixtures that exceed a total of 10 percent of all fixtures to be disposed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
659.5000.S	Lamp, Ballast, LED, Switch Disposal by Contractor	EACH

Payment for Lamp, Ballast, LED, Switch Disposal by Contractor is full compensation for detachment, handling, packaging, labeling and scheduling disposal with the hazardous waste vendor; and scrapping and disposal of all other materials.

stp-659-500 (20220628)

42. Temporary Traffic Signals for Intersections W National Ave & S 35th St, Item 661.0201.001; Temporary Traffic Signals for Intersections W National Ave & S Layton Blvd, Item 661.0201.002;

Replace standard spec 661.2.1(1) with the following:

(1) Furnish control cabinet, controller, and control equipment. Provide a cabinet with a Corbin #2 door lock and an access door that allows placing the controller in emergency flash. Provide keys to the access door to the engineer and law enforcement agencies as required. Also provide a manual control accessible by the police. Supply a controller capable of executing the timing program supplied in this contract for this temporary traffic signal. Test traffic signal control cabinets before installation. Provide primary and secondary temporary traffic signal contact names and phone numbers who will be responsible for implementing temporary traffic signal timing changes. The City may request traffic signal timing changes to an approved timing plan during the project. Implement any approved timing plan change within 24 hours upon notification of the change. Record the times of operation of the timing change and provide this information to the City.

Add the following to standard specification 661.2.1:

(6) Furnish pedestrian signal faces as shown in the plans, in accordance to 658.2.3 of the standard specifications.

Replace standard spec 661.3.1(2) with the following:

(2) Request a signal inspection of the completed temporary traffic signal installation to the engineer at least five working days prior to the time of the requested inspection. Notify the City Public Works Department at (414) 286-2489 to coordinate the inspection. City personnel will perform the inspection.

Add the following to standard specification 661.3.1:

(4) 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.

Replace standard spec 661.3.1.1(2) 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 with the pertinent provisions in Section 690.3. 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 Section 204.3, Construction. Hold any wood poles in place and/or move wood poles during construction due to conflicts with proposed work. All wood poles shall be plumb and level.

Replace standard spec 661.3.2.2(2) with the following:

(2) Install the tether wire at 20 feet to 22 feet over the roadway.

Replace standard spec 661.3.2.4(1) with the following:

(1) Install the span wires free of any splices or kinks. Install the span wire mounted signal faces so the bottom is a maximum of 22 feet above the roadway (minimum height is 20 feet). Compute the vertical height of the span wire on the span pole using the following formula:

HD (0.05) + RC+ HH = SH

Replace standard spec 661.5(2) 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. All utility charges for installation, disconnection, and energy service through project completion
3. The cost of delivery and pick-up of the cabinet assemblies.
4. Traffic signal timing change requests from the City

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; for cleaning up and properly disposing of waste.

43. Removing Concrete Pavement Modified, Item SPV.0035.001; Removing Asphaltic Surface Modified, Item SPV.0035.002.

A Description

This special provision describes removing pavement conforming to standard spec 204 and as modified in this special provision.

B (Vacant)

C Construction

Replace standard spec 204.3.2.2.1(3) with the following:

(3) Under the Removing Asphaltic Surface bid item, remove all types of asphaltic pavement or surfacing. Also, remove asphaltic overlays of existing concrete pavements, bases, or bridge decks designated to remain in place.

D Measurement

Replace standard spec 204.4(2) thru 204.4(4) with the following:

(2) The department will measure Removing Concrete Pavement and Removing Asphaltic Surface by the cubic yard acceptably complete. The department will measure Removing Concrete Pavement Butt Joints and Removing Asphaltic Surface Butt Joints by the square yard acceptably complete regardless of the depth or number of courses encountered. The department will measure Removing Asphaltic Surface Milling by the square yard, or by the ton acceptably completed.

(3) If removing curb, gutter, or curb & gutter is required in conjunction with removing concrete pavement, the department will measure removing these structures by the cubic yard acceptably completed, under the Removing Concrete Pavement bid item. If removing a rigid base with an asphaltic surface extending beyond the lateral limits of the rigid base, as in a widened pavement, the department will measure only the area occupied by the rigid base under the Removing Concrete Pavement bid item. The department will measure the portion of the asphaltic surfacing beyond the rigid base removed under the Removing Asphaltic Surface bid item or the Obliterating Old Road bid item. The department will make no deductions for any opening in the removed pavement having an area of 3 square yards or less.

(4) The department will deduct pavements and other surfaces removed under the Removing Concrete Pavement and Removing Asphaltic Surface bid items from the volume measured under the respective excavation bid items under standard spec 205.4.1. The department will adjust the quantity for areas where the thickness of the pavement or curb and gutter varies by more than one inch of thickness (+ or -) than what is shown on the typical sections.

E Payment

Replace standard spec 204.5.1(1) with the following:

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0035.001	Removing Concrete Pavement Modified	CY
SPV.0035.002	Removing Asphaltic Surface Modified	CY

44. Field Facilities Office Space, Item SPV.0060.001.

A Description

This special provision describes furnishing, equipping, and maintaining a field office as required in the contract at engineer-approved locations conforming to standard spec 642 and as follows.

B Materials

Provide Field Facilities Office Space conforming to standard spec 642.2.1 except delete paragraphs (1), (8), and (10).

Replace standard spec 642.2.1(4) with the following:

Provide and maintain suitable interior sanitary facilities conforming to State and local health requirements, in clean and good working condition, and stock with sanitary supplies for the duration of the contract. Furnish office space in an existing office building or existing building converted to office space with a minimum of 1200 square feet. The facility shall have no fee parking with a minimum parking for 15 cars. The space shall include a meeting room with a minimum of 350 square feet. The exterior door(s) shall have locks in good working order and keys provided for all field staff. The office space shall be located within 2 miles of the construction project.

Equip the office as specified in standard spec 642.2.2.1 except delete paragraph (1) and (5) and add the following:

1. 5 suitable office desks with drawers and locks.
2. 5 ergonomically correct office chairs in working condition with at a minimum: 5-legged base with casters, seat adjustable from 15 to 22 inches from the floor with a seamless waterfall, rounded, front edge, and high backrest with no arms or adjustable arms.
3. 4 six foot folding tables.
4. 1 ten foot folding table.
5. 5 two-drawer file cabinets.
6. 3 four-shelf bookcases.
7. 20 folding chairs.

Provide for the professional cleaning of the field office during regular business hours twice monthly. Provide clearly marked recycling and waste receptacles within the field office, and separate recycling and waste dumpsters near the field office. Cover outdoor containers to keep out rain, snow, and wind-driven debris. Provide regularly scheduled recycling and waste pick-up.

C Construction

Conform to standard spec 642.3 except delete paragraph (2).

D Measurement

The department will measure the Field Facilities Office Space as each office 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.0060.001	Field Facilities Office Space	EACH

Payment is full compensation for providing, equipping, securing, and maintaining the facility; for parking, for telecommunications equipment, installation, and service fees; and for providing bottled water, utilities, fuel, ventilation, and toilet facilities as required, either independently or jointly with the field laboratory, for the time specified in 642.3.

The department will pay for the cost of telecommunications usage fees incurred by department staff.

SER-642-002 (20240112)

45. Utility Line Opening (ULO), Item SPV.0060.002.

A Description

This special provision describes excavating to uncover utilities/infrastructure for the purpose of determining location and elevation and potential conflicts with proposed work as directed by the engineer. The location of existing utilities and infrastructure needed to complete the contract work shall be addressed independent of this provision. This item does not remove the contractor's obligation to locate utilities as required by state and federal law.

B (Vacant)

C Construction

Comply with s.182.0175 (2), Stats., with respect to precautions to be taken to avoid and prevent damage to utility facilities.

All ULO shall be directed by the engineer in writing. Notify the engineer and infrastructure/utility owner or their agents 3 working days in advance so that they may be present when excavation work commences.

Provide documentation to the engineer including coordinates/elevations or referenced to alignment/offset. Document the size and/or diameter, composition, and a description of each infrastructure/utility. Supply digital photographs of the uncovered infrastructure to the engineer in .jpeg format for future reference.

Use of a hydrovac is not permitted within the boundaries of the human burial sites.

Backfill the excavation with suitable backfill, thoroughly compact, replace pavement over utility line opening trenches which are within the staged traffic area as directed by the engineer. Replace pavement and open to traffic within 24 hours of the excavation.

D Measurement

The department will measure ULO by each individual unit, acceptably completed. Where utilities are within 6 feet of each other at a potential conflict location, only one utility line opening will be called for. In these cases, a single utility line opening will be considered full payment to locate multiple utilities. ULO include a trench up to 10 feet long as measured at the trench bottom, and of any depth required to locate the intended utility.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.002	Utility Line Opening (ULO)	EACH

Payment is full compensation for the excavation required to expose the utility line; measuring lateral and depth measurements of the utility line; providing required documentation of measurements to the engineer; backfilling with engineer approved material; compacting the backfill material; restoring the site; cleanup, and maintenance of ULO location during construction.

Existing pavement, concrete curb and gutter, and sidewalk removals necessary to facilitate utility line openings are not considered part of or paid for under ULO but are considered separate and measured and paid for separately as removal items. Granular backfill, pavement replacement material, concrete curb, gutter, and sidewalk items will also be considered separate from ULO and will be measured and paid for separately.

46. Salvaging and Reinstalling Brick Pavers, Item SPV.0060.003.

A Description

This special provision describes the salvaging and reinstalling of existing brick pavers at locations identified on the plans.

B Materials

Furnish bedding sand conforming to ASTM C33 with a 3/16-inch maximum aggregate size. Sand shall be washed free from deleterious or foreign materials, well graded, and angular.

Joint filling material shall be polymeric sand. The manufacturer shall be Techniseal, Series HP NextGel polymeric jointing sand or approved equal.

Aggregate base material shall conform to standard spec 305.2 for ¾-inch gradation.

C Construction

Remove the existing brick pavers in a way that prevents damaging the bricks. If the bricks are damaged by means of the contractor, replace them at no expense to the department. Store materials in a safe location until they are ready to be installed.

Spread and compact aggregate base material in uniform layers not exceeding 4 inches. Compact to 95 percent maximum density. The surface of the aggregate base material shall be close-knit to prevent bedding sand from filtering and eroding the base.

Spread bedding sand evenly over the prepared aggregate base to a minimum thickness of 1 inch. Dampen and roller compact the sand to a level and even surface. Screed and scarify the top ½ inch of sand.

Reinstall salvaged bricks back to the original layout. Stockpile excess brick pavers and contact Jesse Jefferson of the City of Milwaukee, jejeff@milwaukee.gov or (414) 286-2971, to coordinate pickup.

Spread polymeric sand over the brick surface and sweep into the joints. Moisten joints and recover with additional sand until joints are firm. Remove excess sand. Tamp and level the pavers with a mechanical plate vibrator until pavers are firmly embedded, level, and to the correct elevation.

D Measurement

The department will measure Salvaging and Reinstalling Brick Pavers as each contiguous area as noted on the plans and miscellaneous quantities, 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.0060.003	Salvaging and Reinstalling Brick Pavers	EACH

Payment is full compensation for removing and salvaging the existing brick pavers; storing; constructing aggregate and bedding sand layers, reinstalling the pavers, and stockpiling excess pavers.

47. Adjusting Water Valve Boxes, Item SPV.0060.004.

A Description

This special provision describes adjusting, protecting, and maintaining accessibility, for the duration of the project, to all city water service boxes and water gate valve boxes located within the project limits.

B Materials

All material for the adjustment of these facilities will be provided by the City of Milwaukee by contacting Gil Taylor, Milwaukee Water Works, at (414) 708-9005. If there is contractor damage the replacement materials will be provided by the City of Milwaukee; however, the contractor will be charged for all damaged replacement materials. Deliver any unused materials furnished by the City of Milwaukee back to the Department of Public Works Field Headquarters – Infrastructure, Operations, Water Works at 3850 North S 35th Street. Materials being returned shall be accompanied with a “surplus material” form completed by the engineer.

C Construction

Adjust all water service boxes and water gate valve boxes within the project limits to proposed elevations.

The city will locate, mark, inspect and repair all water service boxes and water gate valve boxes within the limits of the project prior to commencement of work on the project.

Throughout the duration of the project, ensure that all water service boxes and water gate valve boxes are adequately located and that 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. If identified and required by the city, make 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 Valve Boxes by each valve box, 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.0060.004	Adjusting Water Valve Boxes	EACH

Payment is full compensation for furnishing all excavation, backfilling, and disposal of surplus materials; for water box clean-out; for maintaining accessibility; and for restoration of the work site.

48. Water Main Protection, Item SPV.0060.005.

A Description

This special provision describes protecting existing water mains from newly constructed storm drainage facilities.

B Materials

Furnish 8 mil polyethylene sheeting.

C Construction

When the catch basin, inlet, or manhole drainage structure has less than 24 inches out-to-out of horizontal clearance to the water main the following protections shall be made:

1. The catch basins and inlets shall be altered to provide a minimum 18 inches of vertical clearance to the water mains or hydrant branches.
2. The catch basins and inlets shall be wrapped with 2 layers of 8 mil polyethylene sheeting around the base and extending 1 foot vertically on all sides of the drainage structure.

No structures will be allowed over the existing water main or hydrant branch with less than 18 inches of vertical out-to-out clearance. Alternative drainage structures shall be used to provide minimum sewer-water clearances required by Wisconsin DNR.

D Measurement

The department will measure Water Main Protection by each protection 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.0060.005	Water Main Protection	EACH

Payment is full compensation for protecting existing water mains; and for furnishing all excavation, backfilling, disposal of surplus materials, and restoration of the work site.

49. Removing City-Owned Signs and Posts, Item SPV.0060.006.

A Description

This special provision describes removing city-owned signs, posts, and post anchors.

B (Vacant)

C Construction

Remove signs, posts, and post anchors with signs remaining affixed to posts. Deliver the entire assembly to the City of Milwaukee Sign Shop at 1540 W Canal Street.

D Measurement

The department will measure Removing City-Owned Signs and Posts by each sign post 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
SPV.0060.006	Removing City-Owned Signs and Posts	EACH

Payment is full compensation for removing existing signs, posts, and post anchors; and for delivering to the sign shop.

50. Moving City-Owned Signs, Item SPV.0060.007.

A Description

This special provision describes moving city-owned signs to the locations shown on the plans.

B Materials

Furnish sign mounting hardware as follows:

5/16-inch x 1 ¼-inch stainless steel fender washers

5/16-inch-18 x ¾-inch stainless steel hex head bolts

201 stainless steel banding ¾-inch x 0.20

Stainless steel flared leg sign mount bracket for ¾-inch banding

201 stainless steel wing seal (buckle) for ¾-inch banding

One- or two-sided sign mounting Z-brackets that fit a 2 3/8-inch post

Street name sign 24-inch wing L-brackets

C Construction

A sign is an installation at a single location that consists of several components or parts that together form one complete sign.

Remove existing signs, and transport and erect the signs at new locations.

D Measurement

The department will measure Moving City-Owned Signs by each sign 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.0060.007	Moving City-Owned Signs	EACH

Payment is full compensation for removing the existing signs; for transporting and erecting signs at new locations.

51. Round Aluminum Sign Post System in Soft Surface 7-FT, Item SPV.0060.008; Round Aluminum Sign Post System in Soft Surface 10-FT, Item SPV.0060.009; Round Aluminum Sign Post System in Soft Surface 11-FT, Item SPV.0060.010; Round Aluminum Sign Post System in Soft Surface 12-FT, Item SPV.0060.011.

A Description

This special provision describes providing sign posts and post anchors in soft surfaces at the locations shown on the plans. Soft surfaces are all surfaces except for concrete.

B Materials

Furnish round aluminum 2-inch schedule 40 6061-T6 extruded aluminum posts with lengths as shown on the plans.

Furnish V-loc soft soil 30-inch, with cleanout bar, post anchors for 2 3/8-inch round post.

Post and V-loc system shall be TAPCO SKU 034-00085, Traffic Safety Supply Company SKU DP00239, Custom Products Corporation Item RPORZVRB23VR2B, or approved equivalent.

C Construction

Install the post and V-loc system in soft surfaces as shown on the plans and according to manufacturer instructions.

D Measurement

The department will measure Round Aluminum Sign Post System in Soft Surface by each post system 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.0060.008	Round Aluminum Sign Post System in Soft Surface 7-FT	EACH
SPV.0060.009	Round Aluminum Sign Post System in Soft Surface 10-FT	EACH
SPV.0060.010	Round Aluminum Sign Post System in Soft Surface 11-FT	EACH
SPV.0060.011	Round Aluminum Sign Post System in Soft Surface 12-FT	EACH

Payment is full compensation for providing sign posts and post anchors.

52. Round Aluminum Sign Post System in Concrete Surface 7-FT, Item SPV.0060.012; Round Aluminum Sign Post System in Concrete Surface 10-FT, Item SPV.0060.013; Round Aluminum Sign Post System in Concrete Surface 11-FT, Item SPV.0060.014.

A Description

This special provision describes providing sign posts, post anchors, and anchoring cement in concrete surfaces at the locations shown on the plans.

B Materials

Furnish round aluminum 2-inch schedule 40 6061-T6 extruded aluminum posts with lengths as shown on the plans.

Furnish V-loc soft soil 30-inch, with cleanout bar, post anchors for 2 3/8-inch round post.

Post and V-loc system shall be TAPCO SKU 037-00012B, Traffic Safety Supply Company SKU DP00241, Custom Products Corporation Item RPORZVR12382OR, or approved equivalent.

Furnish pourable hydraulic cement.

C Construction

Install the post and V-loc system in concrete surfaces as shown on the plans and according to manufacturer instructions.

D Measurement

The department will measure Round Aluminum Sign Post System in Concrete Surface by each post system 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.0060.012	Round Aluminum Sign Post System in Concrete Surface 7-FT	EACH
SPV.0060.013	Round Aluminum Sign Post System in Concrete Surface 10-FT	EACH
SPV.0060.014	Round Aluminum Sign Post System in Concrete Surface 11-FT	EACH

Payment is full compensation for providing sign posts, post anchors, and anchoring cement.

53. Pipe Bollards, Item SPV.0060.015.

A Description

This special provision describes providing bollards at the locations shown on the plans.

B Materials

Furnish schedule 80 galvanized steel pipe.

Furnish grade A, A-FA, A-S, A-T, A-IS, or A-IP concrete conforming to standard spec 501.2.

Furnish expansion joint filler conforming to standard spec 415.2.3.

Furnish an epoxy coating system according to standard spec 517.2.4.

C Construction

Paint the bollards as specified in standard spec 517.3, color yellow. For the portion of the bollard that will be fully encased in concrete, apply on the zinc-rich primer as specified in standard spec 517.3.1.7.2.

Excavate to the depth shown on the plans. Remove water or other foreign material from the excavation and inside the pipe before placing concrete. Install bollards plumb. Place concrete in the excavated area and inside the pipe in a continuous operation at a rate that will not cause air pockets. The concrete shall not have cold joints. Fill the pipe completely with concrete and consolidate to a depth as great as practicable with a mechanical vibrator or other engineer-approved method.

Protect the bollard from damage during transportation, storage, installation, and concrete placement. Repair any damaged paint according to standard spec 517.3.

D Measurement

The department will measure Pipe Bollards by 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.0060.015	Concrete Bollards	EACH

Payment is full compensation for providing and installing all materials; for painting; for excavating, backfilling and disposing of surplus materials; and for repairs to the paint system.

54. Marking Speed Table Chevron Contrast Epoxy, Item SPV.0060.016.

Provide epoxy markings according to standard spec 646, manufacturer instructions, and as shown on the plans.

Add the following to standard spec 646.3.2.4:

(2) For contrast marking, apply 1 ½ inches of black matte finish on either side of the white marking; black marking is not required on asphalt surfaces. Apply epoxy at a wet mil thickness of 20. Do not apply glass beads to black epoxy.

55. Marking Bike Lane Two-Stage Turning Queue Box MMA, Item SPV.0060.017.

A Description

This special provision describes furnishing and installing Methyl Methacrylate (MMA) pavement marking as shown on the plans, according to standard spec 646 of the standards specifications, and as hereinafter provided.

B Materials

Furnish one of the following 98:2 MMA products listed below or equivalent:

- Extended Season MMAX-ES
- Geveko PlastiRoute SprayPlast (98:2 Mix)
- Geveko PlastiRoute RollPlast (98:2 Mix)
- Geveko PlastiRoute CSP (98:2 Mix)
- Everline Coatings and Services - TBL Durables MMA (98:2 Mix)

C Construction

For green markings, furnish and install 80 – 90 mils of MMA Pavement Marking product listed above in a 98:2 ratio and as the plan specifies. Apply MMA in 2 – 3 passes to achieve the desired thickness.

For white markings, furnish and install 25-30 mils of MMA Pavement Marking product listed above in a 98:2 ratio and as the plan specifies.

Apply Potters Visiblend DC BG 2000 Premium Highway Spheres or equivalent accepted by MMA manufacturer evenly across the line at or exceeding 10 – 12 pounds per 100 square feet.

Repair or replace pavement marking that was improperly applied or that fails during the proving period as specified in standard spec 646.3.1.5.

D Measurement

The department will measure the EACH bid items under this section as each individual unit acceptably completed.

The department will measure the LF bid items under this section by the linear foot of line 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.0060.017	Marking Bike Lane Two-Stage Turning Queue Box MMA	EACH

Payment is full compensation for providing all materials including any re-application or repair required under the Performance Requirements and Warranty as provided herein.

56. Marking Yield Line MMA 18-Inch, Item SPV.0060.018; Marking Crosswalk MMA Block Style 12-Inch, Item SPV.0090.007; Marking Bike Lane Crosswalk MMA Block Style 24-Inch, Item SPV.0090.008.

A Description

This special provision describes furnishing and installing Methyl Methacrylate (MMA) pavement marking as shown on the plans, according to standard spec 646 of the standards specifications, and as hereinafter provided.

B Materials

Furnish one of the following 98:2 MMA products listed below or equivalent:

- Extended Season MMAX-ES
- Geveko PlastiRoute SprayPlast (98:2 Mix)
- Geveko PlastiRoute RollPlast (98:2 Mix)
- Geveko PlastiRoute CSP (98:2 Mix)
- Everline Coatings and Services - TBL Durables MMA (98:2 Mix)

C Construction

Furnish and install 25-30 mils of MMA Pavement Marking product listed above in a 98:2 ratio and as the plan specifies. Apply Potters Visiblend DC BG 2000 Premium Highway Spheres or equivalent accepted by MMA manufacturer evenly across the line at or exceeding 10 – 12 pounds per 100 square feet.

Repair or replace pavement marking that was improperly applied or that fails during the proving period as specified in standard spec 646.3.1.5.

D Measurement

The department will measure the EACH bid items under this section as each individual unit acceptably completed.

The department will measure the LF bid items under this section by the linear foot of line 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.0060.018	Marking Yield Line MMA 18-Inch	EACH
SPV.0090.007	Marking Crosswalk MMA Block Style 12-Inch	LF
SPV.0090.008	Marking Bike Lane Crosswalk MMA Block Style 24-Inch	LF

Payment is full compensation for providing all materials including any re-application or repair required under the performance requirements and warranty as provided herein.

57. Inlet Covers Type MS 57, Item SPV.0060.102; Manhole Covers Type MS 58-A, Item SPV.0060.103; Catch Basins Type 44A, Item SPV.0060.110; Curb Inlet Type 70A, Item SPV.0060.120.

A Description

This special provision describes providing inlet covers, manhole covers, catch basins, and curb inlets according to standard spec 611 and as shown on the plans.

B Materials

Furnish materials according to standard spec 611 and as shown on the plans.

Trap assemblies shall be reinforced concrete and shall be integral with the circumferential reinforced wall.

C Construction

Construct catch basins, inlets, inlet covers, and manhole covers according to standard spec 611 and as shown on the plans.

For Curb Inlets Type 70A, connect the sewer pipe at the back of the casting with a flexible clamped coupling. Take adequate measures to install and maintain support under the inlet during paving operations.

D Measurement

The department will measure Inlet Covers Type MS 57, Manhole Covers Type MS 58-A, Catch Basins Type 44A, and Curb Inlets Type 70A by each cover, catch basin, or inlet 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.0060.102	Inlet Covers Type MS 57	EACH
SPV.0060.103	Manhole Covers Type MS 58-A	EACH
SPV.0060.110	Catch Basins Type 44A	EACH
SPV.0060.120	Curb Inlet Type 70A	EACH

Payment is according to standard spec 611, including flexible clamped couplings.

58. Temporary Pipe Connection 12-Inch, Item SPV.0060.108.

A Description

This special provision describes providing a temporary pipe connection between existing storm sewer and proposed storm sewer during staging in accordance with section 612 of the standard specs.

B Materials

Furnish unperforated pipe underdrain and fittings in accordance with section 612.2 of the standard specs.

Furnish concrete for concrete collars in accordance with section 520.2.4.

C Construction

Install temporary pipe connections in accordance with section 612 of the standard specifications.

All elbows and other fittings shall be incidental to the temporary pipe connection.

Connect the temporary pipe connection to the existing and proposed storm sewer using an engineer approved method that is watertight and does not damage the proposed storm sewer pipe.

Remove the temporary pipe connection when it is no longer needed to maintain drainage. Backfill the excavation in accordance with section 204 of the standard specs.

D Measurement

The department will measure Temporary Pipe Connection 12-Inch by the 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.0060.108	Temporary Pipe Connection 12-Inch	EACH

Payment is full compensation for providing up to 10 feet of pipe, fittings, blocking, bricking and mortar; for all mechanical bands, concrete collars, or other pipe to pipe connections; for connections to existing and proposed storm sewer; for all excavation, compaction, and backfill; for preparing the foundation; for all dewatering; for removing the pipe and backfilling the excavation.

The department will pay for pipes in excess of 10 feet under the 530 or 612 bid items.

59. Pipe Connection to Existing Structure, Item SPV.0060.115.

A Description

This special provision describes connecting new storm sewer pipes to a new opening in an existing drainage structure, manhole, or pipe.

B Materials

Conform to standard specs 608.2 and 611.2.

C Construction

Conform to standard specs 608.3 and 611.3.

If the new storm sewer pipe connection to a new opening in an existing drainage structure is a riser connection, construction and materials used shall conform to File 10A of the Standard Specifications For Sewer And Water Construction In Wisconsin, Sixth Edition, dated December 22, 2003, including Addendum Number 1, dated December 22, 2004, and Addendum Number 2, dated April 22, 2008.

D Measurement

The department will measure Pipe Connection to Existing Structure as each pipe connection 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.0060.115	Pipe Connection to Existing Structure	EACH

Payment is full compensation for excavating, backfilling, masonry and fittings; coring holes in existing structures, manholes, or pipes; installing couplings and concrete collars, and for disposing of surplus material.

60. Traffic Signal Cabinet & Controller W National Ave & S 37th St, Item SPV.0060.201; Traffic Signal Cabinet & Controller W National Ave & S 35th St, Item SPV.0060.202; Traffic Signal Cabinet & Controller W National Ave & S Layton Blvd, Item SPV.0060.203.

A Description

This specification describes furnishing and installing an equipped ATC traffic signal controller and NEMA TS2 Type 1 signal control cabinet at intersections. Cabinet components include, but are not limited to, the traffic signal controller, malfunction management unit (MMU), bus interface units (BIU), flash transfer relays, Railroad Preemption interface, and Battery Backup Unit (BBU).

B Materials

Furnish equipment and assemble the cabinet conforming to the latest revision of NEMA Standards Publication TS 2-2003, Traffic Controller Assemblies with NTCIP requirements, National Electrical Manufacturers Association, hereinafter called NEMA TS2 Standard.

The cabinet shall be designed for TS2 Type 1 operation and shall conform to the design shown in DWG TF5016TWI02.

All equipment, materials, and cabinet features shall be the same type, make, and model on all cabinets delivered under any one order.

Furnish an Econolite Cobalt-C shelf mount controller with the latest ASC/3 software installed.

Furnish any equipment and materials not specifically described but required in order to perform the intended functions in the cabinet.

C Construction

Conform all work to the Wisconsin State Electrical Code (WSEC). Conform all work to section 651 of the Wisconsin Standard Specifications for Highway and Structure Construction, 2021 Edition, as supplemented or modified in this specification.

C.1 Definitions

Vendor – the firm under contract with the City of Milwaukee for furnishing the fully equipped and operational traffic signal cabinet

Construction contractor – the firm under contract with the City of Milwaukee or another agency to construct a roadway facility. The construction contractor will install the traffic signal cabinet or may designate a subcontractor, such as an electrical subcontractor, to represent them with regards to the signal cabinet installation

Owner – City of Milwaukee

Manufacturer – the firm that builds or produces the traffic signal equipment other than the cabinet. For example, the “controller manufacturer”

C.2 Terminal Facility

Fully wire the terminal facility with sixteen load switch sockets: eight phases of vehicular, four phases of pedestrian, and four phases of overlap operation; eight flash transfer relay sockets; one flasher socket; and two terminal facility Bus Interface Unit (BIU) rack slots. The use of printed circuit boards is not acceptable on the terminal facility, except printed circuit boards are acceptable for the BIU interface with the load bay. Position the 16 load switch sockets in two horizontal rows of eight sockets each. Support the load switches and flasher by a bracket or shelf extending at least three inches from the terminal facility.

Label all terminals, load switches, and flash transfer relay sockets. Label reference designators by silk-screening on the front and rear of the terminal facility to match drawing designations.

Provide rack mounted BIU’s. Provide a dual-row, 64-pin female DIN 41612 Type B connector for each BIU rack position. Provide card guides for both edges of the BIU. Terminal and facilities BIU mounting shall be an integral part of the terminal facility.

Provide a 16-channel, 8-position, TS2 detector rack, with an integrally mounted BIU mounting. Racks shall be addressable. Power a detector rack by the cabinet power supply. Fasten the loop detector rack towards the left side of the lower shelf.

For BIU rack connectors, provide pre-wired address pins or jumper plugs corresponding to the requirements of the NEMA TS2 Standard. The address pins or jumper plugs shall control the BIU mode of operation. BIUs shall be capable of being interchanged with no additional programming.

For the terminal facility, contain all field wires within one or two rows of horizontally-mounted heavy duty terminal blocks. Terminate all field output circuits on an unfused terminal block with a minimum rating of 10 amps. Use mechanical connector lugs rated for copper wire.

Angle the lower section of the terminal block out from the back of the cabinet at approximately a 45 degree angle.

Identify all field input/output (I/O) terminals by permanent alphanumeric labels. All labels shall use standard nomenclature per the NEMA TS2 Standard.

All field flash sequence programming at the field terminals shall be able to be accomplished with the use of only a screwdriver.

Wire field terminal blocks to use three positions per vehicle or overlap phase (green, yellow, red).

Wire one RC network in parallel with each flash transfer relay coil.

Permanently label all logic-level, NEMA-controller and MMU input and output terminations on the terminal facility. Identity the function of each terminal position on the cabinet drawings.

Terminal blocks for DC signal interfacing shall have a number 6-32 x 7/32 inch screw as minimum.

Functions to be terminated shall be as specified in the listing of Input/Output Terminals in Section 5 of the NEMA TS2 Standard.

Conform all terminal facility and cabinet wiring to the WSEC. The green/walk, yellow, and red/don't walk load switch outputs shall be minimum 16 gauge wire. The MMU (other than AC power), controller I/O, and logic ground shall be minimum 22 gauge wire. All wire colors shall be consistent.

C.3 Vehicle Detection Interface Panel

Provide a 16-position interface panel. Interface panel shall allow for the connection of 16 independent field loops. The panels shall have barrier strip type terminals using 8-32 screws and be rated for 20 inch pounds of torque. Provide a ground bus terminal between each loop pair terminal to provide a termination for the loop lead-in cable ground wire. Secure the interface panels to a mounting plate attached to the left interior side wall of the cabinet. The panel shall also include inputs for up to 4 preempts.

Provide a cable consisting of 20 AWG twisted pair wires to enable connection to and from the interface panel to a detector rack. The twisted pair wires shall be color-coded wires. Provide a cable of sufficient length to allow the detector rack to be placed on either shelf.

Identify all termination points by a unique number silk screened on the panel.

C.4 Conductors and Cabling

All conductors in the cabinet shall be copper 22 AWG or larger. All 14 AWG and smaller wire shall conform to MIL-W-16878/1, Type B, 600V, 19-strand tinned copper. The wire shall have a minimum of 0.010 inches thick PVC insulation without clear nylon jacket and rated to 105 degrees Celsius. All 12 AWG and larger wire shall be UL or NRTL listed THHN/THWN 90 degrees Celsius, 600V, 0.020 inches thick PVC insulation, and clear nylon jacketed.

Provide controller and MMU cables of sufficient length to allow the units to be placed on either cabinet shelf in the operating mode. Connecting cables shall be sleeved in a braided nylon mesh. Exposed tie-wraps and interwoven cables are unacceptable.

Provide the cabinet configuration with up to 6 SDLC RS-485 Port 1 communication cables to allow full capabilities of that cabinet. Each communication cable connector shall be a 15-pin metal shell D subminiature type. The cable shall be a shielded cable suitable for RS-485 communications. Secure all connecting cables and wire runs by mechanical clamps. Stick-on type clamps are not acceptable.

Pre-wire the terminal facility for a Type 16 MMU.

All wiring shall be neat in appearance. Stow excess cable behind the terminal facility or below the shelves in order to allow easy access to the terminal facility and cabinet components. All cabinet wiring shall be continuous from its point of origin to its termination point. Butt type connections/splices are not acceptable.

Wire the grounding system in the cabinet into three separate circuits: AC Neutral, Earth Ground, and Logic Ground.

Optoisolate all pedestrian pushbutton inputs from the field to the controller through the BIU and operate at 12 VAC.

Hook or loop all wire, size 16 AWG or smaller, at solder joints around the eyelet or terminal block post prior to soldering to ensure circuit integrity. Lap joint soldering is not acceptable.

C.5 Cabinet Switches

The above switches shall function as follows:

Off: Signals Dark

Signal: Signals On and operating as follows:

Auto	Hand
Flash: Signals Flash	Signals Flash
Normal: Signals Normal	Signals Advance by use of hand control

Provide manual detector switches. Provide four pedestrian detector switches. The switches shall be spring loaded and automatically return to the center position. Wire the pedestrian switches to the T&F BIU slot 1. The switches shall operate as follows:

Position	Function
Up	Detector Disabled
Center	Detector Enabled
Down	Detector Called

C.6 Bus Bar

Provide a minimum 20-position neutral bus bar capable of connecting three #12 AWG wires per position.

C.7 Circuit Breakers

House in the power panel the following vertically mounted, single pole, 120 volts AC, 60 Hertz circuit breakers, with the ON position being up:

- One 30-amp signal breaker. This breaker shall supply power for all cabinet functions not powered through one of the other breakers or fuses listed below. Streetlights will be powered from outside the cabinet in the meter breaker pedestal. This breaker shall feed a signal bus supplied through a solid state bus relay and a radio interference line filter. The bus relay, in all cases, shall be a solid state contactor and shall not be jack mounted. Breakers shall be thermal magnetic type, UL or NRTL listed, with a minimum of 22,000 amp interrupting capacity.
- One 15-amp auxiliary breaker. This breaker shall supply power to the fan and heater**.**
- One 10-amp breaker. This breaker shall supply power for control equipment: controller, MMU, and cabinet power supply.
- One 20-amp circuit breaker for future use.

Power the cabinet light through the GFI fuse, not a circuit breaker.

C.8 Radio Interference Suppressor

Equip each control cabinet with a single radio interference suppressor (RIS) of sufficient ampere rating to handle the load requirements. Install the RIS at the input power point. The RIS shall minimize interference in both the broadcast and the aircraft frequencies, and shall provide a maximum attenuation of 50 DB over a frequency range from 200 KHZ to 75 MHZ, when used in connection with normal installations. The RIS shall be hermetically sealed in a substantial metal case filled with a suitable insulating compound. The terminals shall be nickel-plated brass studs of sufficient external length to provide space to connect two #8 AWG wires and shall be so mounted that they cannot be turned in the case. Ungrounded terminals shall be properly insulated from each other, and shall maintain a surface leakage distance of not less than 6.35 mm between any exposed current conductor and any other metallic parts. The terminals shall have an insulation factor of 100-200 megaohms dependent upon external conditions. The RIS shall be rated at minimum 50 amperes. Design the RIS for operation on 115 VAC +/- 10%, 60HZ, single-phase circuits, and to meet the standards of UL or a NRTL and Radio Manufacturer's Association.

C.9 Bus Relay

Provide a normally-open, 60 amp, solid state relay.

C.10 Surge Protector

Install a plug-in type EDCO SHA-1250, or Atlantic/Pacific approved equal, surge protector across the load terminal of the 10-amp circuit breaker. Install a General Electric Varistor, catalog #V130PA20A, at the load terminals of the circuit breaker from the hot line to the grounded current carrying neutral conductor

C.11 Power Receptacles

Mount a 120 VAC 20 amp**,** NEMA 5-20R GFCl convenience outlet at each of these two locations:

- On the interior right side wall above the power panel. The outlet shall be fully operational and fuse protected.
- Near the power panel where it will not interfere with power panel maintenance**.** This outlet is to be wired by field installation personnel.

C.12 Suppressors and RC Network

Provide a suppressor for each 120 VAC circuit that serves an inductive device, such as a fan motor or a mechanical relay, to protect the controller's solid state devices from excessive voltage surges. Such suppressors shall be in addition to the surge protector at the input power point. Wire one RC network in parallel with each inductive device.

C.13 Auxiliary Devices

C.13.1 Load Switches

Provide 16 solid state load switches conforming to the requirements of section 6.2 of the NEMA TS2 Standard.

C.13.2 Flashers

Provide one solid state flasher conforming to the requirements of section 6.3 of the NEMA TS2 Standard.

C.13.3 Flash Transfer Relays

Provide 4 flash transfer relays conforming to the requirements of section 6.4 of the NEMA TS2 Standard.

C.13.4 Cabinet Power Supply

Provide one cabinet power supply with each cabinet conforming to the requirements of section 5.3.5 of the NEMA TS2 Standard. Provide LED indicators for the 12 VDC, 12 VAC, and 24 VDC outputs. Provide jack plugs on the front panel for access to the +24 VDC for test purposes.

C.14 Bus Interface Units (BIU)

Provide three BIUs conforming to the requirements of section 8 of the NEMA TS2 Standard.

Provide two BIUs with the main panel and one BIU with one of the detector racks.

C.15 Malfunction Management Unit (MMU)

Provide one shelf-mountable, 16 channel, solid-state MMU with Ethernet capability. The MMU shall meet the requirements of Section 4 of the NEMA TS2 Standard. The MMU shall be an Eberle Design Inc. Model MMU2-16LE or preapproved equal.

The MMU shall be capable of the following:

- Detecting simultaneously active inputs of Green (Walk), Yellow, or Red (Don’t Walk) on the same channel.
- Determining if the field signal input states detected as active or inactive by the MMU correspond with the data provided by the Controller Unit.
- Monitoring an optional external watchdog output from a Controller Unit or other external cabinet device.
- Monitoring an intersection with up to four approaches using the Flashing Yellow Arrow (for protected/permissive left and right turn movements).
- Event logging for the following; AC Line log, Prior/Previous Faults log, and Monitor Reset Log. All log entries shall include a date and time stamp.
- All monitor functions shall be capable of being programmed through the front panel, without the need for computers or special programs cards.
- A built-in Diagnostic Wizard shall be provided that displays detailed diagnostic information regarding the fault being analyzed. This mode shall provide a concise view of the signal states involved in the fault, pinpoint faulty signal inputs, and provide guidance on how the technician should isolate the cause of the malfunction.

The MMU shall have an LCD display that allows for viewing of log files and field indications, as well as the viewing and setting of date and time and configuration parameters.

C.16 Documentation

C.16.1 Cabinet Intersection Wiring Diagrams

For each individual cabinet ordered, within 10 calendar days after receipt of the procurement order, furnish to the City of Milwaukee's electrical lead electrician two sets of 22X34-inch detailed printed cabinet intersection wiring diagrams for information only.

At the time of the cabinet delivery, furnish to the City of Milwaukee's electrical lead electrician two sets of printed 22X34-inch cabinet intersection wiring diagrams and one set of .dgn CAD files per cabinet. Printing the 22X34-inch sheet in smaller sizes is not acceptable. Leave a third drawing in the signal cabinet. After cabinet acceptance is complete, if any cabinet wiring changes were made, revise the cabinet wiring diagrams, leave one drawing in the signal cabinet, and furnish to the City of Milwaukee's electrical lead electrician two sets of as-built printed cabinet wiring diagrams and one set of as-built .dgn CAD files per cabinet. If no changes were made from time of cabinet delivery, notify the City of Milwaukee's lead electrical technician in writing.

C.16.2 Manuals

At the time of the cabinet delivery, furnish to the City of Milwaukee's electrical lead electrician one set of installation, operations, and maintenance manuals per cabinet including each type of equipment in the cabinet. The manuals shall as a minimum include the following information: a) table of contents, b) operating procedure, c) step-by-step maintenance and trouble-shooting information for the entire assembly, d) schematic diagrams, e) pictorial diagrams of parts locations, f) itemized parts lists with parts numbers, g) theory of operation, and h) maintenance checklists.

The itemized parts lists shall include the manufacturer's name and parts number for all components (such as IC, diodes, switches, relays, etc.) used. The list shall include cross-references to parts numbers of other manufacturers who make the same replacement parts.

For each of the traffic signal controller and MMU, in addition to the above manual requirements, furnish one reference manual for the processor and components proposed to perform the controller and MMU functions. Include a complete set of schematics for the controller, MMU, and any auxiliary circuit boards either in the reference manual or in a separate volume. In addition, furnish a written narrative describing the controller and MMU operation and front panel configuration, and a conceptual flow chart illustrating the control logic for comparison with these specifications. The narrative shall include a discussion of any limitation or exceptions to the performance described in these specifications, and a discussion of any control capabilities provided in addition to that required in these specifications.

C.17 Cabinet Delivery

The construction contractor will provide the traffic signal specifications and plans, including the sequence of operation, to the vendor. The vendor shall determine the required cabinet equipment and assembly requirements from the plans and specifications and provide the owner a list of procurement items. The contractor will order the procurement items. The City of Milwaukee will provide the signal timing to the vendor a minimum of two weeks before the scheduled cabinet delivery date.

For cabinets to be installed in the field by the construction contractor, provide the list of procurement items to the City of Milwaukee a minimum of 60 days before the cabinet is scheduled to be installed in the field. The vendor is responsible for coordinating with the project construction contractor to determine the scheduled cabinet installation date. Cabinets shall be completed, delivered, and accepted within 50 calendar days after the initiation of the procurement request. The City of Milwaukee reserves the right to require up to five cabinets per month to be completed, delivered, and accepted.

If the City of Milwaukee makes a modification to any cabinet order before the entire cabinet is completely built in the vendor's shop, the delivery time does not change. If the owner accepts a vendor requested cabinet order or other modification at any time, the delivery time does not change. All cabinet modifications will be made without additional cost to the owner, except if an additional equipment item is added that is under procurement contract, the established price in the procurement contract will be paid the vendor.

Deliver cabinets to City of Milwaukee Electrical Services headquarters located at 1540 West Canal Street Milwaukee, WI 53233. Final wiring/terminations in all cabinets that are to be city owned will be performed by city forces. Coordinate final cabinet wiring with the City of Milwaukee's Traffic Signal Field Operations unit.

Delivery will be received by the owner. Schedule the delivery directly with the construction contractor. The vendor is responsible for arranging the unloading of the cabinet. Notify the electrical shop of the intent to deliver a minimum of two business days ahead of the desired delivery time. The owner will provide the vendor a list of names, phone numbers, and email addresses for contact information.

The vendor is notified that delivery times and schedules may be changed or delayed at any time for any reason. The vendor may be required to store completed cabinets at their facility for extended periods of time.

C.18 Acceptance Testing

Complete on-site traffic signal acceptance testing in the presence of the owner. The acceptance testing will occur after the signal cabinet is fully installed at the project intersection by the construction contractor and before the traffic signal is turned on. The construction contractor and the owner will determine the time for the acceptance testing. In addition to the cabinet as specified in this specification, add-on accessory items, traffic signal interconnect, system communication, and closed loop system operation are included in the acceptance testing.

Provide an IMSA certified Traffic Signal Bench Technician, Level II, or an IMSA certified Traffic Signal Field Technician, Level II, with a minimum of three years experience in construction and operation of traffic signal cabinets similar to the cabinets specified in this specification. Alternatively, provide a technician or electrician with a minimum of three years experience in construction and operation of traffic signal cabinets similar to the cabinets specified in this specification. The technician shall be on-site during the entire acceptance testing, and shall be capable and equipped to make in-field revisions / repairs to the signal cabinet to conform to this specification.

Upon successful completion of the acceptance testing as determined by the Owner, a 30-day conditional acceptance of the signal cabinet will be provided to the vendor. Should the cabinet within the 30-day conditional acceptance period fail to perform in any way as determined by the Owner, the vendor shall repair the cabinet to bring it into conformance with this specification and the acceptance testing shall be repeated. Repair times shall conform to the warranty service response times in this specification. The acceptance testing shall be repeated. Upon successful completion of the retesting, a new 30-day conditional acceptance period shall begin. After the signal cabinet runs 30 days without failure, the cabinet will be fully accepted by the Owner.

The vendor will be allowed up to two 30-day conditional acceptance periods. If the cabinet fails during the second 30-day period, an entirely new cabinet shall be furnished and made operational in the field by the vendor at no cost to the owner and a new acceptance testing procedure shall begin. Cabinet replacement times shall conform to the warranty service response times in this specification. The original cabinet becomes the property of the vendor.

The owner reserves the right to perform its own tests on the traffic signal cabinet at any time using the owner's control equipment. Should an individual traffic signal cabinet be found to not meet the requirements of these specifications, the vendor shall pick up the traffic signal cabinet from the owner or from the field, perform at their shop repairs / revisions as necessary to bring the traffic signal cabinet into conformance with these specifications, and deliver the repaired / revised traffic signal cabinet back to the designated location, all at no additional cost to the City of Milwaukee.

C.19 Certification

Provide a written certification with the cabinet delivery that the equipment meets the requirements of the plans and specifications and will fully run the sequence of operation and the signal timing, including closed loop system operation if applicable. The certification shall be on the vendor's company letterhead, shall be addressed to both the City of Milwaukee and the construction contractor, and shall be signed by a company officer authorized to legally obligate the company.

C.20 Warranty

The warranty shall start upon delivery of the cabinet and all supplied equipment to the owner designated location. Provide a warranty and guarantee statement which stipulates that the cabinet and all supplied equipment, including add-on accessory items, to be, individually and as a cabinet system, free from defects in materials and workmanship for a period of at least one year from the date of final cabinet acceptance in the field, or in the case of a cabinet that is to be delivered to the owner for use by the owner, from the date of delivery of an accepted cabinet to the owner. All warranty beyond the one year construction bond needs to be from the manufacturer or vendor. Final cabinet acceptance in the field is after a successful 30-day conditional acceptance period is completed. Delivery of a cabinet for testing does not constitute acceptance of the cabinet. Turn over to the City of Milwaukee warranties and guarantees that are offered by the manufacturer as a customary trade practice. Name the City of Milwaukee as the obligee on all manufacturers' warranties and guarantees. Shipping costs, both to the factory or an Authorized Repair Depot, and return, shall be paid by the vendor.

The warranty shall provide for full repair or replacement, as determined by the owner, of the failed item or cabinet system, including removal and making the item or system fully operational in the cabinet, at no cost to the owner. Vendor warranty service response times after notification by the owner:

- 4 hours to have qualified service personnel on site at the intersection
- 12 hours to have the signal safely operational, including all phases and enough detection to run the intersection phasing (minimum 8 detectors)
- 48 hours on business days to restore the signal to full original operations

If a malfunction in the controller unit, MMU, module, or any auxiliary equipment occurs during the warranty period, the vendor shall, within 24 hours after notification (excluding Saturday and Sunday), furnish and make fully operational in the cabinet, an identical, programmed, controller unit, MMU, module, or auxiliary equipment, for use while the warranted unit is being repaired or replaced. The isolation of any malfunction during the warranty period shall be the responsibility of the vendor.

The City of Milwaukee reserves the right to make repairs to malfunctioning cabinets and equipment that are under warranty, up to and including complete replacement of the cabinet, when in the owner's determination the safety of the traveling public is best served. Such repair work will not in any way void or limit the vendor's warranty and guarantee specified above. The owner will notify the vendor in writing of the repair.

The vendor shall within five business days after notification replace, at the electrical shop, all cabinets, equipment, and supplies used by the owner in making repairs, with new parts meeting the requirements of this specification.

If any cabinet has three or more equipment or cabinet system failures, resulting from poor workmanship, within the first six months of operation after owner acceptance, an entirely new cabinet exactly matching the existing cabinet shall be furnished and made fully operational by the vendor at no additional cost to the owner. Any traffic control, including but not limited to signing, channelizing devices, temporary signals, police control, and flaggers, that becomes necessary as determined by the owner in order to safely replace the cabinet is the full responsibility of the vendor. The original cabinet becomes the property of the vendor.

Provide, at no additional cost, firmware/software maintenance, problem resolution phone technical support, problem resolution technical support in the supplier's facility, firmware/software patches, and firmware/software upgrades for a minimum of three years. The lead for technical support and primary owner contact for support shall be a qualified person employed by the vendor's local office who is personally familiar with the owner's software and signal operations. Help desks and manufacturer's representatives may be utilized by the lead technical support person as resources, but are not acceptable for lead technical support.

Maintain an inventory of the firmware/software version on each controller provided. Notify the City of Milwaukee's electrical shop supervisor or lead electrician in writing when a firmware/software patch or upgrade is available. The owner will direct the vendor when to load the patch or upgrade for each controller. Load the patch or upgrade and provide a usable copy of the patch or upgrade to the owner. Alternatively, when requested by the owner, provide the patch or upgrade to the owner for installation by the owner.

D Measurement

The department will measure Traffic Signal Cabinet & Controller (location) by 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.0060.201	Traffic Signal Cabinet & Controller W National Ave & S 37th St	EACH
SPV.0060.202	Traffic Signal Cabinet & Controller W National Ave & S 35th St	EACH
SPV.0060.203	Traffic Signal Cabinet & Controller W National Ave & S Layton Blvd	EACH

Payment is full compensation for furnishing and installing the traffic signal controller and control 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.

61. Emergency Vehicle Preemption System W National Ave & S 37th St, Item SPV.0060.204; Emergency Vehicle Preemption System W National Ave & S 35th St, Item SPV.0060.205; Emergency Vehicle Preemption System W National Ave & S Layton Blvd, Item SPV.0060.206.

A Description

This work shall consist of furnishing and installing an Emergency Vehicle Preemption (EVP) System at a single intersection, as shown on the plans and as hereinafter provided.

B Materials

The Emergency Vehicle Preemption System shall include Opticom discriminator Model 764, Model 711 detectors, detector cable, and all additional cabinet equipment required to provide full system functionality.

C Construction

Mount detectors on the mast arms and signal poles as shown on the Plans.

Drill and tap the traffic signal arms and poles to accommodate the mounting of the detector units as shown in the Plans.

Notify the engineer if an obstruction is present in line with the detector prior to installation.

Unless otherwise directed by the City, the detector shield tube shall be installed with the drain hole at the bottom.

There shall be no detector cable splices from the detector assembly to the controller terminations.

Route the EVP detector cables to the controller. Each lead shall be appropriately marked as to which street or avenue it is associated. Complete all terminations inside the cabinet.

The EVP as specified and shown in the Plans shall be complete in place, tested, and in full operation.

D Measurement

The department will measure Emergency Vehicle Preemption System will be measured as 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.0060.204	Emergency Vehicle Preemption System W National Ave & S 37th St	EACH
SPV.0060.205	Emergency Vehicle Preemption System W National Ave & S 35th St	EACH
SPV.0060.206	Emergency Vehicle Preemption System W National Ave & S Layton Blvd	EACH

Payment is full compensation for furnishing and installing all equipment, cabling, necessary additional items, testing and setting up the system.

62. Video Detection System W National Ave & S 37th St, Item SPV.0060.207; Video Detection System W National Ave & S 35th St, Item SPV.0060.208; Video Detection System W National Ave & S Layton Blvd, Item SPV.0060.209.

A Description

This special provision describes the minimum requirements for a video image vehicle tracking and detection system (VIVTDS) that monitors vehicles on a roadway by processing video images and provides detector outputs to a traffic controller or similar device.

B Materials

B.1 Equipment

Furnish Autoscope Vision VIVDS, or equivalent video detection system, meeting the requirements in this specification. The VIVDS shall be able to transmit and receive data by means of a single mode fiber optic cable furnished by others. The system architecture shall fully support Ethernet networking of system

components. All required interface equipment needed for transmitting and receiving data and video from the camera to the signal controller shall be provided with the VIVDS.

The VIVDS shall consist of the following components:

- Color, 10x zoom, Machine Vision Processor (MVP) sensor
- Wired Input/Output Card
- Communications interface panel
- Cable for communications between the MVP and the interface panel
- Software for communication with the VIVDS

This equipment shall meet the NEMA environmental, power and surge ratings as set forth in NEMA TS2 specifications. The VIVDS processor unit shall support NEMA TS1, TS2 and 170/2070 type controllers. Vendor specific mounting hardware and terminations shall be provided with the VIVDS.

B.2 System Software

The MVP sensor embedded software shall incorporate multiple applications that perform a variety of diagnostic, installation, fault tolerant operations, data communications, digital video streaming, and vehicle detection processing. An embedded web server shall permit standard internet browsers to connect and perform basic configuration, maintenance, and video streaming tasks.

B.3 Machine Vision Processor Sensor

The MVP sensor shall include a video sensor that integrates a high-definition (HD) camera with an embedded processor for analyzing the video and performing detection.

The camera shall be a color CMOS imaging array with HD resolution of at least 720p (1280x720 pixels) and minimum 10X optical zoom. It shall be possible to zoom the lens as required to satisfy across-the-intersection detection objectives, including stop line and advance detection. The camera shall have direct, real-time iris and shutter speed control by the integrated processor. The processor shall support H.264 video compression for streaming output. The MVP shall be house in a sealed IP-67 enclosure. The faceplate of the enclosure shall be glass and shall have hydrophilic coating on the exterior surface to reduce debris accumulation and maintenance. The faceplate shall have a thermostatically controlled indium tin oxide (ITO) heater applied directly on the interior surface to keep the faceplate clear of condensation, snow, ice, and frost.

The MVP sensor shall have the capability to store cumulative traffic statistics internally in non-volatile memory for later retrieval and analysis. The MVP shall communicate to the modular cabinet interface unit via the communications interface panel and the software applications using the industry standard TCP/IP network protocol. The MVP shall have a built-in Ethernet-ready, Internet Protocol (IP) address and shall be addressable with no plug-in devices or converters required.

B.4 Power

The vision sensor shall operate normally over an input voltage range of 89 to 265 VAC at 50 or 60 Hz at a maximum of 16 watts typical.

B.5 Detection Zone Programming

A personal computer (PC), furnished by others, shall host the server and client application that are used to program and monitor the system components. Placement of detection zones shall be by means of a PC with a Windows 7 or Windows 10 operating system; a keyboard; and a mouse. The PC monitor shall be able to show the detection zones superimposed on images of traffic scenes.

The detection zones shall be created by using and mouse to draw detection zones on the PC monitor. Using the mouse and keyboard, it shall be possible to place, size, and orient detection zones to provide optimal road coverage for vehicle detection. It shall be possible to download detector configurations from the PC to the MVP sensor and cabinet interface module, to retrieve the detector configuration that is currently running in the MVP sensor, and to back up detector configurations by saving them to the PC fixed disks or other removable storage media. The real-time performance shall be observed by viewing the video output from the sensor with overlaid flashing detectors to indicate the current detection state (on/off).

The supervisor computer's mouse and keyboard shall be used to edit previously defined detector configurations to permit adjustment of the detection zone size and placement, to add detectors for

additional traffic applications, or to reprogram the MVP sensor for different traffic applications or changes in installation site geometry or traffic rerouting.

B.6 Optimal Detection

The detection shall be reliable, consistent, and perform under all weather, lighting, and traffic congestion levels. The video detection system shall optimally detect vehicle passage and presence when the MVP sensor is mounted 30-feet or higher above the roadway, when the image sensor is adjacent to the desired coverage area, and when the distance to the farthest detection zone location is not greater than ten (10) times the mounting height of the MVP. The MVP shall not be required to be directly over the roadway. The MVP shall be able to view either approaching or receding traffic or both in the same field of view. The MVP sensor placed at a mounting height that minimizes vehicle image occlusion shall be able to simultaneously monitor a maximum of six (6) traffic lanes when mounted at the road-side or up to eight (8) traffic lanes when mounted in the center with four (4) lanes on each side.

B.7 MVP Sensor Cable

Each MVP shall have a separate home run cable. The home run cable shall be a “three wires only” cable designed for 110VAC use between the traffic signal cabinet and the traffic signal structures containing the MVPs. The cable shall have a simple factory installed field termination to connect the cable to the connector on the MVP. The cable shall be durable, be water resistant, have low pulling tension, and be rated for underground conduit installation. The cable identification shall be printed with the manufacturer’s part number, number of conductors, conductor size, voltage rating and jacket material and indicate that it is conduit rated. The cable shall have the following attributes:

- 18 AWG Components: Three (3) conductors, 18 AWG, 19 strand 30 gauge tin plated copper conductors – 0.046”/0.052”.
- Conductor Insulation: Extruded polyethylene 200 – 0.030” wall thickness.
- Color: black, white, green.
- Jacket: Extruded black polyethylene – 0.040”/0.050” wall thickness.
- Finished Diameter: 0.330” – 0.354” maximum.
- Electrical: 600 volts (rms)

B.8 Wired Input/Output Card

The video detection system shall support an optional input/output (I/O) card that communicates with the communication interface panel for real-time detection states and other I/O to the traffic controller. The card shall reside in a standard detector rack.

The wired I/O card shall comply with the form factor and electrical characteristics to plug directly into a NEMA type C or D detector rack. Detector racks will be furnished by others. The card shall occupy two slots of the detector rack. The card shall provide four detector outputs on its rear-edge connector. A front connector shall provide communication to the communications interface panel and shall allow 16 inputs and 24 contact-closure detector outputs for wiring into the cabinet. A front panel LED for each of the 16 inputs and 24 outputs shall indicate the state of the input or output.

The wired I/O card shall support optional expansion cards in other slots. Each expansion card shall support 4 outputs to the back edge of the card. The wired I/O card shall support optional harnesses for connection to Input Files or C1, C4, C11, and C12 ports to support Type 170 or Type 2070 controllers.

The wired I/O card shall communicate directly with up to eight (8) MVP sensors and shall comply with the form factor and electrical characteristics to plug directly into a NEMA type C or D detector rack providing up to 32 inputs and 64 outputs.

B.9 Communications Interface Panel

The video detection system shall include an interface panel in the traffic signal cabinet that manages communications between the video sensors, a maintenance technician, and the traffic signal cabinet itself. The communications interface panel shall provide four (4) physical connection ports and allow for up to two (2) sensors to be connected on each port, for a total of up to eight (8) MVP sensors to be connected simultaneously. A 3-pole terminal block shall supply power and broadband-over-power communications to one (1) or two (2) sensors. The broadband-over-power communication shall provide a throughput of 70 to 90 Mbps.

Each physical sensor port shall include a power switch controlling up to two (2) sensors as well as an LED indicating status of power delivery on the port. There shall be an LED for the first four (4) sensors

learned into the system to indicate the status of communications. Each physical sensor port shall contain a resettable fuse and shall provide high-energy transient protection.

The communications interface panel shall accept input voltage in the range of 89 – 265 VAC, 50/60 Hz power from the transient-protected side of the traffic signal cabinet. The communications interface panel shall be protected by two slow blow fuses. Spares shall be attached to the panel.

B.10 Functional

The MVP sensor shall have the capability to be programmed for a variety of detector types that perform specific functions selectable by software. Detector types shall include stop line detectors for presence or moving vehicle detection based on phase status, presence detectors, directional presence and input detectors. Additionally, phase green or red shall be displayed.

The unit shall monitor video contrast and apply video-loss timing parameters to the output by implementing minimum, maximum, or user defined fixed time recall for the assigned phase(s). The detector shall be capable of having Boolean logic applied to multiple detectors or a minimum number of detectors out of a total present, prior to placing a call.

B.11 Minimum Detector Requirements

Minimum detector requirements shall include the following:

a. Count detection – provide bi-directional vehicle counts, occupancy, and headway, and provide means to output these traffic volume statistics.

b. Speed and classification detection – define vehicle by speed, classification and length, with a minimum of 3 different categories for each.

c. Presence detection – indicate presence of a vehicle, stopped vehicle, or a vehicle traveling in the wrong direction.

d. Detector function combination – monitor outputs of multiple detectors via Boolean logic functions.

e. Label display – provide information on the video output and pass input information to other detectors.

f. Detector Station – collect and report traffic data gathered over specified time intervals including 1, 5, 10, 15, 30, 60-minute intervals and per cycle.

g. Incident detection – monitor traffic parameters for conditions that indicate an incident has occurred, such as an accident or stalled vehicle that results in a sudden reduction in roadway capacity or throughput.

h. Schedulers – define plans that can be used by other detectors to specify different paraments for each time-of-day plan.

i. Contrast Loss detection – monitor the quality of the video image that the vision sensor is processing.

j. Speed Alarm – generate alarm outputs based on user-defined algorithms based on vehicle speed.

B.12 Sensor Operations Log

The vision sensor shall maintain a non-volatile operations log, which minimally contains:

a. Revision numbers for the current vision sensor hardware and software components in operation.

b. Title and comments for the detector configuration.

c. Date and time the last detector configuration was downloaded to the vision sensor.

d. Date and time the operation log was last cleared.

e. Date and time communications were opened or closed with the vision sensor.

f. Date and time of last power up.

g. Time stamped, self-diagnosed hardware and software errors that shall aid in the system maintenance and troubleshooting.

B.13 Detection Zone Placement

The video detection system shall provide flexible detection zone placement anywhere and at any orientation within the field of view of the vision sensor. 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. A single detection zone shall be capable of replacing one or more conventional detector loops connected in series. Detection zones shall be able to be overlapped for optimal road coverage. In addition, selective groups of detectors shall be able to be logically combined into a single output by using optional delay and extend timing and signal state information.

B.14 Detection Zone Operation

The vision sensor's real-time detection operation shall be verifiable through the following means:

View the video output of the sensor with any standard video display device (monitor).

The video output of the vision sensor (differential twisted pair) shall be capable of selectively transmitting:

- Camera video only.
- Analog video overlaid with the current real-time detection state of each detector.
- Camera video with overlaid, scaled crosshairs that are used for aiming the sensor (during installation).
- Individual detectors shall have the option of being hidden.

c. Electrically monitor assigned contact closure pinouts from a detector port master such as a detector rack interface card. Each pin of an interface card shall have one associated LED output to reflect its output state.

d. View the associated output LED state on the detector port master:

1. An LED shall be ON when its assigned detector output or signal controller phase input is on.
2. An LED shall be OFF when its assigned detector or signal controller input is off.

B.15 Count Detection Performance

Using an installed camera that meets the optimal viewing specifications for traffic count applications, the system shall be able to count vehicles with at least 98% accuracy under normal operating conditions (day and night) and at least 93% accuracy under artifact conditions.

Artifact conditions are combinations of weather and lighting conditions that result from shadows, fog, rain, show, etc. The volume counts will be accumulated for the entire roadway (all traveled lanes) and over time intervals that contain a minimum of one hundred (100) vehicles to ensure statistical significance.

B.16 Demand Presence Detection Performance

Using an installed camera that meets the optimal viewing specifications for intersection control applications, the system shall be able to accurately provide demand presence detection.

The demand presence accuracy shall be based on the ability to enable a protected turning movement on an intersection stop line, when a demand exists. The probability of not detecting a vehicle for demand presence shall be less than 1% error under normal operating conditions. In the presence of artifact conditions, the vision sensor shall minimize extraneous (false) protected movement calls to less than 7%.

To ensure statistical significance, the demand presence accuracy and error shall be calculated over time intervals that contain a minimum of one hundred (100) protected turning movements.

These performance specifications shall be achieved with a minimum of two (2) presence detectors coupled with a single detector function (Type-9) to provide adequate road coverage to sample the random arrival pattern of vehicles at the stop line.

The calculation of the demand presence error shall not include turning movements where vehicles do not pass through the presence detectors, or where they stop short or stop beyond the combined detection zones.

B.17 Speed Detection Performance

The MVP shall accurately measure average (arithmetic mean) speed of multiple vehicles with more than 97% accuracy under all operating conditions for approaching and receding traffic.

The average speed measurement shall include a minimum of one hundred (100) vehicles in the sample to ensure statistical significance. Optimal speed detection performance requires the sensor location to follow the specifications described above for count station traffic applications with the exception that the sensor must be higher than 40-feet.

The MVP shall accurately measure individual vehicle speeds with more than 94% accuracy under all operating conditions for vehicles approaching the camera (viewing the front end of the vehicles) and more than 90% accuracy for vehicles receding from the camera (viewing the rear end of vehicles).

These specifications shall apply to vehicles that travel through both the count and speed detector pair and shall not include partial detection situations created by lane changing maneuvers.

To ensure statistical significance, the average speed accuracy and error shall be calculated over time intervals that contain a minimum of one hundred (100) vehicles.

B.18 Sensor Electrical

The video output of the vision sensor shall be isolated from earth ground. All video connections from the sensor to the interface panel shall also be isolated from earth ground. The video output communication and power stages of the sensor shall include transient protection to prevent damage to the sensor due to voltage transients occurring on the cable leading from the vision sensor to other field terminations. Connections for video communications and power shall be made to the image sensor following manufacturer recommendations. The vision sensor shall have passed requirements for and received the CE mark. The power to the sensor shall be fused in the controller cabinet. Cable used between the vision sensor and the traffic control cabinet interface shall be a continuous unbroken run. This cable shall follow all local electrical codes and be suitable for installation in conduit or overhead with appropriate span wire.

C Construction

The supplier of the VIVTDS system shall supervise the installation and testing of the sensors, processor, and other sensor components.

System installers will be required to be certified by the system manufacturer. A manufacturer's instructional guide will not be considered an adequate substitute for practical, classroom training or formal certification by an approved agency.

The manufacturer shall provide an online user for reference.

Formal levels of factory authorized training are required for installers, contractors and system operators. All training must be certified by the VIVTDS system manufacturer.

The supplier shall provide a 3-year warranty on the video detection system from the date of installation During the warranty period, technical support shall be available from the supplier via telephone or email at no cost, or via on-site personnel at the supplier's current pricing and terms of conditions for on-site technical support services. Telephone or email support shall be available from factory-certified personnel or factory-certified installers within four hours on the time a request is made.

The supplier shall notify the City within 30-days of the release of a software update. Updates to the video detection system software shall be available from the supplier without charge for the life of the system.

D Measurement

The department will measure Video Detection System (Location) as each intersection with a fully functional video detection system.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.207	Video Detection System W National Ave & S 37th St	EACH
SPV.0060.208	Video Detection System W National Ave & S 35th St	EACH
SPV.0060.209	Video Detection System W National Ave & S Layton Blvd	EACH

Payment is full compensation for furnishing and installing the video detection system, cabling, mounting devices, and required accessories; and for programming and aiming the equipment to allow for full system operation.

63. Installing Precast Controller Base, Item SPV.0060.210.

A Description

This special provision describes installing precast traffic signal controller cabinet bases furnished by the City of Milwaukee.

B Materials

A 36-inch x 21 ¼-inch x 20-inch pre-cast concrete foundation for traffic signal cabinets P1 and P2 will be furnished by the City of Milwaukee. The contractor shall contact Mr. Rudy Gutierrez, Electrical Services Manager (414) 286-5941 office, (414) 708-5148 mobile; or the Electrical Services Dispatcher at (414) 286-3687 to coordinate pickup of the concrete foundation at the City of Milwaukee Electrical Services headquarters located at 1540 West Canal Street Milwaukee, WI 53233.

C Construction

Install concrete traffic cabinet bases according to the plans. Plan changes must be approved by a City of Milwaukee Electric Services Manager or Traffic Engineer. The primary contacts are Mr. Rudy Gutierrez, Electrical Services Manager (414) 286-5941 office, (414) 708-5148 mobile; or Mr. Scott Reinbacher, Traffic Control Engineer (414) 286-3232.

D Measurement

The department will measure Installing Precast Controller Base by 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.0060.210	Installing Precast Controller Base	EACH

Payment is full compensation for excavation, installation, backfilling and disposal of surplus material.

64. Pedestrian Countdown Signal Face 12-Inch, Item SPV.0060.211.

A Description

This special provision describes providing pedestrian countdown signal faces.

B Materials

Furnish a 12-Inch Light Emitting Diode (LED) Pedestrian Countdown Module that meets ITE PTCSI-STD Part 2 from March 2004 or current Institute of Transportation Engineer (ITE) standards. The countdown digits shall be displayed with an LED color/type of Portland Orange. The unit shall be able to operate when exposed to temperatures between -40 to 165 degrees Fahrenheit. The operating voltage shall be between 80 to 135VAC, and the wattage drawn shall be 7W.

C Construction

Install Pedestrian Countdown Signal Face 12-Inch as shown in the plans. Install following standard spec

658.3. The Pedestrian Countdown Signal Face 12-Inch shall be installed in the same housing and immediately below the Pedestrian Signal Face 12-Inch.

D Measurement

The department will measure Pedestrian Countdown Signal Face 12-Inch by each signal face, 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.0060.211	Pedestrian Countdown Signal Face 12-Inch	EACH

Payment is full compensation for providing signal faces.

65. APS Pedestrian Push Buttons W National Ave & S 37th St, Item SPV.0060.212; APS Pedestrian Push Buttons W National Ave & S 35th St, Item SPV.0060.213; APS Pedestrian Push Buttons W National Ave & S Layton Blvd, Item SPV.0060.214.

A Description

This item shall consist of vandal resistant Accessible Pedestrian Signal and push button assembly that provides a vibro-tactile ADA and MUTCD compliant 2" push button with a raised directional arrow. All sounds are emitted from inside the unit via a weatherproof speaker. The unit shall use two wires and interface with a single control unit located in the traffic control cabinet.

B Materials

Furnish pedestrian push buttons conforming to all of the following requirements:

Audible Pedestrian Signal Push Button

- Sunlight visible "Red LED" lights when the button is pushed and remains on until the walk phase goes into effect.
- Audible "Tick" sound is heard each time the button is pushed, as well as tactile feedback given.
- Extended push button can increase volumes, and/or mute all sounds except those on actuated crosswalk.
- All audible sounds automatically adjust in volume in relation to ambient noise level. Audible volume level over ambient noise shall be adjustable up to 10 dB.
- Audio Amplifier Power Output: 15 W, 8 ohm, weatherproof.
- Provide separate volume controls for locator tone, walk message, Clearance and extended button volumes.
- Volume Control Automatic Adjustment Range: 35 dB max.
- Microphone For Ambient Noise approximate frequency range: 170 Hz to 2.3 kHz.
- Options programmable from computer: Walk Sound, Walk Message, Rest In Walk, Location Message, Extended Push Activation and Locating Tone.
- Audible Locating Tone: All tones shall meet MUTCD requirements.
- Option standard locating tone, custom sound or verbal count down during PED Clearance and multiple voice message languages. Provide custom walk message, direction of travel and/or emergency vehicle warning message.
- All sounds are synchronized. Sound alternate in front of the pedestrian and behind the pedestrian during the walking and/or ped clearance phase ("Ping Pong" feature).
- Temperature Range: -40 degrees F to 165 degrees F.
- Wind sensor to prevent runaway volume during windy conditions.
- System can self-test and fault report to a remote site for real-time monitoring and system maintenance. Conflict Detect: WALK indication is ignored in the event of a WALK/DON'T WALK conflict.
- Pedestrian Push Button Interface accepts 12 to 48 AC/DC. Capable of global configuration changes and/or single unit changes.
- Frame: cast aluminum, powder coated yellow.

- Face Plate: aluminum, powder coated, painted black background.
- Arrow Push Button: aluminum, powder coated. Direction of arrow can adjust to one of four directions.
- Push Button: ADA compliant, cast aluminum, nickel plated, powder coated. Vibrator Power shall be 15 VDC pulsed. Operates during walk interval only. Speaker: 8 ohm, 15 W MAX, weather proof.
- Units shall be programmable from a standard Windows 7 laptop through the pedestrian control unit. If software is required for the programming of the units, it shall be incidental to the contract.

Pedestrian Control Unit

The control unit is the power supply and signaling interface between the existing intersection traffic controller and the pedestrian push button unit. The pedestrian control unit shall control up to 16 push button units and 4 pedestrian phases. The pedestrian control unit shall be housed inside the existing traffic controller cabinet and powered by the AC supply mains (115 VAC). Any cable or equipment between the control unit and the pedestrian button field wiring shall be considered incidental to the contract.

- Pedestrian Walk/Don't Walk Inputs; Optically Isolated 80 – 150 Volts AC/DC 5mA Maximum.
- General Purpose Outputs and Pedestrian Outputs; Optically Isolated 36 Volts AC/DC Peak, .3A Solid State Fused Contact Closure.
- Fault Output; Normally Open and Closed Relay Contacts 125 Volts AC/DC 1A Maximum.
- 4 Phase Pedestrian Push Button Power Output; Nominal 22 Volts DC, Short Circuit Protected – Auto Recovering.
- General Purpose Inputs; 10 – 36 Volts AC/DC Peak 10mA Maxium, Optically Isolated.
- Pedestrian control unit shall have an Ethernet port and shall be IP addressable for communications to programming computer.

C (Vacant)

D Measurement

The department will measure APS Pedestrian Push Buttons as 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.0060.212	APS Pedestrian Push Buttons (W National Ave & S 37th St)	EACH
SPV.0060.213	APS Pedestrian Push Buttons (W National Ave & S 35th St)	EACH
SPV.0060.214	APS Pedestrian Push Buttons (W National Ave & S Layton Ave)	EACH

Payment is full compensation for furnishing and installing all materials tools and equipment necessary to complete the work according to the plans and contract.

66. Rectangular Rapid Flashing Beacon System W National Ave & S 33rd St, Item SPV.0060.215; Rectangular Rapid Flashing Beacon System W National Ave & S 30th St, Item SPV.0060.216.

A Description

Furnish and install a rectangular rapid flashing beacon (RRFB) system consisting of multiple assemblies as described herein and as shown in the plans. The assemblies consist of pedestrian activated units and shall be powered through a battery system that is connected to an isolated power source for nightly recharging.

B Materials

The Manufacturer shall provide components for a 120VAC powered Warning RRFB Crosswalk System. Components include:

- RRFB Light Bars
- Bulldog Push Buttons
- Control Cabinet with Flash Controller and System Power Supply
- Mounting Hardware
- Permanent Signing (W11-2, W16-7, and R10-25)
- Traffic Signal Cables
- Traffic Signal Poles

The crosswalk system shall consist of multiple pole assemblies on the corners and median of the intersection. All corner and median pole assemblies shall contain one or more RRFB Light Bars. All corner pole assemblies shall also have a Bulldog Push Button for system activation. There will be pedestal pole assemblies with Bulldog Push Buttons with extenders for system activation by bicyclists. All push buttons and RRFB Light Bars will wire to a single ground control cabinet.

Upon activation by pedestrian or bicyclist push button, the RRFB controller shall activate all RRFB Light Bars in the intersection system simultaneously. RRFB Light Bars shall flash synchronously and then cease operation after a programmable timeout.

Manufacturer Requirements

The RRFB Light Bar Manufacturer shall have a minimum of ten years of relevant intelligent traffic product manufacturing experience, as well as a minimum of three years of RRFB Light Bar manufacturing experience.

The Manufacturer shall provide a system with the option to be upgraded for integration with connected vehicle infrastructure. An upgraded system shall communicate directly with Smart City Road Side Units (RSUs) to relay Intelligent Warning System activation data. Upgraded system shall be compatible with Dedicated Short-Range Communication (DSRC) or Cellular V2X RSUs.

System Requirements

Control Cabinet

Shall be NEMA 3R Type

Cabinet shall be a size ‘M’, EL-702 cabinet and shall be 51” tall x 30” wide x 17” deep and constructed of minimum 0.125” thick aluminum.

Cabinet shall be vented and include a fan and thermostat as part of the assembly.

Cabinet shall have a continuous stainless steel hinge and a replaceable #2 traffic lock with keys that operates a three point locking mechanism.

Cabinet shall include a removable control panel to which all control circuit components either mount or connect.

All materials used in the construction or mounting of the control cabinet shall be either aluminum or stainless steel. Anti-vandal mounting hardware shall be available as an option.

A UV resistant label shall be applied to the exterior of the cabinet and include system specific information including model number, serial number, date of manufacture, as well as any applicable regulatory compliance information.

Controller

The RRFB Programmable Flash Controller is housed within the Control Cabinet, and shall:

Include integrated constant-current LED drivers with a minimum of two-channel output for driving one or two RRFB units.

Output the following “WW+S” flash pattern during each of its 800 millisecond flash periods:

Left LED illuminates for approximately 50 milliseconds

Both LEDs stay dark for approximately 50 milliseconds

Right LED illuminates for approximately 50 milliseconds

Both LEDs stay dark for approximately 50 milliseconds

Left LED illuminates for approximately 50 milliseconds

Both LEDs stay dark for approximately 50 milliseconds

Right LED illuminates for approximately 50 milliseconds

Both LEDs stay dark for approximately 50 milliseconds

Both LEDs illuminate for approximately 50 milliseconds

Both LEDs stay dark for approximately 50 milliseconds

Both LEDs illuminate for approximately 50 milliseconds

Both LEDs stay dark for approximately 250 milliseconds

Automatically adjust the LED drive current control to optimize brightness for the ambient lighting conditions determined by the phototransistor input.

Have the LED drive outputs reach the full output current as programmed within the duration of the 100ms on-time.

Include an integrated Real Time Clock (RTC) with on-board battery backup.

Have the capability of RS232 communication for programming with Windows-based software.

Include a minimum of two General Purpose Inputs and Outputs (GPIO).

Be internally housed in its own IP67 type enclosure.

Be independently replaceable of other control panel components.

Be able to monitor internal temperature.

Operate between the temperatures of -40° to +176°F (-40° to +80°C).

Universal Switching Power Supply

The Universal Switching Power Supply shall:

Accept a universal AC input, 100-240VAC, 50/60 hz

Output 12 VDC regulated to +/- 1%

Have Short Circuit, Overload and Over Voltage protection

Be convection cooled, DIN rail mount

Have an LED power on indicator

Be UL60950-1, TUV EN60950-1, Class I, Div. 2 Group A,B,C,D and Hazardous Locations T4 Approved

Operate in a relative humidity of 20 to 90% non-condensing

Operate from -4° to +158°F (-20° to +70°C)

Light Bar

The Light Bar shall be in conformance with all applicable FHWA MUTCD standards and guidelines, and shall meet or exceed the requirements specified in FHWA Memorandum IA-21, Interim Approval for Optional Use of Pedestrian-Actuated Rectangular Rapid Flashing Beacons at Uncontrolled Marked Crosswalks.

Shall house two rapidly and alternately flashing rectangular yellow LED array vehicle indications and one side-mounted yellow LED array pedestrian indication. The LED arrays shall be designed, located and operated in accordance with the detailed requirements as specified on the plans.

When activated, the Light Bar shall have 75 periods of flashing per minute and shall have alternating and simultaneous flash operations following the “WW+S” flash pattern.

Active vehicle indications shall be visible at distances over 1000 feet during the day and over 1 mile at night.

The light intensity of the vehicle indications shall meet the minimum specifications of Society of Automotive Engineers (SAE) standard J595 (Directional Flashing Optical Warning Devices for Authorized Emergency, Maintenance, and Service Vehicles) dated January 2005. Manufacturer Certification of Compliance shall be provided upon request.

Have a housing that shall be constructed of durable, corrosion-resistant powder-coated aluminum with stainless steel vandal resistant fasteners.

Have enclosed components that are modular in design whereby any component can be easily replaced without having to uninstall the RRFB assembly.

Include mounting hardware for either single or back-to-back pole mounting and shall be universal to the pole type.

Have two vehicle RRFB indications that is approximately 7” wide x 2.8” high, each with 8 yellow LEDs in its array and one Pedestrian indication that is approximately 0.5” wide x 1.7” high with 8 individual yellow LEDs in its array.

Have overall dimensions of approximately 23.6” wide x 3.8” high x 1.4” deep.

Bulldog Push Button

Shall be a Polara Bulldog model.

Shall operate as a normally open (n/o) circuit.

Must be ADA Compliant.

For bicyclists, a 12” button mounting extender shall be provided at the pole locations adjacent to the bicycle lanes

Shall operate from -30° to +165°F (-34° to +74°C)

Shall be provided with all necessary mounting hardware, wiring and associated ADA signage.

Warning Static Sign

Each static sign face shall be constructed on a 0.080" thick 5052-H32 aluminum and screened onto reflective sheeting of specified color.

Shall have MUTCD compliant sign legend, as dictated by the requirements.

Shall have two holes for mounting to a post or pole.

Includes pole mounting hardware.

Poles

Pole shall be a standard specified outer diameter aluminum pedestal pole.

Pole shall be supplied with one end threaded for easy installation into a pedestal base.

Pole shall be 13’ - 15’ length Schedule 40 pipe raw aluminum as required

Bicycle push button pole shall be 4’ length Schedule 40 pipe raw aluminum as required

Pedestal Base shall be TP-358 cast aluminum that mounts on a concrete foundation attached by four internal anchor bolts imbedded in the foundation.

Pedestal Base shall have a large 8.5" square hand hole cover allowing access to the interior.

C Construction

The RRFB system will consist of multiple assemblies to be constructed by the contractor as shown on the plans. Construct and assemble the system per manufacturer’s instructions to make the RRFB system fully operational.

D Measurement

The department will measure Rectangular Rapid Flashing Beacon System (Location) as a single lump sum unit of work for 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.0060.215	Rectangular Rapid Flashing Beacon (W National Ave & S 33rd St)	EACH
SPV.0060.216	Rectangular Rapid Flashing Beacon (W National Ave & S 30th St)	EACH

Payment is full compensation for furnishing and installing a fully operational RRFB system. Conduit, concrete bases, pull boxes, and meter breaker pedestals are paid for as separate items.

67. Temporary Infrared EVP System W National Ave & S 35th St, Item SPV.0060.217; Temporary Infrared EVP System W National Ave & S Layton Blvd, Item SPV.0060.218.

A Description

This special provision describes maintaining an emergency vehicle preemption system during construction at the temporary signalized intersection as shown in the plans.

B Materials

Furnish an emergency vehicle preemption system compatible with the City’s systems and users. Contact the City for information to confirm the operational requirements of the temporary emergency vehicle preemption system.

C Construction

The Temporary EVP System, as shown in the temporary traffic signal plans or as directed by the engineer, shall be complete in place, tested, and in full operation during each stage and sub-stage of construction.

Install the EVP system as shown in the plans for each construction stage and according to the manufacturer's recommendations. Detectors may be mounted on the temporary traffic signal span wire or wood poles. Relocate the temporary EVP detectors to a suitable location if construction activities and/or construction staging changes impede the detector operation. Arrange for testing of equipment prior to acceptance of the installation for each construction stage.

All cables associated with the temporary EVP system shall be routed to the cabinet. Each lead shall be appropriately marked as to which EVP channel it is associated.

Periodic adjustment and/or moving of the temporary EVP detectors may be required due to changes in traffic control, staging, or other construction operations.

Ensure that the temporary EVP system stays in clean working order. Periodic cleaning of the equipment may be required due to dirt and dust build-up.

Remove the temporary EVP system upon project completion.

Provide the engineer records of all EVP settings used during construction.

D Measurement

The department will measure Temporary Emergency Vehicle Preemption System (Location) by the individual 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.0060.217	Temporary Infrared EVP System W National Ave & S 35th St	EACH
SPV.0060.218	Temporary Infrared EVP System W National Ave & S Layton Blvd	EACH

Payment is full compensation for furnishing and installing a temporary emergency vehicle preemption system, complete and fully operational at an intersection.

68. Pull Boxes 13-Inch x 24-Inch x 24-Inch (Fiberglass Polymer Concrete), Item SPV.0060.302; Pull Boxes 17-Inch x 30-Inch x 24-Inch (Fiberglass Polymer Concrete), Item SPV.0060.303.

A Description

This special provision describes providing fiberglass polymer concrete pull boxes according to standard spec 653 at the locations shown on the plans.

B Materials

Furnish fiberglass/polymer concrete pull boxes of rectangular composite enclosure with Tier 15 rating (15,000-lb design load and 22,500-lb test load), nominal dimensions as indicated, and flared wall style.

Pull boxes 13-Inch x 24-Inch shall be product CHB132424 by Highline Products or B12132424A by Hubbell Power Systems, or approved equivalent.

Pull boxes 17-Inch x 30-Inch shall be product CHB173024 by Highline Products or B12173024A by Hubbell Power Systems, or approved equivalent.

Furnish bolted covers with "STREET LIGHTING" text centered on the top and with a Tier 15 rating. Furnish penta bolts for securing the cover. The pull box shall be listed and labeled by (UL) or other nationally recognized testing laboratory.

Covers for 13-inch x 24-inch pull boxes shall be product CHC1324HL1 by Highline Products or C12132402A41 by Hubbell Power Systems, or approved equivalent.

Covers for 17-inch x 30-inch pull boxes shall be product CHC1730HL1 by Highline Products or C12173002A41 by Hubbell Power Systems, or approved equivalent.

C Construction

Install pull boxes on a 12-inch crushed stone base, set flush with grade. Connect conduits to the pull box with bell end fittings.

D Measurement

The department will measure pull boxes as each individual pull box 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.0060.302	Pull Boxes 13-Inch x 24-Inch x 24-Inch Fiberglass Polymer Concrete	EACH
SPV.0060.303	Pull Boxes 17-Inch x 30-Inch x 24-Inch Fiberglass Polymer Concrete	EACH

Payment is full compensation for furnishing and installing pull boxes and covers; for bell ends and connecting conduits; for excavation, stone base, backfilling, and for disposing of surplus material.

69. Poles MKE 30 Black (30-FT Aluminum, Black, Bolt-Down), Item SPV.0060.321.

A Description

This special provision describes providing aluminum bolt-down pole assemblies according to standard spec 651.

All parts not specifically mentioned, which are necessary or which are regularly furnished in order to provide this pole, shall be furnished, and shall conform in strength, quality of material and workmanship to that usually provided by the engineering practice indicated in this specification. Minor deviations on the pole assembly that will not affect the strength, appearance, vertical and horizontal stability of the pole will be permitted, but all such deviations shall be approved by the City of Milwaukee Street Lighting Engineering.

B Materials

B.1.1. Pole

The 30’-0” aluminum pole shaft shall be round and tapered from the top of the pole to the mounting plate. Dimensions from the pole top to the bracket mounting plate and from the base plate to the top of the pole, as shown on the drawing, shall be rigidly adhered to.

The pole assembly shall be complete with shaft, pole cap, hardware, and base coating. All screws and fasteners shall be stainless steel or other approved materials. The bolt down 30’-0” aluminum street lighting pole assembly shall be in accordance with this specification and City of Milwaukee (DPW-Infrastructure Services Division) Drawing #B-14-14.

B.1.2.

The base plate shall be cast from either type 319 or 356T6 aluminum. The four elongated mounting holes shall be on 90-degree centers on an 11” bolt circle. The mounting slots shall be sized for 1-inch mounting bolts. The base shall be welded to the shaft so the arms bisect the angle between mounting holes at 45 degrees.

B.1.3.

The poles shall be built as a double bracket unit and supplied with one cover plate per pole.

B.1.4.

The pole cap is to be cast aluminum and be secured to the pole by three equally spaced ¼”-20 hex head stainless steel screws.

B.1.5. Hand Hole & Grounding

The hand hole shall be 4" x 6" nominal. A ¼”-20 NC taped hole and bolt shall be provided in the shaft opposite the hand hole for grounding purposes. The hand hole cover shall be secured to the pole using ¼"-20 NC by ¾" long 18-8 stainless steel button head Torx T27H tamper proof screws. The hand hole is to be 90 degrees from the arms. The center line of the hand hole shall be 14 inches above the mounting plate.

B.1.6. Loading and Stability

The 30'-0" assembly furnished under this specification shall support a fifty-pound fixture of an EPA of 3 on each arm when equipped with a pair of 6' upsweep arms. All pole designs shall meet the latest revision of the AASHTO specifications for these poles as defined in their STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS. The manufacturer shall submit engineering calculations for lighting poles to show that maximum stress and deflections do not exceed specified performance requirements under full design loading, as well as other certified reports and data which indicate that the poles meet all load requirements, within 30 days of the bid award. Engineering calculations shall be prepared and sealed by an engineer licensed in the State of Wisconsin.

The entire horizontal and vertical "wind sail" area of the pole assembly subject to wind load including arm and luminaire shall be designed to withstand the AASHTO standard specifications, from above, for wind load requirements for a 90 MPH wind load with gust factor computed per section 3.8.5.and height and exposure factors from table 3-5.

B.1.7.

All Welding shall be in accordance with the latest applicable A.S.M.E. Standards.

B.1.8.

The manufacturer warrants that the pole supplied will be of merchantable quality will conform to applicable specifications, drawings, designs, samples, or descriptions, will be free from defects in materials and workmanship and will be fit for the particular purpose intended.

B.1.9.

A plaque with the pole number as shown on the plans shall be affixed onto the pole shaft.

B.2. Riser Cable

Pole is to be wired as shown on the plans. A separate riser cable will be required to be installed inside of pole for each lighting fixture on the pole. The riser cable shall be 40 feet in length and cut from copper 2#12 UF with ground cable. One wire shall be black, the other shall be white, and the ground can be either bare or green. All splicing is to be done inside the metal housing. The ground wires shall be spliced inside the metal housing and grounded to the housing and each fixture. The cable shall conform to NEC Article 340. The riser cable shall be continuous without splices. The electrical system in use utilizes a full system ground. The neutral is not to be grounded at any point.

C Construction

Install the bolt down pole as specified in the plan and details. After razing the pole use normal pole shaft raking techniques to ensure the centerline of shaft appears vertical to the horizon.

D Measurement

The department will measure Poles MKE 30 Black (30-FT Aluminum, Black, Bolt-Down) as each individual pole 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
SPV.0060.321	Poles MKE 30 Black (30-FT Aluminum, Black, Bolt-Down)	EACH

Payment is full compensation for the pole, riser cables, and all connections.

70. 40-FT Wood Pole, Item SPV.0060.324.

A Description

This special provision describes providing wood poles for temporary street lighting according to standard spec 651 and as shown on the plans.

B Materials

B.1 Wood Pole

References to the American Wood Protection Association (AWPA) designation shall mean the latest revision of the particular AWPA specification and/or test procedure in effect at the time this bid is let for the item/product described herein.

The poles shall be Western Red Cedar poles and shall comply with the latest version of the American Standards Association's "Specifications for Dimensions for Wood Poles".

All poles shall be machine shaved the entire length.

Poles shall be slab gained from the top of the pole to a point 48 inches below the top of the pole. 1st and 2nd gains are to be drilled with a 11/16-inch diameter drill. 1st gain 8 inches from the top of the pole and 2nd gain 24 inches below 1st gain.

All poles shall be incised throughout that portion of the pole surface terminating one foot above and two feet below the standard ground line per AWPA Specifications #C8-73.

All poles shall be butt treated by the thermal process per AWPA specification #C7-73. The treatment shall be water borne preservative, chromated copper arsenate "CCA" Type "C" per AWPA specifications #P5-83. Only oxide formulated chemicals can be used.

An independent inspection agency shall inspect the poles per AWPA Specifications #M2-83. A certified copy of the test report must be delivered with each load shipped.

B.2 Pea Gravel

The pea gravel must consist of particles from natural gravel deposits and shall be composed of clean, hard, tough, durable pebbles free from adherent coatings, soft, flat, or elongated particles, and organic or other deteriorative matter. The following limits apply to deteriorative substances in the pea gravel:

Chert	not over 4% by weight
Coal	not over ½% by weight
Clay lump and friable particles	not over ½% by weight
Soft fragments	not over 1% by weight
Any combination of the above	not over 4% by weight
Flat, elongated or laminated pcs.	not over 10% by weight

(Flat and elongated particles are those having a length more than 5 times the average thickness)

Grading requirements of the pea gravel are as follows:

Passing 3/8-inch sieve	95% to 100%
Passing No.4 sieve	25% to 50%
Passing No.8 sieve	0% to 5%

Each unit will require approximately 0.25 cubic yard of pea gravel.

B.3 Grounding Electrode and Conductor

Furnish and install an approved 5/8-Inch diameter x 8-foot-long copper clad grounding electrode per NEC, WSEC, and local utility codes. Run a single unbroken length of stranded bare #6 copper wire from the grounding electrode to the top of wood pole leaving a 2-foot coil. Make the electrical connection between the grounding electrode conductor and grounding electrode by the exothermic weld method.

C Construction

Install wood poles to an embedment depth of 6 feet 6 inches and according to plan details. Holes may be excavated by means of boring, hydrovac, or hand digging but shall be cylindrical in shape. If any part of the hole is within three feet of a buried utility, hand-dig or hydrovac the holes. No other method of setting poles is acceptable. The poles shall be blocked and/or raked as noted on the plans.

When installing poles in concrete sidewalk areas, prior to concrete removal, saw cut the concrete in a rectangular shape to an adequate size to allow for pole and cable installation. Dispose of all excavation debris and do not use the spoils as backfill.

Install a 6-inch bed of tamped pea gravel at the base of the pole. Backfill the area around the pole with pea gravel, tamping every 12 inches, and fill to finished grade.

D Measurement

The department will measure 40-FT Wood Pole by each 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.0060.324	40-FT Wood Pole	EACH

Payment is full compensation for furnishing the wood pole, pea gravel, and grounding electrode; for excavating for the base; for placement of the pole; and disposing of excavation debris material.

71. Submersible Multitap 3-Port Pre-Insulated Connector, Item SPV.0060.342; Submersible Multitap 4-Port Pre-Insulated Connector, Item SPV.0060.343.

A. Description

This section describes materials, general requirements, personnel qualifications, construction methods, and testing requirements used to perform electrical connections/splices required.

All work shall be in accordance with section 651 of the WisDot Standard Spec.

B. Materials

B.1

Furnish materials conforming to the WSEC, consisting of chapter comm. 16 of the WEC combined with the NEC.

B.2

All materials furnished under this contract for street lighting installation are subject to approval by the City of Milwaukee street lighting project engineer. A prototype may be requested for submittal by the project engineer with a cable sample installed and spliced for approval prior to field installation.

B.3

The contractor shall furnish a complete list of materials to be furnished and used for street lighting. Such list shall include names and addresses of manufactures, together with catalog numbers, certificates of compliance, specifications, and other product information requests by the project engineer. The list shall be submitted within ten (10) calendar days of execution of contract. No material shall be incorporated into the lighting system prior to the written approval of the engineer. Approval does not change the intent of the specifications. The contractor shall not substitute or make changes in material without resubmitting for approval.

Use either the Polaris Edge (ISPB2) or Morris Product submersible insulated connector or else an equal connector that is 3, or 4 Port Pre-Insulated, that is designed for use in below grade boxes, direct burial, and submersible. The Conductors Range from #2/0 - #14 Rated for 600 Volts Dual Rated for CU. or AL.

C. Construction

C.1. General Requirements

Work under items related to the street lighting system shall conform to the National Electrical Code (NEC), 2020 Edition, or the latest edition adopted by the State of Wisconsin, Wisconsin Department of Commerce Chapter Comm 16 (Electrical) State of Wisconsin electrical code, City of Milwaukee code, and these special provisions and good electrical practices. The contractor shall not take advantage of lack of details in plans or these specifications where to do so would conflict with the applicable code and standards.

C.2. Personnel Qualifications

An electrician holding all appropriate licenses (including City of Milwaukee Licenses) shall supervise all work done referring to the street lighting system. All splices shall be made by an electrician. For the purposes of this contract, an electrician is a person who served a four (4) year apprenticeship and passed state exams.

C.3. Splices

The contractor shall perform water tight splicing in a pull box. Conductor runs shall be continuous between pole locations, and no splicing of conductors outside the pull box will be allowed. The water tight splices shall reside in the pull box and above the 3 foot wiring coils. The 2#12UF with ground cable (per

luminaire) shall be brought to the pole hand hole where it will be spliced with the riser cable to the light fixture. An in-line watertight fuse holder needs to be installed in-line with the hot conductor that leads to the luminaire and should be accessible in pole at the hand hole. Oxide inhibitor (OX4) or equivalent shall be applied on all splice's points.

Contractor is to bundle circuit conductors together and identify circuit at every split point.

Hand hole splices if needed should be completed using a multi-tap connector. The connector should be rated for 600 volts, conductor range #1/0 through #14 AL-CU, have a insulating cover rated at 105 degrees Celsius, and meet or exceed ANSI 119.4 Class A specifications for reliability.

C.4. In Service Distribution Systems

The contractor shall not make splices to any underground connections or to any existing distribution system. As indicated on plans, underground splices and connections to existing underground circuitry will be completed by City electricians.

C.5. Testing

After the City makes preliminary acceptance of the street lighting system, it shall be monitored by the City of Milwaukee, Street Lighting Electrical Services during a 60-calendar day operational "burn in". Final acceptance of the lighting system will be based on its meeting standard operational criteria as stated in these specifications. The contractor shall be responsible for all necessary repairs and adjustments to the lighting system to meet standard operational criteria.

D. Measurement

The Department will measure Submersible Multitap Pre-Insulated Connectors as each individual splice location. Multiple splices that may be needed at a single location are incidental.

E. Payment

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

Item Number	Description	Unit
SPV.0060.342	Submersible Multitap 3-Port Pre-Insulated Connector	EACH
SPV.0060.343	Submersible Multitap 4-Port Pre-Insulated Connector	EACH

Payment is full compensation for furnishing labor, equipment, coordination and all materials such as the multi-port submersible insulated connectors, anti-oxidant for wire connections, and incidentals necessary to complete the work to make operational one luminaire.

72. Luminaire Arms Single Member 6-FT (Special), Item SPV.0060.345.

A Description

This special provision describes providing luminaire arms as shown in the plans, according to standard spec 651, and as hereinafter provided.

B Materials

Furnish bracket arms with the following specifications:

Aluminum alloy material, with a satin finish.

2" schedule 80 (2.375" O.D. x .218" wall) Aluminum pipe arm (6061-T6 Alloy).

7'-3" radius bend, with a 9-inch straight piece at the end of the arm for mounting the luminaire.

Mounting plate is ½" thick Aluminum (6061-T6 Alloy).

¾" I.D. rubber grommet inserted in 1 1/16" Diameter hole located 8 inches from mounting plate.

1-inch I.D. rubber grommet for use in pole shaft.

C Construction

The bracket shall be attached to the pole with two ½" x 13 NC x 1 ½" long stainless-steel hex bolts, two 1 ¼" O.D. stainless steel flat washers and two ½" stainless steel lock washers. Apply anti-seizing material to the threads of the bolts before assembly.

D Measurement

The department will measure Luminaire Arms Single Member 6-FT (Special) as each individual arm acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.345	Luminaire Arms Single Member 6-FT (Special)	EACH

Payment is full compensation for furnishing and installing the bracket arms, and for all connections and coordination.

73. Luminaire Arms Single Member 6-FT WP Mount, Item SPV.0060.346.

A Description

This special provision describes providing luminaire arms mounted on wood poles.

B Materials

Furnish 6 ft. Aluminum Upsweep Wood Pole Mounting Bracket – The aluminum bracket shall be fabricated from 2” schedule 80 aluminum pipe. It shall have a minimum 27” rise, and a minimum of 9” straight end section that is suited for use with a slip-fit luminaire. The wire shall be copper 2#12 UF with ground wire. One wire shall be black, the other shall be white. The ground wire shall be grounded to fixture. The cable shall conform to NEC Article 340.

C Construction

Mount the luminaire at a mounting height, as measured to the center of the light, of 26 feet unless otherwise specified on the drawing or indicated in the field by the engineer. Attach the bracket to the wood pole with two (2) 3/8” x 3” long galvanized wood lag bolts, and one (1) 5/8”x (10” to 12” long) galvanized thru bolt with galvanized washers and nut.

D Measurement

The department will measure Luminaire Arms Single Member 6-FT WP Mount as each luminaire arm acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.346	Luminaire Arms Single Member 6-FT WP Mount	EACH

Payment is full compensation for the bracket arm and all connections.

74. Installing Equipment Grounding Electrode, Item SPV.0060.353.

A. Description

Furnish and install grounding protection to provide personnel and equipment protection against faults, surge currents and lightning transients.

This installation is only for locations with direct buried poles, or bolt down poles on old existing concrete light bases. Do not install this item in pull boxes directly connected to department Types 1, 2, 5, and 6 Bases that have been installed with the project. These department bases have their own ground rods installed with them.

B. Materials

Ground Rod: Use ground rods meeting the requirement of UL-467. Ground rods must be made of copper-clad steel with a nominal diameter of 5/8 inches. Ground rod sections must be a minimum of eight feet in length and manufactured for the sole purpose of providing electrical grounding.

Grounding Conductors: Use 7 strand #6 AWG copper insulated (green) conductor for electrical protection ground. The grounding conductor shall be continuous without splices from the grounding electrode through the handhole grounding clip of the pole and of minimum length to make connection.

Mechanical bonding: Provide connection to the grounding electrode using G5 acorn ground clamp. Apply an anti-oxidant compound to all mechanical connections.

C. Construction

Provide a ground rod assembly driven into the earth at a single point (single point ground). Licensed electrician to install the primary ground rod assembly in an electrical pull box so that the top four inches are accessible for inspection, resistance testing, and maintenance.

D. Measurement

The Department will measure Installing Equipment Grounding Electrode item 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.0060.353	Installing Equipment Grounding Electrode	EACH

Payment is full compensation for the grounding electrode and all connections.

75. Removing Bracket Arms and Luminaires, Item SPV.0060.354

A Description

This special provision describes removing existing street lighting bracket arms and luminaires conforming to standard spec 204 and as shown on the plans.

B (Vacant)

C Construction

Disconnect all cables and wiring that is mounted on or in the poles. Carefully remove all bracket arms, clamps, and luminaires from the light pole.

D Measurement

The department will measure Removing Bracket Arms and Luminaires as each light pole where the work is required, acceptably completed.

E Payment

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.354	Removing Bracket Arms and Luminaires	EACH

Payment is full compensation for removal of measured as provided above, will be paid for at the contract unit price each, which price will be payment in full for the removing of bracket arm, clamp, and luminaire.

76. Luminaire Utility 1LED2, Item SPV.0060.374.

A Description

This special provision describes providing LED luminaires according to City of Milwaukee Electrical methods, the National Electrical Code standards, standard spec 651, and as hereinafter provided.

B Materials

B.1 General

Furnish Luminaire Utility 1LED with I.E.S. Type 2 Light Distribution (NEMA label ‘1LED2’) from the following manufacturers or approved equal:

Cree: RSWM-A-HT-2ME-9L-30K7-UL-GY-N-Q1-SS

Philips: Road Focus RFM-72W32LED-3K-G2-R2M-UNV-DMG-FAWS4-RCD7-PH9-SP2-GY3

Factory set FAWS at position 4, labeled 1LED2 visible at 30' away.

All features below shall be incorporated into the equipment and all items shall be furnished and installed into a complete unit ready for operation.

Luminaire shall be designed so it can efficiently produce uniform illumination in accordance with I.E.S. Type II light distribution according to the lighting plan.

B.2 Housings

The housing and door shall be rugged, high quality, cast aluminum for maximum strength, durability and lasting beauty. All castings shall be free from pits, blowholes, or other irregularities. All edges are to be free from burrs.

The housing shall have an integral leveling pad or other suitable means for quick, easy and proper positioning of the luminaire.

The door shall be hinged and easily opened for routine maintenance. All component parts shall be easily accessible with the lower housing opened. Tool-less entry is required.

A bubble level is to be located inside the electrical compartment for easy leveling at installation.

Hinges shall be so constructed and designed to accurately position the door and assure a positive locking with the housing. The hinges shall be provided with a safety catch to prevent the accidental disengagement of the door during servicing.

The entire housing shall be polyester powder-coated for durability and corrosion resistance. Rigorous five-stage pre-treating and painting process shall yield a finish that achieves a scribe creepage rating of 8 (per ASTM D1654) after over 5000 hours exposure to salt fog chamber (operated per ASTM B117).

The luminaire shall be grey in color unless otherwise specified.

There shall be a NEMA label '1LED2' clearly visible at 30 feet height attached to the door of the luminaire. In addition, the luminaire complete model number and manufacturing date shall be indicated inside the housing.

B.3 LED/Optical Assembly

The LED assembly is to be chip on board. The LED module is to be enclosed and sealed with a borosilicate Prismatic Glass optical assembly. The combination shall be NEMA IP66 rated for dust and water resistant. The L_{70}, per IES TM-21, must be greater or equal to 100,000 hours of operational time at 25 degrees Centigrade.

The color temperature is to be 3,000K CCT.

B.4 Power Supply

The Electronic driver must have an expected life of 100,000 hours at a 25°C ambient.

It is to be rated at 240 volts, 60Hz. A driver with multiple input voltages can be supplied as long as it can operate at 240 volts.

B.5 Surge Protection

A surge protector which provides a minimum of 20kV/10kA protection as per IEEE/ANSI C62.41 Category C is to be included. There shall be a visual indicator showing the surge protector is operational.

B.6 Terminal Block

A heavy duty terminal block shall be provided which will accept wire sizes up to #6 A.W.G. The terminal block shall be compatible with either aluminum or copper wire.

B.7 Mounting

Mast arm mount is adjustable for arms from 1-1/4" to 2" (1-5/8" to 2-3/8" O.D.) diameter. Provide a bolt clamping mechanism with 3G vibration rating per ANSI C136.

B.8 Hardware

All nuts, bolts, latches, etc. furnished with the luminaire shall be fabricated from stainless steel or non-ferrous materials.

B.9 Photo Control

No photocell is needed, but a shorting cap and a 7-pins socket are required.

B.10 Warranty

The contractor and/or the manufacturer warrants that goods sold hereunder will be merchantable quality, will conform to applicable specifications, drawings designs, samples or descriptions, will be free from defects in material and workmanship and will be fit for the particular purpose intended by City of Milwaukee. This warranty will remain in effect for ten (10) years from date of acceptance. Under this provision, the contractor and/or manufacturer agrees to repair or replace within a reasonable time, any part, feature or product found to be defective during the warranty period at no cost to the City.

C Construction

Install lighting fixture on the mounting bracket on the pole according to manufacturer standards. Provisions for inserting 2#12UF with ground riser cable between the fixture and cable connecting point at the transformer base/ hand hole shall be included per applicable details within design set.

Contractor is responsible to scan the QR code of each fixture with the Signify app at point of installation. Details will be provided by Street Lighting field office.

D Measurement

The department will measure Luminaire Utility 1LED2 as each individual 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.0060.374	Luminaire Utility 1LED2	EACH

Payment is full compensation for furnishing and installing luminaires, inserting ground riser cable, and scanning QR codes.

77. Luminaire Utility 2LED2, Item SPV.0060.375.

A Description

This special provision describes providing LED luminaires according to City of Milwaukee Electrical methods, the National Electrical Code standards, standard spec 651, and as hereinafter provided.

B Materials

B.1 General

Furnish luminaires conforming to street lighting details and plans.

All features below shall be incorporated into the equipment and all items shall be furnished and installed into a complete unit ready for operation.

Factory set input power (watt): 90 ± 5%
# of LED: ≥ 40
NEMA label: 2LED2
Maximum dimension: 22 3/4” D x 4 3/8” H x 11” W
EPA (sq. ft): ≤ 0.53
Weight: ≤ 12.5 lbs
BUG rating: B3-U0-G3
Minimum efficacy (lumen/watt): 117
Minimum delivered lumens: 10,618

Luminaire shall be designed so it can efficiently produce uniform illumination in accordance with I.E.S. Type II light distribution according to the lighting plan.

B.2 Housings

The housing and door shall be rugged, high quality, cast aluminum for maximum strength, durability and lasting beauty. All castings shall be free from pits, blowholes, or other irregularities. All edges are to be free from burrs.

The housing shall have an integral leveling pad or other suitable means for quick, easy and proper positioning of the luminaire. A bubble level is to be located inside the electrical compartment for easy leveling at installation.

The door shall be hinged and easily opened for routine maintenance. All component parts shall be easily accessible with the lower housing opened. Tool-less entry is required.

Hinges shall be so constructed and designed to accurately position the door and assure a positive locking with the housing. The hinges shall be provided with a safety catch to prevent the accidental disengagement of the door during servicing.

The entire housing shall be polyester powder-coated for durability and corrosion resistance (4 mils/100 microns) with a ±1 mils/24 microns of tolerance. The surface treatment shall yield >3000 hours of salt spray resistant finish per ASTM B117 standard. The housing shall have: 1) discoloration resistant finish in accordance with ASTM D2244 standard, 2) luster retention that meets ASTM D523 standard, 3) humidity proof that meets ASTM D2247 standard.

The surface treatment shall yield >3000 hours of salt spray resistant finish that meets testing performed per ASTM B117 standard.

The luminaire shall be grey in color unless otherwise specified.

There shall be a NEMA label affixed to the door of the luminaire that is clearly visible at a 30-foot height. In addition, the luminaire complete model number and manufacturing date shall be indicated inside the housing.

Max

B.3 LED/Optical Assembly

There shall be a minimum 40 LED on the optical assembly system. The refractor shall be UV stabilized optical grade polymer refractor lenses for optimal lighting distribution and superior lighting uniformity over time. The system is to be NEMA IP66 rated for dust and water resistant. The luminaries shall meet LM-63, LM-79 and TM-15(IESNA) standard for photometric performance.

The L_{70} for the luminaries, per IESNA TM-21, must be ≥ 60,000 hours. The Lumen maintenance % is to be >97.5% at 60,000 hours of operation.

The color temperature is to be 3,000K CCT.

B.4 Thermal Management

The fixture shall be designed and built with passive cooling mechanism (no cooling device with moving parts) by natural vertical convection air flow. The fixture shall be designed and built with openings to enable natural cleaning and removal of dirt and debris, and resistant to animal trapped or building nest on the luminaire. The luminaire shall be rated for operation in ambient temperature of -40°F to 104°F.

B.5 Dimmer and Field Adjustable Output Selector

For Type II luminaire, a single type of luminaire (one for each type of light distribution) shall satisfy the different wattage requirement. The luminaire's input power should be factory set as shown on Table A.

The luminaire shall be supplied with dimmable driver and field adjustable output selector which enable the luminaire to provide 10,618 lumens to 15,160 lumens with efficacy >110. The field adjustable wattage chart shall be attached on the inside of the door opening.

B.5 Power Supply

The electronic driver must have an expected lifespan of ≥60,000 hours at 25°C ambient. The supplied driver shall be auto adjusting type with universal voltage input from 120 Volts to 277 Volts @ 60Hz.

B.6 Surge Protection

A surge protector which provides a minimum of 20kV/10kA protection as per IEEE/ANSI C62.41 Category C and ANSI C136.2-2015 is to be included. There shall be a visual indicator showing the surge protector is operational.

B.7 Terminal Block

A heavy duty terminal block shall be provided which will accept wire sizes up to #6 A.W.G. The terminal block shall be compatible with either aluminum or copper wire.

B.8 Mounting

Mast arm mount is adjustable for arms from 1-1/4” to 2” (1-5/8” to 2-3/8” O.D.) diameter with option to mount the fixture at ±5° in 2.5° step. Provide a 2-bolt clamping mechanism with 3G vibration rating per ANSI C136.31. A built-in bird guard shall be standard with the fixture.

B.8 Hardware

All nuts, bolts, latches, etc. furnished with the luminaire shall be fabricated from stainless steel or non-ferrous materials.

B.9 Control

The luminaire is to be equipped with 7 pins receptacle and shorting cap.

B.10 Smart Inventory and Maintenance Design

Each luminaire shall be uniquely identifiable by having a QR Code on each luminaire for app scanning to access the luminaire specification and configuration, in addition to the geographical location at point of installation. The app shall be free of charge to purchaser for the lifetime of the luminaire.

B.11 Energy Efficiency

The luminaire is to be DLC certified for energy efficiency at time of purchase.

B.12 Accessories

The luminaire shall be designed to seamlessly equip with optional light shield for further lighting control. The optional light shield for the luminaire shall be of standard product from the same manufacturer and readily available.

B.13 Sensor Ready

The luminaire is to be equipped with D4i driver and Zhaga socket in protective cap for future sensor installation.

C Construction

Install lighting fixture on the mounting bracket on the pole according to manufacturer standards. Provisions for inserting 2#12UF with ground riser cable between the fixture and cable connecting point at the transformer base/ hand hole shall be included per applicable details within design set.

Scan the QR code of each fixture with the Signify app at point of installation. Details will be provided by Street Lighting field office.

D Measurement

The department will measure Luminaire Utility 2LED2 as each individual 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.0060.375	Luminaire Utility 2LED2	EACH

Payment is full compensation for furnishing and installing luminaires, inserting ground riser cable, and scanning QR codes.

78. Concrete Base Type 2 (Milwaukee), Item SPV.0060.388; Concrete Base Type 5 (Milwaukee), Item SPV.0060.389.

A Description

This section describes constructing concrete bases for traffic signals, and street lights.

B Materials

Furnish bar steel reinforcement conforming to 505.2.4.

Furnish concrete conforming to 531.2.1.

Furnish anchor rods conforming to ASTM F1554 grade 105 and Supplementary Specification S4, ASTM A563 nuts, and ASTM F436 washers for type 2 traffic signal bases; for type 5 street light base. Hot dip

galvanize according to ASTM F2329 or mechanically galvanize according to ASTM B695 Class 55; ensure that the same galvanization process is used for all parts of the assembly.

Use schedule 40 PVC electrical conduit conforming to 652.

Use ground rods meeting the requirement of UL-467. Ground rods shall be made of copper-clad steel with a nominal diameter of 5/8 inches. Ground rod sections shall be a minimum of eight feet in length and manufactured for the sole purpose of providing electrical grounding.

Use 7 strand #4 AWG copper insulated (green) conductor or minimum 7 strand #6 AWG copper insulated (green) conductor for electrical protection ground. The grounding conductor shall be continuous without splices from the grounding electrode through the handhole grounding clip/lug of the pole and of minimum length to make connection.

Mechanical bonding – Provide connection to the grounding electrode using G5 acorn ground clamp. Apply an anti-oxidant compound to all mechanical connections.

C Construction

Construct drilled shaft concrete bases conforming to 531.3.

Provide a ground rod assembly driven into the earth at a single point (single point ground).

Licensed electrician to install the primary ground rod assembly in an electrical pull box so that the top four inches are accessible for inspection, resistance testing, and maintenance.

D Measurement

The department will measure the Concrete Base bid items as each individual base 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.0060.388	Concrete Base Type 2 (Milwaukee)	EACH
SPV.0060.389	Concrete Base Type 5 (Milwaukee)	EACH

Payment for the Bases bid items is full compensation for providing concrete bases; for embedded conduit and electrical components; for anchor templates, rods, nuts, and washers; for bar steel reinforcement; equipment grounding rod and conductor; and for excavating, drilling, and backfilling; and for providing and removing casing.

79. Transformer Bases Breakaway 11 ½-Inch Bolt Circle Black, Item SPV.0060.399.

Add the following to standard spec 657.2.6:

Transformer Bases Breakaway 11 ½-Inch Bolt Circle Black shall have a black exterior finish, factory applied and powder-coated.

80. 4’ Diameter Manhole Type CUC, Item SPV.0060.401.

A Description

The work under this special provision consists of a 4’-0” round precast concrete manhole for the City of Milwaukee Underground Conduit Section at locations shown in the plans, in accordance with sections 301, 611 and 501 of the standard specifications, and as hereinafter provided.

B Materials

Furnish and install a 4’ diameter precast concrete manhole. Concrete and steel reinforcement shall conform to ASTM specification: C478 (latest edition), except that the two cages of circumferential reinforcement in all vertical walls shall consist of lines of #6 steel wire spaced 3” horizontally and lines of #10 steel wire spaced 8” vertically both located in the center of the wall.

Cast two lifting inserts for 1-1/2” diameter lifting eyes in the wall of the base and all other riser sections except the top cap section.

Cast up to four 7/8” diameter galvanized steel 1-11/16” pulling-in eyes in the wall of the base section directly across from each duct entrance.

Cast four 5/8” diameter plastic threaded cable rack bolt inserts in the wall of the riser section.

Supply and lay a continuous circumferential Butyl Rubber gasket on the wall joint of the base and riser section when manhole is being assembled at job site.

The number of pulling-in eyes and/or cable rack bolt inserts may vary. Additionally, the size, location, shape and number of duct entrances and/or knock-out area may vary.

The City will supply a frame and lid for the manhole. Contractor shall contact Mr. Ricardo Lopez, Inventory Clerk at (414) 286-6123 prior to obtaining the frame and lid from the DPW Headquarters at 3850 N. 35th St. Contractor must have the “Casting Requisition Form” which will be supplied by the City.

To obtain the “Casting Requisition Form” and/or any questions on materials, contact Ms. Karen Rogney at (414) 286-3243.

C Construction

4’ Diameter Manholes Type CUC shall be installed in accordance with subsection 611.3.

Install the top of the roof deck at a standard depth of 18” below finished grade where possible. A minimum depth of 12” from finished grade to the top of the roof deck must be maintained.

Install manhole cover to proposed grade using concrete rings and/or bricks. Completely underpin entire flange area of manhole frame with mortar, bricks and/or concrete rings. Remove wedges/shims. Fill voids with grout. Do not back plaster inside walls.

Notify Mr. Lamar Jones at (414) 708-3009 or lamjones@milwaukee.gov a minimum of 3 business days for inspection and acceptance of the work performed. The contractor will receive no payment until the above work is approved by Communications Underground Conduit

D Measurement

The department will measure 4’ Diameter Manhole Type CUC by each individual manhole acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.401	4’ Diameter Manhole Type CUC	EACH

Payment is full compensation for all excavation work and disposal of material; for adjusting manhole frame to final grade, for furnishing and installing all materials, including precast manhole, conduit, conduit fittings, end bells, bricks, and coarse aggregate, bedding, concrete forms, concrete placement, appurtenances, and backfilling.

81. 4’ Diameter Doghouse Manhole Type CUC, Item SPV.0060.410.

A Description

The work under this item consists of a 4’-0” diameter precast concrete “doghouse” manhole for the City of Milwaukee Underground Conduit Section at locations shown in the plans, in accordance with sections 301, 611 and 501 of the standard specifications, and as hereinafter provided. This work includes providing and placing PVC pipe and associated fittings, cement encasement, and other appurtenances to extend existing conduit as required to provide a complete and fully functional communications manhole unit.

B Materials

B.1 Manhole

Furnish and install a 4’ diameter precast concrete “doghouse” manhole. Concrete and steel reinforcement shall conform to ASTM specification: C478 (latest edition), except that the single cage of circumferential reinforcement in all vertical walls shall consist of lines of #6 steel wire spaced 3” horizontally and lines of #10 steel wire spaced 8” vertically both located in the center of the wall, and #6 hoop rebar centered in the wall 3” above the window knock-outs.

Two lifting inserts for 1-1/2” diameter lifting eyes shall be cast in the wall of the base and all other riser sections except the top cap section.

Up to four 7/8” diameter galvanized steel 1-11/16” pulling-in eyes shall be cast in the wall of the base section directly across from each duct entrance.

Four 5/8” diameter plastic threaded cable rack bolt inserts shall be cast in the wall of the riser section.

A continuous circumferential Butyl Rubber gasket shall be supplied, to be laid on the wall joint of the base and riser section when manhole is being assembled at job site.

The number of pulling-in eyes and/or cable rack bolt inserts may vary. Additionally, the size, location, shape and number of duct entrances and/or knock-out area may vary. Unit price of manhole shall not vary for number of openings, pulling-in eyes and/or rack bolt inserts.

Field verify window depth and locations prior to ordering manhole.

The City will supply a frame and lid for the manhole. Contractor shall contact Mr. Ricardo Lopez, Inventory Clerk at (414) 286-6123 prior to obtaining the frame and lid from the DPW Headquarters at 3850 N. 35th St. Contractor must have the “Casting Requisition Form” which shall be supplied by the City.

To obtain the “Casting Requisition Form” and/or any questions on materials, contact Ms. Karen Rogney at (414) 286-3243.

B.2 High-Density Polyethylene (HDPE) Conduit

Furnish orange color smooth, high-density polyethylene (HDPE), solid-wall conduit rated for outdoor and underground use conforming to ASTM D2447 / F2160 / NEMA TC-7. Use the size the plans show with a size-to-diameter ratio (Schedule 80).

Permanent marking with sequential feet, material, production info, relevant standards and “City of Milwaukee” along the duct shall be included.

The Continuous Duct inside wall shall be co-extruded with Silicore ULF (ultra-low friction) to create a permanent interior lining with low coefficient of friction.

The construction and testing of the conduit must comply with applicable EIA/TIA, ANSI, and ASTM standards.

Furnish bends, adapters, couplings, fittings, and other materials used to install conduits. They are to meet duct manufacturer’s installation recommendations.

B. 3 Concrete

The type of concrete mix to be used to encase the ducts will be:

Type IL Cement	280 lbs
Fly Ash	100 lbs
Sharp Torpedo Sand	3100 lbs
Water	35 gals
Chryso Air 260 or approved equal	2.0 ozs
Chryso Plast 209 or approved equal	7.0 ozs
Air	5%

Mix the materials to provide an approximate 3 inch slump

B.4 Slurry Backfill

Aggregate slurry backfill consists of No. 1 concrete aggregate Class ‘C’ concrete mix with the cement deleted.

Fly Ash (Class C)	75 lbs.
Concrete Sand (Damp)	1830 lbs.
No. 1 Concrete Aggregate	1830 lbs.

Mix with water to inundate the aggregate sufficiently to provide an approximate 3 inch slump. Deposit the mix directly from a concrete transit mix truck.

For any questions on materials, contact Ms. Karen Rogney at (414) 286-3243.

C Construction

C.1 Conduit Alterations

Excavate to expose existing conduit. Break back by hand sections of cement encased conduit to facilitate excavation for the new proposed structure. Hand chip concrete away for the existing pipes. Carefully remove pipes from around the cables. Hand chip enough concrete away from the pipes to allow for the coupling of split ducts on to the ends of the pipes. Protect exposed pipe ends and existing cables from damage.

C.2 Manhole

Manhole Type CUC “Doghouse” shall be installed in accordance with subsection 611.3. The bottom section of the manhole shall be installed while avoiding damage to the live active cables. The excavation may need to be widened to slide the bottom under the existing cables. After the bottom section of the manhole has been set, the existing cables need to be placed within the window openings, splice cases and/or coils placed back into the manhole.

Exercise extreme care in the handling of working cables within the excavation. When cables need to be moved, particularly lead sheathed cables, move cables slowly and gradually. Avoid sharp kinks that may damage the inner core of the cables and the sheath.

Complete the “doghouse” manhole installation without any damage or service disruption to the existing cables.

Install 4’ Diameter “Doghouse” Manholes Type CUC in accordance with subsection 611.3.

Install the top of the roof deck at a standard depth of 18” below finished grade where possible. A minimum depth of 12” from finished grade to the top of the roof deck must be maintained.

Install manhole cover to proposed grade using concrete rings and/or bricks. Completely underpin entire flange area of manhole frame with mortar, bricks and/or concrete rings. Remove wedges/shims. Fill voids with grout. Do not back plaster inside walls.

C.3 Placing Duct

All ducts shall be inspected before placing to see that the bores are clean and free from mud, sand, etc. Only ducts with a smooth bore, free from burrs, rough projections etc. shall be used. Where burrs or other rough areas likely to damage cable are found in the duct, they shall be smoothed off by rasping or scraping.

All existing ducts shall be extended into the new manhole structure unless otherwise noted on the plan. Split HDPE duct should be used on ducts containing cables. The split duct shall be installed per manufactures recommendations using tape and reinforced with plastic straps to produce a rigid, stable unit.

All ducts shall terminate on the inside wall of the manhole. A standard end bell fitting shall be installed on all duct access points into the manhole prior to duct encasement and sealing manhole window.

Where trace wires are present, reconnect and extend trace with #10 copper wire extended two feet past the inside wall of the manhole.

C.4 Concreting

Begin concreting after conduit has been laid and the trench and duct have been inspected. The minimum concrete encasement of the ducts is three (3) inches on the top, two (2) inches on the sides, and three (3) inches on the bottom. After placing, the concrete shall be puddled with a splicing bar or similar tool so that complete duct encasement is accomplished. Wood braces used to keep the conduit from floating shall be removed before the concrete sets completely and the resultant encasement voids filled with concrete.

Allow the concrete encasement to set for a minimum of 6 hours before backfilling commences.

C.5 Slurry Backfill

Commence backfilling immediately after the duct has been inspected, approved and has set to withstand the load.

An aggregate slurry as specified shall be used to backfill all concrete encased conduit. The trench shall be slurry backfilled to the proposed or existing subgrade. The mix shall be deposited in the trench directly from a concrete transit mix truck.

D Measurement

The department will measure 4’ Diameter Doghouse Manhole Type CUC as each individual manhole acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.410	4’ Diameter Doghouse Manhole Type CUC	EACH

Payment is full compensation for all excavation work and disposal of material; for adjusting manhole frame to final grade, for furnishing and installing all materials, including precast manhole, conduit, conduit fittings, end bells, bricks, and coarse aggregate, bedding, concrete forms, concrete placement, appurtenances, and backfilling.

82. 4’ Diameter Doghouse Manhole Type CUC Installed Over Conduit, Item SPV.0060.411.

A Description

The work under this item consists of a 4’-0” diameter precast concrete doghouse manhole for the City of Milwaukee Underground Conduit Section at locations shown in the plans, in accordance with sections 301, 611 and 501 of the standard specifications, and as hereinafter provided. This work includes providing and placing HDPE pipe and associated fittings, cement encasement, and other appurtenances to extend existing conduit as required to provide a complete and fully functional communications or electrical service manhole unit.

B Materials

B.1 Manhole

Furnish and install a 4’ diameter precast concrete Doghouse manhole. Concrete and steel reinforcement shall conform to ASTM specification: C478 (latest edition), except that the single cage of circumferential reinforcement in all vertical walls shall consist of lines of #6 steel wire spaced 3” horizontally and lines of #10 steel wire spaced 8” vertically both located in the center of the wall, and #6 hoop rebar centered in the wall 3” above the window knock-outs.

Two lifting inserts for 1-1/2” diameter lifting eyes shall be cast in the wall of the base and all other riser sections except the top cap section.

Up to four 7/8” diameter galvanized steel 1-11/16” pulling-in eyes shall be cast in the wall of the base section directly across from each duct entrance.

Four 5/8” diameter plastic threaded cable rack bolt inserts shall be cast in the wall of the riser section.

A continuous circumferential Butyl Rubber gasket shall be supplied, to be laid on the wall joint of the base and riser section when manhole is being assembled at job site.

The number of pulling-in eyes and/or cable rack bolt inserts may vary. Additionally, the size, location, shape and number of duct entrances and/or knock-out area may vary.

Field verify window depth and locations prior to ordering manhole.

The City will supply a frame and lid for the manhole. Contractor shall contact Mr. Ricardo Lopez, Inventory Clerk at (414) 286-6123 prior to obtaining the frame and lid from the DPW Headquarters at 3850 N. 35th St. Contractor must have the “Casting Requisition Form” which shall be supplied by the City.

B.2 High-Density Polyethylene (HDPE) Conduit

Furnish orange color smooth, high-density polyethylene (HDPE), solid-wall conduit rated for outdoor and underground use conforming to ASTM D2447 / F2160 / NEMA TC-7. Use the size the plans show with a size-to-diameter ratio (Schedule 40).

Permanent marking with sequential feet, material, production info, relevant standards and “City of Milwaukee” along the duct shall be included.

The Continuous Duct inside wall shall be co-extruded with Silicore ULF (ultra-low friction) to create a permanent interior lining with low coefficient of friction.

The construction and testing of the conduit must comply with applicable EIA/TIA, ANSI, and ASTM standards.

Furnish bends, adapters, couplings, fittings, and other materials used to install conduits. They are to meet duct manufacturer's installation recommendations.

B. 3 Concrete

The type of concrete mix to be used to encase the ducts will be:

Type IL Cement	280 lbs
Fly Ash	100 lbs
Sharp Torpedo Sand	3100 lbs
Water	35 gals
Chryso Air 260 or approved equal	2.0 ozs
Chryso Plast 209 or approved equal	7.0 ozs
Air	5%

Mix the materials to provide an approximate 3-inch slump

B.4 Slurry Backfill

Aggregate slurry backfill consists of No. 1 concrete aggregate Class 'C' concrete mix with the cement deleted.

Fly Ash (Class C)	75 lbs.
Concrete Sand (Damp)	1830 lbs.
No. 1 Concrete Aggregate	1830 lbs.

Mix with water to inundate the aggregate sufficiently to provide an approximate 3 inch slump. Deposit the mix directly from a concrete transit mix truck.

For any questions on materials, contact Ms. Karen Rogney at (414) 286-3243.

C Construction

C.1 Conduit Alterations

Excavate to expose existing conduit. Break back by hand sections of cement encased conduit to facilitate excavation for the new proposed structure. Hand chip concrete away for the existing pipes. Carefully remove pipes from around the cables. Hand chip enough concrete away from the pipes to allow for the coupling of split ducts on to the ends of the pipes. Protect exposed pipe ends and existing cables from damage.

C.2 Manhole

Manhole Type CUC Doghouse manhole shall be installed in accordance with subsection 611.3. The bottom section of the manhole shall be installed while avoiding damage to the live active cables. The excavation may need to be widened to slide the bottom under the existing cables. After the bottom section of the manhole has been set, place the existing cables within the window openings, splice cases and/or coils placed back into the manhole.

Exercise extreme care in the handling of working cables within the excavation. When cables need to be moved, particularly lead sheathed cables, move cables slowly and gradually. Avoid sharp kinks that may damage the inner core of the cables and the sheath.

Complete the Doghouse manhole installation without any damage or service disruption to the existing cables.

Install the top of the roof deck at a standard depth of 18" below finished grade where possible. A minimum depth of 12" from finished grade to the top of the roof deck must be maintained.

Install manhole cover to proposed grade using concrete rings and/or bricks. Completely underpin entire flange area of manhole frame with mortar, bricks and/or concrete rings. Remove wedges/shims. Fill voids with grout. Do not back plaster inside walls.

C.3 Placing Duct

All ducts shall be inspected before placing to see that the bores are clean and free from mud, sand, etc. Only ducts with a smooth bore, free from burrs, rough projections etc. shall be used. Where burrs or other rough areas likely to damage cable are found in the duct, they shall be smoothed off by rasping or scraping.

All existing ducts shall be extended into the new manhole structure unless otherwise noted on the plan. Split HDPE duct shall be used on ducts containing cables. The split duct shall be installed per manufactures recommendations using tape and reinforced with plastic straps to produce a rigid, stable unit.

All ducts shall terminate on the inside wall of the manhole. A standard end bell fitting shall be installed on all duct access points into the manhole.

Where trace wires are present, reconnect and extend trace with #10 copper wire extended two feet past the inside wall of the manhole.

C.4 Concreting

Begin concreting after conduit has been laid and the trench and duct have been inspected. The minimum concrete encasement of the ducts is three (3) inches on the top, two (2) inches on the sides, and three (3) inches on the bottom. After placing, the concrete shall be puddled with a splicing bar or similar tool so that complete duct encasement is accomplished. Wood braces used to keep the conduit from floating shall be removed before the concrete sets completely and the resultant encasement voids filled with concrete.

Allow the concrete encasement to set for a minimum of 6 hours before backfilling is commenced.

C.5 Slurry Backfill

Commence backfilling immediately after the duct has been inspected, approved and has set to withstand the load.

An aggregate slurry as specified shall be used to backfill all concrete encased conduit. The trench shall be slurry backfilled to the proposed or existing subgrade. The mix shall be deposited in the trench directly from a concrete transit mix truck.

Notify Mr. Lamar Jones at (414) 708-3009 or lamjones@milwaukee.gov a minimum of 3 business days for inspection and acceptance of the work performed. The contractor will receive no payment until the above work is approved by Communications Underground Conduit

D Measurement

The department will measure 4’ Diameter Doghouse Manholes Type CUC Installed over Conduit by each individual manhole acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.411	4’ Diameter Doghouse Manhole Type CUC	EACH

Payment is full compensation for all excavation work and disposal of material; for adjusting manhole frame to final grade, for furnishing and installing all materials, including precast manhole, conduit, conduit fittings, end bells, bricks, and coarse aggregate, bedding, concrete forms, concrete placement, appurtenances, and backfilling.

83. 6’ Diameter Doghouse Manhole Type CUC, Item SPV.0060.414.

A Description

The work under this item consists of a 6’-0” diameter precast concrete “doghouse” manhole for the City of Milwaukee Underground Conduit Section at locations shown in the plans, in accordance with sections 301, 611 and 501 of the standard specifications, and as hereinafter provided. This work includes providing and placing PVC pipe and associated fittings, cement encasement, and other appurtenances to extend existing conduit as required to provide a complete and fully functional communications manhole unit.

B Materials

B.1 Manhole

Furnish and install a 6' diameter precast concrete "doghouse" manhole. Concrete and steel reinforcement shall conform to ASTM specification: C478 (latest edition), except that the single cage of circumferential reinforcement in all vertical walls shall consist of lines of #6 steel wire spaced 3" horizontally and lines of #10 steel wire spaced 8" vertically both located in the center of the wall, and #6 hoop rebar centered in the wall 3" above the window knock-outs.

Two lifting inserts for 1-1/2" diameter lifting eyes shall be cast in the wall of the base and all other riser sections except the top cap section.

Up to four 7/8" diameter galvanized steel 1-11/16" pulling-in eyes shall be cast in the wall of the base section directly across from each duct entrance.

Four 5/8" diameter plastic threaded cable rack bolt inserts shall be cast in the wall of the riser section.

A continuous circumferential Butyl Rubber gasket shall be supplied, to be laid on the wall joint of the base and riser section when manhole is being assembled at job site.

The number of pulling-in eyes and/or cable rack bolt inserts may vary. Additionally, the size, location, shape and number of duct entrances and/or knock-out area may vary. Unit price of manhole shall not vary for number of openings, pulling-in eyes and/or rack bolt inserts.

Field verify window depth and locations prior to ordering manhole.

The City will supply a frame and lid for the manhole. Contractor shall contact Mr. Ricardo Lopez, Inventory Clerk at (414) 286-6123 prior to obtaining the frame and lid from the DPW Headquarters at 3850 N. 35th St. Contractor must have the "Casting Requisition Form" which shall be supplied by the City.

B.2 High-Density Polyethylene (HDPE) Conduit

Furnish orange color smooth, high-density polyethylene (HDPE), solid-wall conduit rated for outdoor and underground use conforming to ASTM D2447 / F2160 / NEMA TC-7. Use the size the plans show with a size-to-diameter ratio (Schedule 80).

Permanent marking with sequential feet, material, production info, relevant standards and "City of Milwaukee" along the duct shall be included.

The Continuous Duct inside wall shall be co-extruded with Silicore ULF (ultra-low friction) to create a permanent interior lining with low coefficient of friction.

The construction and testing of the conduit must comply with applicable EIA/TIA, ANSI, and ASTM standards.

Furnish bends, adapters, couplings, fittings, and other materials used to install conduits. They are to meet duct manufacturer's installation recommendations.

B.3 Concrete

The type of concrete mix to be used to encase the ducts will be:

Type IL Cement	280 lbs
Fly Ash	100 lbs
Sharp Torpedo Sand	3100 lbs
Water	35 gals
Chryso Air 260 or approved equal	2.0 ozs
Chryso Plast 209 or approved equal	7.0 ozs
Air	5%

Mix the materials to provide an approximate 3-inch slump

B.4 Slurry Backfill

Aggregate slurry backfill consists of No. 1 concrete aggregate Class 'C' concrete mix with the cement deleted.

Fly Ash (Class C)	75 lbs.
Concrete Sand (Damp)	1830 lbs.
No. 1 Concrete Aggregate	1830 lbs.

Mix with water to inundate the aggregate sufficiently to provide an approximate 3 inch slump. Deposit the mix directly from a concrete transit mix truck.

For any questions regarding materials, contact Ms. Karen Rogney at (414) 286-3243.

C Construction

C.1 Conduit Alterations

Excavate to expose existing conduit. Break back by hand sections of cement encased conduit to facilitate excavation for the new proposed structure. Hand chip concrete away for the existing pipes. Carefully remove pipes from around the cables. Hand chip enough concrete away from the pipes to allow for the coupling of split ducts on to the ends of the pipes. Protect exposed pipe ends and existing cables from damage.

C.2 Manhole

Manhole Type CUC "Doghouse" shall be installed in accordance with subsection 611.3. The bottom section of the manhole shall be installed while avoiding damage to the live active cables. The excavation may need to be widened to slide the bottom under the existing cables. After the bottom section of the manhole has been set, the existing cables need to be placed within the window openings, splice cases and/or coils placed back into the manhole.

Exercise extreme care in the handling of working cables within the excavation. When cables need to be moved, particularly lead sheathed cables, move cables slowly and gradually. Avoid sharp kinks that may damage the inner core of the cables and the sheath.

Complete the "doghouse" manhole installation without any damage or service disruption to the existing cables.

Install 6' Diameter "Doghouse" Manholes Type CUC in accordance with subsection 611.3.

Install the top of the roof deck at a standard depth of 18" below finished grade where possible. A minimum depth of 12" from finished grade to the top of the roof deck must be maintained.

Install manhole cover to proposed grade using concrete rings and/or bricks. Completely underpin entire flange area of manhole frame with mortar, bricks and/or concrete rings. Remove wedges/shims. Fill voids with grout. Do not back plaster inside walls.

C.3 Placing Duct

All ducts shall be inspected before placing them to see that the bores are clean and free from mud, sand, etc. Only ducts with a smooth bore, free from burrs, rough projections etc. shall be used. Where burrs or other rough areas likely to damage cables are found in the duct, they shall be smoothed off by rasping or scraping.

All existing ducts shall be extended into the new manhole structure unless otherwise noted on the plan. Split PVC duct should be used on ducts containing cables. The split duct shall be installed per manufactures recommendations using tape and reinforced with plastic straps to produce a rigid, stable unit.

All ducts shall terminate on the inside wall of the manhole. A standard end bell fitting shall be installed on all duct access points into the manhole.

Where trace wires are present, reconnect and extend trace with #10 copper wire extended two feet past the inside wall of the manhole.

C.4 Concreting

Begin concreting after conduit has been laid and the trench and duct have been inspected. The minimum concrete encasement of the ducts is three (3) inches on the top, two (2) inches on the sides, and three (3) inches on the bottom. After placing, the concrete shall be puddled with a splicing bar or similar tool so that

complete duct encasement is accomplished. Wood braces used to keep the conduit from floating shall be removed before the concrete sets completely and the resultant encasement voids filled with concrete.

Allow the concrete encasement to set for a minimum of 6 hours before backfilling is commenced.

C.5 Slurry Backfill

Commence backfilling immediately after the duct has been inspected, approved and has set to withstand the load.

An aggregate slurry as specified shall be used to backfill all concrete encased conduit. The trench shall be slurry backfilled to the proposed or existing subgrade. The mix shall be deposited in the trench directly from a concrete transit mix truck.

D Measurement

The department will measure 6' Diameter Doghouse Manhole Type CUC as each individual manhole acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.414	6' Diameter Doghouse Manhole Type CUC	EACH

Payment is full compensation for all excavation work and disposal of material; for adjusting manhole frame to final grade, for furnishing and installing all materials, including precast manhole, conduit, conduit fittings, end bells, bricks, and coarse aggregate, bedding, concrete forms, concrete placement, appurtenances, and backfilling.

84. Removing CUC Manhole, Item SPV.0060.420.

A Description

The work under this item describes removing various manholes for the City of Milwaukee Underground Conduit Department at locations shown in the plans, in accordance to section 204. Removal means removal of the existing structure and any necessary conduit alterations required.

B (Vacant)

C Construction

C.1 General Requirements

Remove existing manholes in their entirety prior to placing new manholes. Manholes designated for removal may have live cables inside them. Remove the manhole without damaging existing cables.

C.2 Frame and Cover Removal

Remove the frame and cover on all manholes designated for removal. If the castings are to be salvaged as directed in the plans, exercise caution with frames embedded in concrete so unnecessary damage to the frame does not occur during the process of breaking concrete. Remove all mortar and concrete from the frame. Store salvaged castings at location approved of by the engineer.

C.3 Protection of Cables

Extreme care must be exercised in the handling of working cables in manholes or exposed conduit package areas while removal work is going on. Cables may carry high voltage that may be life threatening.

No cable removed from its racks and spanning the manhole opening is to be permitted to sag appreciably from its own weight across such opening. Provide temporary supports for all cables.

When cables need to be moved, particularly lead sheathed cables, move cables slowly and bend gradually. Avoid sharp kinks that may damage inner core of cables and the sheath.

Cables must be left as stationary as is practicable after the cables have been temporarily relocated. Exercise care if further shifting is required while construction work progresses and if needed, replace the temporary supports.

Guard against damage to the exposed cables by falling objects such as tools, equipment and debris. Avoid stepping on cables. Do not use cables to support any objects during the course of the construction work.

Promptly notify Mr. Tremel Rembert at (414) 286-5970 (work) / (414) 708-0924 (cell) of any visible cable defects discovered at the time the cable is exposed. Report any signs of abrasion, sheath rupture, kinking in the cable or evidence of sheath cracks.

Any damage that occurs as a result of contractor operations shall be repaired at the contractor's expense.

C.4 Removing Existing Structure

After removal of the castings and protecting and supporting the cables, carefully remove the manhole roof, walls, floor and all hardware. No portion of the existing structure is to remain. The increase in the size of the excavation will be determined by the size of the manhole to be reconstructed as indicated in the detail plans. Remove all waste material accumulated by the removal of the existing structure from the work site. No part of this waste material can be used as backfill material.

C.5 Conduit Alterations

Break back by hand sections of cement encased conduit to facilitate excavation for the new proposed structure. Hand chip concrete away for the existing pipes. Carefully remove pipes from around the cables. Hand chip enough concrete away from the pipes to allow for the coupling of split ducts on to the ends of the pipes. Protect exposed pipe ends and existing cables from damage.

D Measurement

The department will measure Removing CUC Manhole by each individual manhole acceptably removed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.420	Removing CUC Manhole	EACH

Payment is full compensation for breaking down and removing structure; conduit alterations; for providing cable protection; for hauling and disposing of materials.

85. Poles Type 15'-6" Black Aluminum Harp Pole and Shroud, Item SPV.0060.821.

A Description

This special provision describes providing black aluminum Harp poles and shrouds as shown on the plans and as hereinafter provided. All work shall be according to standard spec 651.

B Materials

B.1 Pole

Furnish an octafluted aluminum pole assembly as shown on the plans.

The assembly shall be complete with pole, base castings, four (4) anchor bolt sets, and 2-inch hexagonal nut, with a minimum thickness of 5/8". All screws and fasteners shall be stainless steel unless otherwise noted in these specifications or on the attached drawings

Pole should be designed to support a one hundred (100) pound tenon mounted fixture with an EPA of 5. The pole shall meet the latest revision of the AASHTO specifications for these poles as defined in their STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS,LUMINAIRES AND TRAFFIC SIGNALS.

The maximum stress and deflections do not exceed specified performance requirements under full design loading, as well as other certified reports and data which indicate that the poles meet all load requirements.

The entire horizontal and vertical "wind sail" area of the pole assembly subject to wind load including luminaire shall be designed to withstand the AASHTO standard specifications, from above, for wind load requirements for a 90 MPH wind load with gust factor computed per section 3.8.5 and height and exposure factors from table 3-5.

Aluminum used to manufacture the pole shall comply with Buy America and Built in America (baba) requirements as stated in Federal Highway Administration Section 635.410 (b) (1) (ii). A signed and dated letter attesting to the Federal BABA requirement shall be provided.

The pole shaft is either spun or extruded from 6000 series alloy aluminum, it shall be continuous tapered 15'-6" octafluted pole with eight (8) flutes uniformly spaced. The shaft shall have a 2" x 7.5" heat treated to T-6 pipe tenon at the top with the top four (4) inches threaded. A 1 ½ -inch stainless steel nut is to be supplied. The nut is to be a minimum of 5/8" thick. The tenon is to be an integral part of the pole and non-removable.

A nominal 4" x 8" handhole with cover shall be provided (hand hole shall be located min.12" from base plate). An easily accessible grounding lug shall be provided on the back side of the pole opposite of the hand hole. Grounding lug shall be ¼" X20 NC, with non-ferrous nuts and washers.

Each shaft shall be identified with name of the manufacturer and year manufactured. The identification shall be located on the pole, below the hand hole and on the same side as the hand hole. This information shall be permanently attached or stamped into the pole.

The cast aluminum base plate shall be cast from ASTM #356 alloy aluminum; it is to be a minimum of ¾" thick and be 12" by 12". It is to be centered on the pole and welded to it after machining. It is to be machined with slots so that it fits 11" to 12" bolt circles. The slots are to be open on the outside ends of the plate.

The complete assembly is to be heat treated to T-6 after structural welding is completed. The crown cap on top of the pole is a separate piece which slips over the tenon on top of the pole and matches the flute pattern on the pole. It is held in place by the luminaire. The top is to be 7" diameter and flat to allow the harp fixture to set on it and be locked in place.

B.2 Decorative Shroud Base Casting

The standard shall have a detailed decorative cast aluminum base. The casting shall be cast from ASTM #356 Alloy Aluminum, free from pits, blowholes or other irregularities and shall have a smooth surface after heat treated to T6 temper. The base casting shall have long flutes evenly spaced around the body of the casting. The base casting shall be a split assembly for ease of installation and shall be securely held after it is assembled. The decorative base shall have a tapered access door as shown on drawing, which shall be secured to the base using 1/4"-20 NC by 3/4" long 18-8 stainless button head torx T27H tamper-proof screws. The decorative base shall be 60" + 1".

The decorative base assembly shall include a separate two-piece closing ring to effectively provide a fit and finished appearance and closure of gaps between the pole and base.

B.3 Finish

Pole surface is to be prepared to accept a finish powder coat of Tiger dry lacquer or equivalent as follows:

Black Gloss, Polyester powder coat, RAL 9005, Jet Black (1 coat applied electrostatically 8 mils dry film)

The finish shall consist of 1 primer coat (2 mils to 3 mils) using City Specification Number 29-A-4, white lacquer resistant, Esser S-4196 or equal.

The base castings shall have two (2) finish coats applied electrostatically, both interior and exterior, and the color shall be specified upon order and as follows:

Black Gloss, powder coat, RAL 9005, Jet Black (2 coats applied electrostatically 2 mils to 2.5 mils dry film)

B.5 Riser Cable

Pole is to be wired as shown on the plans. A separate riser cable will be required to be installed inside of pole for lighting fixture on the pole. The riser cable shall be 30 feet in length and cut from copper 2#12 UF with ground cable. One wire shall be black, the other shall be white, and the ground can be either bare or green.

C Construction

Install the bolt down Black Aluminum Harp Pole as specified in the plan and details. After razing the pole use normal pole shaft raking techniques to ensure the centerline of shaft appears vertical. After pole is secured to the concrete base install the Decorative Shroud Base around base of pole.

D Measurement

The department will measure Poles Type 15'-6" Black Aluminum Harp Pole and Shroud as each individual pole acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.821	Poles Type 15’-6” Black Aluminum Harp Pole and Shroud	EACH

Payment is full compensation for furnishing and installing the pole, decorative shroud base, riser cables, and all connections and hardware.

86. Luminaire Historic Black Milwaukee Harp LED Screw-In Lamp, Item SPV.0060.865.

A Description

This special provision describes furnishing and installation of the following material as shown in plans and according to the following.

B Materials

Furnish Holophane MHNB20Kv2B4-AG-S equipped with Keystone KT-LED45HUID-EX39-830D LED lamp, or Halco HID45-CS-EX39-LED screw in bulb.

TECHNICAL REQUIREMENTS: All features listed below shall be incorporated in the design of the Milwaukee Harp. All listed items shall be furnished and installed into a complete unit ready for installation and operation and satisfying all electrical codes and industrial standards for outdoor luminaires. All parts shall be interchangeable between luminaires of different manufactures.

HOUSING: The Milwaukee Harp’s housing and components shall be cast from ASTM #356T6 or 319 aluminum. All castings shall be free from pits, blowholes, or other irregularities. All surfaces shall be smooth with edges free of flashing burrs and imperfections. Manufacturer's identification or logo will not be permitted on the exterior of the housing.

REFLECTOR: The reflector shall be aluminum not less than 0.046" in thickness, and of such uniform thickness and strength to protect against dents or deformations. The entire surface of the reflector shall have a minimum of an Alzak finish to provide a permanent and efficient reflecting surface, which may be easily cleaned and maintained. The reflector is to be mounted in such a manner to allow its removal without removal of mounting hardware. The reflector shall not extend beyond the frame of the luminaire in such a manner that it interferes with the proper operation of the refractor hinge assembly.

REFRACTOR: The refractor is to be manufactured from thermal resistant borosilicate glass in a teardrop shape and size which is similar to original Milwaukee Harp refractors. It shall not extend beyond the frame of the luminaire in such a manner that it interferes with the proper operation of the refractor hinge assembly.

LIGHTING DISTRIBUTION: The reflector/refractor combination shall be available in A.S.A.- IES Type IV distribution patterns.

MOUNTING: The Harp Luminaire shall accommodate a tenon with 1½” standard pipe thread with a hex locking nut for mounting to pole. The hex nut and washer are to be supplied for each unit as part of the bid price.

GASKETING: A durable gasket, made from non-deteriorating, sunlight resistant 1/8 inch thick rubber or neoprene, shall be installed where the lantern housing and the harp arms mate.

BALLAST: There will be no ballast or ignitor in the harp fixture.

SURGE PROTECTOR: The luminaire is to be factory wired with a surge protector Littelfuse LSP10277S-LSP10 in series on the hot and neutral between the input power and the mogul socket in order to protect the LED lamp. The surge protector shall be secured inside the harp fixture, easily accessible without causing any interference with the wiring.

HARDWARE: All clips, springs, blots, etc. which are required to assemble the Harp luminaire shall be made of stainless steel, brass or aluminum. This requirement includes the hinge pin. There shall be no ferrous materials used.

SOCKET: The Mogul socket shall be constructed from rugged, high grade porcelain, rated at not less than 600 volts and be able to withstand the voltage stresses generated by the starting device. It shall have lamp grips to hold the lamp securely. The center contact shall be spring loaded for positive electrical contact. The socket shall be located so the lamp’s light center is at the focal point of the reflector/refractor combination.

HINGE AND LATCH ASSEMBLY: The hinge assembly shall not be an integral part of the main housing casting. It shall be a replaceable part attached to the main housing casting with hardware. The hinge assembly shall be consistent from unit to unit. The latch assembly must allow release without tools. All materials shall be aluminum.

FINISH: The finish shall consist of one primer coat (2 to 3 mils) X-I-M Flash Bond 400 White or equal and two prime finish coats, applied electrostatically with the color specified on the order and as follows:

Black enamel: Gloss, oil, quick dry enamel, RAL 9005, Jet Black (2 coats applied electrostatically 2 to 2.5 mils dry film)

Accent panels: Gloss, oil, quick dry enamel, RAL 1000 Green Beige (2 coats applied electrostatically 2 to 2.5 mils dry film).

The accent panels may also be highlighted with tape colored to the RAL 1000, (Green Beige) specification. The tape must be able to withstand all environmental conditions that could be reasonably be encountered in the typical use of the Harp.

The tape must be fade resistant.

LAMP: The luminaire shall be equipped with Keystone KT-LED45HID-EX39-830D LED or lamp

C Construction

The Milwaukee Harp fixture is set on the pipe tenon that is attached to the top of the pole and is secured to the pole using standard 1-1/2” stainless steel hex head nut. Perform all splices and connections for the operation of fixture.

D Measurement

The department will measure Luminaire Historic Black Milwaukee Harp LED Screw-In Lamp as each individual 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.0060.865	Luminaire Historic Black Milwaukee Harp LED Screw-In Lamp	EACH

Payment is full compensation for the Luminaire Historic Milwaukee Harp, surge protector, LED lamp and all connections needed for complete installation.

87. Luminaire Historic Black Milwaukee Lantern LED 3 Screw-In Lamp, Item SPV.0060.867.

A Description

This special provision describes furnishing and installation of the following material as Milwaukee Lantern shown in plans and according to the following.

B Materials

Furnish Luminaire Historic Milwaukee Lantern LED.

GENERAL APPEARANCE: The Milwaukee Lantern Holophane MLNB20KvB4G shall replicate and conform to the shape and size as shown on plan set.

HOUSING: The Lantern Housing shall be cast from ASTM #319 or #356T6 aluminum alloy. The casting shall be free from pits, blowholes, or other irregularities and shall have smooth surfaces. Manufacturer’s Logo or identification shall not be visible on the exterior of the casting.

REFLECTOR: The reflector shall be aluminum not less than 0.046" in thickness, and of such uniform thickness and strength to protect against dents or deformations. The entire surface of the reflector shall have a minimum of an Alzak finish to provide a permanent and efficient reflecting surface, which may be easily cleaned and maintained. The reflector is to be mounted in such a manner to allow its removal without removal of mounting hardware. The reflector shall not extend beyond the frame of the luminaire in such a manner that it interferes with the proper operation of the refractor hinge assembly.

REFRACTOR: The refractor is to be manufactured from borosilicate glass to provide the most efficient distribution of lighting. The shape and size of the refractor is to be similar to original Milwaukee Lantern

refractors. It shall not extend beyond the frame of the luminaire in such a manner that it interferes with the proper operation of the refractor hinge assembly. Refractor gasket(s) are not to be installed.

SURGE PROTECTOR: The Luminaire is to be wired with a surge protector, Littelfuse LSP10277S-LSP10 in series on the hot and neutral between the input power and the mogul socket in the arm, in order to protect the LED bulb. The surge protector shall be easily accessible without causing wiring interference.

MOUNTING: The Large Milwaukee Lantern is to be pendant mounted using the ball coupling and canopy lock nut. The lock nut used to secure the lantern to the arm is to be provided with the lantern. It is to be made from stainless steel.

ELECTRICAL CONNECTIONS: All electrical connections shall be accessible by removing the reflector only. Electrical components are to be listed by Underwriters Laboratory or other nationally recognized testing organizations.

LEADS: The power leads are to be routed through the top of the luminaire, (through the ball socket) and have a pigtail length of 12 inches minimum. They are to be #16 AWG stranded copper wire with insulation able to withstand the pulses from the starters and all environmental conditions that could be reasonably encountered in the typical use of the Lantern. They will consist of a black wire (line) white wire (neutral) and green wire (ground, connected to the casting). All paths of the leads are to be protected by insulating bushings or other suitable protection per standard or code.

HARDWARE: All clips, springs, bolts, etc. which are required to assemble the luminaire shall be made of stainless steel, brass or aluminum. This requirement includes the hinge pin. There shall be no ferrous materials used.

SOCKET: The Mogul socket shall be constructed from rugged, high grade porcelain, rated at not less than 600 volts and be able to withstand the voltage stresses generated by the starting device. It shall have lamp grips to hold the lamp securely. The center contact shall be spring loaded for positive electrical contact. The socket shall be located so the lamp's light center is at the focal point of the reflector/refractor combination.

HINGE AND LATCH ASSEMBLY: The hinge assembly shall not be an integral part of the main housing casting. It shall be a replaceable part attached to the main housing casting with hardware. The hinge assembly shall be consistent from unit to unit. The latch assembly must allow release without tools. All materials shall be aluminum.

FINISH: The finish shall consist of one primer coat (2 to 3 mils) X-I-M Flash Bond 400 White or equal and two prime finish coats, applied electrostatically with the color specified on the order and as follows:

Black enamel: Gloss, oil, quick dry enamel, RAL 9005, Jet Black (2 coats applied electrostatically 2 to 2.5 mils dry film)

Accent panels: Gloss, oil, quick dry enamel, RAL 1000 Green Beige (2 coats applied electrostatically 2 to 2.5 mils dry film).

The accent panels may also be highlighted with tape colored to the RAL 1000 (Green Beige) specification. The tape must be able to withstand all environmental conditions that could be reasonably be encountered in the typical use of the Harp.

The tape must be fade resistant.

Note: Supplier to submit color sample and specification data for approval and supply one gallon of finish paint and one quart of accent panel paint per 25 luminaires.

LAMP: The luminaire shall be equipped with Keystone KT-LED80HID-EX39-830-D or Halco HID80- CS-EX39-LED screw in bulb.

C Construction

The Lantern 1-1/4" tenon is to be threaded into the bracket and 1-1/4" stainless steel hex head nut installed on pipe tenon, lock nutting the fixture to the bracket. Perform all splices and connections needed for the operation of fixture.

D Measurement

The department will measure Luminaire Historic Black Milwaukee Lantern LED 3 Screw-In Lamp as each individual 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.0060.867	Luminaire Historic Black Milwaukee Lantern LED 3 Screw-In Lamp	EACH

Payment is full compensation Luminaire Historic Milwaukee Lantern LED fixture, surge protector, screw in bulb, and all connections.

88. Fuse System On the Lighting Riser Cable In the Pole, Item SPV.0060.881.

A Description

This section describes materials, general requirements, personnel qualifications, construction methods, and testing requirements used to perform electrical connections/splices required. All work shall be in accordance with the current Wisconsin Standard Specification for Highway and Structure Section 651.

B Materials

Furnish materials conforming to the WSEC, consisting of chapter comm. 16 of the WEC combined with the NEC.

All materials furnished under this contract for street lighting installation are subject to approval by the City of Milwaukee street lighting project engineer. A prototype maybe requested for submittal by the project engineer with a cable sample installed and spliced for approval prior to field installation.

The contractor shall furnish a complete list of materials to be furnished and used for street lighting. Such list shall include names and addresses of manufactures, together with catalog numbers, certificates of compliance, specifications, and other product information requests by the project engineer. The list shall be submitted within ten (10) calendar days of execution of contract. No material shall be incorporated into the lighting system prior to the written approval of the engineer. Approval does not change the intent of the specifications. The contractor shall not substitute or make changes in material without resubmitting for approval

Use either the KLM-5 Bussmann Limitron Fast Acting Fuse housed in 1-Pole Midget Fuse Holder HEB-AA Bussmann 10A 600V with 2A0600 Bussmann insulator fuse boot or else an equal fuse assembly compatible with internal raceway of light unit.

C Construction

C.1 General Requirements

Work under items related to the street lighting system shall conform to the National Electrical Code (NEC), 2020 Edition, or the latest edition adopted by the State of Wisconsin, Wisconsin Department of Commerce Chapter Comm 16 (Electrical) State of Wisconsin electrical code, City of Milwaukee code, and these special provisions and good electrical practices. The contractor shall not take advantage of lack of details in plans or these specifications where to do so would conflict with the applicable code and standards.

C.2 Personnel Qualifications

An electrician holding all appropriate licenses (including City of Milwaukee Licenses) shall supervise all work done referring to the street lighting system. All splices shall be made by an electrician. For the purposes of this contract, an electrician is a person who served a four (4) year apprenticeship and passed state exams.

C.3 Splices

The contractor shall perform water tight connections at pole’s handhole with materials listed or equal on Street Lighting Standard Details 142. Conductor runs shall be continuous between pole locations, and no splicing of conductors outside the pull box will be allowed. The water tight splices shall reside in the pull box and above the wiring coils called for in Street Lighting Standard Details 145. The 2#12UF with ground cable (per luminaire) shall be brought to the pole hand hole where it will be spliced with the riser cable to the light fixture. See luminaire specification for information on the installation of an in-line watertight fuse holder installed in-line with the hot conductor that leads to the luminaire. Install in-line watertight fuse holder at the following accessible location: (Option 1) in pole at the hand hole, (Option 2) in transformer breakaway base, (Option 3) in pull box due to the hand hole having insufficient room or accessibility, or there is no transformer breakaway base.

C.4 In Service Distribution Systems

The contractor shall not make splices to any underground connections or to any existing distribution system. As indicated on plans, underground splices and connections to existing underground circuitry will be completed by City electricians.

C.5 Testing

After the City makes preliminary acceptance of the street lighting system, it shall be monitored by the City of Milwaukee, Street Lighting Electrical Services during a 60-calendar day operational “burn in”. Final acceptance of the lighting system will be based on its meeting standard operational criteria as stated in these specifications. The contractor shall be responsible for all necessary repairs and adjustments to the lighting system to meet standard operational criteria.

D Measurement

The Department will measure this item Fuse System On the Lighting Riser Cable In the Pole as each individual fuse 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.0060.881	Fuse System On the Lighting Riser Cable In the Pole	EACH

Payment is full compensation for furnishing and installing inline fuse holder assemblies and for disposing of surplus material.

89. Concrete Curb & Gutter HES 19-Inch, Item SPV.0090.001; Concrete Curb & Gutter HES 31-Inch, Item SPV.0090.002.

Provide high early strength concrete curb and gutter according to standard spec 501 and 601.

90. Concrete Curb & Gutter 19-Inch Type MCTS, Item SPV.0090.003; Concrete Curb & Gutter 31-Inch Type MCTS, Item SPV.0090.004; Concrete Curb Type D Special, Item SPV.0090.005.

Provide concrete curb and concrete curb and gutter according to standard spec 601 and as shown on the plans.

91. Marking Stop Line Epoxy 24-Inch, Item SPV.0090.006; Marking Crosswalk Epoxy Transverse Line 12-Inch, Item SPV.0090.009; Marking Crosswalk Epoxy Block Style 12-Inch, Item SPV.0090.010.

Provide stop line and crosswalk epoxy pavement markings according to standard spec 646 and as shown on the plans.

92. Electrical Cable Type 3#6 AL, Item SPV.0090.302.

A Description

This special provision describes providing service cable according to standard spec 651, City of Milwaukee electrical methods, the National Electrical Code, and as shown on the plans.

B Materials

Furnish electrical cable Type 3#6 AL ASCR (Aluminum conductor steel reinforced).

Cable shall consist of 3 #6 stranded aluminum wires with 3/64 polyethylene insulation 7 strands 1 #4 bare neutral, 6 strands of Aluminum conductors around a steel messenger, ASCR 6/1.

Voltage shall be 600 volts phase-to-phase or less and at conductor temperatures not to exceed 75°C for polyethylene insulated conductors or 90°C for crosslinked polyethylene (XLP) insulated conductors.

Service drop cable shall meet or exceed the following ASTM specifications:

B-230 Aluminum Wire, 1350-H19 for Electrical Purposes.

B-231 Aluminum Conductors, Concentric-Lay-Stranded.

B-232 Aluminum Conductors, Concentric-Lay-Stranded, Coated Steel Reinforced (ACSR).

B-399 Stranded 6201-T81 Aluminum Alloy Conductors.

B-901 Compressed Round Stranded Aluminum Conductors Using Single Input Wire.

All conductors shall be concentrically stranded and compressed 1350-H19 aluminum.

Insulation shall be either polyethylene (PE) or crosslinked polyethylene (XLP).

Neutral messengers shall be concentrically stranded 6201, AAC, or ACSR. Cable shall meet or exceed all applicable requirements of ANSI/ICEA S-76-474.

C Construction

Install the cable to supply power, usually from a pole-mounted transformer, to the user's service head where connection to the service entrance cable is made. Complete all splices unless otherwise noted on the plans.

D Measurement

The department will measure Electrical Cable Type 3#6 AL 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.0090.302	Electrical Cable Type 3#6 AL	LF

Payment is full compensation for providing the cable; for splicing and making water-tight connections; and for restoration.

93. Electrical Cable Type 2#2/1#4 AL, Item SPV.0090.304.

A Description

This special provision describes providing service cable according to standard spec 651, City of Milwaukee electrical methods, the National Electrical Code, and as shown on the plans.

B Materials

Furnish electrical cable Type 2#2/1#4 AL Triplex ASCR (Aluminum conductor steel reinforced).

Unless otherwise specified, the cable to be furnished shall comply with the test requirements of the Insulated Cable Engineers Association (ICEA) specifications No S-61-402, NEMA WC5, and No S-66-524 NEMA WC7, latest revisions.

Cable shall consist of 2 #2 stranded aluminum wires with 3/64 polyethylene insulation 7 strands 1 #4 bare neutral, 6 strands of Aluminum conductors around a steel messenger, ASCR 6/1.

Voltage shall be 600 volts phase-to-phase or less and at conductor temperatures not to exceed 75°C for polyethylene insulated conductors or 90°C for crosslinked polyethylene (XLP) insulated conductors.

Service drop cable shall meet or exceed the following ASTM specifications:

B-230 Aluminum Wire, 1350-H19 for Electrical Purposes.

B-231 Aluminum Conductors, Concentric-Lay-Stranded.

B-232 Aluminum Conductors, Concentric-Lay-Stranded, Coated Steel Reinforced (ACSR).

B-399 Stranded 6201-T81 Aluminum Alloy Conductors.

B-901 Compressed Round Stranded Aluminum Conductors Using Single Input Wire.

All aluminum conductors shall be concentrically stranded and shall be Class A or Class B 3% compressed 1350-H19 aluminum. Solid conductors shall be H16 temper.

Insulation shall be 600V either black extruded high molecular weight polyethylene (PE) or black extruded crosslinked polyethylene (XLP). Insulation shall be a nominal 45 mils thickness.

Neutral messengers shall be concentrically stranded 6201, AAC, or ACSR. Cable shall meet or exceed all applicable requirements of ANSI/ICEA S-76-474. The direction of lay of the outer layer is right hand.

Before shipment, the ends of all wire and cable shall be carefully sealed to protect the insulation from moisture. Both ends of the wire and cable shall be accessible for testing but shall be covered and protected from injury.

Ten percent of the reels of any one item may be shipped in random length of not less 50% of the specified nominal length. This tolerance is permitted so that the cable manufacturers may avoid brazing together lengths of copper conductor. All conductors shall be free from brazes or splices.

Service drop cable schedule shall be Triplex Service Drop 600 Volt PE or XLP ASCR reduced size neutral messenger.

CITY OF MILW P/N	CODE WORD	SIZE AWG	NO# WIRE	INSUL (INS)	BARE NTRL SIZE AWG	BARE NTRL NO# WIRE	REEL LNG (FT)	WGHT LBS PER 1000' ALUM	WGHT LBS PER 1000' CABLE
3400-032	Cockle 2	7	0.045	4	6/1	1800'	163	227	---
3400-034	Strombus	4	7	0.045	6	6/1	1500'	103	154
3400-036	Voluta 6*	7	0.045	6	6/1	2200'	73	116	---

* ACSR Full Size Neutral Messenger

C Construction

Install the cable to supply power, usually from a pole-mounted transformer, to the user's service head where connection to the service entrance cable is made. Complete all splices unless otherwise noted on the plans.

D Measurement

The department will measure Electrical Cable Type 2#2/1#4 AL Triplex 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.0090.304	Electrical Cable Type 2#2/1#4 AL	LF

Payment is full compensation for providing the cable; for splicing; and for restoration.

94. Electrical Cable Type UF 3#10 AWG with Ground, Item SPV.0090.310.

A Description

This special provision describes providing type UF electrical cable according to current City of Milwaukee electrical methods and the National Electrical Code standards.

B Materials

Furnish type UF cable with ground including the number and size of conductors as the plans show. Use cable conforming to ANSI/UL 493.

C Construction

The cable shall be installed in HDPE, PVC, and Liquidtight Flexible Non-Metallic conduit when indicated on plans. Any turf damage during installation of cable shall be restored (grass, asphalt or concrete) by the contractor, all splices in luminaires and transformer bases, must be completed by the contractor unless otherwise designated on plans. Do not splice directly in underground or conduit. Do not leave wire or cable ends uncovered or submerged in water. If the engineer observes this condition, the engineer may reject the entire length of cable or wire. Make all electrical connections and splices with approved pressure or compression type fittings. Cover tape with a liberal coating of an electrical varnish or sealant

providing flexible protection from oil, moisture, and corrosion. Obtain the engineer's approval of this electrical coating before using. Extend wire for termination 15 inches beyond the pole hand hole.

For all cables entering each pull box/vault, provide enough cable so that approximately 3 feet of cable length will extend beyond the top of the pull box. (See Detail 142). This extra cable is in addition to the amount needed to reach from the entrance conduit raceway end to the opening in the exiting conduit raceway.

Install conductors in continuous lengths without splices from termination to termination. The contractor may splice only at hand-holes in the bases of poles. At locations where no transformer bases exist, splice at the hand-holes in poles.

D Measurement

The department will measure Electrical Cable Type UF 3#10 AWG with Ground 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.0090.310	Electrical Cable Type UF 3#10 AWG with Ground	LF

Payment is full compensation for furnishing and installing cable and disposing of surplus material.

95. Liquidtight Flexible Nonmetallic Conduit 1 ½-Inch, Item SPV.0090.319.

A Description

This special provision describes providing liquidtight flexible nonmetallic conduit according to standard spec 652.

B Materials

Furnish liquidtight, nonmetallic, nonconductive, noncorrosive conduit Type LFNC-B. The conduit shall have a smooth inner surface with integral reinforcement within the conduit wall.

Conduit shall be UL listed for use as indicated in Article 356 of the latest NEC, and for outdoor use and sunlight resistant.

Fittings and adapters shall be of the same manufacturer as the conduit.

C Construction

Install the fittings, adapters, and conduit in conjunction with street lighting. Install per the manufacturer's instructions and as shown on the plans.

D Measurement

The department will measure Liquidtight Flexible Nonmetallic Conduit 1 ½-Inch 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.0090.319	Liquidtight Flexible Nonmetallic Conduit 1 ½-Inch	LF

Payment is full compensation for furnishing and installing the conduit, including the connectors.

96. Electrical Cable Type 4#2/1#8 XLP, Item SPV.0090.324.

A Description

This special provision describes furnishing and installing service cable in accordance with current City of Milwaukee Electrical methods and National Electrical Code standards. The service cable shall consist of four (5) cross-linked polyethylene covered, stranded, copper conductors. All work shall be in accordance with Wisconsin DOT Standard Specifications section 651.

B Materials

B.1 Cable

Unless otherwise specified, the cable to be furnished shall comply with the manufacture and test requirements of the Insulated Cable Engineers Association (ICEA) Specification No. S-61-402, NEMA WC5, latest revision.

B.2 Conductors

The conductors shall be of soft round annealed uncoated stranded copper conductor per ASTM B-3, ASTM B-8, and UL Standard UL-44. Conductors No. 8 A.W.G. or larger shall be stranded. Conductors smaller than No. 8 A.W.G. shall be solid unless otherwise specified. Stranding must meet the requirements of ASTM B8, Class B.

B.3 Insulation

B.3.1 Voltage

The insulation for cable rated 600V shall be cross XLPE thermosetting chemically crosslinked polyethylene insulation in accordance with industry standard ICEA Pub. No. S-95-658/Nema WC-70 (2009), latest revision, and shall be a nominal 45 mils. thickness. Insulation shall meet the ANSI/ASTM D2220-74 (latest revision) accelerated water absorption requirements and -30°C (-22°F) cold bend test with a separator applied between the stranded conductor and insulation to facilitate cable stripping. The outside diameter of the insulating covering must be circular and extruded concentrically over the conductor.

B.3.2 Nominal Thickness

The nominal insulation thickness around each individual conductor shall be not less than 90% of the thickness specified in the schedule.

B.3.3 Color Code

The insulation compound which covers each conductor shall be color coded in conformance with the N.E.M.A. Color Code Standard, unless otherwise specified; however, printed color designations as in I.3.2 or I.3.3. will not be acceptable under this specification (see schedule). Individual conductor insulation compound colors will be Black, Red, White, Gray and Green.

B.4 Marking

Identification for each conductor must be provided by colors in accordance with I.M.S.A. Standards. The outer insulation must be marked with the following information at a minimum: conductor size (AWG), 600V, XLPE, USE-2, manufacturer's name, date of manufacture. All markings must be a minimum of one-eighth inch (1/8") in height. Marking shall be at approximately two (2) foot intervals. A sequential footage marking must be located on the opposite side of the jacket. All marking must be perfectly legible with permanent white ink.

B.5 Round Cable

This cable shall consist of stranded, uncoated, conductors each concentrically encased with a cross linked polyethylene USE-2 rubber insulation.

Each length of the individual insulated conductor and completed cable shall comply with all requirements of I.C.E.A. Standards S-61-402. Sampling and Test Methods shall be in accordance with Part 6. A certified report of the tests made on the cable to show compliance with this specification may be required prior to shipment. If requested, a sample of the cable covered by the report shall also be submitted.

POWER, CABLE SCHEDULE FOR SPECIFICATION

	4#2/1#8	
Size of Conductor	#2	#8
Number of Conductors	4	1
Number of Wires in Conductor	7	7
Type of Insulation	4 Cross-Linked Polyethylene (XLPE)	Cross-Linked Polyethylene (XLPE)
Insulation Thickness	60 mils	60 mils
Insulation Voltage Rating	600 volt	600 volt
Insulation Color Code	1-white 1-black 1-red 1-gray	1-green
Non-Hydroscopic Fill	None	
Jacket Thickness	None	

All conductors shall be uncoated annealed soft copper.

C Construction

The cable shall be installed in HDPE, PVC, and Liquidtight Flexible Non-Metallic conduit when indicated on plans. Any turf damage during installation of cable shall be restored (grass, asphalt or concrete) by the contractor, All splices in luminaires and transformer bases, must be completed by the contractor unless otherwise designated on plans. Do not splice directly in underground or conduit. Do not leave wire or cable ends uncovered or submerged in water. If the engineer observes this condition, the engineer may reject the entire length of cable or wire. Make all electrical connections and splices with approved pressure or compression type fittings. Cover tape with a liberal coating of an electrical varnish or sealant providing flexible protection from oil, moisture, and corrosion. Obtain the engineer's approval of this electrical coating before using. Extend wire for termination 15 inches beyond the pole hand hole.

For all cables entering each pull box/vault, provide an extra loop, approximately 3 feet in length, to remain in each pull box/vault. This loop of cable is in addition to the amount needed to reach from the entrance conduit raceway end to the opening in the exiting conduit raceway.

When there is more than one circuit, bundle the circuit conductors with nylon cable ties or engineer approved electrical tape at access points.

At each pull box, identify the line side of each circuit with an attached waterproof and tear resistant cable tag using a fade-resistant waterproof black marker pen and provide the following Info:

Circuit ID: (*Cir.WD-E*)
Line Side coming from unit street light unit is on: (*Street Name*)
Side of street light unit is on: (*N,S,E,or W*)
Number of street lighting units from nearest crossing street: (*1,2,3,4,5*)
Direction from the nearest crossing street: (*N,S,E,or W*)
Name of the nearest crossing street: (*Street Name*)

Example of Tag Info:

Cir.WD-E,

Line Side from: *W. Canal St. / N. / 1 / W. /of Potawatomi Cir.*

Install conductors in continuous lengths without splices from termination to termination. The contractor may splice only at hand-holes in the bases of poles. At locations where no transformer bases exist, splice at the hand-holes in poles.

D Measurement

The department will measure Electrical Cable 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.0090.324	Electrical Cable Type 4#2/1#8 XLP	LF

Payment is full compensation for furnishing and installing electrical cable and for disposing of surplus material.

97. Conduit 3-Inch HDPE Schedule 40, Item SPV.0090.325; Conduit 3-Inch HDPE Schedule 80, Item SPV.0090.326.

A Description

This special provision describes providing conduit 3-inch-high density polyethylene HDPE schedule 40 and schedule 80 for lighting, along with other electrical work.

B Materials

Furnish electrical conduit and fittings with a UL or NRTL label on each piece installed.

Furnish RED color smooth, high-density polyethylene (HDPE), solid-wall conduit rated for outdoor and underground use conforming to ASTM D2447 / F2160 / NEMA TC-7. Use the size the plans show with a size-to-diameter ratio (Schedule 40) or (Schedule 80).

Permanent marking with sequential feet, material, production info, relevant standards and “City of Milwaukee” along the duct shall be included.

The Continuous Duct inside wall shall be co-extruded with Silicore ULF (ultra low friction) to create a permanent interior lining with low coefficient of friction.

The construction and testing of the conduit must comply with applicable EIA/TIA, ANSI, and ASTM standards.

Furnish bends, adapters, couplings, fittings, and other materials used to install conduits. They are to meet duct manufacturer’s installation recommendations.

Provide pull tape for empty ducts in the run. The pull tape must have documentation as duct cutting resistant, tensile strength of greater than 1,500 pounds, nominal width of 5/16 inch, and marked every foot. Dry silk or equal.

Contractor must submit a certificate of compliance certifying that the conduit rigid nonmetallic as furnished conform to the above requirements. Send a copy of the certificate of the conduit rigid nonmetallic to:

Eng Kie Lee
City of Milwaukee
Infrastructure Services Division
Transportation Section
Street Lighting & City Underground Conduit
841 N. Broadway (Room 920)
Milwaukee WI. 53202

C Construction

C.1 General

Use conduit of the nominal inside diameter the plans show. Make each run of conduit the distance the plans show or as the engineer directs. Install each run of conduit between adjacent access points using one size for its entire length. A run is the conduit from pull box to pull box, junction box to junction box, or pull box to junction box. If the engineer approves, the contractor may substitute a larger size of conduit than the contract shows for that run.

Install pull tape in each conduit run that will receive future conductors as the conduit is laid.

Cap or plug rigid nonmetallic conduit immediately after installation, unless the conduit terminates in a pull box, and keep capped or plugged until installing the wire or cable. Install end bells on rigid nonmetallic conduit raceway access points before installing pull tape or cable. Ream non-metallic conduits to eliminate internal sharp edges before installing end bells.

Excavate trenches true to line and grade to provide the conduit uniform bearing throughout its length. Do not backfill the trench before inspecting the conduit. Carefully tamp the backfill in place as specified for placing backfill in layers in 651.3. Place at least 0.7 cubic feet of size No. 2 coarse aggregate conforming to 501.2.7.4.2 directly under each drainage hole. Effective with the November 2021 Letting 2022 Standard WisDot Specifications

C.2 Installing HDPE Conduit

Install conduit by directional boring, or trenching.

Do not exceed the minimum bending radius of the cable installed in the conduit. Do not pull cable over edges or corners, over or around obstructions, or through unnecessary curves or bends.

Use directional bore installations if the contract specifies.

Repairs are not allowed. Remove broken, chipped, cracked, or impaired lengths of fittings or conduit and replace with new materials. Do not install conduit above ground or on structures.

C.3 Marking and Inspecting

Mark the location of each conduit as the plans show.

After the conduit installation is complete, inspect each installed conduit before any wire is pulled. During this inspection, ensure that the conduit raceway is fully open for its entire length. Replace any conduit that the engineer determines is crushed, damaged, or unsatisfactory.

If the engineer directs, expose the conduit at a randomly selected conduit arrow mark. If the distance from that conduit's centerline to a plumb line projected down from the tip of the arrow mark is more than six inches, expose all arrow marked conduits. Destroy arrow marks not meeting the six-inch limit and remark the conduit.

D. Measurement

The department will measure Conduit 3-Inch HDPE Schedule 40 and Conduit 3-Inch HDPE Schedule 80 by the linear foot 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.0090.325	Conduit 3-Inch HDPE Schedule 40	LF
SPV.0090.326	Conduit 3-Inch HDPE Schedule 80	LF

Payment is full compensation for furnishing and installing the conduit, including any necessary connectors.

98. 1-Duct Sand Encased Conduit, HDPE, 4-Inch, Item SPV.0090.451; 2-Duct Sand Encased Conduit, HDPE, 4-Inch, Item SPV.0090.452; 3-Duct Sand Encased Conduit, HDPE, 4-Inch, Item SPV.0090.453; 4-Duct Sand Encased Conduit, HDPE, 4-Inch, Item SPV.0090.454; 5-Duct Sand Encased Conduit, HDPE, 4-Inch, Item SPV.0090.455; 6-Duct Sand Encased Conduit, HDPE, 4-Inch, Item SPV.0090.456; 8-Duct Sand Encased Conduit, HDPE, 4-Inch, Item SPV.0090.458.

A Description

This special provision describes furnishing and installing sand encased duct conduit packages below grade as shown on the plans and as hereinafter described.

B Materials

B.1 High-Density Polyethylene (HDPE) Conduit

Furnish and install orange, smooth, 4-Inch Schedule 80 HDPE, solid-wall conduit rated for outdoor and underground use conforming to ASTM F2160.

Permanent marking with sequential feet, material, production info, relevant standards and “City of Milwaukee” along the duct shall be included.

The Continuous Duct inside wall shall be co-extruded with Silicore ULF (ultra-low friction) to create a permanent interior lining with low coefficient of friction.

The construction and testing of the conduit must comply with applicable EIA/TIA, ANSI, and ASTM standards.

B.2 Conduit Spacers

Furnish and install nonmetallic interlocking base spacers and intermediate spacers that provide a 1-1/2” vertical and 1-1/2” horizontal separation between HDPE pipes. The base spacers shall provide a 3” vertical separation from the trench bed to the bottom of the HDPE pipes.

B.3 Conduit Bed

Furnish and install a minimum 2” conduit bed of stone chips or crushed stone screenings conforming to the following:

3/8 Inch Crushed Stone Chips

Sieve Sizes	% Passing by Weight
½”	100
3/8”	90-100
No. 8	0-15
No. 30	0-3

Crushed Stone Screenings

Sieve Sizes	% Passing by Weight
½”	100
No. 4	75-100
No. 100	10-25

B.4 Sand Encasement

Encase conduit with 3 inches of 30 mesh sand on top and bottom, and 2 inches on the sides, of conduits.

B.5 Slurry Backfill

Aggregate slurry backfill consists of No. 1 concrete aggregate Class ‘C’ concrete mix with the cement deleted.

Fly Ash (Class C)	75 lbs
Concrete Sand (Damp)	1830 lbs
No. 1 Concrete Aggregate	1830 lbs

Mix with water to inundate the aggregate sufficiently to provide an approximate 3-inch slump. Deposit the mix directly from a concrete transit mix truck.

B.6 Pull Rope

Pull rope specifications shall be:

- Flat construction (7/16” to 5/8” wide)
- 100% woven aramid fiber (may include tracer wire)
- 1500 lbs. Minimum pull strength pre-lubricated
- Sequential footage markings for location

For any questions on materials, contact Ms. Karen Rogney at (414) 286-3243.

C Construction

C.1 Excavation

The excavation shall have the minimum or maximum dimensions shown on the plans and as follows:

Number of Ducts Wide	Minimum (Inches)	Maximum (Inches)
1	8 1/2	11
2	14 5/8	17 1/8
3	20 3/4	23 1/4.
4	26 7/8	29 3/8
5	33	35 1/2
6	39 1/8	41 5/8
8	51 3/8	53 7/8

These minimum and maximum trench widths apply to standard 4-inch HDPE electrical duct only. Excavation may be widened for the handling and placing of materials.

Sheath and brace open-cut trenches as required by code and as necessary to maintain safety. The cost of furnishing, placing and removing of sheathing and bracing shall be included in the unit bid for the work.

The dimensions of the excavation will be governed by the number, configuration and the grade (cover) to which the conduit is to be installed as shown on the plan. The walls of the excavation shall be clean and true.

Prior to excavating trenches, expose the existing manhole and conduit lines. The object of this is to permit adjustments in line and grade to avoid special construction methods. Protect the exposed manhole and conduit from damage.

Lay the conduit at a depth so that sufficient protection from damage is provided. Install the conduit at the following depths:

- 39 inches below bike path pavement grade
- 54 ½” inches below finished roadway pavement grade

Maintain the standard cover wherever possible and any deviation less than the standard cover requires the approval of the engineer.

Grade the trench to have a minimum pitch of three inches per 100 feet. When an obstruction is encountered in the trench and it is necessary to excavate a deeper trench than would otherwise be required, in order to obtain drainage, refer the matter to the engineer to determine whether the extra excavation should be made.

After the rough excavation is completed, prepare the bottom of the trench to receive the conduit. Bring the duct bed to the final grade by grading uniformly from the high point to the low or drainage points. Use stone chips or crushed stone screenings to grade the trench.

C.2 Placing Duct

Proceed with placing the ducts as soon as the duct bed has been completed. Inspect conduit before placing. Repairs are not allowed. Remove broken, chipped, cracked, or impaired lengths of fittings or conduit and replace with new materials. Where full runs of conduit cannot be achieved due to construction staging use butt fusion or electrofusion to join HDPE pipes.

Pull HDPE conduit into the trench from stationary reel or by laying the conduit into the trench from a moving reel attached to a trailer. Conduit should be straightened to remove any residual “coil memory”.

Place the duct on base spacers located 15 inches from manhole and carried forward in preferred intervals between spacer assemblies of 6 to 8 feet. Place spacers within 15 inches on each side of HDPE splice/connection point.

Formations of two ducts or more in height are to be carried forward in full formation from manhole to manhole. Exercise caution in the driving operation, so the duct will be split or damaged in any way. After the full duct placement has been completed, place wood trench and duct bracing on the ducts to prevent shifting or overturning creating excess conduit slack while the sand envelope is being placed and during driving operation.

This procedure shall be followed with succeeding lengths, providing spacers at the proper intervals, until required trench footage of completed formation has been placed and is ready to receive sand encasement.

The terminating point for mainline conduit will be the inside manhole or pull box wall. Install a standard end bell fitting flush with the wall on all duct access points.

Install a #10 copper tracer wire along and above the centerline of the duct for encasement in sand or concrete. The wire shall be 4 feet longer than the run of conduit and be at least 2 feet long at each access point.

Install a pull rope in each run of conduit, as laid. The rope shall be 4 feet longer than the run of conduit and shall be doubled back at least 2 feet at each raceway access point. Anchor the pull rope at each access point in a manner acceptable to the engineer.

C.3 Butt Fusion

For joining individual lengths of HDPE pipes use butt fusion method by heat fusion of the pipe butt ends: Clean, clamp and align the pipe ends to be joint. Face the pipe ends to establish clean, parallel surfaces, perpendicular to the center line. Align the pipe ends and melt the pipe interfaces. Join the two pipe ends together by applying the proper fusion force. Hold joint pipes under pressure until the joint is cool.

C.4 Sand Backfill

Commence backfilling of the conduit immediately after the duct has been inspected, approved and has set to withstand the load. Encase conduit with 3 inches of sand on top and bottom, and 2 inches on the sides of conduits.

Sand as specified shall be used to backfill and encase conduit. The trench shall be backfilled to the proposed or existing subgrade. After placing, puddle the sand with a splicing bar or similar tool so that complete duct encasement is accomplished. Remove wood braces used to keep the conduit from floating and the resultant encasement voids filled with sand, provide compaction to prevent the trench backfill from settling.

C.5 Slurry Backfill

Commence backfilling immediately after the duct has been inspected, approved and has set to withstand the load.

An aggregate slurry as specified shall be used to backfill all sand encased conduit. The trench shall be slurry backfilled to the proposed or existing subgrade. The mix shall be deposited in the trench directly from a concrete transit mix truck.

D Measurement

The department will measure Sand Encased Conduit, HDPE, 4-Inch by the linear foot acceptably completed. The measured quantity will equal the linear feet of encased duct, based on the distance along the centerline of duct between ends of conduit.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.451	1-Duct Sand Encased Conduit, HDPE, 4-Inch	LF
SPV.0090.452	2-Duct Sand Encased Conduit, HDPE, 4-Inch	LF
SPV.0090.453	3-Duct Sand Encased Conduit, HDPE, 4-Inch	LF
SPV.0090.454	4-Duct Sand Encased Conduit, HDPE, 4-Inch	LF
SPV.0090.455	5-Duct Sand Encased Conduit, HDPE, 4-Inch	LF
SPV.0090.456	6-Duct Sand Encased Conduit, HDPE, 4-Inch	LF
SPV.0090.458	8-Duct Sand Encased Conduit, HDPE, 4-Inch	LF

Payment is full compensation for furnishing the conduit, conduit bodies, conduit fittings, conduit spacers, end caps and trace wire; for excavating, bedding, encasement and backfilling including any sand, concrete, stone, aggregate slurry, bracing, or other related materials; for disposing of surplus materials; and for installing the conduit.

99. Fiber Optic Cable Outdoor Plant 72-Count, Item SPV.0090.601; Fiber Optic Cable Outdoor Plant 12-Count, Item SPV.0090.602.

A Description

This special provision describes providing fiber optic cable and patch panels.

B Materials

Furnish 72-count fiber cable with the following specifications.

- Ultra low loss single-mode loose tube OS2
- 2.5mm buffer tubes
- All-dielectric outer jacket
- 12 fibers/buffer tube
- Length markings denoted in feet
- Minimum tensile strength of 2700 N/600 lbf
- Performance option code: single-mode (OS2) with max attenuation of 0.4/0.4/0.3 dB/km
- Gel-free cable

Furnish pull rope for use during installation of the fiber. Pull rope shall be rated for 1,800 lbs or greater of pull strength.

Furnish 12-count fiber cable and patch panels with the following specifications.

- 6 step patch panel
- Single mode
- Standard performance
- ST step connectors
- Pigtail (no connector)
- Outdoor rated
- Cable rating “Riser”
- Black color
- Pull kit installed on the tail

Furnish 1-inch duct with the following specifications.

- Orange color
- Nominal inner diameter of 1.03”
- Nominal outer diameter of 1.31”
- Pull tape rated for 900 lbs
- Weight of 14 lbs per 100 foot length

C Construction

Install and perform testing of the fiber optic cable according to standard spec 678.3.

D Measurement

The department will measure Fiber Optic Cable Outdoor Plant 72-Count and Fiber Optic Cable Outdoor Plant 12-Count 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.0090.601	Fiber Optic Cable Outdoor Plant 72-Count	LF
SPV.0090.602	Fiber Optic Cable Outdoor Plant 12-Count	LF

Payment is full compensation for furnishing and installing fiber optic cables and patch panels; for splice enclosures and splicing; and for testing, documentation, and certifications.

100. Detectable Edge Tiles, Item SPV.0165.001.

A Description

This special provision describes providing tactile directional indicator detectable edge tiles in plastic or wet concrete sidewalk.

B Materials

Furnish wet-set, cast iron tactile directional indicator plates from Advantage Tactile, a Division of SureWerx, Elgin, IL, 60123, (844) 697-2920, www.advantagetactile.com, or Neenah Foundry, Neenah, WI 54956, (920) 725-7000, www.groupnei.com, or approved equal, conforming to the following requirements.

- Gray cast iron, ASTM A48, Class 30 minimum
- Uncoated natural patina
- Size 12” wide x 12” long, or 12” wide x 24” long
- Raised elongated bar spacing 3.0”, bar length 10.75”
- ISO 23599 compliant
- Integral anchors

Castings shall be sound, free from pouring faults, cracks, blowholes and other defects.

Furnish wedge tiles or radial tiles for use in curves, conforming to manufacturer requirements.

Submit manufacturer’s literature describing products, installation procedures, and routine maintenance to the engineer. Submit shop drawings to the engineer prior to procuring the tiles.

Submit one sample tile that shows bar size and spacing to the engineer. Submit complete test reports to qualify that materials proposed for use are in compliance with requirements and meet or exceed the properties indicated in the specifications.

Manufacturer’s Warranty: The tiles shall be warranted in writing for a period of 10 years from date of substantial completion. The warranty shall include factory defects, breakage, and deformation.

C Construction

Coordinate with the engineer and tile manufacturer so that the surfaces being prepared and fabricated to receive the plates are constructed correctly and adequately for plate installation. Review manufacturer drawings and instructions with the engineer prior to construction.

Embed (wet-set) detectable edge tiles in plastic concrete according to manufacturer-recommended procedures. Do not install on hardened concrete. Stringline or use other engineer-approved methods to install the tiles in straight lines or arcs. The top level of the plate, not including the raised elongated bars, is to be flush with the adjacent concrete.

Install tiles end to end in a contiguous manner as shown on the plans, without gaps between individual tiles. Gaps may be allowed for transverse joints, grade breaks, and obstructions. When permitted, the maximum gap between two adjacent tiles or between a tile and an adjacent obstruction shall be 6 inches.

Do not field cut plates except as allowed by the manufacturer. Field cuts will not be allowed through the raised elongated bars. Smooth the edges of field cuts.

Anchor the tiles per manufacturer instructions.

D Measurement

The department will measure Detectable Edge Tiles 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.0165.001	Detectable Edge Tiles	SF

Payment is full compensation for providing detectable edge tiles of the specified configuration and color, including hardware and anchoring.

101. Concrete Raised Median, Item SPV.0165.002.

A Description

This special provision describes providing concrete raised medians according to standard spec 601 and as shown on the plans.

B Materials

Furnish materials according to standard spec 601.

C Construction

Construct concrete raised medians according to standard spec 601.

D Measurement

The department will measure Concrete Raised Median 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.0165.002	Concrete Raised Median	SF

Payment is full compensation for foundation excavation and preparation; for providing materials, including concrete and expansion joints; for placing, finishing, protecting, and curing; for sawing joints; and for restoring the site.

Payment adjustments for concrete crack repairs will be according to standard spec 601.5.2.

102. Track Zone Removal, Item SPV.0180.001.

A Description

This special provision describes removing and disposing of all track zone materials including rails, rail ties, concrete, granite pavers, and other related appurtenances underneath the existing pavement.

B (Vacant)

C Construction

Avoid damaging utilities during construction operations. Complete all necessary operations to remove the track zone and other related appurtenances. Backfill all trenches, holes, and pits not occupied by the new pavement, base course, and select crushed material as shown on the plans.

D Measurement

The department will measure Track Zone Removal 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.0180.001	Track Zone Removal	SY

Payment is full compensation for removing all track zone materials, including any sawing of the pavement or track zone; and for hauling and disposing of materials.

103. Excavation, Hauling, and Disposal of Metals Contaminated Soil, Item SPV.0195.001.

A Description

A.1 General

This special provision describes excavating, loading, hauling, and disposing of metals-contaminated soil at a DNR approved landfill facility. The closest DNR approved landfill facilities are:

Waste Management Orchard Ridge Landfill
W124 N9355 Boundary Road
Menomonee Falls, WI 53051
(262) 253-8626

GFL Environmental Emerald Park Landfill
W124 S10629 124th Street
Muskego, WI 53150
(414) 529-1360

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

A.2 Notice to the Contractor – Contaminated Soil Locations

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

- STH 59 STA 21+20 to 21+80, from 30 ft right of reference line to project limits right, from 1’ below ground surface (bgs) to maximum excavation depth. Soil contains metals and must be managed. Approximately 95 cubic yards (approximately 162 tons at an estimated 1.7 tons per cubic yard) of soil will be excavated from this location.
- STH 59 STA 24+30 to 24+90, from 35 ft right of reference line at 24+30 and 30 ft right of reference line at 24+90 to project limits right, from 1’ bgs to maximum excavation depth. Soil contains silver and must be managed. Approximately 37 cubic yards (approximately 64 tons at an estimated 1.7 tons per cubic yard) of soil will be excavated from this location.
- STH 59 STA 24+35 to 24+95, from 30 ft left of reference line at 24+35 and 35 ft left of reference line at 24+95 to project limits left, from 1’ bgs to maximum excavation depth. Soil contains metals and must be managed. Approximately 57 cubic yards (approximately 97 tons at an estimated 1.7 tons per cubic yard) of soil will be excavated from this location.
- STH 59 STA 31+00 to 31+60, from 35 ft left of reference line at 31+00 and 30 ft left of reference line at 31+60 to project limits left, from 1’ bgs to maximum excavation depth. Soil contains metals and must be managed. Approximately 27 cubic yards (approximately 46 tons at an estimated 1.7 tons per cubic yard) of soil will be excavated from this location.
- STH 59 STA 34+40 to 35+00, from 35 ft right reference line to project limits right, from 1’ bgs to maximum excavation depth. Soil contains metals and must be managed. Approximately 62 cubic yards (approximately 106 tons at an estimated 1.7 tons per cubic yard) of soil will be excavated from this location.
- STH 59 STA 55+90 to 56+20, from 10’ left of reference line to project limits left, from 1’ bgs to maximum excavation depth. Soil contains lead and must be managed. Approximately 55 cubic yards (approximately 95 tons at an estimated 1.7 tons per cubic yard) of soil will be excavated from this location.

Directly load soil excavated by the project at the above locations into trucks that will transport the soil to a WDNR-licensed landfill facility for treatment and disposal.

If contaminated soils are encountered elsewhere on the project, terminate excavation activities in the area and notify the engineer. If dewatering is required at the above locations, conduct the dewatering in accordance with Section C below.

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

Name: Mr. Andrew Malsom
Address: 141 NW Barstow Street, PO Box 798, Waukesha, WI 53187-0798
Phone: 262-548-6705
Fax: 262-548-6891
E-mail: Andrew.Malsom@dot.wi.gov

A.3 Coordination

Coordinate work under this contract with the environment consultant:

Consultant: Ramboll
Address: 234 W. Florida Street, Fifth Floor, Milwaukee, WI 53204
Contact: Mr. Graham Fazio
Phone: 414-791-6995
E-mail: Graham.Fazio@ramboll.com

The role of the environmental consultant will be limited to:

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

Provide at least a 14-calendar day notice of the preconstruction conference date to the environmental consultant. At the preconstruction conference, provide a schedule for all excavation activities in the areas of contamination to the environmental consultant. Also notify the environmental consultant at least three calendar days before beginning 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 approved landfill facility that will be used for disposal of contaminated soils and provide this information to the environmental consultant no later than 30 calendar days before beginning 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 for disposal of contaminated soils from the landfill facility. Do not transport contaminated soil offsite without prior approval from the environmental consultant.

A.4 Health and Safety Requirements

Add the following to standard spec 107.1:

During excavation activities, expect to encounter soil contaminated with metals. 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 before the start of work.

B (Vacant)

C Construction

Add the following to standard spec 205.3:

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

The environmental consultant will periodically evaluate soil excavated from the contaminated areas to determine if the soil will require offsite landfill disposal. 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 15 cubic yards excavated.

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

If dewatering is required in areas of known contamination, water generated from dewatering activities will likely contain metals. Such water may be discharged to the storm sewer or surface water with WDNR approval under a Wisconsin Pollution Discharge Elimination System (WPDES) General Permit, or to the sanitary sewer or at the treatment facility with approval from the local wastewater utility. Pretreatment may be required prior to discharge.

Contractor shall meet all applicable requirements, including the control of suspended solids. Perform all necessary monitoring to document compliance with requirements. Furnish, install, operate, maintain, disassemble, and remove treatment equipment necessary to comply with 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 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 Excavation, Hauling, and Disposal of Metals-Contaminated Soil in tons of contaminated soil, accepted by the landfill facility as documented by weight tickets generated by the landfill facility.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0195.001	Excavation, Hauling, and Disposal of Metals 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 before transport, if necessary. Management and disposal of contaminated water is considered incidental to other bid items in the contract. The department will not pay directly for management and disposal/treatment of contaminated water.

104. Excavation, Hauling, and Disposal of PAH Contaminated Soil, Item SPV.0195.002.

A Description

A.1 General

This special provision describes excavating, loading, hauling, and disposing of polycyclic aromatic hydrocarbon (PAH)-contaminated soil at a DNR approved landfill facility. The closest DNR approved landfill facilities are:

Waste Management Orchard Ridge Landfill
W124 N9355 Boundary Road
Menomonee Falls, WI 53051
(262) 253-8626

GFL Environmental Emerald Park Landfill
W124 S10629 124th Street
Muskego, WI 53150
(414) 529-1360

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

A.2 Notice to the Contractor – Contaminated Soil Locations

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

STH 59 STA 18+15 to 18+75, from 30 ft left of reference line to project limits left, from 1' below ground surface (bgs) to maximum excavation depth. Soil contains PAHs and metals and must be managed. Approximately 38 cubic yards (approximately 66 tons at an estimated 1.7 tons per cubic yard) of soil will be excavated from this location.

Directly load soil excavated by the project at the above locations into trucks that will transport the soil to a WDNR-licensed landfill facility for treatment and disposal.

If contaminated soils are encountered elsewhere on the project, terminate excavation activities in the area and notify the engineer. If dewatering is required at the above locations, conduct the dewatering in accordance with Section C below.

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

Name: Mr. Andrew Malsom
Address: 141 NW Barstow Street, PO Box 798, Waukesha, WI 53187-0798
Phone: 262-548-6705
Fax: 262-548-6891
E-mail: Andrew.Malsom@dot.wi.gov

A.3 Coordination

Coordinate work under this contract with the environment consultant:

Consultant: Ramboll
Address: 234 W. Florida Street, Fifth Floor, Milwaukee, WI 53204
Contact: Mr. Graham Fazio
Phone: 414-791-6995
E-mail: Graham.Fazio@ramboll.com

The role of the environmental consultant will be limited to:

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

Provide at least a 14-calendar day notice of the preconstruction conference date to the environmental consultant. At the preconstruction conference, provide a schedule for all excavation activities in the areas

of contamination to the environmental consultant. Also notify the environmental consultant at least three calendar days before beginning 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 approved landfill facility that will be used for disposal of contaminated soils and provide this information to the environmental consultant no later than 30 calendar days before beginning 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 for disposal of contaminated soils from the landfill facility. Do not transport contaminated soil offsite without prior approval from the environmental consultant.

A.4 Health and Safety Requirements

Add the following to standard spec 107.1:

During excavation activities, expect to encounter soil contaminated with PAHs. 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 before the start of work.

B (Vacant)

C Construction

Add the following to standard spec 205.3:

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

The environmental consultant will periodically evaluate soil excavated from the contaminated areas to determine if the soil will require offsite landfill disposal. 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 15 cubic yards excavated.

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

If dewatering is required in areas of known contamination, water generated from dewatering activities will likely contain PAHs. Such water may be discharged to the storm sewer or surface water with WDNR approval under a Wisconsin Pollution Discharge Elimination System (WPDES) General Permit, or to the sanitary sewer or at the treatment facility with approval from the local wastewater utility. Pretreatment may be required prior to discharge.

Contractor shall meet all applicable requirements, including the control of suspended solids. Perform all necessary monitoring to document compliance with requirements. Furnish, install, operate, maintain, disassemble, and remove treatment equipment necessary to comply with 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 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 Excavation, Hauling, and Disposal of PAH-Contaminated Soil in tons of contaminated soil, accepted by the landfill facility as documented by weight tickets generated by the landfill facility.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0195.002	Excavation, Hauling, and Disposal of PAH 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 before transport, if necessary. Management and disposal of contaminated water is considered incidental to other bid items in the contract. The department will not pay directly for management and disposal/treatment of contaminated water.

105. Excavation, Hauling, and Disposal of VOC Contaminated Soil, Item SPV.0195.003.

A Description

A.1 General

This special provision describes excavating, loading, hauling, and disposing of volatile organic compound (VOC)-contaminated soil at a DNR approved bioremediation or landfill facility. The closest DNR approved bioremediation or landfill facilities are:

Waste Management Orchard Ridge Landfill
W124 N9355 Boundary Road
Menomonee Falls, WI 53051
(262) 253-8626

GFL Environmental Emerald Park Landfill
W124 S10629 124th Street
Muskego, WI 53150
(414) 529-1360

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

A.2 Notice to the Contractor – Contaminated Soil Locations

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

- STH 59 STA 16+85 to 17+50, from 30 ft right of reference line to project limits right, from 1’ below ground surface (bgs) to maximum excavation depth. Soil contains VOCs and metals and must be managed. Approximately 118 cubic yards (approximately 202 tons at an estimated 1.7 tons per cubic yard) of soil will be excavated from this location.
- STH 59 STA 17+25 to 56+48, within Historic Trolley Track Zone, from 1’ bgs to maximum excavation depth. Soil contains VOCs, metals, and PAHs and must be managed. Approximately 6,268 cubic yards (approximately 10,657 tons at an estimated 1.7 tons per cubic yard) of soil will be excavated from this location.
- STH 59 STA 30+95 to 31+55, from 35 ft right of reference line at 30+95 and 40 ft right of reference line at 31+55 to project limits right, from 1’ bgs to maximum excavation depth. Soil contains VOCs, metals, and PAHs and must be managed. Approximately 121 cubic yards (approximately 207 tons at an estimated 1.7 tons per cubic yard) of soil will be excavated from this location.

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

If contaminated soils are encountered elsewhere on the project, terminate excavation activities in the area and notify the engineer. If dewatering is required at the above locations, conduct the dewatering in accordance with Section C below.

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

Name: Mr. Andrew Malsom
Address: 141 NW Barstow Street, PO Box 798, Waukesha, WI 53187-0798
Phone: 262-548-6705
Fax: 262-548-6891
E-mail: Andrew.Malsom@dot.wi.gov

A.3 Coordination

Coordinate work under this contract with the environment consultant:

Consultant: Ramboll
Address: 234 W. Florida Street, Fifth Floor, Milwaukee, WI 53204
Contact: Mr. Graham Fazio
Phone: 414-791-6995
E-mail: Graham.Fazio@ramboll.com

The role of the environmental consultant will be limited to:

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

Provide at least a 14-calendar day notice of the preconstruction conference date to the environmental consultant. At the preconstruction conference, provide a schedule for all excavation activities in the areas of contamination to the environmental consultant. Also notify the environmental consultant at least three calendar days before beginning 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 approved bioremediation or landfill facility that will be used for disposal of contaminated soils and provide this information to the environmental consultant no later than 30 calendar days before beginning 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 for disposal of contaminated soils from the bioremediation or landfill facility. Do not transport contaminated soil offsite without prior approval from the environmental consultant.

A.4 Health and Safety Requirements

Add the following to standard spec 107.1:

During excavation activities, expect to encounter soil contaminated with VOCs. 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 before the start of work.

B (Vacant)

C Construction

Add the following to standard spec 205.3:

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

The environmental consultant will periodically evaluate soil excavated from the contaminated areas to determine if the soil will require offsite bioremediation or landfill disposal. 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 15 cubic yards excavated.

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

If dewatering is required in areas of known contamination, water generated from dewatering activities will likely contain VOCs. Such water may be discharged to the storm sewer or surface water with WDNR approval under a Wisconsin Pollution Discharge Elimination System (WPDES) General Permit, or to the sanitary sewer or at the treatment facility with approval of the local wastewater treatment utility. Pretreatment may be required prior to discharge.

Contractor shall meet all applicable requirements, including the control of suspended solids. Perform all necessary monitoring to document compliance with requirements. Furnish, install, operate, maintain, disassemble, and remove treatment equipment necessary to comply with 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 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 Excavation, Hauling, and Disposal of VOC-Contaminated Soil in tons of contaminated soil, accepted by the bioremediation or landfill facility as documented by weight tickets generated by the bioremediation or landfill facility.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0195.003	Excavation, Hauling, and Disposal of VOC 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 before transport, if necessary. Management and disposal of contaminated water is considered incidental to other bid items in the contract. The department will not pay directly for management and disposal/treatment of contaminated water.

ADDITIONAL SPECIAL PROVISION 1 (ASP 1)
HIGHWAY CONSTRUCTION SKILLS TRAINING (HCST)
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 include: 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).

The Wisconsin Department of Transportation OJT program was originally established in 1995. Highway Construction Skills Training (HCST) was previously known as Transportation Alliance for New Solutions (TrANS) and underwent a name change in early 2023. HCST is an industry driven plan of services to address the outreach, preparation, placement and retention of women, minorities, and disadvantaged persons as laborers and apprentices in the highway skilled trades. Candidate preparation and contractor coordination services (OJT Supportive Services) are provided by contracted community-based organizations.

I. BASIC CONCEPTS

Training reimbursements to employing contractors for new placements, rehires or advancement to apprenticeship of Highway Construction Skills Training (HCST) graduates and employing eligible trainees in qualifying trades will be made as follows:

1) **On-the-Job Training, Item ASP.1T0G, ASP 1 HCST Graduate.** At the rate of $5.00 per hour on Federal-aid projects when HCST graduates are initially hired, or seasonally rehired, as unskilled laborers or equivalent.
   Eligibility and Duration: To the employing contractor, for up to 2,000 hours or two years, whichever comes first from the point of initial hire as a HCST placement.
   Contract Goal: To maintain the intent of the Equal Employment Opportunity program, it is a goal that __6____ HCST Graduate(s) be utilized for __6000_____ hours 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 HCST Program is subsequently entered into an apprenticeship contract in a qualifying trade.
   Eligibility and Duration: To the employing contractor, for the length of time that the HCST graduate is in apprenticeship status.
   Contract Goal: To maintain the intent of the Equal Employment Opportunity program, it is a goal that __3____ HCST Apprentice(s) be utilized for ___3600____ hours on this contract.

3) The maximum duration of reimbursement is two years as a HCST graduate plus time in apprentice status.

4) If a HCST 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 Department of Transportation Labor Development Specialist at the phone number listed below.

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.

II. RATIONALE AND SPECIAL NOTE

The $5.00 per hour now being paid for HCST 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 HCST 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 HCST 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 HCST 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.

III. 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 page 2 Dated January 2012 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 HCST graduate or a HCST apprentice. The compliance specialists utilize the information on the Certified Payrolls to track the hours accumulated by HCST Graduates and HCST 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. HCST 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. HCST 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 ensure 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 underrepresentation 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-Office of Business Opportunity & Equity Compliance (OBOEC). A request for an exemption or modification, with justification, shall be made in writing, addressed to WisDOT OBOEC - Labor Development, 141 NW Barstow Street, Suite 411, PO Box 798, Waukesha, WI 53187.

VI. PROGRAM CONTACTS

Marguerite (Maggie) Givings, Labor Development Specialist
Margueritel.Givings@dot.wi.gov | 608-789-7876

Deborah Seip, Labor Development Specialist
Deborah.Seip@dot.wi.gov | 262-548-8702

ADDITIONAL SPECIAL PROVISION 3

DISADVANTAGED BUSINESS ENTERPRISE (DBE) PROGRAM IMPLEMENTATION

Authority

Wisconsin Department of Transportation (WisDOT) is a recipient of funds from the US Department of Transportation's Federal Highway Administration. The DBE program is a federal program applicable on all contracts administered by WisDOT that include federal-aid highway funds. The authority for the DBE program is the Transportation Bill as approved by Congress periodically. DBE program guidance and requirements are outlined in the Code of Federal Regulations at 49 CFR Part 26. This contract is subject to DBE provisions because it is financed with federal-aid-highway funds. Additionally, this contract is subject to the *State of Wisconsin Standard Specifications for Highway and Structure Construction* and all applicable contract documents.

Requirements

Pursuant to the federal DBE program regulation at 49 CFR Part 26, a contractor's failure to comply with any provision of the DBE program regulatory provisions will be considered a material breach of contract. This is nonnegotiable.

If a contractor fails to carry out the DBE program requirements and/or the Required Contract Provisions for Federal Aid Contracts (FHWA 1273) referenced in this document, sanctions will be assessed depending upon the facts, reasoning, severity, and remedial efforts of the contractor that may include: termination of contract, withholding payment, assessment of monetary sanctions, and/or suspension/debarment proceedings that could result in the disqualification of the contractor from bidding for a designated period of time.

(1) The Commitment to Subcontract to DBE (Form DT1506 or digital submittal), Attachments A, and Good Faith Effort Documentation (Form DT1202) will be submitted as described in Section 2.
(2) Any change to DBE Commitments thereafter must follow modification of DBE subcontracting commitment as described in Section 9.
(3) The Department requires this list of DBE subcontractors from all bidders at time of bid to ensure the lowest possible cost to taxpayers and fairness to other bidders and subcontractors. Bid shopping is prohibited.
(4) The contractor must utilize the specific DBE firms listed in the approved DBE Commitment to perform the work and/or supply the materials for which the DBE firm is listed unless the contractor obtains written consent in advance from WisDOT. The contractor will not be entitled to payment for any work or materials on the approved DBE Commitment that is not performed or supplied by the listed DBE without WisDOT's written consent.

Description

The Wisconsin Department of Transportation is committed to the compliant administration of the DBE Program. The DBE provisions work in tandem with FHWA 1273 and WisDOT's *Standard Specifications for Highway and Structure Construction* and *Construction and Materials Manual*. The WisDOT Secretary is signatory to assurances of department-wide compliance.

The Department assigns the contract DBE goal as a percentage of work items that could be performed by certified DBE firms on the contract. The assigned DBE goal is expressed on the bid proposal as a percentage applicable to the total contract bid amount.

(1) WisDOT identifies the assigned DBE goal in its contract advertisements and posts the contract DBE goal on the cover of the bidding proposal. The contractor can meet the assigned contract DBE goal by subcontracting work to a DBE firm or by procuring services or materials from a DBE firm.

(2) Under the contract, the prime contractor should inform, advise, and develop participating DBE firms to be more knowledgeable contractors who are prepared to successfully complete their contractual agreement through the proactive provision of assistance in the following areas:

- Produce accurate and complete quotes
- Understand highway plans applicable to their work
- Understand specifications and contract requirements applicable to their work
- Understand contracting reporting requirements

(3) The Department encourages contractors to assist DBE subcontractors more formally by participating in WisDOT's Business Development program as a mentor, coach, or resource. For comprehensive information on the Disadvantaged Business Enterprise Program, visit the Department's Civil Rights and Compliance Section website at: http://wisconsindot.gov/Pages/doing-bus/civil-rights/dbe/default.aspx

1. Definitions

Interpret these terms, used throughout this additional special provision, as follows:

a. **Assigned DBE Contract Goal:** The percentage shown on the cover of the Highway Work Proposal that represents the feasible level of DBE participation for each contract. The goal is calculated using the Engineer's Estimate and DBE Interest Report. Goal assignment includes review of FHWA funds, analyzes bid items for subcontract opportunity and compatibility with DBE certified firm work codes. Additional factors considered include proximity, proportion, and regulations.

b. **Bid Shopping:** In construction law, bid shopping is the practice of divulging a subcontractor's bid to another prospective contractor(s) before or after the award of a contract to secure a lower bid.

c. **DBE:** Disadvantaged Business Enterprise – A for-profit small business concern where socially and economically disadvantaged individuals own at least a 51% interest and control management and daily business operations.

d. **DBE Commitment:** The DBE Commitment is identified in the Commitment to Subcontract to DBE (Form DT1506) and is expressed as the amount of DBE participation the prime contractor has secured. The DT1506, a contract document completed by the bidder, is required to be considered a responsive bidder on an FHWA-funded contract that has an assigned DBE goal. The prime contractor will have the option to submit the DT1506 digitally, as an entry with the bid in Bid Express, or as an attachment to the bid.

e. **DBE Utilization:** The actual participation of a DBE subcontractor on a project. WisDOT verifies DBE utilization through review of the DBE Commitment, payments to subcontractors, and contract documentation. The Prime Contractor receives DBE credit for payments made to the DBE firms performing the work listed on the approved DBE Commitment, and those submitted after approved commitment with Attachment A.

f. **Good Faith Effort:** Legal term describing a diligent and honest effort taken by a reasonable person under the same set of facts or circumstances. For DBE subcontracting, the bidder must show that it took all necessary and reasonable steps to achieve the assigned DBE goal by the scope, intensity, and appropriateness of effort that could reasonably be expected for a contractor to obtain sufficient DBE participation.

g. **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.

h. **Reasonable Price:** Contractors are expected to assess reasonable price by analyzing the contract scope for DBE subcontract feasibility and comparing common line items in DBE and non-DBE subcontract quotes for the same work. Per federal regulation, reasonable price is not necessarily the lowest price.

i. **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.

j. **Tied quote:** Subcontractor quote that groups multiple bid/line items at a bundled/package price with a notation that the items within the quote will not be separated.

2. WisDOT DBE Program Compliance

a. Documentation Submittal

- The Commitment to Subcontract to DBE (Form DT1506 or digital submittal) must be submitted at the time of bid (Tuesday) by all prime contractors.
- Attachments A OR quotes from all DBEs included in the Commitment must be submitted at bid (Tuesday) **OR**
- Within one-hour following bid submittal by ALL prime contractors via eSubmit (Tuesday).
- If only DBE quotes were submitted, all remaining signed Attachments A must be submitted within 24-hours of bid closing via eSubmit (Wednesday).
- If the assigned DBE contract goal is not met, Documentation of Good Faith Effort (Form DT1202) and supporting documentation must be submitted within 24-hours of bid closing (Wednesday) via eSubmit. Instructions for eSubmit.

**Bidders have the option of submitting the DBE Commitment at the time of bid via direct entry through Bid Express OR with attachment of Form DT1506 (Commitment to Subcontract to DBE). The DBE Commitment entered with bid is the digital form of the DT1506. Separate submission of Form DT1506 is not required if the DBE Commitment is entered in Bid Express. Form DT1202, if applicable, is no longer required to be submitted at time of bid; submit DT1202 within the 24-hour supplemental time frame following bid closing.

The DBE Office will not certify Good Faith Effort and the Bureau of Project Development will consider the bid nonresponsive if the contractor fails to furnish the DBE Commitment (digitally entered into the bid OR Form DT1506 as an attachment), Attachments A, and Form DT1202 if applicable, as required. See sample forms in the Appendix.

b. Verification of DBE Commitment

The documentation related to DBE subcontract commitment submitted prior to contract award is evaluated as follows:

(1) DBE Goal Met

If the bidder indicates that the contract DBE goal is met, the Department will evaluate the DBE Commitment submitted with bid OR Form DT1506, and Attachments A to verify the actual DBE percentage calculation. If the DBE Commitment is verified, the contract is eligible for award with respect to the DBE Commitment.

(2) DBE Goal Not Met

a) If the bidder indicates a bid percentage on the DBE Commitment that does not meet the assigned DBE contract goal, the bidder must request alternative evaluation of good faith effort through submission of Form DT1202 (Documentation of Good Faith Effort) within 24-hours of bid including narrative description. Supplementary documentation of good faith effort that supports the DT1202 submission is also due within 24-hours of bid submission and prior to bid posting. The Department will review the bidder's DBE Commitment and evaluate the bidder's good faith efforts submission.

b) Following evaluation of the bidder's Good Faith Effort documentation the bidder will be notified that the Department intends to:

1. *Approve* the request (adequate documentation of GFE has been submitted) - no conditions placed on the contract with respect to the DBE Commitment;
2. *Deny* the request (inadequate documentation of GFE has been submitted) - the contract is viewed as non-responsive per Wisconsin Standard Specifications for Highway and Structure Construction and will not be executed.

c) If the Department denies the bidder's request, the contract is ineligible for award. The Department will provide a written explanation for denying the request to the bidder. The bidder may appeal the Department's denial (see Section 4).

Supplemental good faith effort documentation must be submitted through eSubmit.

3. Department's Criteria for Good Faith Effort Documentation

The Federal-aid Construction Contract Provision, referenced as FHWA-1273, explicitly states that the prime contractor shall be responsible for all work performed on the contract by piecework, station work, or subcontract.

The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of the contract including assurances of equal employment opportunity laws, DBE regulations, and affirmative action. Compliance encompasses responsible and responsive action, documentation, and good faith effort.

Contractually, all contractors, subcontractors, and service providers on the contract are bound by FHWA 1273 and DBE program provisions. **Prime contractors should encourage subcontractors to utilize DBE firms whenever possible to contribute to the assigned DBE contract goal.**

Bidders are required to document good faith effort. Per 49 CFR Part 26.53, good faith effort is demonstrated in one of two ways. The bidder:

(1) Documents that it has obtained enough DBE participation to meet the goal; OR

(2) Documents that it made adequate good faith efforts to meet the goal, even though it did not succeed

Appendix A of 49 CFR Part 26 provides guidance concerning good faith efforts. WisDOT evaluates good faith effort on a contract basis just as each contract award is evaluated individually.

The efforts employed by the bidder should be those that WisDOT can reasonably expect a bidder to take to actively and aggressively obtain DBE participation sufficient to meet the DBE contract goal. The Department will only approve demonstration of good faith effort if the bidder documents the quality, quantity, and intensity of the variety of activities undertaken that are commensurate with expected efforts to meet the stated goal.

The Department, in conjunction with industry stakeholders, has developed the following guidance for contractor good faith effort activity. 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.

a. Solicitation Guidance for Prime Contractors:

(1) Document all efforts and decisions made toward achieving the DBE goal on the contract. The bidder should use WisDOT-approved DBE outreach tools, including the UCP DBE Directory and the Bid Express Small Business Network to foster DBE participation on all applicable contracts.

(2) As needed, request assistance with DBE outreach and follow-up by contacting the Department's DBE Support Services Office by phone or email request at least 14 days prior to the bid letting date. Phone numbers are (414) 438-4584 and/or (608) 267-3849; Fax: (414) 438-5392; E-mail: DBE_Alert@dot.wi.gov

(3) Participate in and document a substantive conversation with at least one DBE firm per Let, to discuss questions, concerns, and any other contract related matters that may be applicable to the DBE firm. Guidelines for this conversation are provided in Appendix A of ASP-3.

(4) Request quotes by identifying potential items to subcontract and solicit. In their initial contacts, contractors are strongly encouraged to include a single page, 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 B. 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 firms to do work in a prime contractor's area of specialization.

i. Solicit quotes from certified DBE firms who match possible items to subcontract using all reasonable and available means. Additionally, forward copies of solicitations highlighting the work areas for which quotes are being sought to DBE_Alert@dot.wi.gov

ii. Acceptable outreach tools include SBN (Small Business Network, see Appendix C): https://www.bidx.com/wi/main, postal mail, email, fax, and phone.

a. Contractors must ask DBE firms for a response in their solicitations. See *Sample Contractor Solicitation Letter,* Appendix B. This letter may be included as an attachment to the sub-quote request.

b. Solicit quotes at least 10 calendar days prior to the letting date to allow DBE firms sufficient time to respond. Prime contractors should contact DBE firms early, asking if they need help organizing their quote, assistance confirming equipment needs, or other assistance supporting their submission of a competitive quote for their services.

c. A follow up solicitation should take place within 5 calendar days of the letting date. Email and/or SBN are the preferred method for the solicitation.

iii. 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.

iv. When potential exists, the contractor should advise interested DBE firms on how to obtain bonding, line of credit, or insurance if requested.

v. 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. Signed copy of record of subcontractor outreach effort

b. Guidance for Evaluating DBE quotes

(1) Quote evaluation practices required to evaluate DBE quotes:

i. Reasonable Price**:** Contractors are expected to assess reasonable price by analyzing the contract scope for DBE subcontract feasibility and comparing common line items in DBE and non-DBE subcontract quotes for the same work. Per federal regulation, reasonable price is not necessarily the lowest price. See 49 CFR Part 26, Appendix A. IV.D(2).

(2) Documentation submitted by the prime of the following evaluation is required to evaluate DBE quotes by contractors:

i. Evaluation of DBE firm's ability to perform "possible items to subcontract" using legitimate reasons, including but not limited to, ***a discussion*** between the prime and DBE firm regarding its capabilities prior to the bid letting. If lack of capacity is the reason for not utilizing the DBE firm's quote, the prime is required to contact the DBE by phone and email regarding their ability to perform the work indicated in the UCP directory listed as their work area by NAICS code. Only the work area indicated by the NAICS code(s) listed in the UCP directory can be counted toward DBE credit. Documentation of the conversation is required.

a In striving to meet an assigned DBE contract goal, contractors are expected to use DBE quotes that are responsive and reasonable. This includes DBE quotes that are not the low quote.

b Additional evaluation - Evaluation of DBE quotes with tied bid items. Typically, this type of quoting represents a cost saving but is not clearly stated as a discount. Tied quotes are usually presented as an 'all or none' quote. When non-DBE subcontractors submit tied bid items in their quotes, the DBE firm's quote may not appear competitive. In such a case, the following steps are taken in comparing the relevant quotes. These are qualitative examples:

i Compare bid items common to both quotes, noting the reasonableness in the price comparison.

ii 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.

See Appendix D – *Good Faith Effort Evaluation Measures* and Appendix E - *Good Faith Effort Best Practices.*

c. Requesting Good Faith Effort Evaluation At the time of bid- if the DBE goal is not met in full, the prime contractor must indicate they will file form DT1202- Documentation of Good Faith Effort within 24-hours of bid submission. Supplementary documentation of good faith effort that supports the DT1202 submission is also due within 24-hours of bid submission and prior to bid posting. Supporting documentation for the DT1202 is to include the following:

(1) Solicitation Documentation: The names, addresses, email addresses, and telephone numbers of DBE firms contacted along with the dates of both initial and follow-up contact; electronic copies of all written solicitations to DBE firms. A printed copy of SBN solicitation is acceptable.

(2) Selected Work Items Documentation: Identify economically feasible work units to be performed by DBEs to include activities such as: list of work items to be performed; breaking up of large work items into smaller tasks or quantities; flexible time frames for performance and delivery schedules.

(3) Documentation of Project Information provided to interested DBEs: A description of information provided to the DBE firms regarding the plans, specifications, and estimated quantities for portions of the work to be performed by that DBE firm.

(4) Documentation of Negotiation with Interested DBEs: Provide sufficient evidence to demonstrate that good faith negotiations took place. Merely sending out solicitations requesting bids from DBEs does not constitute sufficient good faith efforts.

(5) Documentation of Sound Reasoning for Rejecting DBEs and copies of each quote received from a DBE firm and, if rejected, copies of quotes from non-DBEs for same items.

(6) Documentation of Assistance to Interested DBEs- Bonding, Credit, Insurance, Equipment, Supplies/Materials

(7) Documentation of outreach to Minority, Women, and Community Organizations and other DBE Business Development Support: Contact organizations and agencies for assistance in contacting, recruiting, and providing support to DBE subcontractors, suppliers, manufacturers, and truckers at least 14 days before bid opening. Participate in or host activities such as networking events, mentor-protégé programs, small business development workshops, and others consistent with DBE support.

If the Good Faith Effort documentation is deemed adequate, the request will be approved and the DBE office will promptly notify the Prime Contractor and Bureau of Project Development.

If the DBE Office denies the request, the Prime Contractor will receive written correspondence outlining the reasons. The Department encourages the Prime Contractor to communicate with DBE staff to clarify any questions related to meeting goals and/or contractor demonstration of good faith efforts.

If the contract is awarded, the Prime Contractor must obtain written consent from the DBE Office to change or replace any DBE firm listed on the approved DBE Commitment. No contractor, prime or subsequent tier, shall be paid for completing work assigned to a DBE subcontractor on an approved DBE Commitment unless WisDOT has granted permission for the reduction, replacement, or termination of the assigned DBE in writing. If a prime contractor or a subcontractor on any tier uses its own forces to perform work assigned to a DBE on an approved DBE Commitment, **they will not be paid for the work**. Any changes to DBE Commitment after the approval of the DBE Commitment must be reviewed and approved by the DBE Office prior to the change (see Section 9).

Additional resources for demonstrating and tracking good faith effort can be found on the “Contracting with a DBE” webpage in the ASP-3 and Good Faith Effort Guidance section.

4. Bidder's Documentation of Good Faith Effort Evaluation Request Appeal Process

A bidder can appeal the Department's decision to deny the bidder's demonstration of Good Faith Effort through Administrative Reconsideration. The bidder must provide a written justification refuting the specific reasons for denial as stated in the Department's denial notice. The bidder may meet in person with the Department if so requested. Failure to appeal within 5 business days after receiving the Department's written notice denying the request constitutes a forfeiture of the bidder's right of appeal. Receipt of appeal is confirmed by email date stamp or certified mail signed by WisDOT staff. A contract will not be executed without documentation that the DBE provisions have been fulfilled.

The Department will appoint a representative who did not participate in the original good faith effort determination, to assess the bidder's appeal. The Department will issue a written decision within 5 business days after the bidder presents all written and oral information. In that written decision, the Department will explain the basis for finding that the bidder did or did not demonstrate an adequate good faith effort to meet the contract DBE goal. The Department's decision is final.

5. Determining DBE Eligibility

Directory of DBE firms

a. The only resource for DBE firms certified in the State of Wisconsin is the Wisconsin Unified Certification Program (UCP) DBE Directory. WisDOT maintains a current list of certified DBE firms at: http://wisconsindot.gov/Documents/doing-bus/civil-rights/dbe/dbe-ucp-directory.xlsx

b. The DBE Program office is available to assist with contracting DBE firms:(608) 267-3849.

c. DBE firms are certified based on various factors including the federal standards from the Small Business Administration that assigns a North American Industrial Classification (NAICS) Codes. DBE firms are only eligible for credit when performing work in their assigned NAICS code(s). If a DBE subcontractor performs work that is not with its assigned NAICS code, the prime contractor should contact the DBE Office to inquire about compatibility with the Business Development Program.

6. Counting DBE Participation

Assessing DBE Work

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 UCP agencies. 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:

a. The Department counts work performed by the DBE firm's own resources. The Department includes the cost of materials and supplies the DBE firm obtains for the work. The Department also includes the cost of equipment the DBE firm leases for the work. The Department will not include the cost of materials, supplies, or equipment the DBE firm purchases or leases from the prime contractor or its affiliate, with the exception of non-project specific leases the DBE has in place before the work is advertised.

b. The Department counts fees and commissions the DBE subcontractor charges for providing 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 program engineer deems reasonable based on experience or prevailing market rates.

c. If a DBE firm subcontracts work, the Department counts the value of the work subcontracted to a DBE subcontractor.

d. The contractor will maintain records and may be required to furnish periodic reports documenting its performance under this item.

e. It is the Prime Contractor's responsibility to determine whether the work that is committed and/or contracted to a DBE firm can be counted for DBE credit by referencing the work type and NAICS code listed for the DBE firm on the Wisconsin UCP DBE Directory.

f. It is the Prime Contractor's responsibility to assess the DBE firm's ability to perform the work for which it is committing/contracting the DBE to do. Note that the Department encourages the Prime Contractor to assist and develop DBE firms to become fully knowledgeable contractors to successfully perform on its contracts.

g. The Prime Contractor will inform the DBE office via email of all DBE subcontractors added to the project following execution of the contract. The Prime Contractor may omit submission of another form DT1506, but must submit signed Attachment A forms for additional DBE firms.

h. See Section 7 for DBE credit evaluation for Trucking and Section 8 for DBE credit evaluation for Manufacturers, Suppliers, and Brokers

Naming conventions: When emailing files, please use the following language to identify your submission- "Project #, Proposal #, Let date, Business Name, Attachment A" Email: DBE_Alert@dot.wi.gov

*Note: A sublet request is required for DBE work, regardless of subcontract tier, and also for reporting materials or supplies furnished by a DBE.

- Sublet Requests via form DT1925 or WS1925 are required for 1st Tier DBEs
- For all 2nd Tier and below notification of DBE sublet is indicated by the contractor entering them in CRCS

7. Credit Evaluation for Trucking

All bidders are expected to adhere to the Department's current trucking policy posted on the HCCI website at: http://wisconsindot.gov/Documents/doing-bus/civil-rights/dbe/trucking-utilization-policy.pdf

The prime contractor is responsible for ensuring that all subcontractors including trucking firms, receive Form FHWA 1273: https://www.fhwa.dot.gov/programadmin/contracts/1273/1273.pdf

See Section 8 for Broker credit.

8. Credit Evaluation for Manufacturers, Suppliers, Brokers

The Department will calculate the amount of DBE credit awarded to a prime using a DBE firm for the provisions of materials and supplies on a contract-by-contract basis. The Department will count the material and supplies that a DBE firm provides under the contract for DBE credit based on whether the DBE firm is a manufacturer, supplier, or broker. Generally, DBE credit is determined through evaluation of the DBE owner's role, responsibility, and contribution to the transaction. Maximum DBE credit is awarded when the DBE firm manufactures materials or supplies. DBE credit decreases when the DBE firm solely supplies materials, and minimal credit is allotted when the DBE firm's role is administrative or transactional. It is the bidder's responsibility to confirm that the DBE firm is considered a supplier or a manufacturer before listing them on Commitment to Subcontract to DBE form DT1506 or DBE Commitment submitted with the bid.

a. Manufacturers

(1) A manufacturer is 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 and of the general character described by the specifications.

(2) If the materials or supplies are obtained from a DBE manufacturer, **100%** percent of the cost of the materials or supplies counts toward DBE goals.

b. Regular Dealers of Material and/or Supplies

(1) A regular dealer is a firm that owns, operates, or maintains a store, warehouse, or other establishment in which the materials, supplies, articles or equipment of the general character described by the specifications

and required under the contract are bought, kept in stock, and regularly sold or leased to the public in the usual course of business.

(2) If the materials or supplies are purchased from a DBE regular dealer, count **60%** percent of the cost of the materials or supplies toward DBE goals.

(3) At a minimum, a regular dealer must meet the following criteria to be counted for DBE credit:

i. The DBE firm must be an established, regular business that engages, as its principal business and under its own name, in the purchase and sale or lease of the products in question.

ii. The DBE firm must both own and operate distribution equipment for the product--bulk items such as petroleum products, steel, cement, gravel, stone, or asphalt. If some of the distribution equipment is leased, the lease agreement must accompany the DBE Commitment form for evaluation of the dealer's control before the DBE office approves the DBE credit.

(4) When DBE suppliers are contracted, additional documentation must accompany the DBE Commitment and Attachment A forms. An invoice or bill-of-sale that includes names of the bidder and the DBE supplier, along with documentation of the calculations used as the basis for the purchase agreement, subcontract, or invoice. WisDOT recognizes that the amount on the Attachment A form may be more or less than the amount on the invoice per b.(1) above.

i. The bidder should respond to the following questions and include with submission of form DT1506 or the DBE Commitment entered with bid:

a. What is the product or material?

b. Is this item in the prime's inventory or was the item purchased when contract was awarded?

c. Which contract line items were referenced to develop this quote?

d. What is the amount of material or product used on the project?

(5) Supplies purchased in **bulk** from DBE firms at the beginning of the season may be credited to current contracts if submitted with appropriate documentation to the DBE office.

i. To ensure that the appropriate credit is assigned, follow the procedure below:

a. When DBE suppliers are contracted for bulk supply or commodity purchases, an invoice or bill-of-sale that includes names of the contractor and the DBE supplier should be submitted to the DBE Office via eSubmit (preferred during letting) or the DBE_Alert email box. The supply/commodity credit may be applied during the federal fiscal year (October- September) in which the purchase was made.

b. When the contractor intends to apply the credit to a particular project, submit a copy of the original invoice, documentation of the calculations for supplies/commodities to be used on the project, and an Attachment A. Indicate on the Attachment A:

c. This supply/commodity is in the prime's inventory or pre-paid in case of commodities

d. The full value of the original invoice submitted to the DBE Office, above in (1)

e. The amount of material or product used on this project

f. Fuel estimate listed on Attachment A will be recorded as a deduction from the full fuel purchase amount shown on the invoice

ii. DBE Office Process (Applies only to bulk purchases)

a. Supply/Commodity commitment is received

b. Engineer verifies amount listed on invoice and enters the full amount into spreadsheet

c. The amount of credit applied for each project is updated on the spreadsheet until the bulk purchase is exhausted

d. Engineer informs contractor when full amount of bulk purchase has been applied

c. Brokers, Transaction Expediters, Packagers, Manufacturers' Representatives

(1) No portion of the cost of the materials, supplies, services themselves will count for DBE credit. However, WisDOT will evaluate the fees or commissions charged when a prime purchases materials, supplies, or services from a DBE certified firm which is neither a manufacturer nor a regular dealer, namely: brokers, packagers, manufacturers' representatives, or other persons who arrange or expedite transactions.

(2) Brokerage fees are calculated as **10%** of the purchase amount.

(3) WisDOT may count the amount of fees or commissions charged for assistance in the procurement of the materials and supplies, fees, or transportation charges for the delivery of materials or supplies required on a job site.

(4) Evaluation of DBE credit includes review of the contract need for the item/service, the sub-contract or invoice for the item/service, and a comparison of the fees customarily allowed for similar services to determine whether they are reasonable.

9. DBE Commitment Modification Policy (Formerly "DBE Replacement Policy")

a. Issuing a Contract Change Order

Any changes or modifications to the contract once executed are considered contract modifications and as such require a change order. In addition, the DBE office must provide consent for reduction, termination, or replacement of subcontractors approved on the DBE Commitment *in advance* of the modification for the prime contractor to receive payment for work or supplies. Additions to the DBE Commitment do not require advance notification of the DBE office. (see below e. DBE Utilization beyond the approved DBE Commitment)

b. Contractor Considerations

(1) A prime contractor cannot modify the DBE Commitment through reduction in participation, termination, or replacement of a DBE subcontractor listed on the approved DBE Commitment without prior written consent from the DBE Office. This includes, but is not limited to, instances in which a prime contractor seeks to perform work originally designated for a DBE subcontractor with its own forces or those of an affiliate, a non-DBE firm, or with another DBE firm.

(2) If a prime contractor reduces participation, replaces, or terminates a DBE subcontractor who has been approved for DBE credit toward its contract, the prime is required to provide documentation supporting its inability to fulfill the contractual commitment made to the Department regarding the DBE utilization.

(3) The Prime Contractor is required to demonstrate efforts to find another DBE subcontractor to perform at least the same amount of work under the contract as the DBE subcontractor that was terminated, to the extent needed to meet the assigned DBE contract goal. When additional opportunity is available by contract modifications, the Prime Contractor must utilize DBE subcontractors that were committed to equal work items, in the original contract.

(4) In circumstances when a DBE subcontractor fails to complete its work on the contract for any reason, or is terminated from a contract, the Prime Contractor must undertake efforts to maintain its commitment to the assigned DBE goal.

(5) The DBE subcontractor should communicate with the Prime Contractor regarding its schedule and capacity in the context of the contract. If the DBE firm anticipates that it cannot fulfill its subcontract, they will advise the Prime Contractor and suggest a DBE subcontractor that may replace their services and provide written consent to be released from its subcontract.

i. Before the Prime Contractor can request modification to the approved DBE Commitment, the Prime Contractor must:

a. Make every effort to fulfill the DBE Commitment by working with the listed DBE subcontractor to ensure that the firm is fully knowledgeable of the Prime Contractor's expectations for successful performance on the contract. Document these efforts in writing.

b. If those efforts fail, provide written notice to the DBE subcontractor of the Prime Contractor's intent to request to modify the Commitment through reduction in participation, termination, and/or replacement of the subcontractor including the reason(s) for pursuing this action.

c. Copy the DBE Office on all correspondence related to changing a DBE subcontractor who has been approved for DBE credit on a contract, including preparation and coordination efforts.

d. Clearly state the amount of time the DBE firm has to remedy and/or respond to the notice of intent to replace/terminate. The DBE must be allowed five days from the date notice was received as indicated by email time stamp or signed certified mail, to respond, in writing. EXCEPTION: The Prime Contractor must provide a verifiable reason for a response period shorter than five days. For example, a WisDOT project engineer or project manager confirms that WisDOT has eliminated an item the DBE subcontractor was contracted for.

e. The DBE subcontractor must acknowledge the contract modification with written response to the Prime Contractor and the DBE Office. If objecting to the subcontract modification, the DBE subcontractor must outline the basis for objection to the proposed modification, providing sound reasoning for WisDOT to reject the prime's request.

c. Request to Modify DBE Subcontracting Commitment

The written request referenced above may be delivered by email or fax. The request must contain the following:

(1) Project ID number

(2) WisDOT Contract Project Engineer's name and contact information

(3) DBE subcontractor name and work type and/or NAICS code

(4) Contract's progress schedule

(5) Reason(s) for requesting that the DBE subcontractor be replaced or terminated

(6) Attach/include all communication with the DBE subcontractor to deploy/address/resolve work completion

Naming conventions: When emailing files, please use the following language to identify your submission- "Project #, Proposal #, Let date, Business Name, MODIFICATION" Email: DBE_Alert@dot.wi.gov + Project Engineer

WisDOT will review the request and any supporting documentation submitted to evaluate if the circumstance and the reasons constitute good cause for replacing or terminating the approved DBE subcontractor.

Good Causes to Replace a DBE subcontractor according to the federal DBE program guidelines {49 CFR part 26.53}

- The listed DBE subcontractor fails or refuses to execute a written contract
- The listed DBE subcontractor fails or refuses to perform the work of its subcontract in a way consistent with normal industry standards. Provided, however, that good cause does not exist if the failure or refusal of the DBE subcontractor to perform its work on the subcontract results from the bad faith or discriminatory action of the prime contractor
- The listed DBE subcontractor fails or refuses to meet the prime contractor's reasonable, nondiscriminatory bond requirements
- The listed DBE subcontractor becomes bankrupt, insolvent, or exhibits credit unworthiness
- The listed DBE subcontractor is ineligible to work on public works projects because of suspension and debarment proceedings pursuant 2 CFR Parts 180, 215, and 1,200 or applicable state law
- The prime has determined that the listed DBE subcontractor is not a responsible contractor
- The listed DBE subcontractor voluntarily withdraws from the project and provides written notice of its withdrawal
- The listed DBE subcontractor is ineligible to receive DBE credit for the type of work required

- A DBE firm owner dies or becomes disabled with the result that the listed DBE subcontractor is unable to complete its work on the contract.

d. Evaluation and Response to the Request

WisDOT's timely response to the Prime Contractor's request for modification of the approved DBE Commitment will be provided to the prime and the WisDOT project engineer via email.

If WisDOT determines that the Prime Contractor's basis for reduction in participation, replacement, or termination of the DBE subcontractor is not consistent with the good cause guidelines, the DBE office will provide a response via email within 48-hours of receipt of request from the Prime Contractor as indicated by email time stamp. The communication will include: the requirement to utilize the committed DBE, actions to support the completion of the contractual commitment, a list of available WisDOT support services, and administrative remedies, including withholding payment to the prime, that may be invoked for failure to comply with federal DBE guidelines for DBE replacement.

The WisDOT contact for all actions related to modification of the approved DBE Commitment is the DBE Program Engineer who can be reached at DBE_Alert@dot.wi.gov or (414) 335-0413.

e. DBE Utilization beyond the approved DBE Commitment

When the prime or a subcontractor increases the scope of work for an approved DBE subcontractor or adds a DBE subcontractor who was not on the approved form DT1506 or DBE Commitment submitted with bid at any time after contract execution, this is referred to as voluntary DBE contract goal achievement. The contractor must follow these steps to ensure that the participation is accurately credited toward the DBE goal:

(1) Forward a complete, signed Attachment A form to the DBE Office. A complete Attachment A includes DBE subcontractor contact information, signatures, subcontract value, and description of the work areas to be performed by the DBE. The DBE Office will verify the DBE participation and revise the DBE Commitment based on the email/discussion and the new Attachment A.

(2) When adding to an existing DBE Commitment, submit a new Attachment A to the DBE Alert mailbox

(3) OR Submit a final Attachment A to DBE Alert during the Finals Process when Compliance receives notice of "Substantially Complete"

Naming conventions: When emailing files, please use the following language to identify your submission- "Project #, Proposal #, Let date, Business Name, New Attachment A" Email: DBE_Alert@dot.wi.gov

Special note on trucking

- DBE truckers added to the sublets in CRCS *will* be approved without DBE credit (You will see a "N" in CRCS instead of "Y")
- Prime Contractors may enter a "place holder" e.g. $1000.00, for DBE Trucking in CRCS if the full amount of trucking is unknown for sublet purposes only
- The hiring contractor may obtain the Attachment A with DBE signature included but the **Prime Contractor** must sign the Attachment A before submitting
- DBE truckers need to be added to the DBE commitment once. If the DBE trucker is on the initial commitment (DT1506/E1506) there is no requirement to submit another Attachment A for that trucker for that contract.

10. Commercially Useful Function

a. Commercially Useful Function (CUF) is evaluated after the contract has been executed, while the DBE certified firm is performing contracted work items.

b. The Department uses Form DT1011, DBE Commercially Useful Function Review and Certification to evaluate if the DBE is performing a commercially useful function. WisDOT counts expenditures of a DBE toward the DBE goal only if the DBE is performing a commercially useful function on that contract.

c. A DBE firm is performing a commercially useful function if the following conditions are met:

(1) For contract work, the DBE is responsible for executing a distinct portion of the work and is carrying out its responsibilities by actually performing, managing, and supervising that work.

(2) For materials and supplies, the DBE is responsible for negotiating price, determining quality and quantity, ordering, and paying for those materials and supplies.

d. Offsite Hauling – when DBE truck will haul between a pit and plant or location other than the construction site associated with the commitment

(1) Indicate Offsite Hauling on Attachment A

(2) Discuss offsite hauling at weekly progress meetings with Project Engineer (PE)

(3) PE conducts spot checks of pits/plants to verify DBE truck is hauling and/or verifying hauling log

(4) Prime should be prepared to submit haul tickets, plant/pit tickets, timecards, and other pertinent documentation if requested by PE or DBE Office

11. Credit Evaluation for DBE Primes

WisDOT calculates DBE credit based on the amount and type of work performed by DBE certified firms for work submitted with required documentation. If the prime contractor is a DBE certified firm, the Department will only count the work that the DBE prime performs with its own forces for DBE neutral credit. The Department will also calculate DBE credit for work performed by any other DBE certified subcontractor, DBE certified supplier, and DBE certified manufacturer on the contract in each firm's approved NAICS code/work areas that are submitted with required documentation. Crediting for manufacturers and suppliers is calculated consistent with Section 8 of this document and 49 CFR Part 26.

12. Joint Venture

A joint venture is an association of a DBE firm and one or more other firms to carry out a single, for-profit business enterprise, for which the parties combine their property, capital, efforts, skills and knowledge, and in which the DBE is responsible for a distinct, clearly defined portion of the work of the contract and whose share in the capital contribution, control, management, risks, and profits of the joint venture are commensurate with its ownership interest. If a DBE performs as a participant in a joint venture, the Department will only credit the portion of the total dollar value of the contract equal to the portion of the work that the DBE performs with its own forces.

13. 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. DBE credit is evaluated and confirmed by the DBE Office for any contracts on which the mentor-protégé team identifies itself to the DBE Office as a current participant of the Mentor-Protégé Program.

(1) DBE credit may only be awarded to a non-DBE mentor firm for using its own protégé firm for less than one half of its goal on any contract; and

(2) Not award DBE credit to a non-DBE mentor firm for using its own protégé firm for more than every other contract performed by the protégé firm.

c. A DBE protégé firm may be eligible for conditional NAICS code extension for training with the mentor. Request permission from the DBE Office- Certification area.

d. Refer to WisDOT's Mentor-Protégé guidelines for guidance on the number of contracts and amount of DBE credit allowed on WisDOT projects.

14. Use of Joint Checks

The use of joint checks is allowable if it is a commonly recognized business practice in the material industry. A joint check is defined as a two-party check between a DBE subcontractor, a prime contractor, and the regular dealer or materials supplier who is neither the prime nor an affiliate of the prime. Typically, the prime contractor issues one check as payor to the DBE subcontractor and to the supplier jointly (to guarantee payment to the supplier) as payment for the material/supplies used by the DBE firm in cases where the DBE subcontractor and materials have been approved for DBE credit. The DBE subcontractor gains the opportunity to establish a direct contracting relationship with the supplier to potentially facilitate a business rapport that results in a line of credit or increased partnering opportunities.

The cost of material and supplies purchased by the DBE firm is part of the value of work performed by the DBE to be counted toward the goal. To receive credit, the DBE firm must be responsible for negotiating price, determining quality and quantity, ordering the materials, and installing (where applicable) and "paying for the material itself." See 49 CFR 26.55(c)(1).

The approval to use joint checks constitutes a commitment to provide further information to WisDOT, upon request by staff. WisDOT will allow the use of joint checks when the following conditions are met:

a. The Prime Contractor must request permission to use joint checks from the DBE Office by submitting the Application to Use Joint Checks.

(1) Request should be made when the DBE Commitment or the Request to Sublet is submitted; the request will not be considered if submitted after the DBE Subcontractor starts its work.

(2) Approval/Permission must be granted prior to the issuance of any joint checks.

(3) The payment schedule for the supplier must be presented to the DBE office before the first check is issued.

(4) The joint check for supplies must be strictly for the cost of approved supplies.

b. The DBE subcontractor is responsible for furnishing and/or installing the material/work item and is not an ‘extra participant’ in the transaction. The DBE firm’s role in the transaction cannot be limited solely to signing the check(s) to release payment to the material supplier. At a minimum, the DBE subcontractor’s tasks should include the following:

(1) The DBE subcontractor (not the prime/payor) negotiates the quantities, price, and delivery of materials.

(2) The DBE subcontractor consents to sign/release the check to the supplier by signing the Application to Use Joint Checks after establishing the conditions and documentation of payment within the subcontract terms or in a separate written document.

c. The Prime contractor/payor acts solely as a guarantor.

(1) The Prime Contractor agrees to furnish the check used for the payment of materials/supplies under the contract.

(2) The prime contractor/payor cannot require the subcontractor to use a specific supplier or the prime contractor’s negotiated unit price.

15. Payment

Costs for conforming to this Additional Special Provision (ASP) and any associated DBE requirements are incidental to the contract.

Appendix A
Substantive Conversation Guidelines

The substantive conversation is critical to all bidders' demonstration of good faith effort to meet the DBE goal prior to bid opening. Relationship building between primes and subcontractors is crucial to DBE goal attainment. Responsible bidders seek to build rapport with potential DBE subcontractors to understand capacity, areas of expertise, and assess contracting feasibility. Bidders who compete for WisDOT contracts are specialty contractors responding to a growing and changing contract environment. Just as these specialists are responsible for care of the roads, they are likewise responsible for contributing to the health of the industry. The substantive conversation drives collaboration that will build industry health and capacity. The following is intended to provide guidance for such discussions but is not an exhaustive list. Contractors are encouraged to incorporate their existing strategies for cultivating business relationships as well.

<u>Prior to Bid Opening- this discussion should happen as early as possible (WisDOT advertisements are released weeks prior to each Let)</u>

1. Determine DBE subcontractor's interest in quoting
2. If response indicates inexperience with quoting- offer support/assistance to the DBE in understanding the industry including fundamentals a subcontractor needs to know, required reading and/or resources.
3. Assess their interest and experience in the road construction industry by asking questions such as:

- Have you competed for other WisDOT contracts? Ratio of competed/to wins
- Have you performed on any transportation industry contracts (locally or with other states)?
- What the largest contract you've completed?
- Have you worked in the industry: apprentice, journeyman, safety, inspection etc.?
- Does this project fit into your schedule? Are you working on any contracts now?
- Have you reviewed a copy of the plans? Are you comfortable performing within the scope and quantity considerations of this contract?
- What region do you work in? Home base?
- Which line items are you considering?
- Have you read/are you familiar with WisDOT Standard Specifications? Construction Material Manual?
- Do you understand where your work fits in the project schedule, project phases?

<u>Following Bid Opening- this discussion can happen at any time</u>

1. After reviewing their quote, note the following in your discussion:

- Does the quote look complete? Irregular?
- Are there errors in the quote? Are items very high or very low?
- In general, does the quote look competitive?

2. Questions and Advice for the bidder to share with the potential DBE subcontractor:

- What line items would typically be in a competitive quote for a subcontractor of their specialty?
- How many employees and what is their role/experience/expertise in your firm?
- Do you have resources for labor (union member, family-based, community-resourced) and capital (banking relationship, bond agent, CPA)?
- Where have you worked: cities, states, government, commercial, residential/private sector, etc. Explain similarities or differences.
- Refer them to reliable, trusted, industry resources that can educate or connect them to relevant resources, education/certification resources, more appropriate contract opportunities.
- Discussion about prime contract and subcontract liability, critical path items, contract quantities, schedule risks, and potential profit/loss (for upcoming known projects or in general).
- Discussion of bonding, insurance, and overall business risk considerations.

Appendix B

Sample Contractor Solicitation Letter Page 1

(This sample is provided as a guide, not a formatting requirement)

DBE Solicitation - [Month] [Day], [Year] WisDOT Bid Letting

Attention all DBEs. [Prime Contractor] is actively seeking your quote for the [Month][Day], [Year] Bid Letting. [Prime Contractor] is considering bidding on the projects listed on page 2 as a prime contractor. Please see page 2 for instructions and the sub-contractable opportunities for each proposal.

Does [Prime Contractor] accept quotes in areas we might self-perform? Yes, we do! We support this federal rule and (if needed) we consider areas we might self-perform an opportunity to provide in the field assistance and training if we award your quote.

Where can DBEs find the plans, specifications & addenda? Please visit [Prime Contractor's] plan room [LINK] or on WisDOT's Highway Construction Contract Information HCCI website: Wisconsin Department of Transportation Highway Construction Contract Information (wisconsindot.gov). This same website can be checked for the contract status.

What should your quote include? All the costs required to complete the items you propose to perform including labor, equipment, material, and related bonding or insurance. The quote should also note items that you are DBE certified to perform, tied items, and any special terms. Please use page 2 as your cover sheet for your quote.

Do you have a question regarding bonding, credit, insurance, equipment, or supplies/materials? We welcome all DBE questions! Please call [Prime Contractor] and ask to speak with [Contact]. [Prime Contractor] can provide basic information as well as a referral to a trusted industry partner for insurance and bonding needs.

When are quotes due?

[Month] [Day], [Year] at [Time]. We accept quotes via SBN, email, or fax. Please make every effort to have your quotes in by this time or earlier. Quality check your quote so it includes the correct letting date, project ID, proposal number, unit price and extension.

Who can DBEs contact for questions, information, clarification or for a quote evaluation? [Project Manager Name] [Phone] [Email]. If you are quoting [Prime Contractor] for the first time, we encourage you to come meet with us in person to discuss the project. Our office hours are 7:30 a.m. – 5:00 p.m. On bid day, we are in the office by 6:30 a.m.

Why partner with [Prime Contractor]?

DBE partnership is a core part of [Prime Contractor's] mission. Including DBEs at the beginning of each project is essential in the success of each project. We consider DBEs to be important industry partners who bring dedication and knowledge at various stages during construction. We are proud to be an industry leader with our DBE partnership. Your success as a DBE is our success.

Sample Contractor Solicitation Letter Page 2

(This sample is provided as a guide, not a formatting requirement)

REQUEST FOR QUOTE

[Prime Contractor]
Letting Date: [Month] [Day], [Year]
Project IDs: 1234-56-00 (Proposal #1) & 1234-01-78 (Proposal #6)

Please check all that apply:
____Yes, we will be quoting the projects & 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 someone contact me at this number:

Prime Contractor Contact:_____ DBE:_____
Phone:_____ Fax:_____
Email:_____

Please circle the proposals and items you will be quoting below and contact us with any questions

Proposal **County**	**1** **Dane County**	**6** **Crawford County**
Clearing & Grubbing	**X**	**X**
Dump Truck Hauling	**X**	**X**
Curb/Gutter/Sidewalk	**X**	
Erosion Control Items		**X**
Excavation	**X**	**X**
Pavement Marking		**X**
Traffic Control	**X**	
Sawing	**X**	**X**
QMP, Base		**X**
Pipe Underdrain	**X**	
Landscape		**X**
Beam Guard	**X**	
Electrical	**X**	
Signs/Posts/Markers		**X**
Survey/Staking		**X**

Again, please make every effort to have your quotes into our office by time deadline prior to the letting date.

Sample Contractor Solicitation Email - Simplified

(This sample is provided as a guide, not a formatting requirement)

ATTENTION DBEs

- **[Prime Contractor] specializes in municipal projects in the XX Region(s)**
- **We have successfully competed for *and* completed XX WisDOT projects over the past XX years**
- **Consider [Prime Contractor] your partner on WisDOT Projects**

[Prime Contractor] is seeking *your* subcontractor quote for the XX/XX/20XX WisDOT bid letting on the below projects:

Project	Proposal	County	Region
1234-56-00	**2**	**Dane**	**SW**
1234-01-78	**6**	**Crawford**	**SW**

- Please review the attachments **[attach Solicitation Letter]** and respond with your intent to quote (or not) along with the work items you are interested in performing and respond via fax or email by ***date***. The quote should note items that you are DBE certified to perform, tied items, and any special terms. Please include labor, equipment, material, and related bonding or insurance.

- If you have any questions regarding bonding, credit, insurance, equipment and/or materials/supplies, please feel free to call [Prime Contractor] and ask for [Contact]. **(Include if your company is willing to answer these types of DBE questions)**

- Plans and Specifications can be found: **WisDOT HCCI Website: List webpage where plans are located**

- If you do choose to quote, please make every effort to have your quote into our office by ***time and date.*** Make sure the correct letting date, project number, unit price and extension are included in your quote.

- Should you have questions regarding the mentioned project, please call our office at (414) 555-5555 and we will direct you to the correct estimator/project manager.
  Our office hours are 7:30 a.m. - 5:00 p.m.

Thank you – we look forward to working with your company on this project!

Prime Contractor
Project Manager
Direct: 414-555-5555
Cell: 414-555-5556

Sample Contractor Solicitation Email to non-DBE WisDOT Subcontractors - Simplified

(This sample is provided as a guide, not a formatting requirement)

ATTENTION WisDOT SUBCONTRACTORS

[Prime Contractor] is considering bidding on the below projects for the XX/XX/20XX WisDOT Bid Letting:

Project	Proposal	County	Region	DBE Goal
1234-56-00	2	Dodge	SW	6.00%
1234-01-78	11	Adams	NC	3.00%
1234-00-99	20	Buffalo	NW	5.00%
1234-00-98	33	Portage	NC	6.00%

The above projects have DBE goals and [Prime Contractor] is committed to DBE inclusion with every project. As such, we are requesting:

- All WisDOT Subcontractors to **solicit and utilize** DBEs in your quotes.
- DBE participation can be achieved through purchasing materials from DBE suppliers, using DBE subcontractors and/or DBE trucking firms or any combination of these.
- If there is an opportunity to untie an item in your quote so a DBE can be utilized, please look for those opportunities as well.
- Your quote will be evaluated based on the amount of DBE participation your company is able to provide when compared to other quotes for the same work.

If you do choose to quote, please make every effort to have your quote into our office by **time and date.** Please submit all quotes to [Email]. Make sure the correct letting date, project number, unit price and extension are included in your quote.

Should you have questions regarding the mentioned project, the Project Manager contact is: [Name] [Phone Number] [Email]

Thank you for utilizing DBEs who are trusted industry partners with WisDOT projects.

Prime Contractor
Project Manager
Direct: 414-555-5555
Cell: 414-555-5556

Appendix C
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 later completion.
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 help small businesses learn more about opportunities, compete more effectively, network with other contractors and subcontractors, and win more jobs. The DBE will provide free SBN accounts to DBEs when requested. Use DBE_Alert@dot.wi.gov to request an account. **DBE firms can:**

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 a 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.

Appendix D

Good Faith Effort Evaluation Measures *by categories referenced in DBE regulations*

Bidders must demonstrate that they took all necessary and reasonable steps to achieve the assigned DBE contract goal. For each contract, all bidders must submit documentation indicating the goal has been met or if falling short of meeting the assigned goal, must request a DBE Goal Waiver and document all efforts employed to secure DBE subcontractor participation on Form DT1202.

DBE staff analyze the bidder's documented good faith efforts to determine if action taken was sufficient to meet the goal. Sufficiency is measured contract-by-contract. WisDOT evaluates active and aggressive efforts, quality, quantity, scope, intensity, and appropriateness of the bidder's efforts as a scale of the principles of Good Faith outlined in 49 CFR Part 26, Appendix A. Additional emphasis is placed on the bidder's demonstration of timely submission of documentation and communication with DBE subcontractors, and business development initiatives undertaken to support DBE firm growth.

The following is a sample of good faith effort activities that are rated according to the accompanying rubric. Contractors are encouraged to identify additional activities that align with their business type(s).

- Personal, tailored solicitation to firms that specialize in work types planned or desired for subcontracting
- Follow up to initial solicitation via email or phone
- Substantive conversation including topics such as contract liability, critical path work items, schedule risks, and potential profit/loss
- SBN utilization including posting quotes
- Review and response to DBE quotes including provision of information about plans, specifications,and requirements as applicable
- Documentation requesting subcontractors support DBE goal by solicitation and inclusion of DBE subcontractor quotes
- Responsive and timely submission of organized documentation
- Analysis of number of DBE firms who do work types that you typically subcontract
- Analysis of number of DBE firms who reside in geographical areas where prime seeks work
- Analysis of firms who express interest in bidding/quoting including the number of firms who declined your solicitation
- Reference check of DBE subcontractor work or training (documentation of questions and response required)
- Number of different efforts undertaken to meet the assigned DBE goal as documented in accompanying Form DT1202
- Submission of all DBE quotes received matched with a variety of work to be performed by DBEs
- Number and names of DBE firms provided written advice, or referral to industry-specific business development resources
- Overall pattern of DBE utilization on all WisDOT contracts which may include contracting with municipalities
- Documentation of resources expended to meet assigned DBE goal (#of hours, staff titles, average pay rate, actions taken)
- Analysis of subcontractable work items to be completed by prime beyond prime contractor's 30%
- Risk analysis of work items that are typically in tied quotes that could be unbundled
- List of contract work items in smallest economically feasible units, identifying schedule impact
- Submission of a Gap Analysis identifying DBE skillset and/or industry needs
- Staff training in EEO and Civil Rights laws as documented in training logs
- Written Capacity Assessment completed with DBE firm documenting its ability to perform the work quoted
- DBE engagement efforts beyond simple solicitation that include a substantive discussion, initiated as early in the acquisition process as possible (*points added for each day prior to letting*)
- Outreach and marketing efforts with minority, women, and veteran-focused organizations at least 10 days prior to bid opening
- Active involvement in WisDOT's Business Development Program, TrANS training, facilitated networking efforts, workshops
- Customized teaching/training efforts for future opportunities with DBE subcontractor, contract specific and/or annually
- Introduction and reference provided for DBE subcontractor to a prime who has not previously contracted with the DBE firm
- Prime utilization of a DBE subcontractor the prime has not contracted with previously
- Written referral/recommendation to bond/insurance agents, manufacturer, supplier
- Documented efforts fostering DBE participation through administrative and/or technical assistance
- Evidence of negotiation with the DBE firm about current and future Let opportunities
- Recommendation of local and state services that support small business and access to opportunity: DOA, SBA, WEDC, WPI, etc.
- Advice on bonding, lines of credit, or insurance as required to complete the items quoted and contract requirements

GFE Evaluation Rubric – Phase 1 – Initial Review

DT1202	Examples	Rating	OBOEC Feedback
Solicitation Documentation	Identify all reasonable and available activities performed to solicit the interest of all certified DBEs who have capacity and ability to perform work on the project. *Such as: Updated solicitation letter and email, timely solicitation, and follow-up, and/or utilized various methods to communicate solicitation (ex: letter, email, publication, posting and/or website)*		
Selected Work Items Documentation	All work items are broken out into economically feasible units to facilitate DBE participation. *Such as: Selected work items are specific to each proposal and clearly identified in all solicitation(s)*		
Documentation of Project Information provided to Interested DBEs	Provide interested DBEs with adequate information about the plans, specifications, and any other contractual requirements in a timely manner to assist DBEs in response to solicitation. *Such as: Project information is clearly identified in all solicitation(s)*		
Documentation of Negotiation with Interested DBEs	Provide sufficient evidence demonstrating that good faith negotiations took place during the bid letting. *Such as: Documented attempts with DBEs or on behalf of DBEs to increase DBE participation*		
Documentation of Sound Reason for Rejecting DBEs	Provide sufficient evidence demonstrating that DBEs are rejected for sound reasons. *Such as: Detailed and thoughtful analysis that considers both the percentage and dollar difference when rejecting a DBE including past performance, relevant business experience and stability, safety record, business ethic and integrity, technical capacity, and other tangible factors.*		
Documentation of Assistance to Interested DBEs- bonding, credit, insurance, equipment, supplies/materials	Documented assistance in both solicitation(s) and outreach to DBEs.		
Documentation of Outreach to Minority, Women, and Community organizations and other DBE Business Development Support	Effectively use the services of minority, women, and community organizations as well as contractors' groups, local, state, and federal business assistance offices and organization that provide assistance in recruiting and supporting DBEs, as well participation in activities that support DBE business development. *Such as: Variety of activities that translate into meaningful DBE participation*		
Documentation of other GFE activities	*Such as: Used DT1202 Excel Workbook, Diversity & Inclusion company policy, Mentor-Protégé participant, awarded neutral DBE after bid submission, included company GFE overview/strategy information and/or company website highlights DBE opportunities and participation*		
Overall Demonstration of GFE			

GFE EVALUATION RATING LEGEND – PHASE 1 – Initial Review

Documentation provided by bidder is evaluated and rated on the rubric. Bidders should include activities characterized by the following types of effort:

ACTIVE & AGGRESSIVE: Demonstrated through engaged and assertive activity
QUALITY: Demonstrated through essential character of conscientious and serious activity
QUANTITY: Demonstrated through a measurable number of activities
SCOPE & INTENSITY: Demonstrated through a rigorous approach to an appropriate and purposeful range of activities
TIMING: Demonstrated through engagement efforts beyond simple solicitation, initiated early in the process

GFE EVALUATION – PHASE 2 – Team Review

GFE Team completes:

- Review of activities included on the rubric
- Review of the intent to award and sound reasoning submitted by Prime
- Bid analysis to confirm if any bid submitted met the DBE goal
- Review average of other bidders DBE goal achievement
- Team review of combined efforts documented in Phase 1 and 2 constitute final GFE determination

Rating Scale:

- **GFE Approval:**
  Bona Fide = 6 or more categories color coded green.
  Genuine effort characterized by sincere and earnest activities – "Solicitation" and "Sound Reasoning" must be green

- **GFE Approval:**
  Sufficient = 5 or more categories color coded green or yellow
  Adequate effort documented with a variety of quality activities – "Solicitation" and "Sound Reasoning" must be green or yellow

- **GFE Denial:**
  Pro Forma efforts = 4 or less categories color coded green or yellow. Perfunctory effort characterized by routine or superficial activities

Green = Exceeds expectations
Yellow = Meets expectations
Red = Areas in need of attention and/or absence of documentation **See OBOEC Rubric Analysis_Feedback**

Excerpt from Appendix A to 49 CFR Part 26:
V. In determining whether a bidder has made good faith efforts, it is essential to scrutinize its documented efforts. At a minimum, you must review the performance of other bidders in meeting the contract goal. 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 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. As provided in §26.53(b)(2)((vi), you must also require the contractor to submit copies of each DBE and non-DBE subcontractor quote submitted to the bidder when a non-DBE subcontractor was selected over a DBE for work on the contract to review whether DBE prices were substantially higher; and contact the DBEs listed

GFE RUBRIC ANALYSIS	
OBOEC DECISION	APPROVAL OR DENIAL
Prime Contractor	
Proposal	
Project	
Bid Letting	
DBE Goal Amount	
DBE Goal Amount Achieved	
Bid Analysis	
Goal %	Achieved %
Apparent Low Bidder	%
Bidder B	
Bidder C	
Average of OTHER Bidders (Not including Apparent Low Bidder)	
DBE Quotes Received	
DBE Quotes Awarded	
DBE Quote(s) Rejected	**Rejected Quote Analysis**
DBE Quote(s) Awarded	**Awarded DBE Amount**

Appendix E
Good Faith Effort Best Practices

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 be thorough 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 F
Good Faith Effort Evaluation Guidance
Appendix A of 49 CFR Part 26

I. When, as a recipient, you establish a contract goal on a DOT-assisted contract for procuring construction, equipment, services, or any other purpose, a bidder must, in order to be responsible and/or responsive, make sufficient 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, you have the responsibility 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, based on the regulations and the guidance in this Appendix.

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. Determinations should not be made using quantitative formulas.

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. (1) Conducing market research to identify small business contractors and suppliers and soliciting through all reasonable and available means the interest of all certified DBEs that have the capability to perform the work of the contract. This may include attendance at pre-bid and business matchmaking meetings and events, advertising and/or written notices, posting of Notices of Sources Sought and/or Requests for Proposals, written notices or emails to all DBEs listed in the State's directory of transportation firms that specialize in the areas of work desired (as noted in the DBE directory) and which are located in the area or surrounding areas of the project.

(2) The bidder should solicit this interest as early in the acquisition process as practicable to allow the DBEs to respond to the solicitation and submit a timely offer for the subcontract. The bidder should 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 (for example, smaller tasks or quantities) to facilitate DBE participation, even when the prime contractor might otherwise prefer to perform these work items with its own forces. This may include, where possible, establishing flexible timeframes for performance and delivery schedules in a manner that encourages and facilitates DBE participation.

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 with their offer for the subcontract.

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. (1) 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 status) are not legitimate causes for the rejection or non-solicitation of bids in the contractor's efforts to meet the project goal. Another practice considered an insufficient good faith effort is the rejection of the DBE because its quotation for the work was not the lowest received. However, nothing in this paragraph shall be construed to require the bidder or prime contractor to accept unreasonable quotes in order to satisfy contract goals.

(2) A prime contractor's inability to find a replacement DBE at the original price is not alone sufficient to support a finding that good faith efforts have been made to replace the original DBE. The fact that the contractor has the ability and/or desire to perform the contract work with its own forces does not relieve the contractor of the obligation to make good faith efforts to find a replacement DBE, and it is not a sound basis for rejecting a prospective replacement DBE's reasonable quote.

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, it is essential to scrutinize its documented efforts. At a minimum, you must review the performance of other bidders in meeting the contract goal. 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 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. As provided in §26.53(b)(2)((vi), you must also require the contractor to submit copies of each DBE and non-DBE subcontractor quote submitted to the bidder when a non-DBE subcontractor was selected over a DBE for work on the contract to review whether DBE prices were substantially higher; and contact the DBEs listed on a contractor's solicitation to inquire as to whether they were contacted by the prime. Pro forma mailings to DBEs requesting bids are not alone sufficient to satisfy good faith efforts under the rule.

VI. A promise to use DBEs after contract award is not considered to be responsive to the contract solicitation or to constitute good faith efforts.

[79 FR 59600, Oct. 2, 2014]

Appendix G

(SAMPLE) Forms DT1506 and DT1202

Official Form DT1506 can be found here: https://wisconsindot.gov/Documents/formdocs/dt1506.pdf

COMMITMENT TO SUBCONTRACT TO DBE

Clear

Wisconsin Department of Transportation

DT1506 12/2021 s.84.06(2) Wis. Stats. ☐ Non-Traditional Project

Project ID: _____

Proposal # _____

Prime Contractor: _____

County: _____

Letting Date: _____

Total $ Value of Prime Contract: $ _____

DBE Contract Goal: _____ %

DBE Goal Achieved: 0.00 %

This contract requires that a specified percentage of the work be subcontracted to a disadvantaged business enterprise and that this information be submitted as described in ASP-3. The submittal of this form with the bid proposal constitutes your DBE commitment. Include Attachment A for DBEs included on commitment.

This form must be completed and returned for this proposal. See page 2 for instructions.

1. DBE Firm	2. Work or Items to be subcontracted	3. Supplier Y/N	4. Trucking Only	5. DBE Full Subcontract $	6. DBE Amount for Credit $
			O# L#		
			O# L#		
			O# L#		
			O# L#		
			O# L#		
			O# L#		
			O# L#		
			O# L#		
			O# L#		
			O# L#		
			O# L#		
			O# L#		
			O# L#		
			O# L#		
			O# L#		
			O# L#		
			O# L#		
			O# L#		
			O# L#		
			O# L#		
			O# L#		
			O# L#		
			O# L#		
			O# L#		
			O# L#		
				$ 0.00	$ 0.00

Government Use Only Approved Amounts		
A =	$	%
V =	$	%
Total =	$	%

Signature:

Date:

Good faith effort approved: Yes ☐ No ☐

Prime Representative Signature & Date

DBE Office Signature & Date Approved

COMMITMENT TO SUBCONTRACT TO DBE
ATTACHMENT A

CONFIRMATION OF PARTICIPATION

Project I.D.:	Proposal Number:
Letting Date:	

Name of DBE Firm Participating in this Contract:	
Name of the Prime/Subcontractor who hired the DBE Firm: *(list all names of tiers if more than one)*	
Type of Work or Type of Material Supplied:	
Total Subcontract Value:	Total DBE Credit Value:

FOR PRIME CONTRACTORS ONLY: I certify that I made arrangements with the participating DBE firm to perform the type of work listed or supply the material indicated above for the subcontract value listed above.	Prime Contractor Representative's Signature
	Prime Contractor Representative's Name (Print Name)
	Prime Contractor (Print Company Name)
	Date

FOR PARTICIPATING DBE FIRMS ONLY: I certify that I made arrangements with the Prime Contractor or the Hiring Contractor to perform the type of work or supply the material indicated above for the subcontract value listed above.	Participating DBE Firm Representative's Signature	Date
	Participating DBE Firm Representative's Name (Print Name)	
FOR DBE TRUCKING FIRMS ONLY: I certify that I will utilize, for DBE credit, only trucks listed on my WisDOT approved Schedule of Owned/Leased Vehicles for DBE Credit form and I will be utilizing the number of trucks as listed below.	Participating DBE Firm (Print Company Name)	
	DBE Firm's Address:	

# Owned Trucks	# Leased Trucks	# DBE-Owned Leased Trucks	# Non-DBE-Owned Leased Trucks

☐ Off site Hauling

Official Form DT1506 can be found here: https://wisconsindot.gov/Documents/formdocs/dt1506.pdf

DOCUMENTATION OF GOOD FAITH EFFORT

Wisconsin Department of Transportation
DT1202 3/2020

Project ID	Proposal No.	Letting
Prime Contractor		County
Person Submitting Document		Telephone Number
Address		Email Address

All bidders must undertake necessary and reasonable steps to achieve the assigned DBE contract goal per federal regulatory guidance at 49 CFR Part 26. Bidders use this form to document all efforts employed to meet the assigned goal as a record of contractor good faith efforts (GFE). Refer to ASP3 or 49 CFR Part 26 for guidance on actions that demonstrate good faith effort.

It is critical to list all efforts, attach documentation, and follow the instructions to complete this submission. Documentation of good faith effort includes copies of each DBE and non-DBE subcontractor quote submitted to the bidder for the same line items. Utilize the sample documentation logs to document and organize efforts.

Submit good faith effort documentation per ASP-3 guidelines.

Instructions: Provide a narrative description of all activities pursued to demonstrate good faith efforts, any corresponding documentation, and applicable explanation on separate pages. Include the following items, organized in the order listed below.

1. **Solicitation Documentation:**
   - a. **Purpose:** To identify all reasonable and available activities the bidder performed to solicit the interest of all certified DBEs who have the capacity and ability to perform work on the project. All solicitation efforts should begin as early as possible to ensure DBEs have ample time to respond and ask questions.
   - b. **Action:** Identify and list all activities engaged in to solicit DBEs using all reasonable and available means such as written notice and follow-up communications; substantive conversations; pre-bid meetings; networking events; market research; advertising.
2. **Selected Work Items Documentation:**
   - a. **Purpose:** To ensure that all work items are broken out into economically feasible units to facilitate DBE participation. This must occur even when you prefer to perform the work yourself.
   - b. **Action:** Identify economically feasible work units to be performed by DBEs to include activities such as: list of work items to be performed; breaking up of large work items into smaller tasks or quantities; flexible time frames for performance and delivery schedules.
3. **Documentation of Project Information provided to Interested DBEs:**
   - a. **Purpose:** To provide interested DBEs with adequate information about the plans, specifications, and any other contractual requirements in a timely manner to assist DBEs in response to solicitation.
   - b. **Action:** Provide DBEs access to plans, specifications, and other contract requirements. Early solicitation allows ample opportunity to provide project information, links to Let advertisements, and substantive engagement with DBEs.

4. **Documentation of Negotiation with Interested DBEs:**
   a. **Purpose:** To ensure that negotiations with interested DBEs were made in good faith providing evidence as to why agreements could not be reached for DBEs to perform work.

   b. **Action:** Provide sufficient evidence to demonstrate that good faith negotiations took place. Merely sending out solicitations requesting bids from DBEs does not constitute sufficient good faith efforts. A bidder using good business judgment considers a number of factors in negotiating with all subcontractors, and the firm's price and capabilities in addition to contract goals are taken 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 failing to meet the DBE goal as long as costs are reasonable. (see 49 CFR Part 26 Appendix A)

5. **Documentation of Sound Reason for Rejecting DBEs:**
   a. **Purpose:** To ensure that bidders avoid rejecting DBEs as unqualified without sound reasons. Reasons for rejection must be based on thorough investigation of DBE capabilities.

   b. **Action:** Provide sufficient evidence to demonstrate that DBE was rejected for sound reasons such as past performance, relevant business experience and stability, safety record, business ethic and integrity, technical capacity, other tangible factors.

6. **Documentation of Assistance to Interested DBEs - Bonding, Credit, Insurance, Equipment, Supplies/Materials:**
   a. **Purpose:** To assist interested DBEs in obtaining bonds, lines of credit, insurance, equipment, supplies, materials, and other assistance or services.

   b. **Action:** Assist interested DBEs in obtaining bonding, lines of credit or insurance, and provide technical assistance or information related to plans, specifications, and project requirements. Assist DBEs in obtaining equipment, supplies, materials or other services related to meeting project requirements (excluding supplies or equipment the DBE purchases from the prime).

7. **Documentation of outreach to Minority, Women, and Community Organizations and other DBE Business Development Support:**
   a. **Purpose:** To effectively use the services of minority, women, and community organizations as well as contractors' groups, local, state, and federal business assistance offices and organization that provide assistance in recruiting and supporting DBEs, as well as participation in activities that support DBE business development.

   b. **Action:** Contact organizations and agencies for assistance in contacting, recruiting, and providing support to DBE subcontractors, suppliers, manufacturers, and truckers at least 14 days before bid opening. Participate in or host activities such as networking events, mentor-protégé programs, small business development workshops, and others consistent with DBE support.

Return to:
Wisconsin Department of Transportation
DBE Program Office
PO Box 7965
Madison, WI 53707-7965
DBE_Alert@dot.wi.gov

I certify that I have utilized comprehensive good faith efforts to solicit and utilize DBE firms to meet the DBE participation requirements of this contract proposal, as demonstrated by my responses and as specified in Additional Special Provision 3 (ASP-3).

I certify that the information given in the Documentation of Good Faith Efforts is true and correct to the best of my knowledge and belief.

I further understand that any willful falsification, fraudulent statement, or misrepresentation will result in appropriate sanctions, which may involve debarment and/or prosecution under applicable state (Trans 504) and Federal laws.

(Bidder/Authorized Representative Signature)

(Print Name)

(Title)

Good Faith Effort -- Sample Documentation Logs

The sample logs below are provided as guides rather than exhaustive list. See ASP3, Appendix A for additional examples of demonstrable good faith efforts. Attach documentation for each activity listed.

Acceptable forms of documentation include copies of solicitations sent to DBEs, notes from substantive conversations and negotiations with DBEs, copies of advertisements placed, email communications, all quotes received from DBEs and from all subcontractors who were considered alongside DBE quotes, proof of attendance at applicable networking events; flyers for events or workshops for DBEs offered by the prime, and other physical records of good faith efforts activities.

SOLICITATION LOG

Date	Activity	Name of DBE Solicited	Follow-up
4/1/2020	Sent May Let solicitation	Winterland Electric	Spoke with Mark Winterland on 4/15/20 to ask if he would quote

SELECTED WORK ITEMS SOLICITED LOG

Work Type	DBE Firm	Contact Person	Date	Contact Mode
Pavement Marking	ABC Marking	Leslie Lynch	4/1/2020	Email; phone
	#1 Marking Co.	Mark Smart	4/1/2020	Email; left VM
Electrical	Winterland Electric	Tabitha Tinker	4/3/2020	Email, left VM
	Superstar Wiring	Jose Huascar	4/3/2020	Email; phone

INFORMATION PROVIDED LOG

Request Date	DBE Firm	Information Requested & Provided	Response Date
4/1/2020	Winterland Electric	Requested info on electrical requirements; provided plan and link to specs	4/3/2020
4/21/2020	Absolute Construction	Wanted to know how and when supplies are paid for by WisDOT; referred to spec that covers stockpiling	4/21/2020

NEGOTIATIONS LOG

Date	DBE Firm	Contact Name	Work Type	Quotes Rec'd?	Considered for project?	If not selected, why?
4/12/2020	ABC Landscape	John Dean	Erosion Control	Yes	No	Cannot perform all items
4/17/2020	Wild Ferns	Sandy Lynn	Erosion Control	Yes	Yes	
4/20/2020	#1 Marking	Mark Smart	Electrical	Yes	Yes	

ASSISTANCE LOG

Date	DBE Firm	Contact Person	Assistance Provided
4/1/2020	ABC Sawing	Jackie Swiggle	Informed DBE on how to obtain bonding
4/17/2020	Supreme Construction	Winston Walters	Provided contact for wholesale supply purchase

OUTREACH & BUSINESS DEVELOPMENT LOG

Date	Agency/Organization Contacted	Contact Person	Assistance Requested
4/1/2020	Women in Construction	LaTonya Klein	Contact information for woman-owned suppliers
4/28/2020	WBIC	Sam Smith	Asked for information to provide to DBE regarding financing programs through WBIC

Official Form DT1202 can be found here: https://wisconsindot.gov/pages/global-footer/formdocs/default.aspx

ADDITIONAL SPECIAL PROVISION 4

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.

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 is not allowed to withhold 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.

Acceptance and Final Payment

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.

Additional Special Provision 6 (ASP-6)
Modifications to the standard specifications

Table of Contents

Additional Special Provision 6 (ASP-6)
Modifications to the standard specifications

Make the following revisions to the standard specifications.

---

104 Scope of Work

104.6.1.2.3 Drop-Off Protection

Replace subsection with the following effective with the November 2025 letting.

(1) Eliminate vertical drop-offs greater than 2 inches and edge slopes steeper than 3:1 between adjacent lanes open to traffic.

(2) If the roadway remains open to through traffic during construction and a greater than 2-inch drop-off occurs within 3 feet or less from the edge of the traveled way, eliminate the drop-off within 48 hours after completing that days work. Provide aggregate shoulder material compacted to a temporary 3:1 or flatter cross slope from the surface of the pavement edge.

(3) Unless the engineer allows otherwise address drop-offs when they exist greater than 3 and less than 8 feet from the travelled way as follows:

- Delineate vertical drop-offs 2 inches or greater and edge slopes steeper than 3:1 with drums, barricades, and signs, by the end of the workday.
- Eliminate vertical drop-offs 2 inches or greater and edge slopes steeper than 3:1 within 72 hours or before a weekend or holiday whichever comes first.
- Eliminate or use temporary concrete barrier to protect vertical drop-offs 4-inches or greater after 72 hours or before a weekend or holiday whichever comes first.

(4) If a 4-inch or greater vertical drop-off or an edge slope steeper than 3:1 exists greater than 8 and less than 15 feet from the traveled way, delineate that drop-off or edge slope with drums, barricades, and signs by the end of the workday.

(5) If a 12-inch or greater vertical drop-off exists greater than 8 and less than 15 feet from a traveled way with a posted speed limit of 55 mph or greater, eliminate or use temporary concrete barrier to protect that drop-off within 72 hours or before a weekend or holiday whichever comes first.

104.6.1.2.4 Hazard Protection on Roads Open to All Traffic

Replace subsection with the following effective with the November 2025 letting.

(1) On roads open to all traffic; conform to the following construction clear zone requirements:

- Posted speeds 45 mph or less: within 8 feet of the travelled way.
- Posted speeds from 45 mph to 55 mph inclusive: within 10 feet of the travelled way.
- Posted speeds above 55 mph: within 15 feet of the travelled way.

(2) Remove all construction debris, stored materials, and equipment not in use from the construction clear zone; or if the engineer allows, delineate and shield with concrete barrier.

(3) Delay removal of existing permanent roadside safety devices until necessary. When located within the construction clear zone and not shielded by concrete barrier, use temporary traffic control drums to delineate bridge abutments, concrete barrier blunt ends, sign bridge foundations, drainage structures, and slopes exposed by removing permanent protective measures.

- For exposed bridge abutments, concrete barrier blunt ends, sign bridge foundations, and drainage structures, eliminate the need for delineation within 5 calendar days.
- For exposed slopes steeper than 3:1, eliminate the need for delineation within 14 calendar days, or duration approved by the engineer.

---

107 Legal Relations and Responsibility to the Public

Add section 107.27 (Drones or Unmanned Aircraft Systems (UAS)) effective with the November 2024 letting.

107.27 Drones or Unmanned Aircraft Systems (UAS)

107.27.1 Licensing and Compliance

(1) Obtain and possess the necessary Federal Aviation Administration (FAA) licenses and certifications to operate drones commercially (https://www.faa.gov/uas).

(2) Comply with all FAA regulations, airspace restrictions, and local laws. Operators of small drones that are less than 55 pounds for work or business must follow all requirements as listed in Title 14, Chapter 1, Subchapter

F, Part 107 of the Code of Federal Regulations (14 CFR) and obtain a remote pilot certificate (https://www.faa.gov/uas/commercial_operators).

(3) Comply with Wisconsin State Statute 942.10. Limit operations to the specific approved purpose and employ reasonable precautions to avoid capturing images of the public except those that are incidental to the project.

(4) Provide copies of waivers required for specific project conditions to the engineer prior to any flight.

107.27.2 Flight Approval, Safety, and Incident Reporting

(1) Submit information in 107.27.2(2) to obtain written drone flight approval from the engineer at least 3 business days prior to operating a drone within the right-of-way. Do not operate a drone within the right-of-way unless approved by the engineer.

(2) Drone flight application for review and approval must include:

- UAS pilot information and qualifications, images of certification
- UAS drone information and FAA tail numbers
- Max/ Min allowable flight parameters (weather)
- Specifics of flight mission: capture scope
- Estimated flight duration
- Pre-flight checklist
- Site-specific parameters
- Notification protocols - Federal/Local/Agency/Owner/Responsible in Charge
- Confirmation and verification of approved operators and hardware
- Flight plan map diagram (including launch and landing location)
- FAA-Airspace flight map classification and confirmation with graphics
- UAS incident management protocol

(3) If contractor is requesting multiple types of the same flight, a simplified request can be submitted listing weekly flight plan.

(4) Safety measures must include but are not limited to:

- Regular training and updates on drone regulations are required and must be provided upon request.
- Drones must be operated in accordance with safety guidelines, including maintaining a safe distance from people, structures, vehicles, etc.
- Conduct a pre-flight safety assessment, considering weather conditions, airspace restrictions, and potential hazards.
- Emergency procedures (e.g., drone malfunction, loss of control) must be documented and followed.
- All incidents must be reported to the engineer.

(5) If the drone has an incident during flight, report the following to the engineer:

- Incident background and details.
- FAA (14 CFR 107.9) and NTSB (49 CFR 870) notification protocol.
- Contractor internal notification protocol.

107.27.3 Insurance Requirements

(1) Maintain drone liability insurance with the following limits.

1. For drones weighing 10 pounds or less, a liability policy with a minimum limit of $1,000,000.00 is required.
2. For drones weighing more than 10 pounds and less than or equal to 20 pounds, a liability policy with a minimum limit of $2,000,000.00 is required.
3. For drones weighing more than 20 pounds, notify engineer and department will determine appropriate liability policy coverage levels based on size, use, location, and other risk factors.

---

305 Dense Graded Base

305.3.3.3 Shoulders Adjacent to Asphaltic Pavement or Surfacing

Replace subsection with the following effective with the November 2025 letting.

(1) If the roadway is closed to through traffic during construction, construct the aggregate shoulders before opening the road.

(2) If the roadway remains open to through traffic during construction, conform as specified in 104.6.1.2.3.

(3) Provide and maintain signing and other traffic protection and control devices, as specified in 643, until completing shoulder construction to the required cross-section and flush with the asphaltic pavement or surfacing.

310 Open-Graded Base

310.2 Materials

Replace paragraph (2) with the following effective with the November 2025 letting.

(2) The contractor may substitute material conforming to the gradation requirements for crushed aggregate specified in table 310-01 if that material conforms to the fracture requirements for open-graded crushed gravel specified in 301.2.4.5.

TABLE 310-01 COARSE AGGREGATE (% passing by weight)

AASHTO No. 67[1]

SIEVE	COARSE AGGREGATE (% PASSING by WEIGHT) AASHTO No. 67
2-inch	-
1 1/2-inch	-
1-inch	100
3/4-inch	90 - 100
1/2-inch	-
3/8-inch	20 - 55
No. 4	0 - 10
No. 8	0 - 5
No. 16	-
No. 30	-
No. 50	-
No. 100	-
No. 200	-

[1] Size according to AASHTO M43.

415 Concrete Pavement

415.3.16.4.1.2 Magnetic Pulse Induction

Replace subsection with the following effective with the November 2025 letting.

(1) The department will measure thickness within 10 business days of paving. Upon completion of the project thickness testing, the department will provide the test results to the contractor within 5 business days.

(2) The department will establish a project reference plate at the start of each paving stage. The department will notify the contractor of project reference plate locations before testing. The department will measure the project reference plate before each day of testing.

(3) If the random plate test result falls within 80 to 50 percent pay range specified in 415.5.2, the department will measure the second plate in that unit. The department will notify the contractor immediately if the average of the 6 readings fall within the 80 to 50 percent pay range.

(4) If an individual random plate test result is more than 1 inch thinner than contract plan thickness, the pavement is unacceptable. Department will determine limits of unacceptable pavement by performing the following:

- The engineer will test each consecutive plate stationed ahead and behind until the thickness test result is plan thickness or greater.
- The engineer will direct the contractor to core the hardened concrete to determine the extent of the unacceptable area. In each direction, the contractor shall take cores at points approximately 20 feet from the furthest out of specification plate towards the plate that is plan thickness of greater. Once a core is within 80 to 100 percent pay range, the coring is complete and the limits of unacceptable pavement extend from the stationing between the core test results of 80 to 100 percent payment, inclusive of all unacceptable core and plate test results.
- Perform coring according to WTM T24. The department will evaluate the results according to AASHTO T148
- Fill core holes with concrete or mortar.

416 Concrete Pavement - Repair and Replacement

416.2 Materials

416.2.1 General

Replace paragraph (3) with the following effective with the November 2025 letting.

(3) The contractor may use accelerating admixtures for concrete placed under SHES bid items as follows:

1. If using calcium chloride,
   - AASHTO M144, type S as grade N1 or grade N2, class A.
   - AASHTO M144, type L in a concentration of approximately 30 percent for premixed solutions.
2. If using non-chloride accelerators, conform to:
   - AASHTO M194, type C accelerating admixtures.
3. Do not exceed the manufacturer's recommended maximum dosage.
4. If the engineer requests, provide a written copy of the manufacturer's dosage recommendations.

416.2.4 Special High Early Strength Concrete Pavement Repair and Replacement

416.2.4.1 Composition and Proportioning of Concrete

Add paragraph (4) to subsection effective with the November 2025 letting.

(4) The contractor may use pre-packaged horizontal rapid set concrete patch material from the APL for partial and full-depth pavement repairs instead of specified grades of concrete.

---

506 Steel Bridges

506.3.12.3 High-Strength Bolts

506.3.12.3.1 Materials

Replace subsection with the following effective with the November 2025 letting.

(1) Install bolts according to AASHTO LRFD Bridge Construction Specifications, article 11.5.5, with the following exceptions:

1. If connections are assembled, install bolts with a hardened washer under the nut or bolt head, whichever is the element turned in tightening.
2. If using oversized holes, 2 hardened washers are required, one under the bolt head and one under the nut.
3. Bring the bolted parts into solid contact bearing before final tightening. Use not less than 25 percent of the total number of bolts in a joint to serve as fitting up bolts.
4. For steel diaphragms on prestressed concrete bridges do the following:
   4.1. For steel-to-steel connections within diaphragms:
      - Tension by the turn-of-nut method.
   4.2. For steel-to-concrete girder connections:
      - No PIV or field rotational capacity (RoCAP) testing is required.
      - Tighten as the plan details specify.

(2) Before fasteners are delivered to the site, provide documentation of rotational capacity testing in accordance with ASTM F3125, Annex A2, Rotational Capacity (RoCap)Test. The fasteners must be received in packages that match the fastener assembly combination as tested. If documentation of RoCap testing is not received; then perform this testing in the field prior to installation.

(3) Install bolt, nut, and washer combinations from the same rotational-capacity lot.

(4) Check galvanized nuts to verify that a visible dyed lubricant is on the threads and at least one bolt face.

(5) Ensure that uncoated bolts are oily to the touch over their entire surface when delivered and installed.

(6) Provide and use a Skidmore-Wilhelm Calibrator or an acceptable equivalent tension measuring device at each job site during erection. Perform pre-installation verification (PIV) testing in the field conforming to the procedures enumerated in department form DT2114 no earlier than 14 calendar days prior to permanent bolting. Submit 2 copies of form DT2114 to the engineer.

(7) Prior to installation, ensure that the fastener condition has not changed due to accumulation of rust or dirt, weathering, mixture of tested assembly lots, or other reasons. If changes have occurred, including cleaning and re-lubricating of weathered bolts, the engineer will require re-qualification using RoCap testing in the field, for a minimum of two fastener assemblies of each combination to be used in permanent bolting, and PIV re-testing.

(8) Additional RoCap or PIV tests are required whenever the condition of the fasteners or understanding of the bolting crew is in question by the Engineer. Do not allow permanent bolting until PIV testing is completed.

(9) Tighten threaded bolts by the turn-of-nut method while holding the bolt head. Where clearance is an issue, the contractor may tighten the bolt head while holding the nut.

(10) The contractor may use alternate tightening methods if the engineer approves before use.

(11) The contractor may use a flat washer if the surface adjacent to and abutting the bolt head or nut does not have a slope of more than 1:20 with respect to a plane normal to the bolt axis. For slopes greater than 1:20, use smooth, beveled washers to produce parallelism.

(12) Snug all bolts during installation according to AASHTO LRFD Bridge Construction Specifications, article 11.5.5.4.1.

(13) Tighten each fastener to provide, if all fasteners in the joint are tight, at least the minimum bolt tension as follows:

TABLE 506-1 BOLT TENSION

BOLT SIZE	REQUIRED MINIMUM BOLT TENSION[1]
1/2-inch	12 kips
5/8-inch	19 kips
3/4-inch	28 kips
7/8-inch	39 kips
1-inch	51 kips
1 1/8-inch	64 kips
1 1/4-inch	81 kips
1 3/8-inch	97 kips
1 1/2-inch	118 kips

[1] Equal to the proof load by the length measurement method as specified in ASTM F3125 for grade A35 bolts.

(14) Do not reuse galvanized F3125 A325 bolts. The contractor may reuse uncoated F3125 A325 bolts, if the engineer approves, but not more than once. The department will not consider re-tightening previously tightened bolts that become loosened by the tightening of adjacent bolts as reuse.

506.3.19 Welding

Replace subsection title and text with the following effective with the November 2025 letting.

506.3.19.4 Welding Inspection

(1) Inspect welding according to the current edition of AWS D1.5. Unless specified otherwise, test butt welds in main members by either the radiographic or the ultrasonic method.

(2) Test fillet welds and groove welds not covered otherwise in main members in a non-destructive manner by the magnetic particle method according to ASTM E709, utilizing the yoke method. This includes, but is not limited to, a minimum of 12 inches in every 10 feet or portion thereof of each weld connecting web to flange, bearing stiffener to web or flange, framing connection bar to web or flange, and longitudinal stiffener to web or vertical bar.

506.3.31 Cleaning of Surfaces

506.3.31.2 Coated Surfaces

Replace subsection with the following effective with the November 2025 letting.

(1) Blast clean structural steel and ferrous metal products to be coated as specified in 517.3.1.3.3.

(2) Blast clean steel that will be encased in concrete to SSPC-SP 6 standards or cleaner.

506.3.32 Painting Metal

Replace subsection with the following effective with the November 2025 letting.

(1) Unless the contract provides otherwise, apply 3 coats of paint to structural steel and ferrous metal products. Furnish and apply paints according to the epoxy system or as specified in the special provisions. The requirements for this system are set forth in 517.

(2) For structural steel, including weathering steel, and miscellaneous metals that will be encased in concrete, paint as specified in 517.3.1.

(3) For galvanized surfaces paint as specified in 517.3.1.

(4) Use the 3-coat epoxy system to paint the end 6 feet of structural weathering steel at the abutments, the 6 feet on each side of piers, joints, downspouts, hinges, and galvanized bearings in contact with weathering

steel. Use a coat of brown urethane matching AMS Standard 595A: AMS-STD 20059. Apply one coat of zinc-rich paint to surfaces of expansion joint assemblies and other surfaces not in contact with the weathering steel but inaccessible after assembly or erection.

(5) Do not paint structural steel to be welded before completing welding. If welding only in the fabricating shop and subsequently erecting by bolting, coat it after completing shop welding. Apply one coat of weldable primer or other engineer-approved protective coating to steel surfaces to be field welded after completing shop welding and shop fabrication. Protect machine-finished surfaces that do not receive a paint or galvanizing from contamination during the cleaning and painting process.

(6) Upon fabrication and acceptance, coat pins and pinholes with a plastic or other engineer-approved coating before removing from the shop.

(7) Mark members weighing 3 tons or more with their weights on areas that will be encased in concrete, or paint with a compatible paint on zinc-rich primer, or mark with soapstone on an epoxy-coated surface. Wait until material is dry, inspected, and approved for shipment before loading for shipment.

---

509 Concrete Overlay and Structure Repair

509.2 Materials

Replace subsection with the following effective with the November 2025 letting.

(1) Furnish a neat cement bonding grout. Mix the neat cement in a water-cement ratio approximately equal to 5 gallons of water per 94 pounds of cement. Pre-packaged non-shrink grout from the APL may be used instead of site mixed or ready mixed grout.

(2) Furnish grade E conforming to 501 for overlays.

(3) Furnish grade C or E concrete conforming to 501 for surface repairs. The contractor may increase the slump for grade E concrete to a maximum of 4 inches. For vertical and overhead repairs, use pre-packaged vertical and overhead repair material from the APL unless a different material is approved by the engineer in writing.

(4) Furnish grade C or E concrete conforming to 501 for joint repairs, curb repairs, and full-depth deck repairs; except as follows:

1. The contractor may increase slump of grade E concrete to 3 inches.
2. The contractor may use ready-mixed concrete.

(5) Provide QMP for class II ancillary concrete as specified in 716 if using concrete mixtures conforming to 501.

---

513 Railing

513.2.3 Steel Railing

Replace subsection with the following effective with the November 2025 letting.

(1) Furnish steel railing components as follows:

Structural steel	506.2.2
High strength bolts	506.2.5
Steel guardrail	614.2
Round structural steel tubing for steel pipe railing	ASTM A500 grade B
Structural steel tubing used with other steel railings	ASTM A500 grade B or C

(2) Furnish a two-coat paint system from the APL for structure painting systems under paint - galvanized surfaces.

---

517 Paint and Painting

517.3.1.3.3 Blast Cleaning

517.3.1.3.3.2 Epoxy Coating System

Replace subsection with the following effective with the November 2025 letting.

(1) Blast clean structural steel receiving this coating to a near-white finish according to SSPC-SP 10.

(2) Solvent clean oil and grease on surfaces receiving this coating according to SSPC-SP 1 and blast clean to a near-white finish according to SSPC-SP 10.

(3) Remove fins, tears, slivers, and burred or sharp edges present on any steel member, or that appears during blasting, by grinding then re-blast the area to a one to 2 mils surface shape.

(4) If using abrasives for blast cleaning, use either clean dry sand, steel shot, mineral grit, or manufactured grit of a gradation that produces a uniform one to 2 mils profile as measured with a department-approved impregnated surface profile tape.

(5) Remove abrasive and paint residue from steel surfaces with a commercial grade vacuum cleaner equipped with a brush-type cleaning tool, or by double blowing. If using the double blowing method, vacuum the top surfaces of structural steel, including top and bottom flanges; longitudinal stiffeners, splice plates, and hangers after completing the double blowing operations. Ensure that the steel is dust free when applying primer. Apply the primer within 8 hours after blast cleaning.

(6) Protect freshly coated surfaces from later blast cleaning operations. Brush any blast damaged primed surfaces with a non-rusting tool, or if visible rust occurs, re-blast to a near white condition. Clean the brushed or blast cleaned surfaces and re-prime within the manufacturer's recommended time.

(7) When coating galvanized surfaces, ensure tie-coat adhesion by brush blasting the cleaned surface according to SSPC-SP7 to create a slight angular surface profile according to manufacturer's recommendations of 1 mil to 1.5 mils. Blasting must not fracture the galvanized finish or remove dry film thickness. For the tie- and top-coat, furnish an epoxy coating system from the APL for paint systems for galvanized surfaces.

517.3.1.3.5 Galvanizing

Add subsection effective with the November 2025 letting.

(1) After fabrication, blast clean assemblies per SSPC-SP6 and galvanize according to ASTM A123.

---

526 Temporary Structures

526.3.4 Construction, Backfilling, Inspection and Maintenance

Replace subsection with the following effective with the November 2025 letting.

(1) Construct temporary structures conforming to 500. Backfill conforming to 206.3.13 with structure backfill conforming to 210.2.

(2) Temporary highway bridges open to traffic less than or equal to 24 months: inspect temporary bridges conforming to the National Bridge Inspection Standards (NBIS) and the department's Structure Inspection Manual (SIM) before opening to traffic. Perform additional inspections, as the department's SIM requires, based on structure type, condition, and time in service. Submit inspection reports on department form DT2007 to the engineer and electronic copies to the Bureau of Structures (BOS) Maintenance Section. Ensure that a department-certified qualified team leader performs the inspections.

(3) Temporary highway bridges open to traffic greater than 24 months: complete additional inspections and inventory data collection per the NBIS and SIM within 27 months of the bridge being opened to traffic. Contact the BOS to have a structure number assigned. Enter the inventory data and element level bridge inspection data in accordance with the SIM into WisDOT's Highway Structures Information System (HSIS) within 90 days of completing the field portion of the inspection. Continue to complete required inspections and data submittal at intervals according to the requirements of the NBIS and SIM.

(4) Maintain temporary structures and approaches in place until no longer needed. Unless the engineer directs otherwise, completely remove and dispose of as specified in 203.3.5; do not place on the finished surface.

526.5 Payment

Replace paragraph (2) with the following effective with the November 2025 letting.

(2) Payment for the Temporary Structure bid items is full compensation for providing a temporary structure including design and construction; for construction staking; for temporary shoring and other secondary structure items; for backfilling with structure backfill; for maintaining; and for removing when no longer needed. The department will pay 70 percent of the contract amount when open to traffic and the balance after structure removal and associated site restoration.

621 Landmark Reference Monuments

Remove Standard Specification 621 (Landmark Reference Monuments) effective with the November 2025 letting. Refer to updated information in standard specifications 680 and 682.

---

643 Traffic Control

643.1 Description

Replace paragraph (1) with the following effective with the November 2025 letting.

(1) This section describes providing, maintaining, repositioning, and removing temporary traffic control devices as follows:

Drums	Warning lights	42-inch cones
Barricades type III	Connected arrow boards	Portable changeable message signs
Flexible tubular markers	Signs	Channelizing curb system
Speed feedback trailers	Connected work zone start and end location markers	

643.2.2 Department's Approved Products List (APL)

Replace paragraph (1) with the following effective with the November 2025 letting.

(1) Furnish materials from the APL as follows:

- Drums
- Barricades type III
- Flexible tubular marker posts including bases
- Warning lights and attachment hardware
- Channelizing curb systems
- Connected work zone start and end location markers
- Connected arrow boards
- Sign sheeting
- 42-inch cone assemblies
- Portable changeable message signs
- Speed feedback trailers

643.3 Construction

643.3.1 General

Add paragraphs (10), (11), (12) and (13) effective with the November 2025 letting.

(10) For connected devices provide a local specialist to respond to emergency situations within 2 hours of being notified. Equip local specialists with sufficient resources to correct deficiencies in the connected work zone devices.

(11) Prior to deployment, test all connected devices with the engineer to ensure the device is showing in the WisDOT approved data feed. Send an email to *DOTBTOworkzone@dot.wi.gov* to notify Bureau of Traffic Operations (BTO) that the devices have been turned on.

(12) Provide a WisDOT approved data feed from connected devices and the remote management software, updated at least every minute.

(13) If requested by the engineer, provide real-time status change alerts to a list of designated personnel via text or email or both. Send an alert each time a connected device is switched between operating modes which include the current operating mode, the previous operating mode, the date and time of the mode switch, and the location (latitude and longitude) of the device at the time of the mode switch in the alert.

643.3.3 Connected Arrow Boards

Revise subsection title, replace paragraph (3) and add paragraph (4) effective with the November 2025 letting.

(3) The connected arrow board may be switched between the following pattern displays per the plan:

- Blank
- Right arrow static
- Right arrow flashing
- Right arrow sequential
- Left arrow static
- Left arrow flashing
- Left arrow sequential
- Line flashing
- Bi-directional arrow flashing.

(4) When the connected arrow board is not displaying a pattern, the display shall be blank, and the connected arrow board transmits its status to the data feed. When a connected arrow board is switched to a pattern, the connected arrow board transmits its location and its current operating mode to the data feed.

643.3.7 Temporary Pavement Marking

Add paragraph (9) effective with the November 2025 letting.

(9) Install temporary markings on the final surface in the same location as permanent markings will be placed or as the plans show.

643.3.10 Connected Work Zone Start and End Location Markers

Add subsection effective with the November 2025 letting.

(1) Place work zone start location marker at the beginning of the work zone per plan or as the engineer directs. Clearly label the work zone start location marker so that it is easily distinguishable by field personnel.

(2) Place work zone end location marker at the end of the work zone per plan or as the engineer directs. Clearly label the work zone end location marker so that it is easily distinguishable by field personnel.

(3) Ensure the connected work zone start and end location markers operate continuously when deployed on the project.

(4) Ensure the work zone location markers and connected arrow board are from the same manufacturer.

(5) When the work zone start and end location markers are switched to the ON mode, verify the begin and end location markers transmit their location and identity as begin or end markers to the data feed.

(6) Switch the work zone start and end location markers to OFF mode when temporary traffic control is removed, and the normal traveled way is restored.

643.4 Measurement

643.4.1 Items Measured by the Day

Add paragraphs (3) and (4) effective with the November 2025 letting.

(3) The department will measure Traffic Control Connected Arrow Boards by day for the days the device is reporting correct data.

(4) The department will measure Traffic Control Connected Work Zone Start and End Location Markers by day per roadway segment for the days the devices are reporting correct data.

643.5 Payment

643.5.1 General

Replace paragraph (1) with the following effective with the November 2025 letting.

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

ITEM NUMBER	DESCRIPTION	UNIT
643.0300	Traffic Control Drums	DAY
643.0420	Traffic Control Barricades Type III	DAY
643.0500	Traffic Control Flexible Tubular Marker Posts	EACH
643.0600	Traffic Control Flexible Tubular Marker Bases	EACH
643.0650	Traffic Control Channelizing Curb System	LF
643.0700 - 0799	Traffic Control Warning Lights (type)	DAY
643.0810	Traffic Control Connected Arrow Boards	DAY
643.0900	Traffic Control Signs	DAY
643.0910	Traffic Control Covering Signs Type I	EACH
643.0920	Traffic Control Covering Signs Type II	EACH
643.1000	Traffic Control Signs Fixed Message	SF
643.1050	Traffic Control PCMS	DAY
643.1051	Traffic Control PCMS with TMC Communications	DAY
643.1070 - 1079	Traffic Control Cones (height)	DAY
643.1220	Traffic Control Connected Work Zone Start and End Location Markers	DAY
643.1500	Traffic Control Speed Feedback Trailer	DAY
643.3100 - 3299	Temporary Marking Line (material/type) (width)	LF
643.3300 - 3399	Temporary Marking Crosswalk (material) 6-Inch	LF
643.3500 - 3599	Temporary Marking Arrow (material)	EACH
643.3600 - 3699	Temporary Marking Word (material)	EACH
643.3700 - 3799	Temporary Marking Raised Pavement Marker (type)	EACH
643.3800 - 3899	Temporary Marking Stop Line (material) 18-Inch	LF
643.3900 - 3959	Temporary Marking Diagonal (material) 12-Inch	LF

643.3960 - 3999	Temporary Marking Removable Mask Out Tape (width)	LF
643.4100	Traffic Control Interim Lane Closure	EACH
643.5000	Traffic Control	EACH

646 Pavement Marking

646.3.1.1 General Marking

Replace paragraph (7) with the following effective with the November 2025 letting.

(7) Apply marking to the width and color the bid item indicates. Distribute beads uniformly across the line. Provide a sharp cutoff for both sides and ends of the marking with a uniform cross-section. Achieve straight alignment, not to exceed a 3/8-inch variation in any 40-foot section of travelled way. Do not damage existing marking that will remain in place.

646.3.1.6.2 Retroreflectivity

Replace paragraph (1) with the following effective with the November 2025 letting.

(1) For grooved-in markings, the engineer will also evaluate the percent failing retroreflectivity at the end of the proving period. Ensure that the 180-day reflectivity, in millicandelas/lux/m^2, meets or exceeds the following:

MATERIAL	COLOR	180 DAY DRY RETROREFLECTIVITY
Epoxy	White	150
	Yellow	100
Wet Reflective Epoxy	White	250
	Yellow	150
Permanent Tape	White	400
	Yellow	335

646.3.2.4 Black Epoxy

Replace paragraph (1) with the following effective with the November 2024 letting.

(1) Apply black epoxy in a grooved slot directly after the white marking. Apply epoxy at a wet mil thickness of 20. Apply black aggregate at or exceeding 25 pounds per gallon of epoxy. Do not apply glass beads to black epoxy.

650 Construction Staking

650.3.12 Supplemental Control Staking

Replace paragraph (2) with the following effective with the November 2025 letting.

(2) Document and provide to the engineer complete descriptions and reference ties of the control points, alignment points, and benchmarks to allow for quick reestablishment of the plan data at any time during construction and upon project completion. Document additional control on department form DT1291 as described in CMM 710, table 710-1.

680 Public Land Survey Monuments

Add section 680 (Public Land Survey Monuments) effective with the November 2025 letting.

680.1 Description

(1) This section describes perpetuating US Public Land Survey System (USPLSS) monuments.

680.2 Materials

(1) Furnish magnetic survey nails with center point a minimum of 2-1/2 inches long or engineer approved alternative.

(2) Furnish minimum 3/4-inch reinforcement or 1 inch outside diameter (OD) iron pipe at least 24 inches long.

(3) Furnish plastic survey marker cap with lettering that reads “Witness Monument”.

(4) Use alternative materials if requested and furnished by the county surveyor.

680.3 Construction

680.3.1 General

(1) Perform work under the direction and control of a professional land surveyor registered in the state of Wisconsin, following Wisconsin Administrative Code A-E 7 (https://docs.legis.wisconsin.gov/code/admin_code/a_e/7).

(2) Preserve existing USPLSS monuments and witness monuments (ties) within the construction limits in their original position until monuments are verified and sufficiently tied off.

680.3.2 Pre-Construction

(1) Notify the county surveyor at least 30 days prior to start of construction operations about all USPLSS monuments within the construction limits that might be disturbed.

(2) Obtain the existing USPLSS Monument Record from the county surveyor. Verify existing monuments and witness monuments are in place and undisturbed.

(3) Replace witness monuments that are missing or that could be disturbed by construction operations. Locate new witness monuments near the USPLSS monument but outside the construction limits. Submit a monument record as specified in 680.3.5.

(4) Temporarily mark the location of all witness monuments to protect them during construction.

680.3.3 Removals

(1) Remove or abandon existing monument and monument cover that interfere with construction operations. Remove and dispose of surplus excavation and materials as specified in 205.3.12.

680.3.4 Post-Construction

(1) Verify the location of monuments and witness monuments when construction operations are complete.

(2) Set new monuments and witness monuments where necessary. Recess magnetic survey nails 1/4 inch below the pavement surface for monuments located in pavement. Use reinforcement or iron pipe for monuments not in pavement and for witness monuments. Locate new witness monuments near the USPLSS monument and outside the roadbed. Install plastic caps on witness monuments.

(3) Install marker posts next to all witness monuments if required and supplied by the county surveyor.

(4) Omit setting monuments in the pavement if approved by the department's regional survey coordinator and county surveyor due to traffic or safety concerns.

(5) Submit a monument record as specified in 680.3.5.

680.3.5 Monument Records

(1) Submit a monument record on department form DT1291 to the county surveyor at locations where monuments were set. Provide a copy to the engineer and regional survey coordinator.

680.4 Measurement

(1) The department will measure bid items under this section as each individual monument acceptably completed.

680.5 Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
680.0100	Public Land Survey Monument Verify and Reset	EACH

(2) Payment for the Public Land Survey Monument Verify and Salvage bid item is full compensation for providing all materials; for coordinating with county surveyors; for obtaining existing monument records; for verifying the existing location of monuments and witness monuments; for removing or abandoning existing monuments and monument covers; for resetting monuments; for setting or resetting temporary and permanent witness monuments; and for submitting monument records.

---

682 Geodetic Survey Monuments

Add section 682 (Geodetic Survey Monuments) effective with the November 2025 letting.

682.1 Description

(1) This section describes salvaging geodetic survey discs and constructing geodetic survey monuments.

682.2 Materials

(1) Furnish materials conforming to the following:

Concrete 501
Reinforcement 505.2
Foundation backfill 520.2

(2) Furnish grade A concrete as modified in 716. Provide QMP for class III ancillary concrete as specified in 716.

682.3 Construction

(1) Contact the WisDOT Geodetic Surveys Unit at (866) 568-2852 or "geodetic@dot.wi.gov" as required below.

682.3.1 Salvage Geodetic Survey Discs

(1) Remove and salvage geodetic survey discs from existing structures or survey monuments being removed at the locations shown in the plan.

(2) Notify the WisDOT Geodetic Surveys Unit 7 calendar days prior to removal operations.

(3) Ship or deliver salvaged discs to following address:

WisDOT Bureau of Technical Services

Geodetic Surveys Unit

3502 Kinsman Boulevard

Madison, WI 53704

Provide a tracking number to the Geodetic Surveys Unit upon shipment or contact the Geodetic Surveys Unit to schedule in-person delivery.

682.3.2 Geodetic Survey Monuments

682.3.2.1 Monument Location

(1) Stake the approximate location of monuments provided in the plan and contact the WisDOT Geodetic Surveys Unit 30 days prior to excavating holes for field verification and delivery of department furnished geodetic survey discs.

682.3.2.2 Placing Monuments

(1) Excavate holes for monuments by use of a circular auger at the size and depth the plans show or as the engineer directs.

(2) Remove and dispose of surplus excavation and materials as specified in 205.3.12.

(3) Fill holes with concrete and strike off flush with the ground surface. Place circular forms and steel reinforcement in the concrete as the plans show. Place geodetic survey discs on monuments while the concrete is still plastic.

682.3.2.3 Protecting and Curing

(1) Cure exposed portions of cast in place concrete monuments as specified in 415.3.12 except the contractor may use curing compound conforming to 501.2.8.

(2) Protect placed concrete monuments as specified for concrete pavement as specified in 415.3.14

(3) Protect cast in place concrete monuments from freezing for 7 days.

682.4 Measurement

(1) The department will measure bid items under this section as each individual monument acceptably completed.

682.5 Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
682.0100	Salvage Geodetic Survey Disc	EACH
682.0200	Geodetic Survey Monument	EACH

(2) Payment for the Salvage Geodetic Survey Disc bid item is full compensation for removing and salvaging; and shipping or delivering the disc to the Geodetic Surveys Unit. Removing existing survey monuments will be paid separately under the Removing Concrete Bases bid item. Removing existing survey marker posts will be paid separately under the Removing Delineators and Markers bid item.

(3) Payment for the Geodetic Survey Monument bid item is full compensation for staking; providing concrete; providing steel reinforcement; for placing department-furnished geodetic discs; and for excavating and backfilling.

---

710 General Concrete QMP

710.3 Certification Requirements

Replace paragraph (1) and add paragraph (2) effective with the November 2025 letting.

(1) Have a person certified from the Highway Technician Certification Program Portland Cement Concrete Technician 1 (HTCP - PCCTEC-1) or Assistant Certified Technician Program - Portland Cement Concrete (ACT-PCC) working under a certified technician, on the project site, prepared and equipped to perform required sampling and testing whenever placing concrete.

(2) The department will have a certified HTCP Portland Cement Concrete Mix Design Certification (PCC MDC) technician to review and approve concrete mixes.

710.4 Concrete Mixes

Replace subsection with the following effective with the November 2025 letting.

(1) The contractor is responsible for mix performance.

(2) At least 7 business days before producing concrete, document that materials conform to 501 unless the engineer allows or individual QMP specifications provide otherwise. Include the following:

1. For mixes: quantities per cubic yard expressed as SSD weights and net water, water to cementitious material ratio, air content, and SAM number.
2. For cementitious materials and admixtures: type, brand, and source.
3. For aggregates: absorption, oven-dried specific gravity, SSD bulk specific gravity, wear, soundness, light weight pieces, freeze thaw test results if required, and air correction factor. Submit component aggregate gradations, aggregate proportions, and target combined blended aggregate gradations using the following:
    - DT2220 for combined aggregate gradations.
    - DT2221 for optimized aggregate gradations.
4. For optimized concrete mixtures:
    - Complete the worksheets within DT2221 according to the directions.
    - Ensure the optimized aggregate gradations and the optimized mix design conform to WisDOT specifications and pass the built-in tests within DT2221.
    - Verify slip-form mixture workability and conformance to specifications through required trial batching.
    - Submit the completed DT2221 to the engineer electronically. Include the trial batch test results with the mix design submittal.
5. For high early strength (HES) concrete mixtures required by contract, complete the HES mix modification section in the DT2220 or DT2221 form.

(3) Document mix adjustments daily during concrete production.

(4) Prepare, notify, and submit mixture design modifications to the engineer. Do not place material until the documentation is submitted and, when required, written approval of the mixture design modifications.

(5) Report concrete mix design modifications as classified in levels as specified in table 710-1.

TABLE 710-1 MIX DESIGN MODIFICATION NOTIFICATION

NOTIFICATION	LEVEL I	LEVEL II	NEW MIX DESIGN DURING PROJECT
Prepare, notify, and submit mix design to Engineer	Prior to use	3 business days prior to use	5 business days prior to use
Approval required before placement	No	Yes	Yes

(6) A mix design modification is when any modification occurs for a specific level as specified in table 710-2.

(7) Dependent on the modification performed, documentation is required to be submitted to the engineer as specified in table 710-3.

(8) For HES concrete, conform as specified in table 710-4.

(9) HES concrete is not eligible for 28-day strength incentives.

(10) Submit concrete mix designs into MRS as specified in 701.1.2.7.

TABLE 710-2 MATERIAL MIX DESIGN MODIFICATIONS

MODIFICATION TYPE		LEVEL I	LEVEL II	NEW MIX DESIGN DURING PROJECT
Change in:	Water source	X		
	Cement source, type, or brand			X
	Total cementitious [1]			X
	Aggregate blend	X		
	Aggregate source			X
	SCM replacement rate		X	
	SCM type and supplier			X
	Fly ash source (different class)			X
	Fly ash source (same class for pavements and cast-in-place barriers)		X	
	Fly ash source (same class for structures)			X
	Slag source (same grade)		X	
	Chemical admixture manufacturer or product name [2]			X
Removal of:	SCM			X
	Type B or Type D chemical admixture	X [3]	X [4]	
Addition of:	Non-fading, color pigment	X		
	Type B or Type D chemical admixture	X [3]	X [4]	
	New SCM			X

[1] If not HES/SHES concrete.

[2] Not including Type B or Type D chemical admixture.

[3] Furnished from the APL.

[4] Not furnished from the APL.

TABLE 710-3 MIX DESIGN MODIFICATION DOCUMENTATION

NEW REQUIRED DOCUMENTATION	LEVEL I	LEVEL II	NEW MIX DESIGN DURING PROJECT
Results from trial batching if required			X
Amendment to the quality control plan	X	X	X
Water source name and report [1]	X		
Cement mill certification			X
WisDOT aggregate quality report			X
SCM mill certification		X	X
Chemical additive product data sheet	X	X	X
Updated DT2220 or DT2221 form	X	X	
New DT2220 or DT2221 form			X
New mixture ID: Contractor ID and WisDOT ID	X	X	X
New maturity curve	X [2]	X	X
New lot/sublot layout [3]		X [4]	X

[1] Water for concrete report conforming to 501.2.6 for private wells or surface water sources.

[2] Required only when using a retarder.

[3] Required for HES concrete.

[4] Required when changing the SCM replacement rate.

TABLE 710-4 OPTIONS FOR HES CONCRETE

SCENARIO	MIXTURE MODIFICATION	
When the contract requires, or the HES is directed by the department	OPTION 1 [1]	Add 94 to 282 lb/cy of cement [2]
	OPTION 2	Use Type III cement
When the engineer allows HES when requested by the contractor in writing	Add up to 282 lb/cy of cement [1.2]	

[1] Adjust water to maintain workability without raising the w/cm ratio.

[2] Add to a previously accepted mixture.

710.5.6.2 Contractor Control Charts

710.5.6.2.1 General

Replace subsection with the following effective with the November 2025 letting.

(1) Test aggregate gradations during concrete production except as allowed for small quantities under 710.2. Perform required contractor testing using non-random samples.

(2) Sample aggregates from either the conveyor belt or from the working face of the stockpiles.

(3) Complete aggregate testing as specified in table 710-5. Submit one pre-placement test within five days before anticipated placement. Include this gradation on the control charts.

(4) Report gradation test results and provide control charts to the engineer within 1 business day of obtaining the sample. Submit results to the engineer and electronically into MRS as specified in 701.1.2.7.

(5) Conduct aggregate testing at the minimum frequency specified in table 710-5 for each mix design, except as allowed for small quantities in 710.2. The contractor's concrete production tests can be used for the same mix design on multiple contracts.

TABLE 710-5 QC AGGREGATE TESTING FREQUENCY

CONCRETE CLASSIFICATION	PRE-PLACEMENT TESTING	PLACEMENT TESTING	
Class I: Pavement	One pre-placement test per aggregate source	Hand Placement: ≤ 250 CY > 250 CY Slip Formed Placement [1] ≤ 1500 CY > 1500 CY	One test per cumulative 250 CY One test per day One test per day Two tests per day
Class I: Structures [2], [3], [4]		One test per cumulative 150 CY, maximum one test per day	
Class I: Cast-in Place Barrier		≤ 250 CY > 250 CY	One test per cumulative 250 CY One test per day
Class II: Base	One pre-placement test per aggregate source	One test per calendar week of production	
Class II: Structure Repair - Joints		One test per cumulative 150 CY, maximum one test per day	
Class II: Concrete Overlay			
Class II: Pavement Repair		One test per 400 CY, minimum one test per 10 business days, maximum one test per day	
Class II: Pavement Replacement			
Class II: Base Patching			
Class II: Ancillary			
Class II: Structure Repair – Curb & Surface [5]		Preplacement testing only	

[1] Frequency is based on project daily production rate.

[2] Aggregate gradation testing must be performed on a per contract basis. If multiple structures are on the same contract and use the same aggregate source, then the samples must be collected based on cumulative concrete contract quantities within the same concrete classification.

[3] WTM T255 (Fine and Coarse) required for each aggregate sample.

[4] Calculate trial batch weights for each mix design when production begins and whenever the moisture content of the fine or coarse aggregate changes by more than 0.5 percent, adjust the batch weights to maintain the design w/cm ratio.

[5] Aggregate gradation must meet the gradation previously approved by the engineer.

710.5.6.3 Department Acceptance Testing

Replace subsection with the following effective with the November 2025 letting.

(1) Department testing frequency is based on the quantity of each mix design placed under each individual WisDOT contract as specified table 710-6. Aggregate gradation testing must be performed on a per contract basis.

(2) The department will split each sample, test for acceptance, and retain the remainder for a minimum of 10 calendar days.

(3) The department will obtain the sample and deliver to the regional testing lab in the same day. The department will report gradation test results to the contractor within 1 business day of being delivered to the lab. The department and contractor can agree to an alternative test result reporting timeframe. Document alternative timeframes in the contractor's quality control plan.

(4) Additional samples may be taken at the engineer's discretion due to a changed condition.

(5) If multiple bid items on the same contract use the same aggregate source, then the samples must be collected based on cumulative concrete contract quantities within the same concrete classification.

(6) Department will test small quantities at the minimum frequency specified in table 710-7.

TABLE 710-6 QV AGGREGATE TESTING FREQUENCY

CONCRETE CLASSIFICATION	PLACEMENT TESTING
Class I: Pavement	One test per placement day for first 5 days of placement. - If all samples are passing, reduced testing frequency is applied. - Reduced frequency: One test per calendar week of placement
Class I: Structures	One test per 250 CY placed. - Minimum of one test per contract for substructure - Minimum of one test per contract for superstructure
Class I: Cast-in-Place Barrier	One test per 500 CY placed
Class II: Concrete Overlay	One test per 250 CY - Maximum one test per day
Class II: Base	No minimum testing
Class II: Structure Repair	
Class II: Pavement Repair	
Class II: Pavement Replacement	
Class II: Base Patching	
Class II: Ancillary	

TABLE 710-7 QV AGGREGATE TESTING FREQUENCY FOR SMALL QUANTITIES

CONCRETE CLASSIFICATION	PLACEMENT TESTING
Class I: Pavement	One test on the first day of placement.
Class I: Structures	
Class I: Cast-in-Place Barrier	

710.5.7 Corrective Action

710.5.7.1 Optimized Aggregate Gradations

Replace subsection with the following effective with the November 2025 letting.

(1) If the contractor's 4-point running average or a department test result of the volumetric percent retained exceeds the tarantula curve limits by less than or equal to 1.0 percent on a single sieve size or limits listed in the additional requirements for optimized aggregate gradation in 501.2.7.4.2 table 501-4, notify the other party immediately and do the following:

Option A:

1. Perform corrective action documented in the QC plan or as the engineer approves.
2. Document and provide corrective action results to the engineer as soon as they are available.
3. Department will conduct two tests within the next business day after corrective action. Department will provide test results to contractor after each test is complete.
4. If blended aggregate gradations are within the tarantula curve limits by the second department test:
   - Continue with concrete production.
   - Include a break in the 4-point running average.
   - For Class I Pavements: The department will discontinue reduced frequency testing and will test at a frequency of 1 test per placement day. Once 5 consecutive samples are passing at the 1 test per placement day frequency, the reduced frequency testing will be reapplied.
5. If blended aggregate gradations are not within the tarantula curve limits by the second department test:
   - If the contract does not require optimized aggregate gradation under 501.2.7.4.2.1(2), stop concrete production and submit either a modified optimized aggregate gradation mix design or a new optimized aggregate gradation mix design or a new combined aggregate gradation mix design.
   - If the contract requires optimized aggregate gradations under 501.2.7.4.2.1(2), stop concrete production and submit a modified optimized aggregate gradation mix design or a new optimized aggregate gradation mix design.

Option B:

1. Submit a modified optimized aggregate gradation mix design or a new optimized aggregate gradation mix design.
2. Restart control charts for new mix design.

(2) If the contractor's 4-point running average or a department test result of the volumetric percent retained exceeds the tarantula curve limits by more than 1.0 percent on one or more sieves, stop concrete production and submit a modified mix design or a new mix design.

(3) Both the department and contractor must sample and test aggregate of the modified mix design or a new mix design at the frequency specified in 710.5.6.1.

710.5.7.2 Combined Aggregate Gradations

Replace subsection with the following effective with the November 2025 letting.

(1) If the contractor's 4-point running average or a department test result of the percent passing by weight exceeds the combined aggregate gradation limits by less than or equal to 1.0 percent on a single sieve size, do the following:

1. Notify the other party immediately.
2. Perform corrective action documented in the QC plan or as the engineer approves.
3. Document and provide corrective action results to the engineer as soon as they are available.
4. The department will conduct two tests within the next business day after corrective action is complete.
5. If blended aggregate gradations are within the combined aggregate gradation limits by the second department test:
   - Continue with concrete production.
   - Include a break in the 4-point running average.
   - For Class I Pavements: The department will discontinue reduced frequency testing and will test at a frequency of 1 test per placement day. Once 5 consecutive samples are passing at the 1 test per placement day frequency, the reduced frequency testing will be reapplied.
6. If blended aggregate gradations are not within the combined aggregate gradation limits by the second department test, stop concrete production and submit a modified mix design or a new mix design.

(2) If the contractor's 4-point running average or a department test result of the percent passing by weight exceeds the combined aggregate gradation limits by more than 1.0 percent on one or more sieves, stop concrete production and submit a modified mix design or a new mix design.

(3) Both the department and contractor must sample and test aggregate of the modified mix design or a new mix design at the frequency specified in 710.5.6.1.

---

715 QMP Concrete Pavement, Cast-in-Place Barrier and Structures

715.3.1.2 Lot and Sublot Definition

715.3.1.2.1 General

Replace subsection with the following effective with the November 2025 letting.

(1) Designate the location and size of all lots before placing concrete. Ensure that no lot contains concrete of more than one mix design or placement method defined as follows:

Mix design change A modification to the mix requiring the engineer's approval under 710.4(5).

For paving and barrier mixes, follow 710.4(4) and 710.4(5) for concrete mixture design modifications.

Placement method Either slip-formed, not slip-formed, or placed under water.

(2) Lots and sublots include ancillary concrete placed integrally with the class I concrete.

715.3.1.2.3 Lots by Cubic Yard

Replace paragraph (3) with the following effective with the November 2025 letting.

(3) An undersized lot is eligible for incentive payment under 715.5 if the lot has 4 or more sublots for that lot.

715.3.2 Strength Evaluation

715.3.2.1 General

Replace subsection with the following effective with the November 2025 letting.

(1) The department will make pay adjustments for strength on a lot-by-lot basis using the compressive strength of contractor QC cylinders or the flexural strength of contractor QC beams.

(2) The department will evaluate the sublot for possible removal and replacement if the 28-day sublot average strength is:

- Pavement (Compressive): < 2500 psi
- Pavement (Flexural): < 500 psi
- Structure: < f'c - 500 psi [1]
- Cast-in-Place Barrier: < f'c - 500 psi [1]

[1] f'c is design strength found in plans or specials.

715.5 Payment

715.5.1 General

Replace paragraph (4) and add paragraphs (8) and (9) effective with the November 2025 letting.

(4) The department will adjust pay for each lot using PWL of the 28-day sublot average strengths for that lot. The department will measure PWL relative to strength lower specification limits as follows:

- Compressive strength of 3700 psi for pavements.
- Flexural strength of 650 psi for pavements.
- Compressive strength of 4000 psi for super structures and barrier, or as shown in the plan details.
- Compressive strength of 3500 psi for substructures and culverts, or as shown in the plan details.

(5) The department will not pay a strength incentive for concrete that is nonconforming in another specified property, for ancillary concrete accepted based on tests of class I concrete, or for high early strength concrete unless placed in pavement gaps as allowed under 715.3.1.2.2.

(6) Submit test results to the department electronically using MRS software. The department will verify contractor data before determining pay adjustments.

(7) All coring and testing costs under 715.3.2.2 including filling core holes and providing traffic control during coring are incidental to the contract.

(8) If the contractor combines concrete of varying specified strengths in a single lot/sublot, the highest specified strength of the related concrete shall be used to calculate pay incentive/disincentive.

(9) The department will apply one price adjustment to a given quantity of material. If the quantity in question is subject to more than one nonconforming test, apply the adjustment with the greater price reduction. In the absence of exact quantities affected by the sublot test results, pay reductions will be applied to the entire sublot.

715.5.4 Pay Adjustments for Nonconforming Air Content, Temperature, and Delivery Time

Add subsection 715.5.4 (Pay Adjustments for Nonconforming Air Content, Temperature, and Delivery Time) effective with the November 2025 letting.

(1) The department will adjust pay for each sublot with nonconforming QC air content and temperature test results as specified in table 715-2 and table 715-3. If the quantity in question is subject to more than one of the following conditions, apply the adjustment with the greater price reduction.

(2) For high temperatures, the engineer may consider the effectiveness of the contractor's temperature control plan and the contractor's compliance with their temperature control plan before taking a price reduction.

(3) A 25% price reduction to the concrete invoice price will be applied if concrete is placed after the delivery time exceeds the limit specified in 501.3.5.2.

TABLE 715-2 PRICE REDUCTIONS FOR NONCONFORMING AIR CONTENT

LIMITS (%)		PERCENT PRICE REDUCTION OF THE CONTRACT UNIT PRICE
Above Specification	>= 0.5 [1]	10
	0.1 to 0.4 [1]	5
Below Specification	0.1 to 0.5	20
	0.6 to 1.0	30
	> 1.0	50 or remove and replace

[1] Evaluate the strength data. If the strengths are acceptable, do not take a price reduction for high air content. Contractor is responsible to provide additional strength data, if necessary.

TABLE 715-3 PRICE REDUCTIONS FOR NONCONFORMING TEMPERATURE

LIMITS (F) [1]	PERCENT PRICE REDUCTION OF THE CONTRACT UNIT PRICE
<= 5	10
> 5	25

[1] Applies only for Concrete Structures and Cast-in-Place Barrier.

---

716 QMP Ancillary Concrete

716.2 Materials

716.2.1 Class II Concrete

Replace paragraph (2) with the following effective with the November 2025 letting.

(2) Perform random QC testing at the following frequencies:

1. Test air content, temperature, and slump a minimum of once per 100 cubic yards for each mix design and placement method.
2. Cast one set of 3 cylinders per 200 cubic yards for each mix design and placement method. Cast a minimum of one set of 3 cylinders per contract for each mix design and placement method. Random 28-day compressive strength cylinders are not required for HES or SHES concrete.
3. For deck overlays, perform tests and cast cylinders once per 50 cubic yards of grade E concrete placed.
4. For concrete base, one set of tests and one set of cylinders per 250 cubic yards.

The department will allow concrete startup test results for small quantities as specified in 710.2(1). Cast one set of 3 cylinders if using startup testing for acceptance.

716.2.2 Class III Concrete

Replace paragraph (1) with the following effective with the November 2025 letting.

(1) Acceptance of class III concrete is based on DT2220/ DT2221 certification page. Submit the certificate of compliance at least 3 business days before producing concrete along with the initial concrete mix documentation as required under 710.4(2).

Bid Items

600 Bid Items

Add the following bid items effective with the November 2025 letting.

611.0613	Inlet Covers Type DW	EACH

Remove the following bid items effective with the November 2025 letting.

621.0100	Landmark Reference Monuments	EACH
621.1100	Landmark Reference Monuments and Cast-Iron Covers	EACH
621.1200	Landmark Reference Monuments and Aluminum Covers	EACH

Remove the following bid items effective with the November 2025 letting.

643.0405	Traffic Control Barricades Type I	DAY
643.0410	Traffic Control Barricades Type II	DAY
643.0800	Traffic Control Arrow Boards	DAY

Add the following bid items effective with the November 2025 letting.

643.0810	Traffic Control Connected Arrow Boards	DAY
643.1220	Traffic Control Connected Work Zone Start and End Location Markers	DAY

Add the following bid items effective with the November 2025 letting.

680.0100	Public Land Survey Monument Verify and Reset	EACH
682.0100	Salvage Geodetic Survey Disk	EACH
682.0200	Geodetic Survey Monuments	EACH

ERRATA

204.3.1.3 Salvaging or Disposal of Materials

Replace paragraph (2) to correct link from 203.3.4 to 203.3.5 effective with the November 2024 letting.

(2) Dispose of concrete, stone, brick, and other material not designated for salvage as specified for disposing of materials under 203.3.5.

204.3.2.3 Removing Buildings

Replace paragraph (2) to correct link from 203.3.4 to 203.3.5 effective with the November 2024 letting.

(2) Buildings removed and materials resulting from building removal become the contractor's property unless the contract specifies otherwise. Dispose of unclaimed and removed material as specified for disposing of materials in 203.3.5.

335.3.2 Rubblizing

Replace paragraph (6) to correct link from 203.3.4 to 203.3.5 effective with the November 2024 letting.

(6) Remove reinforcing steel exposed at the surface by cutting below the surface and disposing of the steel as specified in 203.3.5. Do not remove unexposed reinforcing steel.

335.3.3 Compacting

Replace paragraph (2) to correct link from 203.3.4 to 203.3.5 effective with the November 2024 letting.

(2) Remove loose asphaltic patching material, joint fillers, expansion material, or other similar materials from the compacted surface. Also remove pavement or patches that have a maximum dimension greater than or equal to 6 inches that are either not well seated or projecting more than one inch. Dispose of removed material as specified in 203.3.5.

460.3.3.2 Pavement Density Determination

Replace change description annotation with the following to revise implementation date. This change is effective with the November 2025 letting.

Add information to 460.3.3.2(1) and (3). Add reference to CMM, WTM, and WTP H-002. WTP H-002 contains the sublot layouts formerly in CMM 815. Definition of a lot is now defined here (460.3.3.2(3)) instead of CMM. This change was implemented via ASP-6 with the February 2024 letting.

602.3.6 Concrete Rumble Strips

Replace paragraph (5) to correct link from 203.3.4 to 203.3.5 effective with the November 2024 letting.

(5) At the end of each workday, move equipment and material out of the clear zone and sweep or vacuum the traveled way pavement and shoulder areas. Sweep away or vacuum up milling debris before opening adjacent lanes to traffic. Dispose of waste material as specified in 203.3.5; do not place on the finished shoulder surface.

604.2 Materials

Replace paragraph (1) with the following information to remove line and link for crushed aggregate effective with the November 2024 letting. The crushed aggregate gradation information for slope paving is now found in 604.2(3).

(1) Furnish materials conforming to the following:

Water 501.2
Select crushed material 312.2
Concrete 501
Reinforcement 505
Expansion joint filler 415.2.3
Asphaltic materials 455.2

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. DBE firms must enter all payments to DBE and non-DBE firms regardless of tier.
6. 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).
7. All agreements made by a contractor shall include the provisions in A(1), (2), (3), (4), (5), and (6), and shall be binding on all first tier subcontractor relationships, all contractors and subcontractors utilizing DBE firms on the project, and all payments from DBE firms.

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

NOTE: CRCS Prime Contractor payment is currently not automated and will need to be manually loaded into the Civil Rights Compliance System. Copies of prime contractor payments received (check or ACH) will have to be forwarded to paul.ndon@dot.wi.gov within 5 days of payment receipt to be logged manually.

***Additionally, for information on Subcontractor Sublet assignments, Subcontractor Payments and Payment Tracking, please refer to the CRCS Payment and Sublets manual at:

https://wisconsindot.gov/Documents/doing-bus/civil-rights/labornwage/crcs-payments-sublets-manual.pdf

ADDITIONAL SPECIAL PROVISION 9

Electronic Certified Payroll or Labor Data Submittal

(1) Use the department's Civil Rights Compliance System (CRCS) for projects with a LET date on or before December 2024 and AASHTOWare Project Civil Rights and Labor (AWP CRL) for projects with a LET date on or after January 2025 to electronically submit Certified Payroll Reports for contracts with federal funds and labor data for contracts with state funds only. Details are available online through the department's Highway Construction Contractor Information (HCCI) site on the Labor, Wages, and EEO Information page at: https://wisconsindot.gov/Pages/doing-bus/civil-rights/labornwage/default.aspx

(2) Ensure that all tiers of subcontractors, including all trucking firms, either submit their weekly certified payroll reports (contracts with federal funds) or labor data (contracts with state funds only) electronically through CRCS or AWP CRL. These payrolls or labor data 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 or AWP CRL training as they are about to begin their submittals. The department will provide training either in a classroom setting at one of our regional offices, via the online AWP Knowledge Base, or by telephone. to schedule CRCS specific training. The AWP Knowledge Base is at: https://awpkb.dot.wi.gov/

(4) The department will reject all paper submittals for information required under this special provision. All costs for conforming to this special provision are incidental to the contract.

(5) For firms wishing to export payroll/labor data from their computer system, have their payroll coordinator contact:

- For CRCS: Paul Ndon at paul.ndon@dot.wi.gov. Information about exporting payroll/labor data. Not every contractor's payroll system can produce export files. For details, see Section 4.8 CPR Auto Submit (Data Mapping) on pages 49-50; 66-71 of the CRCS Payroll Manual at: https://wisconsindot.gov/Documents/doing-bus/civil-rights/labornwage/crcs-payroll-manual.pdf
- For AWP CRL: Contact AWP Support at awpsupport@dot.wi.gov. Additional information can be found in the AWP Knowledge Base at https://awpkb.dot.wi.gov/Content/crl/Payrolls-PrimesAndSubs/PayrollXMLFileCreationProcess.htm

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, United States Code, as required in 23 CFR 633.102(b) (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). 23 CFR 633.102(e).

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. 23 CFR 633.102(e).

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) in accordance with 23 CFR 633.102. 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 solicitation-for-bids or request-for-proposals 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). 23 CFR 633.102(b).

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. 23 CFR 633.102(d).

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. 23 U.S.C. 114(b). The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors. 23 U.S.C. 101(a).

II. NONDISCRIMINATION (23 CFR 230.107(a); 23 CFR Part 230, Subpart A, Appendix A; EO 11246)

The provisions of this section related to 23 CFR Part 230, Subpart A, Appendix A 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 Part 60, 29 CFR Parts 1625-1627, 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), 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 Part 60, and 29 CFR Parts 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with 23 U.S.C. 140, Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), and Title VI of the Civil Rights Act of 1964, as amended (42 U.S.C. 2000d et seq.), 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 Part 230, Subpart A, 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 (*see* 28 CFR Part 35, 29 CFR Part 1630, 29 CFR Parts 1625-1627, 41 CFR Part 60 and 49 CFR Part 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 Part 35 and 29 CFR Part 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. 23 CFR 230.409 (g)(4) & (5).

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, sexual orientation, gender identity, 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 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 or other knowledgeable company official.

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, sexual orientation, gender identity, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to ensure 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. 23 CFR 230.409. 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, sexual orientation, gender identity, 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, sexual orientation, gender identity, 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 thereunder. 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, sexual orientation, gender identity, 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, 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. Assurances Required:

a. The requirements of 49 CFR Part 26 and the State DOT's FHWA-approved Disadvantaged Business Enterprise (DBE) program are incorporated by reference.

b. The contractor, subrecipient 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 recipient deems appropriate, which may include, but is not limited to:
(1) Withholding monthly progress payments;
(2) Assessing sanctions;
(3) Liquidated damages; and/or
(4) Disqualifying the contractor from future bidding as non-responsible.

c. The Title VI and nondiscrimination provisions of U.S. DOT Order 1050.2A at Appendixes A and E are incorporated by reference. 49 CFR Part 21.

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 more than $10,000. 41 CFR 60-1.5.

As prescribed by 41 CFR 60-1.8, 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, sexual orientation, gender identity, 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), in accordance with 29 CFR 5.5. The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. 23 U.S.C. 113. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. 23 U.S.C. 101. Where applicable law requires that projects be treated as a project on a Federal-aid highway, the provisions of this subpart will apply regardless of the location of the project. Examples include: Surface Transportation Block Grant Program projects funded under 23 U.S.C. 133 [excluding recreational trails projects], the Nationally Significant Freight and Highway Projects funded under 23 U.S.C. 117, and National Highway Freight Program projects funded under 23 U.S.C. 167.

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 (29 CFR 5.5)

a. *Wage rates and fringe benefits.* All laborers and mechanics employed or working upon the site of the work (or otherwise working in construction or development of the project under a development statute), 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 basic hourly 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. As provided in paragraphs (d) and (e) of 29 CFR 5.5, the appropriate wage determinations are effective by operation of law even if they have not been attached to the contract. Contributions made or costs reasonably anticipated for bona fide fringe benefits under the Davis-Bacon Act (40 U.S.C. 3141(2)(B)) on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.e. 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 must be paid the appropriate wage rate and fringe benefits on the wage determination for the classification(s) of work actually performed, without regard to skill, except as provided in paragraph 4. of this section. 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 classifications and wage rates conformed under paragraph 1.c. of this section) and the Davis-Bacon poster (WH–1321) must 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. *Frequently recurring classifications.* (1) In addition to wage and fringe benefit rates that have been determined to be prevailing under the procedures set forth in 29 CFR part 1, a wage determination may contain, pursuant to § 1.3(f), wage and fringe benefit rates for classifications of laborers and mechanics for which conformance requests are regularly submitted pursuant to paragraph 1.c. of this section, provided that:

(i) The work performed by the classification is not performed by a classification in the wage determination for which a prevailing wage rate has been determined;

(ii) The classification is used in the area by the construction industry; and

(iii) The wage rate for the classification bears a reasonable relationship to the prevailing wage rates contained in the wage determination.

(2) The Administrator will establish wage rates for such classifications in accordance with paragraph 1.c.(1)(iii) of this section. Work performed in such a classification must be paid at no less than the wage and fringe benefit rate listed on the wage determination for such classification.

c. *Conformance.* (1) The contracting officer must 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 be classified in conformance with the wage determination. Conformance of an additional classification and wage rate and fringe benefits is appropriate 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 used 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) The conformance process may not be used to split, subdivide, or otherwise avoid application of classifications listed in the wage determination.

(3) 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 will be sent by the contracting officer by email to *DBAconformance@dol.gov*. 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.

(4) 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 will, by email to *DBAconformance@dol.gov*, refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The 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.

(5) The contracting officer must promptly notify the contractor of the action taken by the Wage and Hour Division under paragraphs 1.c.(3) and (4) of this section. The contractor must furnish a written copy of such determination to each affected worker or it must be posted as a part of the wage determination. The wage rate (including fringe benefits where appropriate) determined pursuant to paragraph 1.c.(3) or (4) of this section must 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.

d. *Fringe benefits not expressed as an hourly rate.* 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 may either pay the benefit as stated in the wage determination or may pay another bona fide fringe benefit or an hourly cash equivalent thereof.

e. *Unfunded plans.* 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, in accordance with the criteria set forth in § 5.28, 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.

f. *Interest.* In the event of a failure to pay all or part of the wages required by the contract, the contractor will be required to pay interest on any underpayment of wages.

2. Withholding (29 CFR 5.5)

a. *Withholding requirements.* The contracting agency may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for the full amount of wages and monetary relief, including interest, required by the clauses set forth in this section for violations of this contract, or to satisfy any such liabilities required by any other Federal contract, or federally assisted contract subject to Davis-Bacon labor standards, that is held by the same prime contractor (as defined in § 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to Davis-Bacon labor standards requirements and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld. In the event of a contractor's failure to pay any laborer or mechanic, including any apprentice or helper working on the site of the work all or part of the wages required by the contract, or upon the contractor's failure to submit the required records as discussed in paragraph 3.d. of this section, the contracting agency may on its own initiative and 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.

b. *Priority to withheld funds.* The Department has priority to funds withheld or to be withheld in accordance with paragraph

2.a. of this section or Section V, paragraph 3.a., or both, over claims to those funds by:

(1) A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;

(2) A contracting agency for its reprocurement costs;

(3) A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;

(4) A contractor's assignee(s);

(5) A contractor's successor(s); or

(6) A claim asserted under the Prompt Payment Act, 31 U.S.C. 3901–3907.

3. Records and certified payrolls (29 CFR 5.5)

a. *Basic record requirements* (1) *Length of record retention.* All regular payrolls and other basic records must be maintained by the contractor and any subcontractor during the course of the work and preserved for all laborers and mechanics working at the site of the work (or otherwise working in construction or development of the project under a development statute) for a period of at least 3 years after all the work on the prime contract is completed.

(2) *Information required.* Such records must contain the name; Social Security number; last known address, telephone number, and email address of each such worker; each worker's correct classification(s) of work actually performed; 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 40 U.S.C. 3141(2)(B) of the Davis-Bacon Act); daily and weekly number of hours actually worked in total and on each covered contract; deductions made; and actual wages paid.

(3) *Additional records relating to fringe benefits.* Whenever the Secretary of Labor has found under paragraph 1.e. of this section 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 40 U.S.C. 3141(2)(B) of the Davis-Bacon Act, the contractor must 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.

(4) *Additional records relating to apprenticeship.* Contractors with apprentices working under approved programs must maintain written evidence of the registration of apprenticeship programs, the registration of the apprentices, and the ratios and wage rates prescribed in the applicable programs.

b. *Certified payroll requirements* (1) *Frequency and method of submission.* The contractor or subcontractor must submit weekly, for each week in which any DBA- or Related Acts-covered work is performed, certified payrolls to the contracting agency. The prime contractor is responsible for the submission of all certified payrolls by all subcontractors. A contracting agency or prime contractor may permit or require contractors to submit certified payrolls through an electronic system, as long as the electronic system requires a legally valid electronic signature; the system allows the contractor, the contracting agency, and the Department of Labor to access the certified payrolls upon request for at least 3 years after the work on the prime contract has been completed; and the contracting agency or prime contractor permits other methods of submission in situations where the contractor is unable or limited in its ability to use or access the electronic system.

(2) *Information required.* The certified payrolls submitted must set out accurately and completely all of the information required to be maintained under paragraph 3.a.(2) of this section, except that full Social Security numbers and last known addresses, telephone numbers, and email addresses must not be included on weekly transmittals. Instead, the certified payrolls need only include an individually identifying number for each worker (*e.g.,* the last four digits of the worker's Social Security number). The required weekly certified payroll information may be submitted using Optional Form WH–347 or in any other format desired. Optional Form WH–347 is available for this purpose from the Wage and Hour Division website at *https://www.dol.gov/sites/dolgov/files/WHD/legacy/files/wh347/.pdf* or its successor website. It is not a violation of this section for a prime contractor to require a subcontractor to provide full Social Security numbers and last known addresses, telephone numbers, and email addresses to the prime contractor for its own records, without weekly submission by the subcontractor to the contracting agency.

(3) *Statement of Compliance.* Each certified payroll submitted must be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor, or the contractor's or subcontractor's agent who pays or supervises the payment of the persons working on the contract, and must certify the following:

(i) That the certified payroll for the payroll period contains the information required to be provided under paragraph 3.b. of this section, the appropriate information and basic records are being maintained under paragraph 3.a. of this section, and such information and records are correct and complete;

(ii) That each laborer or mechanic (including each helper and apprentice) working 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 29 CFR part 3; and

(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(s) of work actually performed, as specified in the applicable wage determination incorporated into the contract.

(4) *Use of Optional Form WH–347.* The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH–347 will satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(3) of this section.

(5) *Signature.* The signature by the contractor, subcontractor, or the contractor's or subcontractor's agent must be an original handwritten signature or a legally valid electronic signature.

(6) *Falsification.* The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under 18 U.S.C. 1001 and 31 U.S.C. 3729.

(7) *Length of certified payroll retention.* The contractor or subcontractor must preserve all certified payrolls during the course of the work and for a period of 3 years after all the work on the prime contract is completed.

c. *Contracts, subcontracts, and related documents.* The contractor or subcontractor must maintain this contract or subcontract and related documents including, without limitation, bids, proposals, amendments, modifications, and extensions. The contractor or subcontractor must preserve these contracts, subcontracts, and related documents during the course of the work and for a period of 3 years after all the work on the prime contract is completed.

d. *Required disclosures and access* (1) *Required record disclosures and access to workers.* The contractor or subcontractor must make the records required under paragraphs 3.a. through 3.c. of this section, and any other documents that the contracting agency, the State DOT, the FHWA, or the Department of Labor deems necessary to determine compliance with the labor standards provisions of any of the applicable statutes referenced by § 5.1, available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and must permit such representatives to interview workers during working hours on the job.

(2) *Sanctions for non-compliance with records and worker access requirements.* If the contractor or subcontractor fails to submit the required records or to make them available, or refuses to permit worker interviews during working hours on the job, the Federal agency may, after written notice to the contractor, sponsor, applicant, owner, or other entity, as the case may be, that maintains such records or that employs such workers, 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, or to permit worker interviews during working hours on the job, may be grounds for debarment action pursuant to § 5.12. In addition, any contractor or other person that fails to submit the required records or make those records available to WHD within the time WHD requests that the records be produced will be precluded from introducing as evidence in an administrative proceeding under 29 CFR part 6 any of the required records that were not provided or made available to WHD. WHD will take into consideration a reasonable request from the contractor or person for an extension of the time for submission of records. WHD will determine the reasonableness of the request and may consider, among other things, the location of the records and the volume of production.

(3) *Required information disclosures.* Contractors and subcontractors must maintain the full Social Security number and last known address, telephone number, and email address of each covered worker, and must provide them upon request to the contracting agency, the State DOT, the FHWA, the contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or other compliance action.

4. Apprentices and equal employment opportunity (29 CFR 5.5)

a. *Apprentices* (1) *Rate of pay.* Apprentices will be permitted to work at less than the predetermined rate for the work they perform 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 (OA), or with a State Apprenticeship Agency recognized by the OA. A person who is not individually registered in the program, but who has been certified by the OA or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice, will be permitted to work at less than the predetermined rate for the work they perform in the first 90 days of probationary employment as an apprentice in such a program. In the event the OA or a State Apprenticeship Agency recognized by the OA withdraws approval of an apprenticeship program, the contractor will no longer be permitted to use apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(2) *Fringe benefits.* Apprentices must 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, fringe benefits must be paid in accordance with that determination.

(3) *Apprenticeship ratio.* The allowable ratio of apprentices to journeyworkers on the job site in any craft classification must not be greater than the ratio permitted to the contractor as to the entire work force under the registered program or the ratio applicable to the locality of the project pursuant to paragraph 4.a.(4) of this section. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated in paragraph 4.a.(1) of this section, must 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 this section must be paid not less than the applicable wage rate on the wage determination for the work actually performed.

(4) *Reciprocity of ratios and wage rates.* Where a contractor is performing construction on a project in a locality other than the locality in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyworker's hourly rate) applicable within the locality in which the construction is being performed must be observed. If there is no applicable ratio or wage rate for the locality of the project, the ratio and wage rate specified in the contractor's registered program must be observed.

b. *Equal employment opportunity.* The use of apprentices and journeyworkers under this part must be in conformity with

the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

c. 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. 23 CFR 230.111(e)(2). 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 journeyworkers 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 as provided in 29 CFR 5.5.

6. Subcontracts. The contractor or subcontractor must insert FHWA-1273 in any subcontracts, along with the applicable wage determination(s) and such other clauses or contract modifications as the contracting agency may by appropriate instructions require, and a clause requiring the subcontractors to include these clauses and wage determination(s) in any lower tier subcontracts. The prime contractor is responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in this section. In the event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and may be subject to debarment, as appropriate. 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 as provided in 29 CFR 5.5.

9. Disputes concerning labor standards. As provided in 29 CFR 5.5, 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 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 40 U.S.C. 3144(b) or § 5.12(a).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of 40 U.S.C. 3144(b) or § 5.12(a).

c. The penalty for making false statements is prescribed in the U.S. Code, Title 18 Crimes and Criminal Procedure, 18 U.S.C. 1001.

11. Anti-retaliation. It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

a. Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the DBA, Related Acts, this part, or 29 CFR part 1 or 3;

b. Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under the DBA, Related Acts, this part, or 29 CFR part 1 or 3;

c. Cooperating in any investigation or other compliance action, or testifying in any proceeding under the DBA, Related Acts, this part, or 29 CFR part 1 or 3; or

d. Informing any other person about their rights under the DBA, Related Acts, this part, or 29 CFR part 1 or 3.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

Pursuant to 29 CFR 5.5(b), 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 watchpersons 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. 29 CFR 5.5.

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 and interest from the date of the underpayment. 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 watchpersons and guards, employed in violation of the clause set forth in paragraph 1. of this section, in the sum currently provided in 29 CFR 5.5(b)(2)* 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.

* $31 as of January 15, 2023 (See 88 FR 88 FR 2210) as may be adjusted annually by the Department of Labor, pursuant to the Federal Civil Penalties Inflation Adjustment Act of 1990.

3. Withholding for unpaid wages and liquidated damages

a. *Withholding process.* The FHWA or the contracting agency may, upon its own action, or must, upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor so much of the accrued payments or advances as may be considered necessary to satisfy the liabilities of the prime contractor or any subcontractor for any unpaid wages; monetary relief, including interest; and liquidated damages required by the clauses set forth in this section on this contract, 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 that is held by the same prime contractor (as defined in § 5.2). The necessary funds may be withheld from the contractor under this contract, any other Federal contract with the same prime contractor, or any other federally assisted contract that is subject to the Contract Work Hours and Safety Standards Act and is held by the same prime contractor, regardless of whether the other contract was awarded or assisted by the same agency, and such funds may be used to satisfy the contractor liability for which the funds were withheld.

b. *Priority to withheld funds.* The Department has priority to funds withheld or to be withheld in accordance with Section IV paragraph 2.a. or paragraph 3.a. of this section, or both, over claims to those funds by:

(1) A contractor's surety(ies), including without limitation performance bond sureties and payment bond sureties;

(2) A contracting agency for its reprocurement costs;

(3) A trustee(s) (either a court-appointed trustee or a U.S. trustee, or both) in bankruptcy of a contractor, or a contractor's bankruptcy estate;

(4) A contractor's assignee(s);

(5) A contractor's successor(s); or

(6) A claim asserted under the Prompt Payment Act, 31 U.S.C. 3901–3907.

4. Subcontracts. The contractor or subcontractor must insert in any subcontracts the clauses set forth in paragraphs 1. through 5. of this section and a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor is responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs 1. through 5. In the event of any violations of these clauses, the prime contractor and any subcontractor(s) responsible will be liable for any unpaid wages and monetary relief, including interest from the date of the underpayment or loss, due to any workers of lower-tier subcontractors, and associated liquidated damages and may be subject to debarment, as appropriate.

5. Anti-retaliation. It is unlawful for any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, or to cause any person to discharge, demote, intimidate, threaten, restrain, coerce, blacklist, harass, or in any other manner discriminate against, any worker or job applicant for:

a. Notifying any contractor of any conduct which the worker reasonably believes constitutes a violation of the Contract Work Hours and Safety Standards Act (CWHSSA) or its implementing regulations in this part;

b. Filing any complaint, initiating or causing to be initiated any proceeding, or otherwise asserting or seeking to assert on behalf of themselves or others any right or protection under CWHSSA or this part;

c. Cooperating in any investigation or other compliance action, or testifying in any proceeding under CWHSSA or this part; or

d. Informing any other person about their rights under CWHSSA or this part.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System pursuant to 23 CFR 635.116.

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” in paragraph 1 of Section VI 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: (based on longstanding interpretation)

(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. 23 CFR 635.102.

2. Pursuant to 23 CFR 635.116(a), 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. Pursuant to 23 CFR 635.116(c), 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. (based on long-standing interpretation of 23 CFR 635.116).

5. The 30-percent self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements. 23 CFR 635.116(d).

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 Part 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. 23 CFR 635.108.

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 Part 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). 29 CFR 1926.10.

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 Part 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 11, 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 (42 U.S.C. 7606; 2 CFR 200.88; EO 11738)

This provision is applicable to all Federal-aid construction contracts in excess of $150,000 and to all related subcontracts. 48 CFR 2.101; 2 CFR 200.327.

By submission of this bid/proposal or the execution of this contract or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, subcontractor, supplier, or vendor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act, as amended (33 U.S.C. 1251-1387). Violations must be reported to the Federal Highway Administration and the Regional Office of the Environmental Protection Agency. 2 CFR Part 200, Appendix II.

The contractor agrees to include or cause to be included the requirements of this Section in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements. 2 CFR 200.327.

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. 2 CFR 180.220 and 1200.220.

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. 2 CFR 180.320.

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. 2 CFR 180.325.

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. 2 CFR 180.345 and 180.350.

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, Subpart I, 180.900-180.1020, and 1200. “First Tier Covered Transactions” refers to any covered transaction between a recipient or subrecipient 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 recipient or subrecipient 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. 2 CFR 180.330.

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. 2 CFR 180.220 and 180.300.

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. 2 CFR 180.300; 180.320, and 180.325. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. 2 CFR 180.335. 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 System for Award Management website (https://www.sam.gov/). 2 CFR 180.300, 180.320, and 180.325.

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 CFR 180.325.

* * * * *

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 CFR 180.335;.

(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, 2 CFR 180.800;

(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, 2 CFR 180.700 and 180.800; 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. 2 CFR 180.335(d).

(5) Are not a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(6) Are not a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability (USDOT Order 4200.6 implementing appropriations act requirements).

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant should attach an explanation to this proposal. 2 CFR 180.335 and 180.340.

* * * * *

3. **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). 2 CFR 180.220 and 1200.220.

a. By signing and submitting this proposal, the prospective lower tier participant 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. 2 CFR 180.365.

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, Subpart I, 180.900 – 180.1020, 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 recipient or subrecipient 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 recipient or subrecipient 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. 2 CFR 1200.220 and 1200.332.

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. 2 CFR 180.220 and 1200.220.

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 System for Award Management website (https://www.sam.gov/), which is compiled by the General Services Administration. 2 CFR 180.300, 180.320, 180.330, and 180.335.

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. 2 CFR 180.325.

* * * * *

4. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

a. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals:

(1) is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency, 2 CFR 180.355;

(2) is a corporation that has been convicted of a felony violation under any Federal law within the two-year period preceding this proposal (USDOT Order 4200.6 implementing appropriations act requirements); and

(3) is a corporation with any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability. (USDOT Order 4200.6 implementing appropriations act requirements)

b. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant should 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 Part 20, App. A.

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.

XII. USE OF UNITED STATES-FLAG VESSELS:

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, or any other covered transaction. 46 CFR Part 381.

This requirement applies to material or equipment that is acquired for a specific Federal-aid highway project. 46 CFR 381.7. It is not applicable to goods or materials that come into inventories independent of an FHWA funded-contract.

When oceanic shipments (or shipments across the Great Lakes) are necessary for materials or equipment acquired for a specific Federal-aid construction project, the bidder, proposer, contractor, subcontractor, or vendor agrees:

1. To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels. 46 CFR 381.7.

2. To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, ‘on-board’ commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (b)(1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Office of Cargo and Commercial Sealift (MAR-620), Maritime Administration, Washington, DC 20590. (MARAD requires copies of the ocean carrier's (master) bills of lading, certified onboard, dated, with rates and charges. These bills of lading may contain business sensitive information and therefore may be submitted directly to MARAD by the Ocean Transportation Intermediary on behalf of the contractor). 46 CFR 381.7.

ATTACHMENT A - EMPLOYMENT AND MATERIALS PREFERENCE FOR APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS ROAD CONTRACTS (23 CFR 633, Subpart B, Appendix B) 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.

NON-DISCRIMINATION PROVISIONS

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

1. Compliance with Regulations: The contractor (hereinafter includes consultants) will comply with the Acts and the Regulations relative to Non-discrimination in Federally-assisted programs of the U.S. Department of Transportation, Federal Highway Administration, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.

2. Non-discrimination: The contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor will not participate directly or indirectly in the discrimination prohibited by the Acts and the Regulations, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR Part 21.

3. Solicitations for Subcontracts, Including Procurements of Materials and Equipment: In all solicitations, either by competitive bidding, or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the contractor of the contractor's obligations under this contract and the Acts and the Regulations relative to Non-discrimination on the grounds of race, color, or national origin.

4. Information and Reports: The contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Recipient or the Federal Highway Administration to be pertinent to ascertain compliance with such Acts, Regulations, and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the contractor will so certify to the Recipient or the Federal Highway Administration, as appropriate, and will set forth what efforts it has made to obtain the information.

5. Sanctions for Noncompliance: In the event of a contractor's noncompliance with the Non-discrimination provisions of this contract, the Recipient will impose such contract sanctions as it or the Federal Highway Administration may determine to be appropriate, including, but not limited to:

a. Withholding payments to the contractor under the contract until the contractor complies; and/or
b. Cancelling, terminating, or suspending a contract, in whole or in part.

6. Incorporation of Provisions: The contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations and directives issued pursuant thereto. The contractor will take action with respect to any subcontract or procurement as the Recipient or the Federal Highway Administration may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the contractor may request the Recipient to enter into any litigation to protect the interests of the Recipient. In addition, the contractor may request the United States to enter into the litigation to protect the interests of the United States.

During the performance of this contract, the contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

Pertinent Non-Discrimination Authorities:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d et seq., 78 stat. 252), (prohibits discrimination on the basis of race, color, national origin); and 49 CFR Part 21.
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601), (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Federal-Aid Highway Act of 1973, (23 U.S.C. § 324 et seq.), (prohibits discrimination on the basis of sex);
- Section 504 of the Rehabilitation Act of 1973, (29 U.S.C. § 794 et seq.), as amended, (prohibits discrimination on the basis of disability); and 49 CFR Part 27;
- The Age Discrimination Act of 1975, as amended, (42 U.S.C. § 6101 et seq.), (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982, (49 USC § 471, Section 47123), as amended, (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987, (PL 100-209), (Broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, The Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act, which prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities (42 U.S.C. §§ 12131-12189) as implemented by Department of Transportation regulations at 49 C.F.R. parts 37 and 38;
- The Federal Aviation Administration's Non-discrimination statute (49 U.S.C. § 47123) (prohibits discrimination on the basis of race, color, national origin, and sex);
- Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, which ensures Non-discrimination against minority populations by discouraging programs, policies, and activities with disproportionately high and adverse human health or environmental effects on minority and low-income populations;
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency, and resulting agency guidance, national origin discrimination includes discrimination because of Limited English proficiency (LEP). To ensure compliance with Title VI, you must take reasonable steps to ensure that LEP persons have meaningful access to your programs (70 Fed. Reg. at 74087 to 74100);
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. 1681 et seq).

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.

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.

DOMESTIC MATERIALS PREFERENCE PROVISION

Domestic Materials Preference (in accordance with the Buy America Act per 23 CFR 635.410, and the Build America-Buy America Act (BABA) per 2 CFR Part 184, and 2 CFR Part 200) shall be articles, materials, or supplies permanently incorporated in this project as classified in the following four categories, and as described in the Construction and Materials Manual (CMM):

1. Iron and Steel

   To be considered domestic, all steel and iron products used, and all products predominantly manufactured from steel or iron must be produced in the United States in accordance with the steel and iron product standards in 23 CFR 635.410.

   This includes smelting, coating, bending, shaping, and all other manufacturing processes performed on the product. Coating includes all processes which protect or enhance the value of the material to which the coating is applied.

Products that are predominantly iron or steel or a combination of both as defined in 23 CFR 635.410 are considered Steel and Iron products and must comply with this section.

2. Construction Materials

   To be considered domestic, all construction materials used must be produced in the United States in accordance with the construction material standards in 2 CFR 184.6:

   - Non-ferrous metals: All manufacturing processes, from initial smelting or melting through final shaping, coating, and assembly, occurred in the United States.
   - Plastic and polymer-based products: All manufacturing processes, from initial combination of constituent plastic or polymer-based inputs, or, where applicable, constituent composite materials, until the item is in its final form, occurred in the United States.
   - Glass. All manufacturing processes, from initial batching and melting of raw materials through annealing, cooling, and cutting, occurred in the United States.
   - Fiber optic cable (including drop cable): All manufacturing processes, from the initial ribboning (if applicable), through buffering, fiber stranding and jacketing, occurred in the United States. All manufacturing processes also include the standards for glass and optical fiber, but not for non-ferrous metals, plastic and polymer-based products, or any others.
   - Optical fiber: All manufacturing processes, from the initial preform fabrication stage through the completion of the draw, occurred in the United States.
   - Lumber: All manufacturing processes, from initial debarking through treatment and planning, occurred in the United States.
   - Drywall: All manufacturing processes, from initial blending of mined or synthetic gypsum plaster and additives through cutting and drying of sandwiched panels, occurred in the United States.
   - Engineered wood: All manufacturing processes from the initial combination of constituent materials until the wood product is in its final form, occurred in the United States.

3. Manufactured Products

   To be considered domestic, all manufactured products used must be produced in the United States as defined in 23 CFR 635.410(c)(1)(vii):

   - For projects with let dates on or after October 1, 2025, the final step in the manufacturing process must occur in the United States.
   - For projects with let dates on or after October 1, 2026, the final step in the manufacturing process must occur in the United States and the cost of the components of the manufactured product that are mined, produced, or manufactured in the United States must be greater than 55 percent of the total cost of all components of the manufactured product.

Manufactured products means articles, materials, or supplies that have been processed into a specific form and shape, or combined with other articles, materials, or supplies to create a product with different properties than the individual articles, materials, or supplies. If an item is classified as an iron or steel product, an excluded material, or construction material, then it is not a manufactured product. An article, material, or supply classified as a manufactured product may include components that are iron or steel

products, excluded materials, or construction materials. Mixtures of excluded materials delivered to a work site without final form for incorporation into a project are not a manufactured product.

Items that consist of two or more construction materials that have been combined together through a manufacturing process, and items that include at least one construction material combined with a material that is not a construction material (including steel/iron) through a manufacturing process are treated as manufactured products, rather than as construction materials.

Products that are classified as predominantly iron or steel do not meet the definition of a manufactured product and must comply with section 1.

With respect to precast concrete products **that are classified as manufactured products**, components of precast concrete products that consist wholly or predominantly of iron or steel or a combination of both shall meet the requirements of section 1. The cost of such components shall be included in the applicable calculation for purposes of determining whether the precast concrete product is produced in the United States.

With respect to intelligent transportation systems and other electronic hardware systems that are installed in the highway right of way or other real property **and classified as manufactured products**, the cabinets or other enclosures of such systems that consist wholly or predominantly of iron or steel or a combination of both shall meet the requirements of section 1. The cost of cabinets or other enclosures shall be included in the applicable calculation for purposes of determining whether systems referred to in the preceding sentence are produced in the United States.

4. Temporary and Excluded Materials

> Temporary materials, and excluded materials meeting the definition of Section 70917(c) Materials as defined in 2 CFR 184, do not have any domestic materials requirements. Section 70917(c) Materials means cement and cementitious materials; aggregates such as stone, sand, or gravel; or aggregate binding agents or additives. Mixtures of excluded materials delivered to a work site without final form for incorporation into a project are not a manufactured product.

The classification of an article, material, or supply as falling into one of the categories listed in this section will be made based on its status at the time it is brought to the work site for incorporation into the project. Except as otherwise provided, an article, material, or supply incorporated into an infrastructure project must meet the Domestic Material Preference for only the single category in which it is classified.

Requirements do not preclude a minimal use of foreign steel and iron provided the cost of such materials do not exceed 0.1 percent (0.1%) of the total contract cost or $2500 whichever is greater. The total contract cost is the contract amount at award.

For each iron or steel product subject to meeting domestic materials requirements, that doesn't fully meet Buy America Act requirements, the following documentation must be provided by the Contractor to verify the foreign steel value. Ensure the threshold is not exceeded and place the documentation in the project files.

- Pay Item,
- Description of associated foreign iron or steel product, or component,
- Invoiced cost of associated foreign iron or steel product, or component, and
- Current cumulative list of all foreign iron or steel products with the total dollar amount of foreign products in relation to the total contract amount.

The minimal use of foreign iron or steel under the minimal usage threshold must be approved by the Engineer prior to incorporation into the project and any associated payment under the contract. The use of foreign iron or steel under the minimal usage threshold does not need to be approved by FHWA. This amount is not considered a waiver to the domestic materials requirements. The Contractor must ensure that the minimal usage amount is not exceeded.

The contractor shall take actions and provide documentation conforming to CMM 228.5 to ensure compliance with this Domestic Material provision.

https://wisconsindot.gov/rdwy/cmm/cm-02-28.pdf

Upon completion of the project, certify to the engineer, in writing using department form DT4567 that all iron and steel, construction materials, and manufactured products conform to this domestic material provision.

Form DT4567 is available at: https://wisconsindot.gov/Documents/formdocs/dt4567.docx

Attach a list of foreign iron or steel and their associated costs to the certification form using the Domestic Material Exemption Tracking Tool, available at:

https://wisconsindot.gov/hccidocs/contracting-info/buy-america-exemption-tracking-tool.xlsx

CARGO PREFERENCE ACT REQUIREMENT

All Federal-aid projects shall comply with 46 CFR 381.7 (a) – (b) as follows:

(a) *Agreement Clauses.* "Use of United States-flag vessels:"

(1) Pursuant to Pub. L. 664 (43 U.S.C. 1241(b)) at least 50 percent of any equipment, materials or commodities procured, contracted for or otherwise obtained with funds granted, guaranteed, loaned, or advanced by the U.S. Government under this agreement, and which may be transported by ocean vessel, shall be transported on privately owned United States-flag commercial vessels, if available.

(2) Within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, 'on-board' commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (a)(1) of this section shall be furnished to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590."

(b) *Contractor and Subcontractor Clauses.* "Use of United States-flag vessels: The contractor agrees—"

(1) To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels.

(2) To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, 'on-board' commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (b) (1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590.

(3) To insert the substance of the provisions of this clause in all subcontracts issued pursuant to this contract.

WISCONSIN DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION AND SYSTEM DEVELOPMENT

SUPPLEMENTAL REQUIRED CONTRACT PROVISIONS FOR PROJECTS WITH FEDERAL AID

I. PREVAILING WAGE RATES

The attached U.S. Department of Labor (Davis-Bacon Minimum Wage Rates) furnishes the minimum prevailing wage rates pursuant to the Davis-Bacon and Related Acts. The wage rates shown are the minimum rates required by the contract to be paid during its life, however this is not a representation that labor can be obtained at these rates. Itis 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 will be allowed or authorized on account of the payment of wage rates in excess of those listed herein.

II. COVERAGE OF TRUCK DRIVERS

Truck drivers are covered by Davis-Bacon Minimum Wage Rates in the following circumstances:

- Drivers of a contractor or subcontractor for time spent working on the site of the work.
- Drivers of a contractor or subcontractor for time spent loading and/or unloading materials and supplies on the site of the work, if such time is not de minimis. https://www.dol.gov/whd/FOH/FOH_Ch15.pdf
- Truck drivers transporting materials or supplies between a facility that is deemed part of the site of the work and the actual construction site.
- Truck drivers transporting portions of the building or work between a site established specifically for the performance of the contract where a significant portion of such building or work is constructed and the physical place where the building or work called for in the contract will remain.

Truck drivers are not covered by Davis-Bacon Minimum Wage Rates in the following circumstances:

- Material delivery truck drivers while off the site of the work.
- Drivers of a contractor or subcontractor traveling between a Davis-Bacon job and a commercial supply facility while they are off the site of the work."
- Truck drivers whose time spent on the site of the work is de minimis, such as only a few minutes at a time merely to pick up or drop off materials or supplies.

Details are available online at:

https://www.dol.gov/whd/recovery/pwrb/Tab9.pdf

https://wisconsindot.gov/Pages/doing-bus/civil-rights/labornwage/trckng.aspx

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 and accessible place at the site of work:

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

All required documents shall be posted by the first day of work and be accurate and complete. Postings must be readable, in an area where they will be noticed, and maintained until the last day of work.

IV. RESOURCES

Required information regarding compliance with federal provisions is found in the following resources:

- FHWA-1273 included in this contract
- U.S. Department of Labor Prevailing Wage Resource Book
- U.S. Department of Labor Field Operations Handbook
- U.S. Code of Federal Regulations
- Any applicable law, Act, or Executive Order enacted by the federal government at the time of the letting of this contract

"General Decision Number: WI20260010 01/02/2026

Superseded General Decision Number: WI20250010

State: Wisconsin

Construction Type: Highway

Counties: Wisconsin Statewide.

HIGHWAY, AIRPORT RUNWAY & TAXIWAY CONSTRUCTION PROJECTS (does not include bridges over navigable waters; tunnels; buildings in highway rest areas; and railroad construction)

Modification Number	Publication Date
0	01/02/2026

BRWI0001-002 06/01/2025

CRAWFORD, JACKSON, JUNEAU, LA CROSSE, MONROE, TREMPEALEAU, AND VERNON COUNTIES

	Rates	Fringes
BRICKLAYER	$ 40.09	28.10

BRWI0002-002 06/01/2025

ASHLAND, BAYFIELD, DOUGLAS, AND IRON COUNTIES

	Rates	Fringes
BRICKLAYER	$ 48.60	29.31

BRWI0002-005 06/01/2025

ADAMS, BARRON, BROWN, CALUMET, CHIPPEWA, CLARK, COLUMBIA, DODGE, DOOR, DUNN, FLORENCE, FOND DU LAC, FOREST, GREEN LAKE, JEFFERSON, KEWAUNEE, LANGLADE, LINCOLN, MANITOWOC, MARATHON, MARINETTE, MARQUETTE, MENOMINEE, OCONTO, ONEIDA, OUTAGAMIE, POLK, PORTAGE, RUSK, SAUK, SHAWANO, SHEBOYGAN, ST. CROIX, TAYLOR, VILAS, WALWORTH, WAUPACA, WAUSHARA, WINNEBAGO, AND WOOD COUNTIES

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER	$ 46.01	29.31

BRWI0003-002 06/01/2024

BROWN, DOOR, FLORENCE, KEWAUNEE, MARINETTE, AND OCONTO COUNTIES

	Rates	Fringes
BRICKLAYER	$ 38.45	27.41

BRWI0004-002 06/01/2025

KENOSHA, RACINE, AND WALWORTH COUNTIES

	Rates	Fringes

BRICKLAYER.....$ 44.71 28.90

BRWI0006-002 06/01/2025

ADAMS, CLARK, FOREST, LANGLADE, LINCOLN, MARATHON, MENOMINEE, ONEIDA, PORTAGE, PRICE, TAYLOR, VILAS AND WOOD COUNTIES

	Rates	Fringes
BRICKLAYER	$ 39.36	28.83

BRWI0007-002 06/01/2025

GREEN, LAFAYETTE, AND ROCK COUNTIES

	Rates	Fringes
BRICKLAYER	$ 40.34	29.49

BRWI0008-002 06/01/2025

MILWAUKEE, OZAUKEE, WASHINGTON, AND WAUKESHA COUNTIES

	Rates	Fringes
BRICKLAYER	$ 45.72	27.42

BRWI0011-002 06/01/2024

CALUMET, FOND DU LAC, MANITOWOC, AND SHEBOYGAN COUNTIES

	Rates	Fringes
BRICKLAYER	$ 38.45	27.41

BRWI0019-002 06/01/2025

BARRON, BUFFALO, BURNETT, CHIPPEWA, DUNN, EAU CLAIRE, PEPIN, PIERCE, POLK, RUSK, ST. CROIX, SAWYER AND WASHBURN COUNTIES

	Rates	Fringes
BRICKLAYER	$ 39.50	28.69

BRWI0034-002 06/01/2025

COLUMBIA AND SAUK COUNTIES

	Rates	Fringes
BRICKLAYER	$ 41.17	28.66

CARP0068-011 05/05/2025

BURNETT (W. of Hwy 48), PIERCE (W. of Hwy 29), POLK (W. of Hwys 35, 48 & 65), AND ST. CROIX (W. of Hwy 65) COUNTIES

	Rates	Fringes
CARPENTER	$ 47.57	31.17
PILEDRIVERMAN	$ 47.71	30.98

CARP0231-002 06/01/2025

KENOSHA, MILWAUKEE, OZAUKEE, RACINE, WASHINGTON, AND WAUKESHA COUNTIES

	Rates	Fringes
CARPENTER	$ 45.46	31.52

CARP0310-002 06/01/2025

ADAMS, ASHLAND, BAYFIELD (Eastern 2/3), FOREST, IRON, JUNEAU, LANGLADE, LINCOLN, MARATHON, ONEIDA, PORTAGE, PRICE, SHAWANO (Western Portion of the County), TAYLOR, VILAS, AND WOOD COUNTIES

	Rates	Fringes
Carpenter	$ 44.43	29.95
Piledriver	$ 44.43	29.95

CARP0314-001 06/02/2025

COLUMBIA, DANE, DODGE, GRANT, GREEN, IOWA, JEFFERSON, LAFAYETTE, RICHLAND, ROCK, SAUK, AND WALWORTH COUNTIES

	Rates	Fringes
Carpenter	$ 42.45	28.78
Piledrivermen	$ 44.45	28.78

CARP0361-004 05/05/2025

BAYFIELD (West of Hwy 63) AND DOUGLAS COUNTIES

	Rates	Fringes
CARPENTER	$ 46.82	31.92

CARP0731-002 06/03/2024

CALUMET (Eastern Portion of the County), FOND DU LAC (Eastern Portion of the County), MANITOWOC, AND SHEBOYGAN COUNTIES

	Rates	Fringes
Carpenter	$ 42.44	28.44
Piledriver	$ 42.44	28.44

CARP0955-002 06/02/2025

CALUMET (Western Portion of the County), FOND DU LAC (Western Portion of the County), GREEN LAKE, MARQUETTE, OUTAGAMIE, WAUPACA, WAUSHARA, AND WINNEBAGO

	Rates	Fringes
Carpenter	$ 44.43	29.95
Piledriver	$ 44.43	29.95

CARP1056-002 06/01/2024

ADAMS, ASHLAND, BARRON, BAYFIELD , BROWN, BUFFALO, BURNETT ,CALUMET, CHIPPEWA, CLARK, COLUMBIA, CRAWFORD, DANE, DODGE, DOOR, DUNN, EAU CLAIRE, FLORENCE, FOND DU LAC, FOREST, GRANT, GREEN, GREEN LAKE, IOWA, IRON, JACKSON, JEFFERSON, JUNEAU, KEWAUNEE, LA CROSSE, LAFAYETTE, LANGLADE, LINCOLN, MANITOWOC, MARATHON, MARINETTE, MARQUETTE, MENOMINEE, MONROE, OCONTO, ONEIDA, OUTAGAMIE, PEPIN, PIERCE (E. of Hwy. 29 & 65), POLK (E. of Hwy. 35, 48 & 65), PORTAGE, PRICE, RICHLAND, ROCK, RUSK, SAUK, SAWYER, SHAWANO, SHEBOYGAN, ST. CROIX (E. of Hwy. 65), TAYLOR, TREMPEALEAU, VERNON, VILAS, WALWORTH, WASHBURN, WAUPACA, WAUSHARA, WINNEBAGO, AND WOOD COUNTIES

	Rates	Fringes
MILLWRIGHT	$ 42.00	28.85

CARP1074-002 06/02/2025

BARRON, BURNETT, CHIPPEWA, CLARK, DUNN, EAU CLAIRE, PEPIN, PIERCE (E. of Hwy. 29 & 65), POLK (E. of Hwy. 35, 48 & 65), RUSK, SAWYER, ST. CROIX (E. of Hwy. 65), AND WASHBURN

	Rates	Fringes
Carpenter	$ 44.43	29.95
Piledriver	$ 44.43	29.95

CARP1143-002 06/02/2025

BUFFALO, CRAWFORD, JACKSON, LA CROSSE, MONROE, TREMPEALEAU AND VERNON COUNTIES

	Rates	Fringes
Carpenter	$ 44.43	29.95
Piledriver	$ 44.43	29.95

CARP1146-002 06/02/2025

BROWN, DOOR, FLORENCE, KEWAUNEE, MARINETTE, MENOMINEE, OCONTO, AND SHAWANO (Western Portion of the County) COUNTIES

	Rates	Fringes
Carpenter	$ 44.43	29.95
Piledriver	$ 44.43	29.95

CARP2337-009 06/02/2025

KENOSHA, MILWAUKEE, OZAUKEE, RACINE, WASHINGTON, AND WAUKESHA

	Rates	Fringes
PILEDRIVERMAN	$ 44.39	34.79

ELEC0014-002 05/25/2025

ASHLAND, BARRON, BAYFIELD, BUFFALO, BURNETT, CHIPPEWA, CLARK

(except Maryville, Colby, Unity, Sherman, Fremont, Lynn & 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

	Rates	Fringes
Electricians:.....	$ 44.29	25.21

ELEC0014-007 05/25/2025

ADAMS, ASHLAND, BARRON, BAYFIELD, BROWN, BUFFALO, BURNETT, CALUMET, CHIPPEWA, CLARK, COLUMBIA, CRAWFORD, DANE, DODGE, DOOR, DOUGLAS, DUNN, EAU CLAIRE, FLORENCE, FOND DU LAC, FOREST, GRANT, GREEN, GREEN LAKE, IOWA, IRON, JACKSON, JEFFERSON, JUNEAU, KENOSHA, KEWAUNEE, LA CROSSE, LAFAYETTE, LANGLADE, LINCOLN, MARATHON, MARINETTE, MARQUETTE, MENOMINEE, MONROE, OCONTO, ONEIDA, OUTAGAMIE, PEPIN, PIERCE, POLK, PORTAGE, PRICE, RACINE, RICHLAND, ROCK, RUSK, SAUK, SAWYER, SHAWANO, SHEBOYGAN, ST CROIX, TAYLOR, TREMPEALEAU, VERNON, VILAS, WALWORTH, WASHBURN, WAUPACA, WAUSHARA, WINNEBAGO AND WOOD COUNTIES

	Rates	Fringes
Teledata System Installer		
Installer/Technician.....	$ 31.17	20.08

Low voltage construction, installation, maintenance and removal of teledata facilities (voice, data, and video) including outside plant, telephone and data inside wire, interconnect, terminal equipment, central offices, PABX, fiber optic cable and equipment, micro waves, V-SAT, bypass, CATV, WAN (wide area networks), LAN (local area networks), and ISDN (integrated systems digital network).

ELEC0127-002 06/01/2025

KENOSHA COUNTY

	Rates	Fringes
Electricians:.....	$ 50.01	28.4

ELEC0158-002 05/25/2025

BROWN, DOOR, KEWAUNEE, MANITOWOC (except Schleswig), MARINETTE(Wausuakee and area South thereof), OCONTO, MENOMINEE (East of a ine 6 miles West of the West boundary of Oconto County), SHAWANO (Except Area North of Townships of Aniwa and Hutchins) COUNTIES

	Rates	Fringes
ELECTRICIAN.....	$ 42.00	23.93

ELEC0159-003 05/26/2024

COLUMBIA, DANE, DODGE (Area West of Hwy 26, except Chester and 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

	Rates	Fringes
ELECTRICIAN	$ 48.55	25.91

ELEC0219-004 06/01/2019

FLORENCE COUNTY (Townships of Aurora, Commonwealth, Fern, Florence and Homestead) AND MARINETTE COUNTY (Township of Niagara)

	Rates	Fringes
Electricians:		
Electrical contracts over $180,000	$ 33.94	21.80
Electrical contracts under $180,000	$ 31.75	21.73

ELEC0242-005 06/01/2025

DOUGLAS COUNTY

	Rates	Fringes
Electricians:	$ 47.46	33.34

ELEC0388-002 06/01/2024

ADAMS, CLARK (Colby, Freemont, Lynn, Mayville, Sherman, Sherwood, Unity), FOREST, JUNEAU, LANGLADE, LINCOLN, MARATHON, MARINETTE (Beecher, Dunbar, Goodman & Pembine), MENOMINEE (Area West of a line 6 miles West of the West boundary of Oconto County), ONEIDA, PORTAGE, SHAWANO (Aniwa and Hutchins), VILAS AND WOOD COUNTIES

	Rates	Fringes
Electricians:	$ 40.19	26%+12.45

ELEC0430-002 06/01/2024

RACINE COUNTY (Except Burlington Township)

	Rates	Fringes
Electricians:	$ 48.50	26.25

ELEC0494-005 06/01/2025

MILWAUKEE, OZAUKEE, WASHINGTON, AND WAUKESHA COUNTIES

	Rates	Fringes
Electricians:	$ 50.86	28.26

ELEC0494-006 06/01/2025

CALUMET (Township of New Holstein), DODGE (East of Hwy 26 including Chester Township), FOND DU LAC, MANITOWOC

(Schleswig), and SHEBOYGAN COUNTIES

	Rates	Fringes
Electricians:	$ 45.20	25.27

ELEC0494-013 06/01/2025

DODGE (East of Hwy 26 including Chester Twp, excluding Emmet Twp), FOND DU LAC (Except Waupuin), MILWAUKEE, OZAUKEE, MANITOWOC (Schleswig), WASHINGTON, AND WAUKESHA COUNTIES

	Rates	Fringes
Sound & Communications		
Installer	$ 37.13	21.58
Technician	$ 37.13	21.58

Installation, testing, maintenance, operation and servicing of all sound, intercom, telephone interconnect, closed circuit TV systems, radio systems, background music systems, language laboratories, electronic carillion, antenna distribution systems, clock and program systems and low-voltage systems such as visual nurse call, audio/visual nurse call systems, doctors entrance register systems. Includes all wire and cable carrying audio, visual, data, light and radio frequency signals. Includes the installation of conduit, wiremold, or raceways in existing structures that have been occupied for six months or more where required for the protection of the wire or cable, but does not mean a complete conduit or raceway system. work covered does not include the installation of conduit, wiremold or any raceways in any new construction, or the installation of power supply outlets by means of which external electric power is supplied to any of the foregoing equipment or products

---

ELEC0577-003 06/01/2025

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, and Springfield), OUTAGAMIE, WAUPACA, WAUSHARA, AND WINNEBAGO COUNTIES

	Rates	Fringes
Electricians:	$ 41.76	23.65

ELEC0890-003 06/01/2024

DODGE (Emmet Township only), GREEN, JEFFERSON, LAFAYETTE, RACINE (Burlington Township), ROCK AND WALWORTH COUNTIES

	Rates	Fringes
Electricians:	$ 43.65	25.95%+12.26

ELEC0953-001 06/02/2019

	Rates	Fringes
Line Construction:		
(1) Lineman	$ 47.53	21.43
(2) Heavy Equipment Operator	$ 42.78	19.80
(3) Equipment Operator	$ 38.02	18.40
(4) Heavy Groundman Driver	$ 33.27	16.88
(5) Light Groundman Driver	$ 30.89	16.11
(6) Groundsman	$ 26.14	14.60

ENGI0139-005 06/01/2025

	Rates	Fringes
Power Equipment Operator		
Group 1	$ 48.37	30.30
Group 2	$ 47.87	30.30
Group 3	$ 46.77	30.30
Group 4	$ 46.51	30.30
Group 5	$ 46.22	30.30
Group 6	$ 40.32	30.30

HAZARDOUS WASTE PREMIUMS:
EPA Level ""A"" protection - $3.00 per hour
EPA Level ""B"" protection - $2.00 per hour
EPA Level ""C"" protection - $1.00 per hour

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

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.

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 jibs lengths measuring 175 feet or under and Backhoes (excavators) weighing 130,000 lbs and over; caisson rigs; pile driver; dredge operator; dredge engineer; Boat Pilot.

GROUP 3: Mechanic or welder - Heavy duty equipment; cranes with a lifting capacity of 25 tons or under; concrete breaker (manual or remote); vibratory/sonic concrete breaker; concrete laser screed; concrete slipform paver; concrete batch plant operator; concrete pvt. spreader - heavy duty (rubber tired); concrete spreader & distributor; automatic subgrader (concrete); concrete grinder & planing machine; concrete slipform curb & gutter machine; slipform concrete placer; tube finisher; hydro blaster (10,000 psi & over); bridge paver; concrete conveyor system; concrete pump; Rotec type Conveyor; stabilizing mixer (self-propelled); shoulder widener; asphalt plant engineer; bituminious paver; bump cutter & grooving machine; milling machine; screed (bituminous paver); asphalt heater, planer & scarifier; Backhoes (excavators) weighing under 130,000 lbs; 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 & A-frames; post driver; material hoist.

GROUP 4: Greaser, roller steel (5 tons or less); roller (pneumatic tired) - self propelled; tractor (mounted or towed compactors & light equipment); shouldering machine; self- propelled chip spreader; concrete spreader; finishing machine; mechanical float; curing machine; power subgrader; joint sawer (multiple blade) belting machine; burlap machine; texturing machine; tractor endloader (rubber tired) - light; jeep digger; forklift; mulcher; launch operator; fireman, environmental burner

GROUP 5: Air compressor; power pack; vibrator hammer and extractor; heavy equipment, leadman; tank car heaters; stump chipper; curb machine operator; Concrete proportioning 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 Tender, day light machine

GROUP 6: Off-road material hauler with or without ejector.

IRON0008-002 06/01/2025

BROWN, CALUMET, DOOR, FOND DU LAC, KEWAUNEE, MANITOWOC, MARINETTE, OCONTO, OUTAGAMI, SHAWANO, SHEBOYGAN, AND WINNEBAGO COUNTIES:

	Rates	Fringes
IRONWORKER	$ 44.66	33.67

Paid Holidays: New Year's Day, Memorial Day, July 4th, Labor Day, Thanksgiving Day & Christmas Day.

IRON0008-003 06/01/2025

KENOSHA, MILWAUKEE, OZAUKEE, RACINE, WALWORTH (N.E. 2/3), WASHINGTON, AND WAUKESHA COUNTIES

	Rates	Fringes
IRONWORKER	$ 47.52	33.67

Paid Holidays: New Year's Day, Memorial Day, July 4th, Labor Day, Thanksgiving Day & Christmas Day.

IRON0383-001 06/01/2025

ADAMS, COLUMBIA, CRAWFORD, DANE, DODGE, FLORENCE, FOREST, GRANT, GREENE, (Excluding S.E. tip), GREEN LAKE, IOWA, JEFFERSON, JUNEAU, LA CROSSE, LAFAYETTE, LANGLADE, MARATHON, MARQUETTE, MENOMINEE, MONROE, PORTAGE, RICHLAND, ROCK (Northern area, vicinity of Edgerton and Milton), SAUK, VERNON, WAUPACA, WAUSHARA, AND WOOD COUNTIES

	Rates	Fringes
IRONWORKER	$ 44.00	32.66

IRON0498-005 06/01/2025

GREEN (S.E. 1/3), ROCK (South of Edgerton and Milton), and
WALWORTH (S.W. 1/3) COUNTIES:

	Rates	Fringes
IRONWORKER	$ 48.74	49.65

IRON0512-008 05/01/2025

BARRON, BUFFALO, CHIPPEWA, CLARK, DUNN, EAU CLAIRE, JACKSON,
PEPIN, PIERCE, POLK, RUSK, ST CROIX, TAYLOR, AND TREMPEALEAU
COUNTIES

	Rates	Fringes
IRONWORKER	$ 46.35	36.86

IRON0512-021 05/01/2025

ASHLAND, BAYFIELD, BURNETT, DOUGLAS, IRON, LINCOLN, ONEIDA,
PRICE, SAWYER, VILAS AND WASHBURN COUNTIES

	Rates	Fringes
IRONWORKER	$ 42.89	36.86

LABO0113-002 06/02/2025

MILWAUKEE AND WAUKESHA COUNTIES

	Rates	Fringes
LABORER		
Group 1	$ 38.81	25.53
Group 2	$ 38.96	25.53
Group 3	$ 39.16	25.53
Group 4	$ 39.31	25.53
Group 5	$ 39.46	25.53
Group 6	$ 35.30	25.53

LABORERS CLASSIFICATIONS

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, and Utility Man); Batch Truck Dumper or Cement Handler; Bituminous Worker (Dumper, Ironer, Smoother, and Tamper); Concrete Handler

GROUP 2: Air Tool Operator; Joint Sawer and Filler (Pavement); Vibrator or Tamper Operator (Mechanical Hand Operated); Chain Saw Operator; Demolition Burning Torch Laborer

GROUP 3: Bituminous Worker (Raker and Luteman); Formsetter (Curb, Sidewalk, and Pavement); Strike Off Man

GROUP 4: Line and Grade Specialist

GROUP 5: Blaster and Powderman

GROUP 6: Flagperson; traffic control person

LABO0113-003 06/02/2025

OZAUKEE AND WASHINGTON COUNTIES

	Rates	Fringes
LABORER		
Group 1	$ 38.06	25.53
Group 2	$ 38.16	25.53
Group 3	$ 38.21	25.53
Group 4	$ 38.41	25.53
Group 5	$ 38.26	25.53
Group 6	$ 35.15	25.53

LABORERS CLASSIFICATIONS

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, and Utility Man); Batch Truck Dumper or Cement Handler; Bituminous Worker (Dumper, Ironer, Smoother, and Tamper); Concrete Handler

GROUP 2: Air Tool Operator; Joint Sawer and Filler (Pavement); Vibrator or Tamper Operator (Mechanical Hand Operated);

GROUP 3: Bituminous Worker (Raker and Luteman); Formsetter (Curb, Sidewalk, and Pavement); Strike Off Man

GROUP 4: Line and Grade Specialist

GROUP 5: Blaster; powderman

GROUP 6: Flagperson and Traffic Control Person

LABO0113-011 06/02/2025

KENOSHA AND RACINE COUNTIES

	Rates	Fringes
LABORER		
Group 1	$ 37.87	25.53
Group 2	$ 38.02	25.53
Group 3	$ 38.22	25.53
Group 4	$ 38.19	25.53
Group 5	$ 38.52	25.53
Group 6	$ 35.02	25.53

LABORERS CLASSIFICATIONS:

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, and Utility Man); Batch Truck Dumper or Cement Handler;

Bituminous worker (Dumper, Ironer, Smoother, and Tamper); Concrete Handler

GROUP 2: Air Tool Operator; Joint Sawer and Filler (Pavement); Vibrator or Tamper Operator (Mechanical Hand Operated); Chain Saw Operator; Demolition Burning Torch Laborer

GROUP 3: Bituminous Worker (Raker and Luteman); Formsetter (Curb, Sidewalk, and Pavement); Strike Off Man

GROUP 4: Line and Grade Specialist

GROUP 5: Blaster and Powderman

GROUP 6: Flagman; traffic control person

LABO0140-002 06/02/2025

ADAMS, ASHLAND, BARRON, BAYFIELD, BROWN, BUFFALO, BURNETT, CALUMET, CHIPPEWA, CLARK, COLUMBIA, CRAWFORD, DODGE, DOOR, DOUGLAS, DUNN, EAU CLAIRE, FLORENCE, FOND DU LAC, FOREST, GRANT, GREEN, GREEN LAKE, IRON, JACKSON, JUNEAU, IOWA, JEFFERSON, KEWAUNEE, LA CROSSE, LAFAYETTE, LANGLADE, LINCOLN, MANITOWOC, MARATHON, MARINETTE, MARQUETTE, MENOMINEE, MONROE, OCONTO, ONEIDA, OUTAGAMIE, PEPIN, PIERCE, POLK, PORTAGE, PRICE, RICHLAND, ROCK, RUSK, SAUK, SAWYER, SHAWANO, SHEBOYGAN, ST. CROIX, TAYLOR, TREMPEALEAU, VERNON, VILLAS, WALWORTH, WASHBURN, WAUPACA, WAUSHARA, WINNEBAGO, AND WOOD COUNTIES

	Rates	Fringes
LABORER		
Group 1	$ 43.77	19.97
Group 2	$ 43.87	19.97
Group 3	$ 43.92	19.97
Group 4	$ 44.12	19.97
Group 5	$ 43.97	19.97
Group 6	$ 40.40	19.97

LABORER CLASSIFICATIONS

GROUP 1: General Laborer; Tree Trimmer; Conduit Layer; Demolition and Wrecking Laborer; Guard Rail, Fence, and Bridge Builder; Landscaper; Multiplate Culvert Assembler; Stone Handler; Bitminous Worker (Shoveler, Loader, and Utility Man); Batch Truck Dumper or Cement Handler; Bituminous Worker (Dumper, Ironer, Smoother and Tamper); Concrete Handler

GROUP 2: Air Tool Operator; Joint Sawer and Filler (Pavement); Vibrator or Tamper Operator (Mechanical Hand Operated); Chain Saw Operator, Demolition Burning Torch Laborer

GROUP 3: Bituminous Worker (Raker and Luteman); Formsetter (Curb, Sidewalk and Pavement); Strike Off Man

GROUP 4: Line and Grade Secialist

GROUP 5: Blaster; powderman

GROUP 6: Flagperson; Traffic Control

LABO0464-003 06/02/2025

DANE COUNTY

	Rates	Fringes
LABORER		
Group 1	$ 44.05	19.97
Group 2	$ 44.15	19.97
Group 3	$ 44.20	19.97
Group 4	$ 44.40	19.97
Group 5	$ 44.25	19.97
Group 6	$ 40.40	19.97

LABORERS CLASSIFICATIONS:

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, and Utility Man); Batch Truck Dumper or Cement Handler; Bituminious Worker (Dumper, Ironer, Smoother, and Tamper); Concrete Handler

GROUP 2: Air Tool Operator; Joint Sawer and Filler (Pavement); Vibrator or Tamper Operator (Mechanical Hand Operated); Chain Saw Operator; Demolition Burning Torch Laborer

GROUP 3: Bituminous Worker (Raker and Luteman); Formsetter (Curb, Sidewalk, and Pavement); Strike Off Man

GROUP 4: Line and Grade Specialist

GROUP 5: Blaster; Powderman

GROUP 6: Flagperson and Traffic Control Person

PAIN0106-008 05/05/2025

ASHLAND, BAYFIELD, BURNETT, AND DOUGLAS COUNTIES

	Rates	Fringes
Painters:		
New:		
Brush, Roller	$ 38.17	27.26
Spray, Sandblast, Steel	$ 38.77	27.26
Repaint:		
Brush, Roller	$ 36.67	27.26
Spray, Sandblast, Steel	$ 37.27	27.26

PAIN0108-002 06/01/2025

RACINE COUNTY

	Rates	Fringes
Painters:		
Brush, Roller	$ 43.64	23.35
Spray & Sandblast	$ 44.64	23.35

PAIN0259-002 05/01/2008

BARRON, CHIPPEWA, DUNN, EAU CLAIRE, PEPIN, PIERCE, POLK, RUSK, SAWYER, ST. CROIX, AND WASHBURN COUNTIES

	Rates	Fringes
PAINTER	$ 24.11	12.15

PAIN0259-004 05/01/2015

BUFFALO, CRAWFORD, JACKSON, LA CROSSE, MONROE, TREMPEALEAU, AND VERNON COUNTIES

	Rates	Fringes
PAINTER	$ 22.03	12.45

PAIN0781-002 06/01/2025

JEFFERSON, MILWAUKEE, OZAUKEE, WASHINGTON, AND WAUKESHA COUNTIES

	Rates	Fringes
Painters:		
Bridge	$ 43.19	24.87
Brush	$ 42.44	24.87
Spray & Sandblast	$ 43.19	24.87

PAIN0802-002 06/01/2025

COLUMBIA, DANE, DODGE, GRANT, GREEN, IOWA, LAFAYETTE, RICHLAND, ROCK, AND SAUK COUNTIES

	Rates	Fringes
PAINTER		
Brush	$ 37.65	21.17

PREMIUM PAY:
Structural Steel, Spray, Bridges = $1.00 additional per hour.

PAIN0802-003 06/01/2025

ADAMS, BROWN, CALUMET, CLARK, DOOR, FOND DU LAC, FOREST, GREEN LAKE, IRON, JUNEAU, KEWAUNEE, LANGLADE, LINCOLN, MANITOWOC, MARATHON, MARINETTE, MARQUETTE, MENOMINEE, OCONTO, ONEIDA, OUTAGAMIE, PORTAGE, PRICE, SHAWANO, SHEBOYGAN, TAYLOR, VILAS, WAUSHARA, WAUPACA, WINNEBAGO, AND WOOD COUNTIES

	Rates	Fringes
PAINTER	$ 37.65	21.17

PAIN0934-001 06/01/2025

KENOSHA AND WALWORTH COUNTIES

	Rates	Fringes

Painters:
     Brush.....$ 40.62 26.37
     Spray.....$ 41.62 26.37
     Structural Steel.....$ 40.77 26.37

PAIN1011-002 06/01/2025

FLORENCE COUNTY

	Rates	Fringes
Painters:	$ 31.17	15.92

PLAS0599-002 06/01/2025

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER		
Area A	$ 47.22	31.90
Area C	$ 40.06	28.65
Area D	$ 42.28	26.43
Area E	$ 41.16	27.54
Area F	$ 37.33	31.38

AREA DESCRIPTIONS:

AREA A: ASHLAND, BURNETT, BAYFIELD, DOUGLAS, IRON, PRICE, SAWYER, AND WASHBURN COUNTIES

AREA C: BUFFALO, CRAWFORD, EAU CLAIRE, JACKSON, JUNEAU, LA CROSSE, MONROE, PEPIN, PIERCE, RICHLAND, TREMPEALEAU, AND VERNON COUNTIES

AREA D: MILWAUKEE, OZAUKEE, WASHINGTON, AND WAUKESHA COUNTIES

AREA E: DANE, GRANT, GREEN, IOWA, LAFAYETTE, AND ROCK COUNTIES

AREA F: KENOSHA AND RACINE COUNTIES

TEAM0039-001 06/01/2025

	Rates	Fringes
TRUCK DRIVER		
1 & 2 Axles	$ 39.57	28.70
3 or more Axles; Euclids, Dumptor & Articulated, Truck Mechanic	$ 39.72	28.70

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

==========

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year.

Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at https://www.dol.gov/agencies/whd/government-contracts.

Note: Executive Order 13658 generally applies to contracts subject to the Davis-Bacon Act that were awarded on or between January 1, 2015 and January 29, 2022, and that have not been renewed or extended on or after January 30, 2022. Executive Order 13658 does not apply to contracts subject only to the Davis-Bacon Related Acts regardless of when they were awarded. If a contract is subject to Executive Order 13658, the contractor must pay all covered workers at least $13.30 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2025. The applicable Executive Order minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under Executive Order 13658 is available at www.dol.gov/whd/govcontracts.

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 (29CFR 5.5 (a) (1) (iii)).

The body of each wage determination lists the classifications and wage rates that have been found to be prevailing for the type(s) of construction and geographic area covered by the wage determination. The classifications are listed in alphabetical order under rate identifiers indicating whether the particular rate is a union rate (current union negotiated rate), a survey rate, a weighted union average rate, a state adopted rate, or a supplemental classification rate.

Union Rate Identifiers

A four-letter identifier beginning with characters other than ""SU"", ""UAVG"", ?SA?, or ?SC? denotes that a union rate was prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2024. PLUM is an identifier of the union whose collectively bargained rate prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2024 in the example, is the effective date of the most current negotiated rate.

Union prevailing wage rates are updated to reflect all changes over time that are reported to WHD in the rates in the collective bargaining agreement (CBA) governing the classification.

Union Average Rate Identifiers

The UAVG identifier indicates that no single rate prevailed for those classifications, but that 100% of the data reported for the classifications reflected union rates. EXAMPLE: UAVG-OH-0010 01/01/2024. UAVG indicates that the rate is a weighted union average rate. OH indicates the State of Ohio. The next number, 0010 in the example, is an internal number used in producing the wage determination. The date, 01/01/2024 in the example, indicates the date the wage determination was updated to reflect the most current union average rate.

A UAVG rate will be updated once a year, usually in January, to reflect a weighted average of the current rates in the collective bargaining agreements on which the rate is based.

Survey Rate Identifiers

The ""SU"" identifier indicates that either a single non-union rate prevailed (as defined in 29 CFR 1.2) for this classification in the survey or that the rate was derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As a weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SUFL2022-007 6/27/2024. SU indicates the rate is a single non-union prevailing rate or a weighted average of survey data for that classification. FL indicates the State of Florida. 2022 is the year of the survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 6/27/2024 in the example, indicates the survey completion date for the classifications and rates under that identifier.

?SU? wage rates typically remain in effect until a new survey is conducted. However, the Wage and Hour Division (WHD) has the discretion to update such rates under 29 CFR 1.6(c)(1).

State Adopted Rate Identifiers

The ""SA"" identifier indicates that the classifications and prevailing wage rates set by a state (or local) government were adopted under 29 C.F.R 1.3(g)-(h). Example: SAME2023-007 01/03/2024. SA reflects that the rates are state adopted. ME refers to the State of Maine. 2023 is the year during which the state completed the survey on which the listed classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 01/03/2024 in the example, reflects the date on which the classifications and rates under the ?SA? identifier took effect under state law in the state from which the rates were adopted.

WAGE DETERMINATION APPEALS PROCESS

1) Has there been an initial decision in the matter? This can be:

a) a survey underlying a wage determination
b) an existing published wage determination
c) an initial WHD letter setting forth a position on a wage determination matter
d) an initial conformance (additional classification

and rate) determination

On survey related matters, initial contact, including requests for summaries of surveys, should be directed to the WHD Branch of Wage Surveys. Requests can be submitted via email to davisbaconinfo@dol.gov or by mail to:

Branch of Wage Surveys
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

Regarding any other wage determination matter such as conformance decisions, requests for initial decisions should be directed to the WHD Branch of Construction Wage Determinations. Requests can be submitted via email to BCWD-Office@dol.gov or by mail to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2) If an initial decision has been issued, then any interested party (those affected by the action) that disagrees with the decision can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Requests for review and reconsideration can be submitted via email to dba.reconsideration@dol.gov or by mail to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210.

==========

END OF GENERAL DECISION
"

NOTICE TO BIDDERS
WAGE RATE DECISION

The wage rate decision of the Department of Labor which has been incorporated in these advertised specifications is incomplete in that the classifications may be omitted from the Department 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 omission 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.

If a project includes multiple types of construction (highway, bridge over navigable water, sanitary sewer and water main, building) and there is not a separate wage determination for this type of work included in the proposal, use the wage determination that is in the proposal.

If a project includes multiple types of construction, different wage rate determinations may be inserted into the contract (WI10/Highway = in all WisDOT highway contracts, WI15/Heavy = bridge over navigable water per USDOL and US Coast Guard designation, WI8/Heavy (Sewer & Water Line & Tunnel) = sanitary sewer and water main if the cost is more than 20% of the contract and/or at least $1,000,000, and Building). If multiple wage rate determinations are inserted into the contract, use the classification in the wage determination for the work being done. Use WI15 wage rates when working on the bridge and/or structure from bank to bank. Use WI8 wage rates when working on any sanitary sewer or water main work. Use Building wage rates for all work done within the footprint of the building. Use WI10 wage rates for all other highway work in the contract and approaches to structures. For example, if a laborer is working within the footprint of a building, use the Laborer rate in the Building wage determination inserted in the contract. If a laborer is working on a bridge/structure within the banks, use the Laborer rate in the WI15/Heavy wage determination if inserted in the contract. If the laborer is working on the highway, use the Laborer rate in the WI10/Highway wage determination.

Proposal ID: 20260210014 **Project(s):** 2410-10-70

Federal ID(s): WISC 2026258

SECTION: 0001 Contract Items

Alt Set ID: **Alt Mbr ID:**

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0002	201.0205 Grubbing	19.000 STA	_____.____	_____.____
0004	201.0220 Grubbing	61.000 ID	_____.____	_____.____
0006	204.0100 Removing Concrete Pavement	490.000 SY	_____.____	_____.____
0008	204.0110 Removing Asphaltic Surface	59.000 SY	_____.____	_____.____
0010	204.0130 Removing Curb	282.000 LF	_____.____	_____.____
0012	204.0150 Removing Curb & Gutter	8,711.000 LF	_____.____	_____.____
0014	204.0155 Removing Concrete Sidewalk	8,908.000 SY	_____.____	_____.____
0016	204.0170 Removing Fence	746.000 LF	_____.____	_____.____
0018	204.0180 Removing Delineators and Markers	26.000 EACH	_____.____	_____.____
0020	204.0185 Removing Masonry	40.000 CY	_____.____	_____.____
0022	204.0195 Removing Concrete Bases	21.000 EACH	_____.____	_____.____
0024	204.0210 Removing Manholes	6.000 EACH	_____.____	_____.____
0026	204.0215 Removing Catch Basins	29.000 EACH	_____.____	_____.____
0028	204.0245 Removing Storm Sewer (size) 012. 12-Inch	674.000 LF	_____.____	_____.____
0030	204.0250 Abandoning Manholes	12.000 EACH	_____.____	_____.____
0032	204.0255 Abandoning Catch Basins	26.000 EACH	_____.____	_____.____

Proposal ID: 20260210014 **Project(s):** 2410-10-70

Federal ID(s): WISC 2026258

SECTION: 0001 Contract Items

Alt Set ID: **Alt Mbr ID:**

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0034	204.0291.S Abandoning Sewer	40.000 CY	_____.____	_____.____
0036	204.9060.S Removing (item description) 201. Traffic Signals W National Ave & S 37th St	1.000 EACH	_____.____	_____.____
0038	204.9060.S Removing (item description) 202. Traffic Signals W National Ave & S 35th St	1.000 EACH	_____.____	_____.____
0040	204.9060.S Removing (item description) 203. Traffic Signals W National Ave & S 30th St	1.000 EACH	_____.____	_____.____
0042	204.9060.S Removing (item description) 204. Traffic Signals W National Ave & S Layton Blvd	1.000 EACH	_____.____	_____.____
0044	204.9060.S Removing (item description) 310. Removing Poles	111.000 EACH	_____.____	_____.____
0046	204.9090.S Removing (item description) 314. Removing Aerial Cable	12,900.000 LF	_____.____	_____.____
0048	205.0100 Excavation Common	27,586.000 CY	_____.____	_____.____
0050	213.0100 Finishing Roadway (project) 001. 2410-10-70	1.000 EACH	_____.____	_____.____
0052	305.0120 Base Aggregate Dense 1 1/4-Inch	34,617.000 TON	_____.____	_____.____
0054	310.0115 Base Aggregate Open-Graded	36.000 CY	_____.____	_____.____
0056	312.0110 Select Crushed Material	23,421.000 TON	_____.____	_____.____
0058	371.2000.S QMP Base Aggregate Dense 1 1/4-Inch Compaction	28.000 EACH	_____.____	_____.____
0060	405.0200 Coloring Concrete Custom	504.000 CY	_____.____	_____.____

Proposal ID: 20260210014 **Project(s):** 2410-10-70

Federal ID(s): WISC 2026258

SECTION: 0001 Contract Items

Alt Set ID: **Alt Mbr ID:**

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0062	415.0080 Concrete Pavement 8-Inch	975.000 SY	_____.____	_____.____
0064	415.0310 Concrete Alley	61.000 SY	_____.____	_____.____
0066	415.4100 Concrete Pavement Joint Filling	1,216.000 SY	_____.____	_____.____
0068	416.0610 Drilled Tie Bars	215.000 EACH	_____.____	_____.____
0070	450.4000 HMA Cold Weather Paving	155.000 TON	_____.____	_____.____
0072	455.0605 Tack Coat	3,326.000 GAL	_____.____	_____.____
0074	460.2000 Incentive Density HMA Pavement	6,950.000 DOL	1.00000	6,950.00
0076	460.6223 HMA Pavement 3 MT 58-28 S	7,730.000 TON	_____.____	_____.____
0078	460.6224 HMA Pavement 4 MT 58-28 S	3,116.000 TON	_____.____	_____.____
0080	465.0120 Asphaltic Surface Driveways and Field Entrances	36.000 TON	_____.____	_____.____
0082	465.0125 Asphaltic Surface Temporary	100.000 TON	_____.____	_____.____
0084	601.0105 Concrete Curb Type A	18.000 LF	_____.____	_____.____
0086	601.0319 Concrete Curb & Gutter 19-Inch	2,302.000 LF	_____.____	_____.____
0088	601.0331 Concrete Curb & Gutter 31-Inch	8,908.000 LF	_____.____	_____.____
0090	601.0600 Concrete Curb Pedestrian	312.000 LF	_____.____	_____.____
0092	602.0410 Concrete Sidewalk 5-Inch	114,938.000 SF	_____.____	_____.____

Proposal ID: 20260210014 **Project(s):** 2410-10-70

Federal ID(s): WISC 2026258

SECTION: 0001 Contract Items

Alt Set ID: **Alt Mbr ID:**

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0094	602.0515 Curb Ramp Detectable Warning Field Natural Patina	2,233.000 SF	_____.____	_____.____
0096	602.0615 Curb Ramp Detectable Warning Field Radial Natural Patina	131.000 SF	_____.____	_____.____
0098	602.0820 Concrete Driveway 8-Inch	569.000 SY	_____.____	_____.____
0100	602.0870 Concrete Driveway HES 8-Inch	182.000 SY	_____.____	_____.____
0102	608.0412 Storm Sewer Pipe Reinforced Concrete Class IV 12-Inch	3,079.000 LF	_____.____	_____.____
0104	608.0415 Storm Sewer Pipe Reinforced Concrete Class IV 15-Inch	36.000 LF	_____.____	_____.____
0106	608.6012 Storm Sewer Pipe Composite 12-Inch	110.000 LF	_____.____	_____.____
0108	611.2004 Manholes 4-FT Diameter	5.000 EACH	_____.____	_____.____
0110	611.8110 Adjusting Manhole Covers	1.000 EACH	_____.____	_____.____
0112	612.0106 Pipe Underdrain 6-Inch	968.000 LF	_____.____	_____.____
0114	619.1000 Mobilization	1.000 EACH	_____.____	_____.____
0116	620.0300 Concrete Median Sloped Nose	408.000 SF	_____.____	_____.____
0118	624.0100 Water	1,121.000 MGAL	_____.____	_____.____
0120	625.0100 Topsoil	4,854.000 SY	_____.____	_____.____
0122	627.0200 Mulching	1,155.000 SY	_____.____	_____.____

Proposal ID: 20260210014 **Project(s):** 2410-10-70

Federal ID(s): WISC 2026258

SECTION: 0001 Contract Items

Alt Set ID: **Alt Mbr ID:**

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0124	628.1905 Mobilizations Erosion Control	20.000 EACH	_____.____	_____.____
0126	628.1910 Mobilizations Emergency Erosion Control	10.000 EACH	_____.____	_____.____
0128	628.7005 Inlet Protection Type A	98.000 EACH	_____.____	_____.____
0130	628.7010 Inlet Protection Type B	69.000 EACH	_____.____	_____.____
0132	628.7020 Inlet Protection Type D	83.000 EACH	_____.____	_____.____
0134	628.7560 Tracking Pads	8.000 EACH	_____.____	_____.____
0136	629.0210 Fertilizer Type B	3.140 CWT	_____.____	_____.____
0138	630.0200 Seeding Temporary	35.000 LB	_____.____	_____.____
0140	630.0500 Seed Water	30.000 MGAL	_____.____	_____.____
0142	631.0300 Sod Water	117.000 MGAL	_____.____	_____.____
0144	631.1000 Sod Lawn	4,854.000 SY	_____.____	_____.____
0146	632.0101 Trees (species, root, size) 001. Autumn Blaze Maple, B&B, 3" Cal	12.000 EACH	_____.____	_____.____
0148	632.0101 Trees (species, root, size) 002. Pacific Sunset Maple, B&B, 2.5" Cal	7.000 EACH	_____.____	_____.____
0150	632.0101 Trees (species, root, size) 003. Red Pointe Maple, B&B, 3" Cal	2.000 EACH	_____.____	_____.____
0152	632.0101 Trees (species, root, size) 004. Tulip Tree, B&B, 3" Cal	5.000 EACH	_____.____	_____.____

Proposal ID: 20260210014 **Project(s):** 2410-10-70

Federal ID(s): WISC 2026258

SECTION: 0001 Contract Items

Alt Set ID: **Alt Mbr ID:**

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0154	632.0101 Trees (species, root, size) 005. Sunburst Honeylocust, B&B, 3" Cal	12.000 EACH	_____.____	_____.____
0156	632.0101 Trees (species, root, size) 006. Kentucky Coffee Tree, B&B, 3" Cal	7.000 EACH	_____.____	_____.____
0158	632.0101 Trees (species, root, size) 007. Frontier Elm, B&B, 3" Cal	5.000 EACH	_____.____	_____.____
0160	632.0101 Trees (species, root, size) 008. Upright English Oak, B&B, 3" Cal	2.000 EACH	_____.____	_____.____
0162	632.0101 Trees (species, root, size) 009. Japanese Tree Lilac, B&B, 2.5" Cal	7.000 EACH	_____.____	_____.____
0164	632.0101 Trees (species, root, size) 010. Fort McNair Red Horse Chestnut, B&B, 3" Cal	2.000 EACH	_____.____	_____.____
0166	632.0101 Trees (species, root, size) 011. Dawn Redwood, B&B, 3" Cal	2.000 EACH	_____.____	_____.____
0168	632.0101 Trees (species, root, size) 012. Hot Wing Tatarian Maple, B&B, 2.5" Cal	3.000 EACH	_____.____	_____.____
0170	632.0101 Trees (species, root, size) 013. American Sycamore, B&B, 3" Cal	5.000 EACH	_____.____	_____.____
0172	632.9101 Landscape Planting Surveillance and Care Cycles	20.000 EACH	_____.____	_____.____
0174	634.0616 Posts Wood 4x6-Inch X 16-FT	6.000 EACH	_____.____	_____.____
0176	637.2210 Signs Type II Reflective H	742.000 SF	_____.____	_____.____
0178	637.2220 Signs Type II Reflective SH	286.000 SF	_____.____	_____.____

Proposal ID: 20260210014 **Project(s):** 2410-10-70

Federal ID(s): WISC 2026258

SECTION: 0001 Contract Items

Alt Set ID: **Alt Mbr ID:**

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0180	637.2230 Signs Type II Reflective F	244.000 SF	_____.____	_____.____
0182	638.2602 Removing Signs Type II	8.000 EACH	_____.____	_____.____
0184	638.3000 Removing Small Sign Supports	1.000 EACH	_____.____	_____.____
0186	643.0300 Traffic Control Drums	32,779.000 DAY	_____.____	_____.____
0188	643.0420 Traffic Control Barricades Type III	27,558.000 DAY	_____.____	_____.____
0190	643.0500 Traffic Control Flexible Tubular Marker Posts	39.000 EACH	_____.____	_____.____
0192	643.0600 Traffic Control Flexible Tubular Marker Bases	39.000 EACH	_____.____	_____.____
0194	643.0705 Traffic Control Warning Lights Type A	55,116.000 DAY	_____.____	_____.____
0196	643.0715 Traffic Control Warning Lights Type C	5,342.000 DAY	_____.____	_____.____
0198	643.0810 Traffic Control Connected Arrow Boards	436.000 DAY	_____.____	_____.____
0200	643.0900 Traffic Control Signs	72,670.000 DAY	_____.____	_____.____
0202	643.0920 Traffic Control Covering Signs Type II	8.000 EACH	_____.____	_____.____
0204	643.1000 Traffic Control Signs Fixed Message	168.000 SF	_____.____	_____.____
0206	643.1050 Traffic Control Signs PCMS	112.000 DAY	_____.____	_____.____
0208	643.1220 Traffic Control Connected Work Zone Start and End Location Markers	436.000 DAY	_____.____	_____.____

Proposal ID: 20260210014 **Project(s):** 2410-10-70

Federal ID(s): WISC 2026258

SECTION: 0001 Contract Items

Alt Set ID: **Alt Mbr ID:**

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0210	643.1500 Traffic Control Speed Feedback Trailer	213.000 DAY	_____.____	_____.____
0212	643.3165 Temporary Marking Line Paint 6-Inch	4,214.000 LF	_____.____	_____.____
0214	643.3180 Temporary Marking Line Removable Tape 6-Inch	27,638.000 LF	_____.____	_____.____
0216	643.3265 Temporary Marking Line Paint 10-Inch	50.000 LF	_____.____	_____.____
0218	643.3280 Temporary Marking Line Removable Tape 10-Inch	745.000 LF	_____.____	_____.____
0220	643.3850 Temporary Marking Stop Line Removable Tape 18-Inch	172.000 LF	_____.____	_____.____
0222	643.3960 Temporary Marking Removable Mask Out Tape 6-Inch	314.000 LF	_____.____	_____.____
0224	643.5000 Traffic Control	1.000 EACH	_____.____	_____.____
0226	644.1430 Temporary Pedestrian Surface Plate	780.000 SF	_____.____	_____.____
0228	644.1440 Temporary Pedestrian Surface Matting	6,972.000 SF	_____.____	_____.____
0230	644.1601 Temporary Pedestrian Curb Ramp	5,664.000 DAY	_____.____	_____.____
0232	644.1605 Temporary Pedestrian Detectable Warning Field	6,450.000 SF	_____.____	_____.____
0234	644.1810 Temporary Pedestrian Barricade	13,900.000 LF	_____.____	_____.____
0236	644.1900.S Temporary Audible Message Devices	13,399.000 DAY	_____.____	_____.____
0238	645.0111 Geotextile Type DF Schedule A	430.000 SY	_____.____	_____.____

Proposal ID: 20260210014 **Project(s):** 2410-10-70

Federal ID(s): WISC 2026258

SECTION: 0001 Contract Items

Alt Set ID: **Alt Mbr ID:**

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0240	645.0220 Geogrid Type SR	28,300.000 SY	_____.____	_____.____
0242	646.1040 Marking Line Grooved Wet Ref Epoxy 4-Inch	9,005.000 LF	_____.____	_____.____
0244	646.1060.S Marking Line MMA 4-Inch	704.000 LF	_____.____	_____.____
0246	646.2040 Marking Line Grooved Wet Ref Epoxy 6-Inch	1,548.000 LF	_____.____	_____.____
0248	646.3040 Marking Line Grooved Wet Ref Epoxy 8-Inch	1,947.000 LF	_____.____	_____.____
0250	646.5020 Marking Arrow Epoxy	28.000 EACH	_____.____	_____.____
0252	646.5060.S Marking Arrow MMA	48.000 EACH	_____.____	_____.____
0254	646.5120 Marking Word Epoxy	1.000 EACH	_____.____	_____.____
0256	646.5260.S Marking Symbol MMA	48.000 EACH	_____.____	_____.____
0258	646.6220 Marking Yield Line Epoxy 18-Inch	16.000 EACH	_____.____	_____.____
0260	646.7120 Marking Diagonal Epoxy 12-Inch	69.000 LF	_____.____	_____.____
0262	646.8120 Marking Curb Epoxy	130.000 LF	_____.____	_____.____
0264	646.8220 Marking Island Nose Epoxy	13.000 EACH	_____.____	_____.____
0266	646.9000 Marking Removal Line 4-Inch	1,336.000 LF	_____.____	_____.____
0268	646.9200 Marking Removal Line Wide	12.000 LF	_____.____	_____.____

Proposal ID: 20260210014 **Project(s):** 2410-10-70

Federal ID(s): WISC 2026258

SECTION: 0001 Contract Items

Alt Set ID: **Alt Mbr ID:**

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0270	650.4000 Construction Staking Storm Sewer	119.000 EACH	_____.____	_____.____
0272	650.4500 Construction Staking Subgrade	4,844.000 LF	_____.____	_____.____
0274	650.5000 Construction Staking Base	4,844.000 LF	_____.____	_____.____
0276	650.5500 Construction Staking Curb Gutter and Curb & Gutter	11,485.000 LF	_____.____	_____.____
0278	650.7000 Construction Staking Concrete Pavement	494.000 LF	_____.____	_____.____
0280	650.8501 Construction Staking Electrical Installations (project) 001. 2410-10-70	1.000 EACH	_____.____	_____.____
0282	650.9000 Construction Staking Curb Ramps	111.000 EACH	_____.____	_____.____
0284	650.9500 Construction Staking Sidewalk (project) 001. 2410-10-70	1.000 EACH	_____.____	_____.____
0286	650.9911 Construction Staking Supplemental Control (project) 001. 2410-10-70	1.000 EACH	_____.____	_____.____
0288	650.9920 Construction Staking Slope Stakes	4,844.000 LF	_____.____	_____.____
0290	652.0225 Conduit Rigid Nonmetallic Schedule 40 2-Inch	268.000 LF	_____.____	_____.____
0292	652.0235 Conduit Rigid Nonmetallic Schedule 40 3-Inch	3,863.000 LF	_____.____	_____.____
0294	653.0905 Removing Pull Boxes	52.000 EACH	_____.____	_____.____
0296	654.0101 Concrete Bases Type 1	19.000 EACH	_____.____	_____.____

Proposal ID: 20260210014 **Project(s):** 2410-10-70

Federal ID(s): WISC 2026258

SECTION: 0001 Contract Items

Alt Set ID: **Alt Mbr ID:**

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0298	654.0102 Concrete Bases Type 2	1.000 EACH	_____.____	_____.____
0300	654.0110 Concrete Bases Type 10	1.000 EACH	_____.____	_____.____
0302	654.0113 Concrete Bases Type 13	2.000 EACH	_____.____	_____.____
0304	654.0120 Concrete Bases Type 10-Special	7.000 EACH	_____.____	_____.____
0306	655.0230 Cable Traffic Signal 5-14 AWG	2,046.000 LF	_____.____	_____.____
0308	655.0240 Cable Traffic Signal 7-14 AWG	729.000 LF	_____.____	_____.____
0310	655.0260 Cable Traffic Signal 12-14 AWG	5,571.000 LF	_____.____	_____.____
0312	655.0305 Cable Type UF 2-12 AWG Grounded	3,837.000 LF	_____.____	_____.____
0314	655.0515 Electrical Wire Traffic Signals 10 AWG	3,959.000 LF	_____.____	_____.____
0316	655.0900 Traffic Signal EVP Detector Cable	2,180.000 LF	_____.____	_____.____
0318	656.0201 Electrical Service Meter Breaker Pedestal (location) 001. W National Ave & S 37th St	1.000 EACH	_____.____	_____.____
0320	656.0201 Electrical Service Meter Breaker Pedestal (location) 002. W National Ave & S 35th St	1.000 EACH	_____.____	_____.____
0322	656.0201 Electrical Service Meter Breaker Pedestal (location) 003. W National Ave & S 33rd St	1.000 EACH	_____.____	_____.____
0324	656.0201 Electrical Service Meter Breaker Pedestal (location) 004. W National Ave & S 30th St	1.000 EACH	_____.____	_____.____

Proposal ID: 20260210014 **Project(s):** 2410-10-70

Federal ID(s): WISC 2026258

SECTION: 0001 Contract Items

Alt Set ID: **Alt Mbr ID:**

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0326	656.0201 Electrical Service Meter Breaker Pedestal (location) 005. W National Ave & S Layton Blvd	1.000 EACH	_____.____	_____.____
0328	657.0100 Pedestal Bases	6.000 EACH	_____.____	_____.____
0330	657.0255 Transformer Bases Breakaway 11 1/2-Inch Bolt Circle	7.000 EACH	_____.____	_____.____
0332	657.0310 Poles Type 3	1.000 EACH	_____.____	_____.____
0334	657.0322 Poles Type 5-Aluminum	7.000 EACH	_____.____	_____.____
0336	657.0350 Poles Type 10	1.000 EACH	_____.____	_____.____
0338	657.0352 Poles Type 10-Special	7.000 EACH	_____.____	_____.____
0340	657.0360 Poles Type 13	2.000 EACH	_____.____	_____.____
0342	657.0405 Traffic Signal Standards Aluminum 3.5-FT	1.000 EACH	_____.____	_____.____
0344	657.0420 Traffic Signal Standards Aluminum 13-FT	4.000 EACH	_____.____	_____.____
0346	657.0430 Traffic Signal Standards Aluminum 10-FT	1.000 EACH	_____.____	_____.____
0348	657.0530 Monotube Arms 30-FT	1.000 EACH	_____.____	_____.____
0350	657.0536 Monotube Arms 35-FT-Special	2.000 EACH	_____.____	_____.____
0352	657.0541 Monotube Arms 40-FT-Special	4.000 EACH	_____.____	_____.____
0354	657.0546 Monotube Arms 45-FT-Special	1.000 EACH	_____.____	_____.____

Proposal ID: 20260210014 **Project(s):** 2410-10-70

Federal ID(s): WISC 2026258

SECTION: 0001 Contract Items

Alt Set ID: **Alt Mbr ID:**

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0356	657.0550 Monotube Arms 50-FT	1.000 EACH	_____.____	_____.____
0358	657.0555 Monotube Arms 55-FT	1.000 EACH	_____.____	_____.____
0360	657.0609 Luminaire Arms Single Member 4-Inch Clamp 6-FT	1.000 EACH	_____.____	_____.____
0362	658.0173 Traffic Signal Face 3S 12-Inch	38.000 EACH	_____.____	_____.____
0364	658.0174 Traffic Signal Face 4S 12-Inch	16.000 EACH	_____.____	_____.____
0366	658.5070 Signal Mounting Hardware (location) 001. W National Ave & S 37th St	1.000 EACH	_____.____	_____.____
0368	658.5070 Signal Mounting Hardware (location) 002. W National Ave & S 35th St	1.000 EACH	_____.____	_____.____
0370	658.5070 Signal Mounting Hardware (location) 003. W National Ave & S Layton Blvd	1.000 EACH	_____.____	_____.____
0372	659.1120 Luminaires Utility LED B	1.000 EACH	_____.____	_____.____
0374	659.1125 Luminaires Utility LED C	6.000 EACH	_____.____	_____.____
0376	659.5000.S Lamp, Ballast, LED, Switch Disposal by Contractor	151.000 EACH	_____.____	_____.____
0378	661.0201 Temporary Traffic Signals for Intersections (location) 001. W National Ave & S 35th St	1.000 EACH	_____.____	_____.____
0380	661.0201 Temporary Traffic Signals for Intersections (location) 002. W National Ave & S Layton Blvd	1.000 EACH	_____.____	_____.____
0382	661.0300 Generators	2.000 DAY	_____.____	_____.____

Proposal ID: 20260210014 **Project(s):** 2410-10-70

Federal ID(s): WISC 2026258

SECTION: 0001 Contract Items

Alt Set ID: **Alt Mbr ID:**

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0384	674.0300 Remove Cable	110.000 LF	_____.____	_____.____
0386	690.0150 Sawing Asphalt	1,103.000 LF	_____.____	_____.____
0388	690.0250 Sawing Concrete	3,147.000 LF	_____.____	_____.____
0390	715.0720 Incentive Compressive Strength Concrete Pavement	500.000 DOL	1.00000	500.00
0392	740.0440 Incentive IRI Ride	4,430.000 DOL	1.00000	4,430.00
0394	ASP.1T0A On-the-Job Training Apprentice at $5.00/HR	3,600.000 HRS	5.00000	18,000.00
0396	ASP.1T0G On-the-Job Training Graduate at $5.00/HR	6,000.000 HRS	5.00000	30,000.00
0398	SPV.0035 Special 001. Removing Concrete Pavement Modified	7,596.000 CY	_____.____	_____.____
0400	SPV.0035 Special 002. Removing Asphaltic Surface Modified	4,692.000 CY	_____.____	_____.____
0402	SPV.0060 Special 001. Field Facilities Office Space	1.000 EACH	_____.____	_____.____
0404	SPV.0060 Special 002. Utility Line Opening (ULO)	110.000 EACH	_____.____	_____.____
0406	SPV.0060 Special 003. Salvaging and Reinstalling Brick Pavers	1.000 EACH	_____.____	_____.____
0408	SPV.0060 Special 004. Adjusting Water Valve Boxes	185.000 EACH	_____.____	_____.____
0410	SPV.0060 Special 005. Water Main Protection	16.000 EACH	_____.____	_____.____

Proposal ID: 20260210014 **Project(s):** 2410-10-70

Federal ID(s): WISC 2026258

SECTION: 0001 Contract Items

Alt Set ID: **Alt Mbr ID:**

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0412	SPV.0060 Special 006. Removing City-Owned Signs and Posts	150.000 EACH	_____.____	_____.____
0414	SPV.0060 Special 007. Moving City-Owned Signs	19.000 EACH	_____.____	_____.____
0416	SPV.0060 Special 008. Round Aluminum Sign Post System in Soft Surface 7-FT	8.000 EACH	_____.____	_____.____
0418	SPV.0060 Special 009. Round Aluminum Sign Post System in Soft Surface 10-FT	70.000 EACH	_____.____	_____.____
0420	SPV.0060 Special 010. Round Aluminum Sign Post System in Soft Surface 11-FT	14.000 EACH	_____.____	_____.____
0422	SPV.0060 Special 011. Round Aluminum Sign Post System in Soft Surface 12-FT	5.000 EACH	_____.____	_____.____
0424	SPV.0060 Special 012. Round Aluminum Sign Post System in Concrete Surface 7-FT	10.000 EACH	_____.____	_____.____
0426	SPV.0060 Special 013. Round Aluminum Sign Post System in Concrete Surface 10-FT	26.000 EACH	_____.____	_____.____
0428	SPV.0060 Special 014. Round Aluminum Sign Post System in Concrete Surface 11-FT	1.000 EACH	_____.____	_____.____
0430	SPV.0060 Special 015. Pipe Bollards	2.000 EACH	_____.____	_____.____
0432	SPV.0060 Special 016. Marking Speed Table Chevron Contrast Epoxy	20.000 EACH	_____.____	_____.____
0434	SPV.0060 Special 017. Marking Bike Lane Two-Stage Turning Queue Box MMA	6.000 EACH	_____.____	_____.____
0436	SPV.0060 Special 018. Marking Yield Line MMA 18-Inch	14.000 EACH	_____.____	_____.____

Proposal ID: 20260210014 **Project(s):** 2410-10-70

Federal ID(s): WISC 2026258

SECTION: 0001 Contract Items

Alt Set ID: **Alt Mbr ID:**

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0438	SPV.0060 Special 102. Inlet Covers Type MS 57	84.000 EACH	_____.____	_____.____
0440	SPV.0060 Special 103. Manhole Covers Type MS 58-A	78.000 EACH	_____.____	_____.____
0442	SPV.0060 Special 108. Temporary Pipe Connection 12-Inch	3.000 EACH	_____.____	_____.____
0444	SPV.0060 Special 110. Catch Basins Type 44A	99.000 EACH	_____.____	_____.____
0446	SPV.0060 Special 115. Pipe Connection to Existing Structure	67.000 EACH	_____.____	_____.____
0448	SPV.0060 Special 120. Curb Inlet Type 70A	15.000 EACH	_____.____	_____.____
0450	SPV.0060 Special 201. Traffic Signal Cabinet & Controller W National Ave & S 37th St	1.000 EACH	_____.____	_____.____
0452	SPV.0060 Special 202. Traffic Signal Cabinet & Controller W National Ave & S 35th St	1.000 EACH	_____.____	_____.____
0454	SPV.0060 Special 203. Traffic Signal Cabinet & Controller W National Ave & S Layton Blvd	1.000 EACH	_____.____	_____.____
0456	SPV.0060 Special 204. Emergency Vehicle Preemption System W National Ave & S 37th St	1.000 EACH	_____.____	_____.____
0458	SPV.0060 Special 205. Emergency Vehicle Preemption System W National Ave & S 35th St	1.000 EACH	_____.____	_____.____
0460	SPV.0060 Special 206. Emergency Vehicle Preemption System W National Ave & S Layton Blvd	1.000 EACH	_____.____	_____.____

Proposal ID: 20260210014 **Project(s):** 2410-10-70

Federal ID(s): WISC 2026258

SECTION: 0001 Contract Items

Alt Set ID: **Alt Mbr ID:**

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0462	SPV.0060 Special 207. Video Detection System W National Ave & S 37th St	1.000 EACH	_____.____	_____.____
0464	SPV.0060 Special 208. Video Detection System W National Ave & S 35th St	1.000 EACH	_____.____	_____.____
0466	SPV.0060 Special 209. Video Detection System W National Ave & S Layton Blvd	1.000 EACH	_____.____	_____.____
0468	SPV.0060 Special 210. Installing Precast Controller Base	3.000 EACH	_____.____	_____.____
0470	SPV.0060 Special 211. Pedestrian Countdown Signal Face 12-Inch	24.000 EACH	_____.____	_____.____
0472	SPV.0060 Special 212. APS Pedestrian Push Buttons W National Ave & S 37th St	1.000 EACH	_____.____	_____.____
0474	SPV.0060 Special 213. APS Pedestrian Push Buttons W National Ave & S 35th St	1.000 EACH	_____.____	_____.____
0476	SPV.0060 Special 214. APS Pedestrian Push Buttons W National Ave & S Layton Blvd	1.000 EACH	_____.____	_____.____
0478	SPV.0060 Special 215. Rectangular Rapid Flashing Beacon System W National Ave & S 33rd St	1.000 EACH	_____.____	_____.____
0480	SPV.0060 Special 216. Rectangular Rapid Flashing Beacon System W National Ave & S 30th St	1.000 EACH	_____.____	_____.____
0482	SPV.0060 Special 217. Temporary Infrared EVP System W National Ave & S 35th St	1.000 EACH	_____.____	_____.____
0484	SPV.0060 Special 218. Temporary Infrared EVP System W National Ave & S Layton Blvd	1.000 EACH	_____.____	_____.____

Proposal ID: 20260210014 **Project(s):** 2410-10-70

Federal ID(s): WISC 2026258

SECTION: 0001 Contract Items

Alt Set ID: **Alt Mbr ID:**

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0486	SPV.0060 Special 302. Pull Boxes 13-Inch x 24-Inch x 24-Inch (Fiberglass Polymer Concrete)	109.000 EACH	_____.____	_____.____
0488	SPV.0060 Special 303. Pull Boxes 17-Inch x 30-Inch x 24-Inch (Fiberglass Polymer Concrete)	64.000 EACH	_____.____	_____.____
0490	SPV.0060 Special 321. Poles MKE 30 Black (30-FT Aluminum, Black, Bolt-Down)	55.000 EACH	_____.____	_____.____
0492	SPV.0060 Special 324. 40-FT Wood Pole	20.000 EACH	_____.____	_____.____
0494	SPV.0060 Special 342. Submersible Multitap 3-Port Pre-Insulated Connector	195.000 EACH	_____.____	_____.____
0496	SPV.0060 Special 343. Submersible Multitap 4-Port Pre-Insulated Connector	110.000 EACH	_____.____	_____.____
0498	SPV.0060 Special 345. Luminaire Arms Single Member 6-FT (Special)	7.000 EACH	_____.____	_____.____
0500	SPV.0060 Special 346. Luminaire Arms Single Member 6-FT WP Mount	6.000 EACH	_____.____	_____.____
0502	SPV.0060 Special 353. Installing Equipment Grounding Electrode	25.000 EACH	_____.____	_____.____
0504	SPV.0060 Special 354. Removing Bracket Arm and Luminaire	6.000 EACH	_____.____	_____.____
0506	SPV.0060 Special 374. Luminaire Utility 1LED2	4.000 EACH	_____.____	_____.____
0508	SPV.0060 Special 375. Luminaire Utility 2LED2	3.000 EACH	_____.____	_____.____
0510	SPV.0060 Special 388. Concrete Base Type 2 (Milwaukee)	62.000 EACH	_____.____	_____.____

Proposal ID: 20260210014 **Project(s):** 2410-10-70

Federal ID(s): WISC 2026258

SECTION: 0001 Contract Items

Alt Set ID: **Alt Mbr ID:**

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0512	SPV.0060 Special 389. Concrete Base Type 5 (Milwaukee)	17.000 EACH	_____.____	_____.____
0514	SPV.0060 Special 399. Transformer Bases Breakaway 11 1/2-Inch Bolt Circle Black	56.000 EACH	_____.____	_____.____
0516	SPV.0060 Special 401. 4' Diameter Manhole Type CUC	11.000 EACH	_____.____	_____.____
0518	SPV.0060 Special 410. 4' Diameter Doghouse Manhole Type CUC	1.000 EACH	_____.____	_____.____
0520	SPV.0060 Special 411. 4' Diameter Doghouse Manhole Type CUC Installed Over Conduit	5.000 EACH	_____.____	_____.____
0522	SPV.0060 Special 414. 6' Diameter Doghouse Manhole Type CUC	1.000 EACH	_____.____	_____.____
0524	SPV.0060 Special 420. Removing CUC Manhole	2.000 EACH	_____.____	_____.____
0526	SPV.0060 Special 821. Poles Type 15-'6" Black Aluminum Harp Pole and Shroud	17.000 EACH	_____.____	_____.____
0528	SPV.0060 Special 865. Luminaire Historic Black Milwaukee Harp LED Screw-In Lamp	17.000 EACH	_____.____	_____.____
0530	SPV.0060 Special 867. Luminaire Historic Black Milwaukee Lantern LED 3 Screw-In Lamp	70.000 EACH	_____.____	_____.____
0532	SPV.0060 Special 881. Fuse System on the Lighting Riser Cable in the Pole	94.000 EACH	_____.____	_____.____
0534	SPV.0090 Special 001. Concrete Curb & Gutter HES 19-Inch	22.000 LF	_____.____	_____.____

Proposal ID: 20260210014 **Project(s):** 2410-10-70

Federal ID(s): WISC 2026258

SECTION: 0001 Contract Items

Alt Set ID: **Alt Mbr ID:**

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0536	SPV.0090 Special 002. Concrete Curb & Gutter HES 31-Inch	125.000 LF	_____.____	_____.____
0538	SPV.0090 Special 003. Concrete Curb & Gutter 19-Inch Type MCTS	121.000 LF	_____.____	_____.____
0540	SPV.0090 Special 004. Concrete Curb & Gutter 31-Inch Type MCTS	97.000 LF	_____.____	_____.____
0542	SPV.0090 Special 005. Concrete Curb Type D Special	667.000 LF	_____.____	_____.____
0544	SPV.0090 Special 006. Marking Stop Line Epoxy 24-Inch	459.000 LF	_____.____	_____.____
0546	SPV.0090 Special 007. Marking Crosswalk MMA Block Style 12-Inch	1,512.000 LF	_____.____	_____.____
0548	SPV.0090 Special 008. Marking Bike Lane Crosswalk MMA Block Style 24-Inch	880.000 LF	_____.____	_____.____
0550	SPV.0090 Special 009. Marking Crosswalk Epoxy Transverse Line 12-Inch	541.000 LF	_____.____	_____.____
0552	SPV.0090 Special 010. Marking Crosswalk Epoxy Block Style 12-Inch	4,480.000 LF	_____.____	_____.____
0554	SPV.0090 Special 302. Electrical Cable Type 3#6 AL	280.000 LF	_____.____	_____.____
0556	SPV.0090 Special 304. Electrical Cable Type 2#2/1#4 AL	10,760.000 LF	_____.____	_____.____
0558	SPV.0090 Special 310. Electrical Cable Type UF 3#10 AWG with Ground	4,228.000 LF	_____.____	_____.____
0560	SPV.0090 Special 319. Liquidtight Flexible Nonmetallic Conduit 1 1/2-Inch	75.000 LF	_____.____	_____.____

Proposal ID: 20260210014 **Project(s):** 2410-10-70

Federal ID(s): WISC 2026258

SECTION: 0001 Contract Items

Alt Set ID: **Alt Mbr ID:**

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0562	SPV.0090 Special 324. Electrical Cable Type 4#2/1#8 XLP	13,635.000 LF	_____.____	_____.____
0564	SPV.0090 Special 325. Conduit 3-Inch HDPE Schedule 40	9,990.000 LF	_____.____	_____.____
0566	SPV.0090 Special 326. Conduit 3-Inch HDPE Schedule 80	1,170.000 LF	_____.____	_____.____
0568	SPV.0090 Special 451. 1-Duct Sand Encased Conduit, HDPE, 4-Inch	8.000 LF	_____.____	_____.____
0570	SPV.0090 Special 452. 2-Duct Sand Encased Conduit, HDPE, 4-Inch	3,672.000 LF	_____.____	_____.____
0572	SPV.0090 Special 453. 3-Duct Sand Encased Conduit, HDPE, 4-Inch	449.000 LF	_____.____	_____.____
0574	SPV.0090 Special 454. 4-Duct Conduit, Cement Encased, 4-Inch HDPE	448.000 LF	_____.____	_____.____
0576	SPV.0090 Special 455. 5-Duct Sand Encased Conduit, HDPE, 4-Inch	248.000 LF	_____.____	_____.____
0578	SPV.0090 Special 456. 6-Duct Conduit, Cement Encased, 4-Inch HDPE	123.000 LF	_____.____	_____.____
0580	SPV.0090 Special 458. 8-Duct Sand Encased Conduit, HDPE, 4-Inch	73.000 LF	_____.____	_____.____
0582	SPV.0090 Special 601. Fiber Optic Cable Outdoor Plant 72-Count	5,032.000 LF	_____.____	_____.____
0584	SPV.0090 Special 602. Fiber Optic Cable Outdoor Plant 12-Count	415.000 LF	_____.____	_____.____
0586	SPV.0165 Special 001. Detectable Edge Tiles	6,756.000 SF	_____.____	_____.____

Proposal ID: 20260210014 **Project(s):** 2410-10-70

Federal ID(s): WISC 2026258

SECTION: 0001 Contract Items

Alt Set ID: **Alt Mbr ID:**

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0588	SPV.0165 Special 002. Concrete Raised Median	1,935.000 SF	_____._____	_____._____
0590	SPV.0180 Special 001. Track Zone Removal	7,385.000 SY	_____._____	_____._____
0592	SPV.0195 Special 001. Excavation, Hauling, and Disposal of Metals Contaminated Soil	570.000 TON	_____._____	_____._____
0594	SPV.0195 Special 002. Excavation, Hauling, and Disposal of PAH Contaminated Soil	66.000 TON	_____._____	_____._____
0596	SPV.0195 Special 003. Excavation, Hauling, and Disposal of VOC Contaminated Soil	11,066.000 TON	_____._____	_____._____

Section: 0001 **Total:** _____._____

Total Bid: _____._____

PLEASE ATTACH ADDENDA HERE