HIGHWAY WORK PROPOSAL

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

Proposal Number: 015

STATE ID	FEDERAL ID	PROJECT DESCRIPTION	HIGHWAY	COUNTY
2190-10-70	N/A	C Wauwatosa W Wisconsin Avenue, Bridge Over Honey Creek P-40-776	LOC STR	Milwaukee
2190-10-71	N/A	C Wauwatosa W Wisconsin Avenue, Bridge Over Honey Creek P-40-776	LOC STR	Milwaukee

ADDENDUM REQUIRED

ATTACHED AT BACK

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

Proposal Guaranty Required: $100,000.00 Payable to: Wisconsin Department of Transportation	Attach Proposal Guaranty on back of this PAGE.
Bid Submittal Date: February 11, 2025 Time (Local Time): 11:00 am	Firm Name, Address, City, State, Zip Code **SAMPLE** **NOT FOR BIDDING PURPOSES**
Contract Completion Time May 15, 2026	
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

For Department Use Only

Type of Work:
Removals, Milling, Grading, Aggregate, Concrete Pavement, Asphalt Pavement, Structure Replacement, Curb and Gutter, Concrete Sidewalk, Storm Sewer, Erosion Control, Permanent Signing, Traffic Control, Pavement Marking, Lighting, Traffic Signals, Water, 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

1. General.

Perform the work under this construction contract for Project 2190-10-70, C Wauwatosa, W Wisconsin Avenue, Bridge Over Honey Creek P-40-776, Local Street, Milwaukee County, Wisconsin and Project 2190-10-71, C Wauwatosa, W Wisconsin Avenue, Bridge Over Honey Creek P-40-776, Const/ Watermain, 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 (20240703)

2. Scope of Work.

The work under this contract shall consist of removals, grading, dense graded base, concrete pavement, HMA pavement, asphaltic surface, concrete curb and gutter, concrete sidewalk, storm sewer, stream relocation, water main, erosion control, permanent signing, traffic control, pavement marking, street lighting, signals, structures, restoration, and all incidental items necessary to complete the work as shown on the plans and included in the proposal and contract.

Structures:

Bridges

B-40-1033

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 10 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.

Be advised that there will be multiple mobilizations and/or remobilizations to complete construction operations. No additional payment will be made, by the department, for additional mobilizations.

Once construction has begun, work continuously, weather permitting, as not to delay the project completion. Notify engineer of delays occurring on any section of the project for greater than two days.

Property Owner Notification Requirements

Inform property owners at least 48 hours prior to performing work that will affect their homes or businesses. Notices shall be mailed or delivered in person. Provide the engineer a sample copy of the notice and a list of recipients indicating method of delivery, and delivery date. A new notice shall be provided to the residents to update them of the new construction schedule if work operations causing interruptions are delayed by more than two (2) days from the date stated on the notice. Work cannot commence until additional notifications are provided 48 hours in advance. The department will not allow any work affecting property owner access to continue until proper notice has been provided. Delays caused because the contractor failed to provide proper notice will not be grounds for a contract time extension.

- Examples of work which require notifications include, but are not limited to:
    - Work performed beyond the hours of operation listed in the Public Convenience and Safety article.
    - Driveway interruptions due to curb, driveway approach, or sidewalk removals and replacements.
    - Interruption of sewer and water service.
- Information to be included:
    - Reason for the interruption.
    - Start date, start time, and duration of the expected interruption.
    - Contractor contact information.

Driveway Interruption Requirements

- Driveway interruptions notifications shall additionally include:
    - Timeframe of when property owners will be able to access driveway.
    - Statement regarding temporary access.
    - A second notice meeting the requirements in this article is required prior to removing temporary access.
- Driveway interruptions due to curb, approach, or sidewalk replacement:
    - Access to driveways must be provided at the end of each day unless prior arrangements are made with property owners.
    - Provide temporary driveway access until the time they are replaced.

A Schedule of Operations

Wisconsin Avenue and Honey Creek Parkway will be closed to through traffic during construction as shown on the plans. Maintain emergency access and driveway access for properties located within the closures.

The department anticipates that the schedule shall be as follows:

- East abutment and wing wall construction
- Existing bridge demolition
- New pier construction
- Stream grading to occur after pier completion
- West abutment and wing wall construction
- Complete restoration of disturbed areas.

B Contractor Coordination

Provide an individual to serve as the contractor's sole point of contact for field utility coordination, traffic closure coordination, and communication for the duration of the project.

Arrange and conduct weekly progress meetings. The contractor's superintendent or representative, designated materials representative, subcontractor's representatives for ongoing subcontract work or subcontract work expected to begin within the next three weeks shall attend. Provide and discuss the schedule and updates at the weekly progress meetings. Agenda items at the meeting shall include, but not be limited to, the following:

- Review of the contractor's and subcontractors' schedule. Indicate if the project is on, ahead or behind schedule. If behind indicate why, how much behind and how the project will get back on schedule.
- Utility conflicts and relocation schedule.
- Evaluation of progress to date.
- Outstanding Requests for Information (RFIs) or issues that may cause contract modifications.

- Shop drawing submittal status.
- Materials submittal status.
- Materials sampling and testing activities and results.
- Lane, road, and ramp closure schedules.
- Impacts to businesses and private properties.
- Impacts to bus routes, emergency services, postal services.
- Equipment status of orders and deliveries.

Obtain permission from the engineer a minimum of 48 hours prior to any construction schedule change.

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 project is anticipated to be under construction concurrently with the work under this contract:

Wisconsin Avenue 2025 Improvements

68th Street to 72nd Street

Signals, Sewer, and Water Main

City of Wauwatosa Contact Mike Steiner, P.E.; (414) 479-8974; msteiner@wauwatosa.net

C Portable Changeable Message Signs

Operate portable changeable message sign boards for a minimum of seven days prior to closing roadways to through traffic and posting the detour routes. Obtain acceptance from the engineer regarding the wording of all messages on portable changeable message signs prior to placing the message.

D Local Street Work Restrictions (Wisconsin Avenue and Honey Creek Parkway)

Provide access to property owners at all times.

Keep sidewalks, paths, and trails open as shown on the plans or as approved by the engineer. Provide adequate temporary sidewalk and bridging over obstructions as directed by the engineer.

Existing trees are to remain in place during construction. Conduct an on-site visit prior to bidding to determine any special measures required for proper clearance between the trees and construction equipment. No additional compensation will be made.

Do not use decorative light poles for traffic control and detour signing.

E All Work Restrictions

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

Provide the City of Wauwatosa Police Department, City of Wauwatosa Public Works Department, and the engineer with a 24-hour emergency contact number for when maintenance is required.

Migratory Birds

No evidence of swallow or other migratory bird nests have been observed on or under the following structure(s) during the preconstruction inspection. However, if nesting is later observed prior to or during construction, the contractor shall implement avoidance/deterrent measures or obtain a depredation permit. All active nests (when eggs or young are present) of migratory birds are protected under the federal Migratory Bird Treaty Act. The nesting season for swallows and other birds is from April 15 to August 31.

Existing Wisconsin Avenue Bridge over Honey Creek (P-40-776)

Protection of Endangered Bats (Tree Clearing)

Northern long-eared bats (*Myotis septentrionalis*, or NLEB) 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 1 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 1:

- 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.

Fish Spawning

There shall be no instream disturbance of Honey Creek as a result of construction activity under or for this contract, from March 1 to June 15, both dates inclusive, in order to avoid adverse impacts upon the spawning of various fish species. For this project, instream disturbance is defined as the water. The contractor can be on dry concrete channel lining; however, all equipment, materials, and personnel should be removed from the channel prior to a rain event during this time period.

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

F Interim Completion of Work prior to Winter Shutdown: November 21, 2025

Complete all contract work with all streets open to through traffic on new pavement, except for traffic signals and final sodding by November 21, 2025.

If the contractor fails to complete all contract work with all streets open to through traffic on new pavement, except for traffic signals and final sodding by November 21, 2025, the department will assess the contractor $5,000 in interim liquidated damages per day for each calendar day after 12:01 AM on November 22, 2025 that the contract work is not complete. The work to be completed includes all structure work, pavement markings, permanent signing, drainage, water main, erosion control, stream excavation and stream restoration, and street lighting. An entire calendar day will be charged for any period of time within a calendar day that the work is not complete beyond 12:01 AM on November 22, 2025.

Concrete bases without poles shall be protected by the contractor at their cost. Install temporary stop signs on Honey Creek Parkway per the pre-construction traffic configuration or as directed by the engineer.

Install Soil Stabilizer Type B at locations where restoration is not complete as directed by the engineer.

4. Traffic.

General

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

Unless detailed in the plans, do not begin or continue any work that closes traffic lanes outside the allowed time periods specified in this article.

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

Maintain emergency vehicle access at all times.

Prior to any traffic control being placed, provide the engineer, City of Wauwatosa Police Department, and City of Wauwatosa Public Works Department with the name and telephone number of a local person responsible for the emergency maintenance of traffic control.

Coordinate all traffic handling with the engineer. Place roadway signing as detailed on the plans and in conformance with the Manual on Uniform Traffic Control Devices (MUTCD), latest edition.

Employ such flag person, signs, barricades, and drums as may be necessary to safeguard or protect hazards in the work zone, such as exposed manholes or drop-offs for vehicles and direct traffic at locations where construction operations may interfere or restrict the smooth flow of traffic. Make arrangements and be responsible for the prompt replacement of damaged or dislocated traffic control or guidance signs, day or night.

Traffic requirements under this contract shall be coordinated with other adjacent and concurrent Department of Transportation or local municipality projects. The contractor shall be responsible for implementing and coordinating with other contractors all traffic control as shown on the plans. Modifications to the traffic control plan may be required by the engineer to be safe and consistent with adjacent work by others.

Always have sufficient experienced personnel available to promptly install, remove, and reinstall the required traffic control devices to reroute traffic during the construction operations.

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

Post parking restrictions at least three days prior to the start of construction.

Do not commence work under this contract until the required traffic control devices and markings are in place and the engineer approves the installations.

Provide temporary means to prevent grade differences greater than 1/4-inch at locations where pedestrian access is maintained. Bridge vertical differences using slopes of 12:1 or greater through temporary asphalt wedging or through other means approved by the engineer.

In no case may any barricade, light, sign, or other traffic control device be out of service for more than 2 hours. The cost to maintain and restore the above items is incidental to the bid item Traffic Control and no additional payment will be made.

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.

Notify the engineer and Construction Program Work Zone and Traffic Engineer if there are any changes in the schedule, early completions, or cancellations of scheduled work.

Submit to the engineer for approval a detailed traffic control plan if different than the traffic control plan provided in the plan set. Submit this plan 10 days prior to the pre-construction conference.

Schedule of Operations

The department anticipates that the schedule of roadway openings and closings shall be as follows, unless approved by the engineer:

- Post detour routes and close Wisconsin Avenue and Honey Creek Parkway to through traffic as shown on the plans. See Detour Plan.
- Post Wisconsin Avenue pedestrian detour, Oak Leaf Trail detour, and Pedestrian Path detour as shown on the plans. See Detour Plan.
- Maintain emergency access and driveway access for properties located within the closures.
- After final restoration, signing, signals, and pavement markings have been completed and accepted by the department, open Wisconsin Avenue and Honey Creek Parkway to all lanes of traffic in each direction.

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 Wisconsin Avenue and Honey Creek Parkway 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 23, 2025 to 6:00 AM Tuesday, May 27, 2025 for Memorial Day;
- From noon Thursday, July 3, 2025 to 6:00 AM Monday, July 7, 2025 for Independence Day;
- From noon Friday, August 29, 2025 to 6:00 AM Tuesday, September 2, 2025 for Labor Day;
- From noon Wednesday, November 26, 2025 to 6:00 AM Monday, December 1, 2025 for Thanksgiving;
- From noon Tuesday, December 23, 2025 to 6:00 AM Friday, January 2, 2026 for Christmas and New Years.

stp-107-005 (20210113)

6. Utilities.

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.

Utility working days shown herein are as defined in Wisconsin Administrative Code.

Known utilities in the project area are as follows:

2190-10-70: Local Street

The following utilities will require work during construction:

Milwaukee Metropolitan Sewerage District (MMSD) has existing underground combined sewer facilities within the project limits. The existing 39”x30” MIS along the north side of Wisconsin Avenue and the existing 24” MIS along the center of Honey Creek Parkway will remain in place. Expose the MMSD underground facilities as needed to facilitate construction at the new bridge abutments and pier under the bid item Exposing MMSD MIS. Use caution when working in these locations.

Reconstruct MMSD manholes and Abandon MMSD Pump Station BS0401 as shown in the plans and bid items.

Wauwatosa, City of – Sewer has existing underground sewer facilities within the project limits. Adjust and reconstruct sanitary manholes as shown in the plans and bid items.

Wauwatosa, City of – Water has existing underground water facilities within the project limits. Install new water facilities as shown in the plans and bid items.

The following utility owners have facilities within the project limits that need adjustments:

AT&T Wisconsin has existing underground communications facilities within the project limits. AT&T Wisconsin plans to complete relocations prior to construction based on an anticipated contractor start of April 2025. Between station 6+18 and station 11+83, AT&T Wisconsin is rerouting their underground facilities to the south side of Wisconsin Avenue and will relocate between the proposed bridge piles 10 feet below the proposed water main prior to construction. There will be approximately 16-inches between the AT&T Wisconsin facilities and the pre-bored bridge piles. Expose the AT&T Wisconsin underground facilities as needed to facilitate construction at the new bridge abutments and pier under the bid item Exposing AT&T Duct Package. Use caution when working in these locations. Prior to construction, AT&T will remove cables from their existing conduit package, which will remain in place.

Spectrum has existing underground communications facilities within the project limits. Spectrum plans to discontinue their fiber and coax facilities in place prior to construction based on an anticipated contractor start of April 2025.

Verizon Business has existing underground communications facilities within the project limits. Verizon Business plans to discontinue their underground facilities in place prior to construction based on an anticipated contractor start of April 2025.

We Energies – Electric has existing overhead electric facilities within the project limits. We Energies – Electric plans to remove their existing poles, associated wire, and equipment prior to construction based on an anticipated contractor start of April 2025.

We Energies – Gas has existing underground gas facilities within the project limits. We Energies – Gas plans to reroute their underground facilities to the north side of Wisconsin Avenue and north of the new bridge and complete relocations prior to construction based on an anticipated contractor start of April 2025. We Energies – Gas will remove three discontinued mains that conflict with the proposed work prior to construction based on an anticipated contractor start of April 2025.

The following utility owners have facilities within the project limits; however, no adjustments are anticipated:

Everstream has existing underground communications facilities within the project limits along the south side of Wisconsin Avenue and south of the new bridge.

2190-10-71: Const/Watermain

All coordination was done under Project 2190-10-70.

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

Both the department and City of Wauwatosa personnel will inspect construction of sanitary sewer and water main under this contract. However, testing, and acceptance of the sanitary sewer and water main construction will be by the City of Wauwatosa.

8. Referenced Construction Specifications.

Construct the work enumerated below conforming to the Standard Specifications for Sewer and Water Construction in Wisconsin. 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:

Reconstruct MMSD Manhole, Abandon MMSD Pump Station, Adjusting Sanitary Manholes, Reconstructing Sanitary Manholes, Water Main, Water Valves, Hydrants, and Water Services

stp-105-002 (20130615)

9. General Provisions for Sewer and Water Main – City of Wauwatosa.

All work shall be done according to relevant sections of the following documents:

a) State of Wisconsin, Department of Transportation, Standard Specifications for Highway and Structure Construction, Current Edition
b) Wisconsin Administrative Code
c) AWWA Standards
d) Standard Specifications for Sewer & Water in Wisconsin, latest Edition
e) DNR Chapter 110, Sewerage Systems
f) DNR Chapter 811, Requirements for the Operation and Design of Community Water System
g) NSF/ANSI 61, Drinking Water System Components—Health Effects
h) Wisconsin Construction Site Best Management Practice Handbook, DNR
i) Wisconsin Manual on Uniform Traffic Control Devices (MUTCD)

When one or more documents conflict, the contractor shall comply with the City of Wauwatosa Standard Specifications, which can be referenced at:

https://www.wauwatosa.net/government/departments/public-works/engineering/standard-specifications

10. Other Contracts.

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 project is anticipated to be under construction concurrently with the work under this contract:

Wisconsin Avenue 2025 Improvements

68th Street to 72nd Street

Signals, Sewer, and Water Main

City of Wauwatosa Contact Mike Steiner, P.E.; (414) 479-8974; msteiner@wauwatosa.net

For all projects, coordinate activities, detours, work zone traffic control, roadway, erosion control and lane closures, and other work items as required with other contracts.

SER-107-012 (20211227)

11. Hauling Restrictions.

Replace standard spec 107.2 with the following:

(1) Hauling will not be allowed on Honey Creek Parkway and Glenview Avenue in the City of Wauwatosa.

(2) Present to the department, five business days before proposed hauling, a proposed haul route plan detailing haul routes that are not part of the state trunk highway system. Include the months, days of the week, time of day, number of trucks, types of trucks and maximum loads of trucks anticipated to accomplish the project work in the haul route submittal.

(3) The department will review the submittal and either approve or provide a letter with comments and proposed revisions to the contractor within five business days of its receipt. If approved, the department will subsequently survey the existing condition of that haul route to establish a baseline for assessing damage that the contractor's hauling operations might cause.

(4) At all times, conduct operations in a manner that will cause a minimum of disruption to traffic on existing roadways. Obtain all permits required that may be required, including hauling of materials. Cost of all permits are incidental to the project.

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

The department has received written verification of coverage under the Section 404 Transportation Regional General Permit from the U.S. Army Corps of Engineers. Comply with the requirements of the permit in addition to requirements of the special provisions.

A copy of the permit is available from the regional office by contacting Michael Baird (Local Program Project Manager) at (262) 548-5918.

If the contractor requires work outside the proposed slope intercepts, based on their method of operation to construct the project, it is the contractor's responsibility to determine whether a U.S. Army Corps of Engineers Section 404 permit modification is required. If a Section 404 permit modification is necessary, obtain the permit modification prior to beginning construction operations requiring the permit. No time extensions as discussed in standard spec 108.10 will be granted for the time required to apply for and obtain the permit modification. The contractor must be aware that the U.S. Army Corps of Engineers may not grant the permit modification request.

stp-107-054 (20230629)

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

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-S066796-02). 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 Michael Baird (Local Program Project Manager) at (262) 548-5918. Post the permit certificate in a conspicuous place at the construction site.

stp-107-056 (20230629)

14. Information to Bidders, Water Main Approvals.

The department has obtained water main plan and specification approvals through the Wisconsin Department of Natural Resources to construct the water main facilities as shown on the plans. Conform to all permit requirements for the project.

Copies of the approvals are available from the regional office by contacting Michael Baird, Local Program Project Manager, at (262) 548-5918.

15. Environmental Protection, Aquatic Exotic Species Control.

Exotic invasive organisms such as VHS, zebra mussels, purple loosestrife, and Eurasian water milfoil are becoming more prolific in Wisconsin and pose adverse effects to waters of the state. Wisconsin State Statutes 30.07, "Transportation of Aquatic Plants and Animals; Placement of Objects in Navigable Waters", details the state law that requires the removal of aquatic plants and zebra mussels each time equipment is put into state waters.

At construction sites that involve navigable water or wetlands, use the follow cleaning procedures to minimize the chance of exotic invasive species infestation. Use these procedures for all equipment that

comes in contact with waters of the state and/or infested water or potentially infested water in other states.

Ensure that all equipment that has been in contact with waters of the state, or with infested or potentially infested waters, has been decontaminated for aquatic plant materials and zebra mussels before being used in other waters of the state. Before using equipment on this project, thoroughly disinfect all equipment that has come into contact with potentially infested waters. Guidelines from the Wisconsin Department of Natural Resources for disinfection are available at:

http://dnr.wi.gov/topic/invasives/disinfection.html

Use the following inspection and removal procedures:

1. Before leaving the contaminated site, wash machinery and ensure that the machinery is free of all soil and other substances that could possibly contain exotic invasive species;
2. Drain all water from boats, trailers, bilges, live wells, coolers, bait buckets, engine compartments, and any other area where water may be trapped;
3. Inspect boat hulls, propellers, trailers and other surfaces. Scrape off any attached mussels, remove any aquatic plant materials (fragments, stems, leaves, seeds, or roots), and dispose of removed mussels and plant materials in a garbage can before leaving the area or invested waters; and
4. Disinfect your boat, equipment and gear by either:
    4.1. Washing with ~212 F water (steam clean), or
    4.2. Drying thoroughly for five days after cleaning with soap and water and/or high pressure water, or
    4.3. Disinfecting with either 200 ppm (0.5 oz per gallon or 1 Tablespoon per gallon) Chlorine for 10-minute contact time or 1:100 solution (38 grams per gallon) of Virkon Aquatic for 20- to 30-minute contact time. Note: Virkon is not registered to kill zebra mussel veligers nor invertebrates like spiny water flea. Therefore, this disinfect should be used in conjunction with a hot water (>104º F) application.

Complete the inspection and removal procedure before equipment is brought to the project site and before the equipment leaves the project site.

stp-107-055 (20130615)

16. Erosion Control.

Supplement standard spec 107.20 with the following:

Erosion control best management practices (BMPs) 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 BMPs until permanent vegetation is established or until the engineer determines that the BMP is no longer required.

All disturbed areas, not surfaced, are to be covered with topsoil, then sodded or seeded with erosion mat, unless otherwise directed by the engineer. Place sod or seed with erosion mat, as designated by the engineer, within 3 calendar days after placement of topsoil.

Stockpile excess material or spoils on upland areas away from wetlands, floodplains and waterways. Stockpiled soil shall be protected against erosion. If stockpiled material is left for more than 14 calendar days, seed the stockpile with temporary seed and mulch within 72 hours.

Re-topsoil graded areas, as designated by the engineer, immediately after grading is completed in those areas. Seed, fertilize, and sod topsoiled areas, as designated by the engineer, within 3 calendar days after placement of topsoil. If graded areas will be left not completed and exposed for more than 14 calendar days, seed those areas with temporary seed and mulch within 72 hours.

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.

17. Dust Control Implementation Plan.

A Description

This special provision describes developing, updating, and implementing a detailed Dust Control Implementation Plan (DCIP) for all land-disturbing construction activities and associated impacts both within the project site boundaries and outside the project site boundaries. Incorporate contract bid items that this article specifies into the DCIP.

B (Vacant)

C Construction

C.1 General

Control dust on the project as specified in standard spec 107.18. Minimize dust emissions resulting from land disturbing activities. Do not generate excessive air borne particulate matter (PM) or nuisance dust conditions. Control dust at all times during the contract.

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

C.2 DCIP Contents

Develop a DCIP tailored to the specific needs of the project. Consider potential impacts to businesses and residences adjacent to the job site. Describe in detail all land disturbing, dust generating activities.

Identify strategies to prevent, mitigate, and collect excess dust. Establish clear lines of communication with the engineer to ensure that all dust control issues can be dealt with promptly.

Include all of the following:

1. A single contact person with overall responsibility for the DCIP development as well as surveillance and remediation of job related dust. Provide:
   - Name, firm, address, and working-hours phone number.
   - Non-working-hours phone number.
   - Email address.
2. A site map locating project features, the job site boundaries, all ingress and egress points, air intakes and other dust-sensitive areas, and all public and private paved surfaces within and adjacent to the job site. Show where specific land disturbing, dust generating activities will occur and, to the extent possible, where employing various dust control or prevention strategies.
3. A matrix, or plan, for each anticipated land disturbing, dust generating activity, showing the following:
   - Preventive measures that shall be employed.
   - The applicable contact person.
   - The contractor's timetable and surveillance measures used to determine when remediation is required.
   - The specific dust control and remediation measures that shall be employed. Identify the specific contract bid items that shall be used for payment. Indicate costs and practices that are incidental to the contract.
   - Both maintenance and cleanup schedules and procedures.
   - Excess and waste materials disposal strategy.
4. A description of monitoring and resolving off-site impacts.

C.3 Updating the DCIP

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

C.4 Dust Control Deficiencies

Coordinate with engineer to determine deadlines for resolving dust control deficiencies. Deficiencies include actions or lack of actions resulting in excessive dust, non-compliance with the contractor's DCIP or associated special provisions, and not properly maintaining equipment.

D Measurement

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

Measurement under the DCIP includes the contract bid items listed in this special provision:

623.0200	Dust Control Surface Treatment
624.0100	Water
628.7560	Tracking Pads
SPV.0075.01	Pavement Cleanup Project

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

E Payment

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

sef-107-005 (20170323)

18. Notice to Contractor – Safety.

All workers shall wear OSHA and ANSI compliant safety head protection, safety glasses, safety-toe protective footwear, and an ANSI 107-2015 Type R, Class 2 safety vest and at all times while within the project footprint. ANSI 107-2015 Type R, Class E safety pants will be required from dusk until dawn while in the project footprint.

The contractor and respective subcontractors shall provide a copy of their current Company Safety Plans to the department at the preconstruction meeting. All workers shall comply with the Safety Plans of their employer. The department will not issue a notice to proceed until all safety plans have been submitted.

Noncompliance with this contract provision may result in removal of contractor personnel from the project or suspension of work according to Wisconsin Department of Transportation standard spec 108.6 applicable under the contract.

19. Notice to Contractor – Honey Creek Rain Events.

Water levels along Honey Creek can change rapidly during rain events. The existing Wisconsin Avenue Bridge over Honey Creek (B-40-776) overtops by more than 1.3 feet in the 10-year storm event and by approximately 3 feet in the 100-year storm event. Proceed with caution, monitor weather forecasts, and safely remove personnel, equipment, and materials from the channel work zone prior to rain events.

20. Notice to Contractor – Construction Facilities.

Perform work in a fire-safe manner. Keep adequate fire-fighting equipment on site and comply with laws and regulations with respect to fire prevention.

Provide and maintain properly sheltered sanitary convenience for employees. Bathroom facilities shall be placed on grassed areas.

21. Notice to Contractor – Protection of Work.

Protect openings and surface obstructions with barricades, signs, or other devices.

Erect and maintain street barricades or other devices for public safety and convenience. Follow applicable laws, regulations, and the Manual on Uniform Traffic Control Devices. Mark hazards within work limits and on detours around work with well-painted, well-maintained barricades, reflectors, electric lights, flashers, and warning and directional signs in quantity and size to protect life and property. Locate and use safeguards to meet changing work conditions.

22. Notice to Contractor – Cleaning.

Clean up materials dropped or fallen from trucks in transit before the end of each workday, at a minimum, and more than once per day as needed.

Remove all dirt and extraneous materials from sewers, water mains and appurtenances affected by the work as the work progresses.

Clean inside and outside of structures and remove and dispose of all unused materials, wastes and debris.

Remove waste and surplus materials, rubbish and construction facilities from the site.

Clean ditches, curb and gutter, catch basins and storm sewers.

All cleaning items listed above are incidental to the contract.

23. Notice to Contractor – Saw Cut Slurry.

Saw cut slurry that may be generated as part of this contract shall be collected and actively managed. Prevent deposition of saw cut slurry into wetlands, drainage courses, and onto private property. Management of saw cut slurry is incidental to the sawing items.

24. Notice to Contractor – Concrete Washout Containment.

All concrete trucks shall wash out into a containment system located sufficiently away from the work area to prevent runoff into wetlands and drainage courses. The contractor shall provide a construction detail and location of the containment system with the ECIP and reviewed by the engineer prior to use.

25. Notice to Contractor – Private Irrigation Sprinkler Systems.

Private irrigation sprinkler systems exist in the project area. Consult the engineer and City Engineering Department prior to disturbing any private irrigation sprinkler systems.

26. Notice to Contractor – Protecting and Support Utilities.

Protect and support all water, sewer, and other pipes and structures, telephones, cable, fiber optic, communications, conduits, electrical services, gas, pavement, utilities, or other properties, public or private, during the execution of this Work.

In the event of any damage or injury to any property because of the Work under this Contract, promptly have the same repaired to the satisfaction of the utility facility at no additional cost to the department.

Existing sub-surface structures in the vicinity of the work to be done are shown on the plans according to the best information available. The department does not, however, guarantee the completeness or accuracy of this information. Any delay or extra cost to the contractor due to encountering structures differing from those shown on the plans shall not constitute a claim for extra payment.

No additional payment will be made for providing design, plans, documents, specifications, and coordination to support various utilities including but not limited to water, sewer, electrical conduits, electrical services, gas, fiber optic, cable, communications, and telephone. Protecting and supporting utilities as described above are considered part of appropriate construction bid item and no additional payment will be made.

27. Notice to Contractor – Protection of Existing Trees.

It is intended that all trees not previously removed be saved during construction. Conduct work to protect all remaining trees.

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

To protect the immediate portion of tree root zones, avoid placing and storing construction equipment or materials, sand, soil, concrete, or any other materials on the surface of any unpaved areas within the driplines of city and county trees. No chemical, rinsates, or petroleum products shall be deposited within the driplines of city and county trees.

For laterals or utilities located near terrace trees, use construction methods to minimize tree damage. Engineer may elect to terminate lateral installation prior to conflict with tree (normally terminate at the curb).

Trench widths for all underground utilities located adjacent to trees shall be minimized to prevent damage to trees.

All roots greater than 1 inch in diameter that are damaged shall be cleanly cut immediately in back of the damaged section on the same day of the excavation. Cuts may be made with lopping shears, chainsaw, stump grinder, Sawzall, or other means which produces a clean cut.

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

Root foundations must remain adequate to withstand heavy windstorms.

Do not rip or pull roots out towards the trunk of a tree while excavating with a backhoe. The use of a backhoe to clean cut roots is not acceptable.

Curb excavations shall be limited to 12 inches behind the proposed curb to reduce damage to the root system.

28. Notice to Contractor – Honey Creek Parkway Coordination.

Work

Protect and avoid damage to any part of Honey Creek Parkway and surrounding areas to ensure the safety of its personnel, County staff and all park users. Provide and install all safety devices, barricades, signs, safety fence, flag person(s) or other measures as needed to comply.

Conduct reasonable and appropriate restoration work to correct any rutting, re-seed disturbed areas, prevent the spread of invasive species, repair any damage, and take the necessary steps to safely work in any environmentally sensitive areas. Decontaminate equipment before arriving and/or leaving a project area in order to prevent the spread of invasive species. It is understood that these impacts will be minor in nature and that any park property disturbed during construction will be restored to the condition that existed prior to the project.

Right-of-Entry Permit and Insurance

Work with the City of Wauwatosa to obtain a Right-of-Entry permit and apply for the permit a minimum of 45 days prior to construction.

The Parks Department requires that the contractor looking to work on or temporarily occupy County property for a project that will involve access, construction, storage of equipment or material, land disturbance or digging of any kind requires a Right-of-Entry Permit signed by the Parks Director or his/her designee. Right-of-Entry Permits can be obtained at Milwaukee County Parks, 9480 Watertown Plank Road, Wauwatosa, WI 53226. More information can be obtained at:

https://county.milwaukee.gov/EN/Parks/Plan/Get-a-Permit.

The County assumes no responsibility for any loss or damage to the personal property of the vendor while in use or stored at or on the premises. Maintain policies of insurance and proof of financial responsibility to cover costs as may arise from claims for damages to property of and/or claims which may arise out of or result from contractor activities, by whomever performed, in such coverage and amounts as required and approved by the County. Acceptable proof of such coverage shall be furnished to the County prior to commencement of activities under this agreement. A Certificate of Insurance shall be submitted for review for each successive period of coverage for the duration of this agreement, unless otherwise specified by the County, in the minimum amounts specified below.

Type of Coverage	Minimum Limits
Wisconsin Workers' Compensation and Employer's Liability and Disease	Statutory/Waiver of Subrogation $100,000/$500,000/$100,000
General Liability Bodily Injury and Property Damage to include: Personal Injury, Fire, Products and Completed Operations	$1,000,000 Per Occurrence $2,000,000 Aggregate
Automobile Liability Bodily Injury and Property Damage All Autos	$1,000,000 Per Accident

Milwaukee County shall be named as an Additional Insured on the General and Automobile Liability policies as respects the services provided in this agreement. A Waiver of Subrogation shall be afforded to

Milwaukee County on the Workers' Compensation policy. A 30-day written notice of cancellation or nonrenewal shall be afforded to Milwaukee County.

The insurance specified above shall be placed with a Carrier approved to do business in the State of Wisconsin. All carriers must be A- rated or better per AM Best's Rating Guide. Any requests for deviations from or waivers of required coverages or minimums shall be submitted in writing and approved by Milwaukee County's Risk Manager as a condition of this agreement.

The insurance requirements contained within this Agreement are subject to periodic review and adjustment by the County Risk Manager.

29. Notice to Contractor – Milwaukee County Parks Coordination.

Milwaukee County Parks will remove the wooden Honey Creek Parkway sign located in the southwest corner of the Wisconsin Avenue intersection with Honey Creek Parkway and reinstall the sign on a new concrete base special constructed by the contractor as shown on the plans. Contractor is responsible for removing the existing concrete base as shown on the plans.

Notify Milwaukee County Parks at least ten (10) business days prior to needing items removed and ten (10) business days prior to the new concrete base becoming available for installation. The contractor is responsible for restoration after the Milwaukee County Parks-performed work has been completed. The Milwaukee County Parks contact is:

Chris Kubacki
Landscape Architect & Engineering Supervisor
Phone: (414) 257-4508
chris.kubacki@milwaukeecountywi.gov

30. Notice to Contractor – Milwaukee County Parks Lighting.

Notify Tony Crivello (414) 640-5195 of Milwaukee County Parks at least 10 business days prior to the start of work affecting Milwaukee County Parks Lighting.

31. Notice to Contractor – City of Wauwatosa Furnished Items.

The City of Wauwatosa will furnish the following items for contractor installation.

- Overhead street name signs and brackets
- 16” butterfly valve (6 each)
- 16” 45-degree bend (4 each)
- 16” 22.5-degree bend (2 each)
- 16” high deflection coupling (2 each)
- 16”x6” anchor tee (2 each)
- 16”x8” anchor tee (2 each)
- 16”x16” tee (1 each)
- Poles type 10 (4 each)
- Monotube arms 20-FT (3 each)
- Monotube arms 25-FT (1 each)
- Luminaire arms steel 15-FT (4 each)
- Concrete poles (2 each)

Contact Jessica Henderson, City of Wauwatosa, at (414) 479-8978 at least ten (10) business days in advance to arrange for pick up at the Department of Public Works:

11100 W Walnut Rd
Wauwatosa, WI 53226

Coordination with the city and pickup of items are incidental to the respective installation bid items.

32. Notice to Contractor – City of Wauwatosa Coordination.

City of Wauwatosa staff will be unavailable on the following dates.

- April 18, 2025 for Spring Holiday
- June 19, 2025 for Juneteenth

Delays caused because the contractor was not able to coordinate with the city during these times will not be grounds for a contract time extension.

33. Notice to Contractor – Milwaukee County Transit System.

The Milwaukee County Transit System (MCTS) operates the following bus routes along the detour route: Connect 1 and 33. Invite MCTS to all coordination meetings between the contractor, the department, local officials and business people to discuss the project schedule of operations including vehicular and pedestrian access during construction operations.

Notify MCTS at least 10 business days prior to beginning work. The MCTS contacts are:

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

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

34. Notice to Contractor – Airport Operating Restrictions.

Fill out the FAA Notice Criteria tool for all permanent structure (bridge, light pole, etc.) or equipment (crane, etc.) used during construction.

https://oeaaa.faa.gov/oeaaa/external/portal.jsp

If required by the Notice Criteria tool, and for all crane or construction equipment higher than 200 feet above the ground, submit completed form 7460-1 (Notice of Proposed Construction or Alteration) to The Federal Aviation Administration (FAA) at least 45 days before starting construction.

Contact Levi Eastlick, (608) 267-5018, WisBOA airspace/tall structure manager for assistance submitting forms.

sef-107-020 (20171004)

35. Notice to Contractor – EMS and Flight for Life Notifications.

Notify the Milwaukee Regional Medical Center, City of Wauwatosa Police Department, and City of Wauwatosa Fire Department of all traffic closures and equipment (crane, etc.) used during construction.

Contact Sheri Schmit, (414) 778-4578, James MacGillis, (414) 471-8430, and James Case, (414) 471-8490 at least 30 days before starting construction.

36. Available Documents.

The department will make its information available to bidding contractors. The list of documents that are available for contractors' information includes:

- Asbestos Report
- Environmental Document
- Design Study Report
- Encroachment Report
- As-Built Drawings
- Geotechnical Engineering Report
- Hydraulic Report
- Traffic Management Plan

These documents are available through question on BidX during advertisement.

Reproduction costs will be applied to all copies requested.

sef-102-005 (20170310)

37. QMP Subgrade.

A Description

This special provision describes requirements for subgrade materials within the roadway foundation as defined in standard spec 101.3. Conform to standard spec 207 as modified in this special provision for all work within the roadway foundation at the following locations: Wisconsin Avenue and Honey Creek Parkway.

Provide and maintain a quality control program. A quality control program is defined as all activities, including process control inspection, sampling and testing, documentation, and necessary adjustments in the process that are related to the construction of subgrade which meets all the requirements of this provision.

Chapter 8 of the department's construction and materials manual (CMM) provides additional detailed guidance for QMP work and describes sampling and testing procedures. The contractor may obtain the CMM from the department's web site at:

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

B Materials

B.1 Quality Control Plan

Submit a comprehensive written quality control plan to the engineer at or before the pre-construction meeting. Do not perform grading work before the engineer reviews and accepts the plan. Construct the project as the plan provides.

Do not change the quality control plan without the engineer's review. Update the plan with changes as they become effective. Provide a current copy of the plan to the engineer and post in the contractor's laboratory as changes are adopted. Ensure that the plan provides the following elements:

- An organizational chart with names, telephone numbers, current certifications or titles, and roles and responsibilities of QC personnel.
- 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.
- An outline for resolving a process control problem. Include responsible personnel, required documentation, and appropriate communication steps.
- Location of the QC laboratory, retained sample storage, and control charts and other documentation.
- A summary of the locations and calculated quantities to be tested under this provision.

- An explanation regarding the basis of acceptance for material that cannot be tested by nuclear methods due to a high percentage of oversized particles.

B.2 Personnel

Perform the quality control sampling, testing, and documentation required under this provision using HTCP certified technicians. Have a grading technician certified under HTCP at level I (or ACT Grading Technician under the direction of a certified technician) present at the site during all subgrade preparation, fill placement, compaction, and nuclear testing activities. Have a nuclear density technician certified under HTCP at level I perform field density and field moisture content testing.

B.3 Laboratory

Perform quality control testing in a department-qualified laboratory. Obtain information on the Wisconsin laboratory qualification program from:

Materials Laboratory
3502 Kinsman Boulevard
Madison, Wisconsin 53704-2583
Telephone: 608-246-7938

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

B.4 Equipment

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.

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

http://www.atwoodsystems.com/.

Ensure that the gauge manufacturer or an approved calibration service calibrates the gauge within 12 months before using it on the project. Retain a copy of the calibration certificate with the gauge.

Conform to ASTM D 2950 and CMM 8.15 for density testing and gauge monitoring methods. Perform nuclear gauge measurements using gamma radiation in the backscatter or direct transmission position. Perform each test for 4 minutes of nuclear gauge count time.

B.5 Soil Source Study

Conduct and submit a soil source study before beginning of grading operations. Ensure that this study identifies each distinct soil type on the project within the top 15 feet of cut areas and all borrow material. Provide the in-bank natural moisture content for each soil. Develop moisture-density curves for each identified soil type by utilizing AASHTO T 99, with a minimum of 5 individual points, and a zero air voids curve at a specific gravity of 2.65. If a different specific gravity is used perform a specific gravity test. Determine the maximum density and corresponding optimum moisture level for each soil type. Develop a site-specific family of Proctor curves for this contract from the completed soil source study and submit to the engineer for review and acceptance.

Perform characterization tests on each of the soil types selected for the soil source study. The tests for roadway include AASHTO T 89, AASHTO T 90, AASHTO T 27, and AASHTO T 11. Classify each soil type selected according to the AASHTO soil classification system based on the characterization tests. Do not begin grading operations until the engineer accepts the soil source study.

Use the soil types identified in the soil source study with corresponding maximum densities and optimum moisture values to determine the compaction compliance on the project. Continue the soil source study in those areas of cuts greater than 15 feet that were not accessible during the initial study. Include data on additional soil types if project conditions change. Ensure that tests of additional soil types are complete and the engineer accepts the results before incorporating the material into the roadway foundation.

Split each Proctor sample and identify so as to provide comparison with the department's test results.

Unless the engineer directs otherwise, retain the QC split samples for 14 calendar days and promptly deliver the department's split samples to the department at:

Regional Materials Laboratory
935 S. 60th Street
West Allis, Wisconsin 53214
Telephone: 414-266-1158

Retain and identify two representative samples of each Proctor. Submit one sample to the engineer. Retain one sample on site for use when performing textural identification.

B.6 Quality Control Documentation

B.6.1 Control Charts

Maintain separate control charts for the field density and field moisture content of each grading area. Designate grading areas within the project as follows:

- Embankment within 200 feet of bridge abutments.
- Subgrade cut portions of the project.
- Embankment in pipe culvert, sewer and waterline trenches.
- Structure and granular backfill placed at bridge abutments.

Ensure that all tests are recorded and become part of the project records. Plot required test results on the control charts. Include random and engineer-requested testing but only include the contractor's randomly selected QC test results in the 4-point running average. The contractor may plot other contractor-performed process control or informational tests on the control charts, but do not include them in 4-point running averages.

Post control charts in an engineer-approved location and update daily. Ensure that the control charts include the project number, the test number, each test element, the applicable control limits, the contractor's individual test results, the running average of the last 4 data points, and the engineer's quality verification test data points. Use the control charts as part of a process control system for identifying potential problems and assignable causes. Format control charts according to the CMM.

Submit control charts to the engineer in a neat and orderly manner within 10 business days after completing subgrade construction.

B.6.2 Records

Document all observations, inspection records, and adjustments to fill placement procedures, soil changes, and test results daily. Note the results of the observations and inspection records as they occur in a permanent field record.

Provide copies of the field density and field moisture running average calculation sheets, the one-point Proctor tests, records of procedure adjustments, and soil changes to the engineer daily.

Submit original testing records to the engineer in a neat and orderly manner within 10 business days after completing subgrade construction.

B.7 Contractor Testing

B.7.1 General

Have a grading technician certified under HTCP at level I (or ACT Grading Technician under the direction of a certified technician) present during all subgrade preparation, fill placement, compaction, and testing. Have a nuclear density technician certified under HTCP at level I perform the testing for field density and field moisture content. During subgrade construction, use sampling and testing methods identified in the CMM to perform the required tests at randomly selected locations at the indicated minimum frequency for each grading area.

Determine the cubic yards for testing based on a total load count system the engineer and contractor agree to.

For each test, provide the cubic yards represented and the test location to within 2 feet horizontally and 0.5 feet vertically. Use project stationing to determine horizontal location and grade stakes to determine vertical location.

Test areas of suspect compaction or areas which appear to be nonconforming as determined by the engineer.

B.7.2 Field Density and Field Moisture

Perform the field density and field moisture tests using the nuclear density meter method according to AASHTO T 310. Ensure that each field density test material is related to one of the specific soil types identified in the soil source study in determining the percent compaction. Use textural identification as the primary method of establishing this relationship. Use the representative samples retained from the soil source study when performing the textural identification. Use a coarse particle correction according to AASHTO T 224.

If field density and field moisture tests cannot be performed by the nuclear density method due to a high percentage of oversized particles as determined according to AASHTO T 99 for highway embankments, observe the placement of the embankment and document the basis of acceptance. Document daily quantities of untested embankment and locations where untested embankment is placed, and keep a cumulative quantity of untested embankment material during the project. Include the daily documentation and a summary of the cumulative quantity of untested embankment material with the project records.

B.7.3 One-Point Proctor

Obtain a representative sample of the fill material and test according to AASHTO T 272. Compare the sample to the curves developed in the soils source study to determine the maximum dry density and optimum moisture. Use the appendix for AASHTO T 272 as a guide in this determination.

B.7.4 Testing Frequency

B.7.4.1 (Vacant)

B.7.4.2 Subgrade Embankment Within 200 Feet of Bridge Abutments

Perform the required tests at the following frequencies:

Test	Minimum Frequency
Field Density and Moisture (AASHTO T 310)	One per 1,000 cubic yards of fill per lift or one test per grading area per day whichever yields the most tests.
One-Point Proctor (AASHTO T 272)	One per 9,000 cubic yards or when a change in fill material occurs.

B.7.4.3 Subgrade Cut

Perform the required tests at the following frequencies:

Test	Minimum Frequency
Field Density and Moisture (AASHTO T 310)	One test per 1,000 linear feet of cut or one test per cut area whichever yields the most tests. The testing will be completed at the finished subgrade elevation.

B.7.4.4 Subgrade Embankment in Pipe Culvert, Sewer and Waterline Trenches

Perform the required tests at the following minimum frequencies per trench run between structures. Test trenches individually at the frequency listed in this section. For example, lateral lines and trunk lines are to be considered individual trenches:

Test	Minimum Frequency
Field Density and Moisture (AASHTO T 310)	One test per 100 CY of backfill placed per lift or one test per day whichever yields the most tests.
One-Point Proctor (AASHTO T 272)	One per 3,000 cubic yards or when a change in fill material occurs.

B.7.4.5 Structure and Granular Backfill at Bridge Abutments

Perform the required tests at the following minimum frequencies:

Test	Minimum Frequency
Field Density and Moisture (AASHTO T 310)	One test per 2 feet of vertical backfill height per abutment.
One-Point Proctor (AASHTO T 272)	One per 3,000 cubic yards or when a change in fill material occurs.

B.7.5 Compaction Zones

B.7.5.1 (Vacant)

B.7.5.2 Subgrade Embankment Within 200 Feet of Bridge Abutments

All embankment material placed within 200 feet of bridge abutments is subject to the quality controls for upper zone material.

B.7.5.3 Subgrade Cut

Subgrade material in cut areas is subject to the quality controls for upper zone material.

B.7.5.4 Subgrade Embankment in Culvert Pipe Trenches

Material placed within culvert pipe trenches is subject to the quality controls for the zone that the material is located in.

B.7.5.5 Structure and Granular Backfill at Bridge Abutments

All backfill material placed adjacent to bridge abutments is subject to the quality controls for upper zone material.

B.7.6 Control Limits

B.7.6.1 Field Density

B.7.6.1.1 General Conditions

The lower control limit for field density measurements in the upper zone is a minimum of 95.0 percent of the maximum dry density as determined by AASHTO T 99 or T 272for the 4-point running average and a minimum of 92.0 percent of the maximum dry density for any individual test.

The lower control limit for field density measurements in the lower zone is a minimum of 93.0 percent of the maximum dry density as determined by AASHTO T 99 or T 272 for the 4-point running average and a minimum of 90.0 percent of the maximum dry density for any individual test.

B.7.6.2 Field Moisture Content

B.7.6.2.1 General conditions

The upper control limit for the field moisture content in the upper and lower zones is 105.0 percent of the optimum moisture as determined by AASHTO T 99 or T 272 for the 4-point running average.

The lower control limit for the field moisture content in the upper and lower zones is 65.0 percent of the determined optimum moisture for the 4-point running average. There is no lower control limit for the field moisture of material having less than 5 percent passing the No. 200 sieve.

B.7.7 Corrective Action

Notify the engineer if an individual field density test falls below the individual test control limit. The subgrade in this area is unacceptable. Perform corrective actions, acceptable to the engineer to improve the density of the subgrade material. After corrective action, perform a randomly located retest within the represented quantity to ensure that the material is acceptable.

Notify the engineer if the field density or field moisture running average point falls below the running average control limit for field density or outside the control limits for field moisture. The subgrade in this area is unacceptable. Perform corrective actions, acceptable to the engineer to improve the quality of the material represented by the running average point. Retest each corrected area at a new random location within its represented quantity and determine a new 4-point running average. If the new running average is not acceptable, perform further corrective actions and retest at new random locations.

If the contractor's control data is proven incorrect resulting in a field density or field moisture point falling below the control limit for field density or outside the control limits for field moisture, the subgrade is unacceptable. Employ the methods described in this special provision for unacceptable material.

B.8 Department Testing

B.8.1 General

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 verification and independent assurance personnel for the project.

The department will provide field density and field moisture test results to the contractor on the day of testing. Test results from Proctor split samples will be provided to the contractor within 7 business days after the sample has been received by the department.

B.8.2 Verification Testing

The department will have an HTCP technician, or ACT under the direction of a certified technician, perform QV sampling and testing. Department verification testing personnel must meet the same certification level requirements specified for contractor testing personnel for each test being verified. The department will notify the contractor before testing so the contractor can observe QV testing.

The department will test field density and field moisture randomly at locations independent of the contractor's QC work. The department will use split samples for verification of Proctor testing. In all cases, the department will conduct the verification tests in a separate laboratory and with separate equipment from the contractor's QC tests.

The department will perform verification testing as follows:

1. The department will conduct verification tests on Proctor split samples taken by the contractor. These samples may be from the Soil Source Study or the one-point Proctor or sample locations chosen by the engineer from anywhere in the process. The minimum verification testing frequency is one per 90,000 cubic yards, with at least one for each soil type identified in the Soil Source Study.
2. The department will test the first split sample obtained by the contractor for the one-point Proctor. The engineer may select any contractor-retained sample for verification testing.
3. The department will conduct at least one verification test for field density and field moisture per 20,000 cubic yards.

Plot verification tests on the contractor's quality control charts as specified in B.6.1. Do not include verification tests in the 4-point running average.

If verification tests are within specified control limits, no further action is required. If verification tests are not within specified control limits, the engineer and contractor will jointly investigate any testing discrepancies. The investigation may include additional testing as well as review and observation of both the department's and contractor's sampling and testing procedures and equipment. Both parties will document all investigative work.

Correct all deficiencies. If the contractor does not respond to an engineer request to correct a deficiency or resolve a testing discrepancy, the engineer may suspend grading work until action is taken. Resolve disputes as specified in B.9.

B.8.3 Independent Assurance Testing

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, which may include one or more of the following:

1. Split sample testing.
2. Proficiency sample testing.
3. Witnessing sampling and testing.
4. Test equipment calibration checks.
5. Reviewing required worksheets and control charts.
6. Requesting that testing personnel perform additional sampling and testing.

Plot the independent assurance tests on the contractor's quality control charts as specified in B.6.1. Do not include independent assurance tests in the 4-point running average.

If the department identifies a deficiency, and after further investigation confirms it, correct that deficiency. If the contractor does not correct or cooperate in resolving identified deficiencies, the engineer may suspend grading work until action is taken. Resolve disputes as specified in B.9.

B.9 Dispute Resolution

The engineer and contractor should make every effort to avoid conflict. If a dispute between some aspect of the contractor's and the engineer's testing program does occur, seek a solution mutually agreeable to the project personnel. The department and contractor may review the data, examine data reduction and analysis methods, evaluate sampling and testing procedures, and perform additional testing. Use ASTM E 178 to evaluate potential statistically outlying data.

If the project personnel cannot resolve a dispute and the dispute affects payment or could result in incorporating nonconforming product, the department will use third party testing to resolve the dispute. The department's central office laboratory, or a mutually agreed on independent testing laboratory, will provide this testing. The engineer and contractor will abide by the results of the third party tests. The party in error will pay service charges incurred for testing by an independent laboratory. The department may use third party tests 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.

B.10 Acceptance

The department will accept the material tested under this provision based on the contractor QC tests unless it is shown through verification testing or the dispute resolution process that the contractor's test results are in error.

C (Vacant)

D (Vacant)

E Payment

Costs for all sampling, testing, and documentation required under this special provision are incidental to the work. If the contractor does not 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.

38. Contractor Notification.

Replace standard spec 104.2.2.2(2) with the following:

(2) If the contractor discovers the differing condition, provide a written notice, as specified in 104.3.3, of the specific differing condition before further disturbing the site and before further performing the affected work.

Replace standard spec 104.3.2 and 104.3.3 with the following:

104.3.2 (Vacant)

104.3.3 Contractor Initial Written Notice

(1) If required by 104.2, or if the contractor believes that the department's action, the department's lack of action, or some other situation results in or necessitates a contract revision, promptly provide a written notice to the engineer. At a minimum, provide the following:

1. A written description of the nature of the issue.
2. The time and date of discovering the problem or issue.
3. If appropriate, the location of the issue.

(2) Provide the additional information specified in 104.3.5 as early as possible to assist the engineer in the timely resolution of an identified issue. The engineer will not require, in subsequent submissions, duplication of information already provided.

sef-104-005 (20141211)

39. Eliminated Work.

Replace standard spec 104.2.2.5 with the following:

104.2.2.5 Change Orders for Eliminated Work

(1) The department has the right to partially eliminate or completely eliminate work the engineer finds to be unnecessary for the project. If the department eliminates work, the engineer will send a Work Authorization Form (WAF) directing the contractor to eliminate the work. If the engineer partially eliminates or completely eliminates work, the engineer will issue a contract change order for a fair and equitable amount as specified in 109.5.

(2) If the department executes an equalizing change order for the purpose of matching the authorized quantity to the amount of units measured and paid for any bid item, this shall not be considered eliminated work.

Replace standard spec 109.5 with the following:

109.5 Eliminated Work

(1) If the department partially eliminates or completely eliminates work as specified in 104.2.2.5, the department will pay contractor costs incurred due to that elimination. The department will pay a fair and equitable amount covering all costs incurred as of the date the work was deleted. Immediately submit a certified statement covering all money expended for the eliminated work.

(2) The department will execute a contract change order for the following costs related to eliminated work:

1. Preparation expenses defined as follows:
    - If preparation for the eliminated work has no value to other contract work, the department will reimburse the contractor in full for that preparation.
    - If preparation for the eliminated work is distributed over other contract work, the department will prorate reimbursement based on the value of the eliminated work compared to the total value of associated contract work.
2. All restocking and cancellation charges.
3. A markup for applicable overhead and other indirect costs paid as 7 percent of the contract price of the work eliminated, except for the items in noted in 109.5*(2)4*. The engineer will issue a contract change order based on the net value of the eliminated work and any replacement work included in the change order.
4. If the following bid items are not used at all for the prosecution of the work, the department will eliminate them with a WAF and a contract change modification. A markup for applicable overhead and other indirect costs will be paid as 2 percent of the contract price of the bid item for the work eliminated:
    - 206.5001 Cofferdams (B-40-1033)
    - 627.0200 Mulching
    - 628.6510 Soil Stabilizer Type B
    - 629.1910 Mobilization Emergency Erosion Control
    - 629.1905 Mobilization Erosion Control
    - 630.0200 Seeding Temporary
    - 645.0220 Geogrid Type SR

(3) If the department partially eliminates or completely eliminates work, the department may pay for, and take ownership of, materials and supplies the contractor has already purchased.

40. Contractor Document Submittals.

This special provision describes minimum requirements for submitting project documents to the department. This special provision does not apply to shop drawing submittals.

Provide one electronic copy of all documents requiring department review, acceptance, or approval. Attach a completed engineer-provided transmittal sheet to each email submittal. The department will reject submittals with incomplete transmittal sheets and require re-submittal.

The department will return one reviewed, accepted, or approved original to the contractor. Additional return originals can be requested. Submit an additional original for each additional return original requested.

Submit electronic copies in PDF format via email to accounts the engineer determines. If possible, create PDFs from original documents in their native format (e.g., Word, Excel, AutoCAD, etc.). Scan other documents to PDF format with a minimum resolution of 600 dpi.

All costs for contractor document submittals are incidental to the contract.

sef-105-010 (20150619)

41. Material Stockpile and Equipment Storage.

Submit a map showing all proposed material stockpile and equipment storage locations to the engineer 14 calendar days before either the preconstruction conference or proposed use, whichever comes first. Identify the purpose; length, width and height; and duration of material stockpile or equipment storage at each location. Do not stockpile material or store equipment until the engineer approves.

SER-107-011 (20220412)

42. Notice to Contractor, Notification of Demolition and/or Renovation No Asbestos Found.

John Roelke, License Number AII-119523, inspected Structure P-40-776 for asbestos on February 20, 2023. No Regulated Asbestos Containing Material (RACM) was found on this structure. A copy of the inspection report is included with the bid package or available from Michael Baird at 141 NW Barstow Street, Waukesha, WI 53187, (262) 548-5918.

According to NR447 and DHS159, ensure that DNR or DHS receives a completed Notification of Demolition and/or Renovation (DNR Form 4500-113 (R 03/20), or subsequent revision) via U.S. mail, hand-delivery, or using the online notification system at least 10 working days before beginning any construction or demolition. Pay all associated fees. Provide a copy of the completed 4500-113 form to Phil Ciha at 141 NW Barstow Street, Waukesha, WI 53187, (414) 750-1951 and via e-mail to dothazmatunit@dot.wi.gov or via U.S. mail to DOT BTS-ESS attn: Hazardous Materials Specialist, 5 South S.513.12, PO Box 7965, Madison, WI 53707-7965. In addition, comply with all local or municipal asbestos requirements.

Use the following information to complete WisDNR form 4500-113:

- Site Name: Structure P-40-776, W. Wisconsin Avenue over Honey Creek
- Site Address: City of Wauwatosa, Milwaukee County, Latitude and Longitude Coordinates 430219.45/880044.78
- Ownership Information: City of Wauwatosa, 7725 W. North Avenue, Wauwatosa, WI 53213
- Contact: Phil Ciha
- Phone: (414) 750-1951
- Age: 91 years old. This structure was constructed in 1934.
- Area: 2400 SF of deck

Insert the following paragraph in Section 6.g.:

> If asbestos not previously identified is found or previously non-friable asbestos becomes crumbled, pulverized, or reduced to a powder, stop work immediately, notify the engineer, and the engineer will notify the department's Bureau of Technical Services at (608) 266-1476 for an emergency response as specified in standard spec 107.24. Keep material wet until it is abated or until it is determined to be non-asbestos containing material.

stp-107-125 (20220628)

43. Pavement Breaking Equipment.

Do not use guillotine, drop hammer, falling weight, gravity impact breakers or equivalent equipment within 300 feet of any structure. A multi-head hydraulic hammer is allowed unless a structure is within 50 feet of the roadway.

SER-204-001 (20161123)

44. Public Involvement Meetings.

Participate in department-sponsored public involvement meetings as the engineer requests. Ensure that representatives of subcontractors also participate in those meetings if the engineer requests.

sef-999-040 (20160915)

45. 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. Motorized construction equipment may be operated from 7:00 AM to 7:00 PM Monday through Saturday. Do not operate motorized equipment outside these hours without the prior written request and approval by the engineer and Wauwatosa Board of Public Works.

46. Removing Structure Over Waterway Debris Capture.

Add the following to standard spec 203.3.2.2.1 as paragraph eight:

(8) Prevent direct impact from falling debris to the concrete lining over the MMSD MIS utility located from Station 7+99.52, 17.1’ LT to Station 9+30.82, 16.5’ LT.

Add the following to standard spec 203.3.2.2.3.4 as paragraph three:

(3) Prevent impact loads to MMSD MIS utility.

47. Abandoning Sewer, Item 204.0291.S.

A Description

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

B Materials

Provide cellular concrete meeting the following specifications: 1 part cement, 1 part fly ash, 8 parts sand, or an approved equal, and water. Provide cement meeting the requirements of standard spec 501.2.4.1. Provide sand meeting the requirements of standard spec 501.2.7.2. Provide water meeting the requirements of standard spec 501.2.6.

C Construction

Fill the abandoned sewer pipe with cellular concrete 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.

48. Removing Lighting Units, Item 204.9060.S.

A Description

This special provision describes the removing lighting units as the plans show, conforming to standard spec 204, and as follows.

B Materials

All removed material shall become the property of the contractor and be disposed off the project site, except for LED and HPS light fixtures and bulbs. LED and HPS light fixtures and bulbs are considered hazardous material, disposal shall be done by the contractor utilizing STSP 659-500 Lamp, Ballast, LED, Switch Disposal by Contractor.

C Construction

Remove lighting units consisting of pole, arm, luminaire, lamp, wires, breakaway device, and associated hardware and appurtenances.

No removal work will be permitted without approval from the engineer. Removal shall start as soon as the temporary lighting or permanent lighting, as applicable, is placed in approved operation. An inspection and approval by the engineer will take place before any associated proposed permanent or temporary lighting is approved for operation.

D Measurement

The department will measure Removing Lighting Units by each individual unit removed, acceptably completed.

E Payment

Add the following to standard spec 204.5:

ITEM NUMBER	DESCRIPTION	UNIT
204.9060.S	Removing Lighting Units	EACH

49. Excavation Common.

Add the following to standard spec 205.2.2:

Remove right-of-way encroachments in conflict with project grading including private irrigation sprinkler systems and decorative landscaping under the Excavation Common bid item. Removal and disposal of private irrigation sprinkler systems and decorative landscaping are incidental to the item, Excavation Common.

50. Coloring Concrete WisDOT Red.

Replace standard spec 405.2.1.1(1) with the following:

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

- For WisDOT red: use synthetic iron oxides at a loading of 6 percent or more by weight of total cementitious material in the mix. Match the concrete color in reasonably close conformance with the existing crosswalk red color, which is similar to the following color admixtures and colors:
    - Solomon Color – Brick 417
    - Schofield System – Quarry Red C-32

- o Davis Colors – Brick Red 160

51. Concrete Curing Materials.

Supplement standard spec 501.2.8 with the following:

The liquid curing compound shall have a color equal to or lighter than Gardner Color Standard No. 2 when tested according to ASTM C 1315 8.7.6 Yellowing Resistance.

52. 502 Concrete Bridges.

Replace standard spec 502.2.7.1 paragraph 1 with the following:

(1) At all locations except over existing MMSD 39”x30” MIS Pipe, use preformed joint filler conforming to AASHTO M153, AASHTO M213, or ASTM D8139

Add paragraph 2 to standard spec 502.2.7.1:

(2) At the existing MMSD 39”x30” MIS Pipe, use self-expanding cork joint filler conforming to AASHTO M153.

53. Sheet Membrane Waterproofing for Buried Structures, Item 516.0610.S.

A Description

This special provision describes providing a primer, waterproofing membrane, hot rubberized sealer or mastic, or both, on the concrete faces of buried structures as the plans show.

B Materials

B.1 Waterproofing System

For pedestrian underpasses and buried structures other than box culverts with no asphaltic overlay or with a minimum earth cover of 6” or more between the waterproofing membrane and the asphaltic pavement, select a membrane from the Sheet Membrane Waterproofing for Buried Structures Approved Products List (APL), or furnish a waterproofing system meeting the requirements as specified herein.

Provide a material in the waterproofing system that is specifically designed for use on buried structures. The membrane shall consist of a cold-applied, self-adhering membrane with a layer of polymer modified bitumen or SBS modified rubberized asphalt. The membrane shall have a release film, polyester or polyethylene on the downside.

Provide a composite sheet membrane with the following properties:

Property	Test Method	Specific Value
Width		36 inch min.
Tensile Strength	ASTM D412 or ASTM D882	325 psi min. (Membrane), 5,000 psi min. (Film)
Thickness		60 mils to 80 mils
Puncture Resistance	ASTM E154	40 lb min.
Permeance	ASTM E96, Method B	0.05 US Perms max.
Low Temperature Pliability	ASTM D146, 1-inch Mandrel @ -25º F Or ASTM D1970	Unaffected
Water Absorption	ASTM D570, 72 hours	0.25% max.
Peel Adhesion	ASTM D903	5 lb/in width min.

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

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

B.2 Materials Certification for Products Not on APL

Waterproofing products not on the APL are required to provide material certification.

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

The certification shall include or have attached specific results of tests performed on the material supplied. Samples of any material for testing may be required by the engineer.

C Construction

C.1 Application Methods Apply materials in strict accordance with the manufacturer's instructions. In order to install the waterproofing membrane, the slab temperature shall be a minimum of 45º F and rising. Before applying the system, become acquainted with the materials specified and their handling characteristics and become thoroughly familiar with the construction procedures recommended by the manufacturer. Furnish a copy of the recommended procedures to the engineer. To establish procedures for maintaining optimum working conditions and to coordinate work related to adjacent construction, hold a pre-installation conference with a manufacturer's representative, the engineer, and other affected contractors before starting construction. To provide quality assurance that the membrane has been properly installed, a manufacturer's representative familiar with membrane installation procedures shall be present during placement of the membrane.

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

The slab shall be clean, dry, and free from mud, dirt, sand, oil, or grease, and any other contaminants before application of the primer. No vehicles or equipment will be permitted on the concrete slab after surface preparation except those necessary for the installation of the waterproofing membrane. The engineer will inspect the concrete slab before the application of the primer. Do not begin application of either the primer or membrane until after the engineer grants approval.

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

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

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

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

To form a bond with the primed slab, remove the release film from the membrane on the tacky side while the membrane is rolled face down. Apply the membrane using hand methods or by using mechanical applicators. Overlap a minimum of 2.5 inches at the edges of each strip and overlap the membrane in such a manner to provide a shingling effect toward the low side of the slab cross section. Overlap a minimum of 5 inches at the ends of each strip of membrane and overlap the membrane in such a manner to provide a shingling effect toward the lower side of the slab profile. Roll the entire membrane surface with a rubber tire roller to ensure firm and uniform contact with the primed surface. Use special care to ensure that the membrane is uniformly adhered to the concrete and that the entire membrane is free of wrinkles, air bubbles, and other placement defects. In the event bubbles or blisters do form under the membrane, puncture the bubbles or blisters with a sharp pointed instrument such as an awl and press the membrane firmly into contact with the slab. Repair any membrane punctures, tears, holes, and misaligned or inadequate seams with a patch of waterproofing membrane sized as required to ensure that the membrane is watertight.

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

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

D Measurement

The department will measure Sheet Membrane Waterproofing for Buried Structures, installed according to the contract and accepted, in area by the square yard. Measurement shall be based on the horizontal distance between the faces of any concrete headers and the horizontal length of membrane installed. Any material specified to be applied up vertical faces of any header or vertically down at the ends of the buried structure shall be included in the measured quantity.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
516.0610.S	Sheet Membrane Waterproofing for Buried Structures	SY

Payment is full compensation for furnishing and placing the primer, membrane, mastic, and hot rubberized asphalt sealer, preparing the surface, and placing all strips of membranes. The department will pay separately for providing fill material over the sheet membrane waterproofing under the Backfill Structure Type B bid item.

stp-516-061 (20230113)

54. Deep Pipe Installation.

Supplement standard spec 520.3.2.1(2) and 607.3.1.1(2) with the following:

For pipe installations greater than 10 feet in depth, submit a shoring design and installation sequence identifying means and methods for meeting requirements for material testing, laying pipe, and backfilling. Have a professional engineer, registered in the state of Wisconsin and knowledgeable of the specific site conditions and requirements, verify the adequacy of the design and proposed materials and stamp the submittal.

55. Riprap Light; Riprap Medium; Riprap Heavy.

Replace standard spec 606.2.1 paragraph 1 with the following:

(1) Furnish durable field stone that is sound, hard, dense, resistant to the action of air and water, and free of seams, cracks, or other structural defects. Use stone pieces with a length and width no more than twice the thickness. Do not place material without the engineer's approval of the stone quality, size, and shape. Stone shall be fluvial/glacial stone defined as: Any smoothly rounded, or semi-angular stone that is produced by the action of moving glaciers or flowing rivers (boulders, cobbles, gravel). This does not include quarried limestone, also known as shot-rock or riprap, or any machine fractured rock that has an angular cleave.

Delete paragraph 3 from standard spec 606.2.1.

56. Fence Safety, Item 616.0700.S.

A Description

This special provision describes providing plastic fence at locations the plans show.

B Materials

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

Furnish fence fabric meeting the following requirements.

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

C Construction

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

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

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

D Measurement

The department will measure Fence Safety by the linear foot along the base of the fence, center-to-center of posts, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
616.0700.S	Fence Safety	LF

Payment is full compensation for furnishing and installing fence and posts; maintaining the fence and posts in satisfactory condition; and for removing and disposing of fence and posts at project completion.

stp-616-030 (20160607)

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

A Description

This special provision describes the 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 by the department’s 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

B.2 Disposal by Department

Items turned into the department will be considered the property of the department for proper future disposal, and the contractor will have no further obligation for the disposal.

C Construction

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.1 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 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 ten 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 handling, packaging, labeling and scheduling disposal with the hazardous waste vendor.

The department will pay separately for the work under which the lamps, ballasts LED or Switches are removed from service.

58. Topsoil.

Replace standard spec 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 standard spec 625.3.3 (3) with the following:

(3) Ensure that for the upper 2 inches, 100 percent of the material passes a 1-inch sieve and at least 90 percent passes the No. 10 sieve.

SER-625-001 (20221007)

59. Removing Signs Type II.

Replace standard spec 638.3.4 (2) with the following:

Type II signs that are not required to be reused on the project are the City of Wauwatosa's property. Carefully stockpile these signs palletized for handling with a forklift. Contact Randy Michelz, City of Wauwatosa, at (414) 471-8429 at least 3 business days in advance to arrange for city pick up.

60. Erecting State Owned Signs Type II.

Add the following to standard spec 638.3.7:

Under the State-Owned Signs bid items, load City of Wauwatosa furnished overhead street name signs and brackets at a specified source, and transport and erect the signs and brackets at required locations. Erect city-furnished signs and brackets as specified for erecting signs in 634 through 637. Contact Randy Michelz, City of Wauwatosa, at (414) 471-8429 at least 10 business days in advance to arrange for pick up.

61. Covering Signs.

Replace standard spec 643.2.3.3(2) with the following:

(2) Ensure that covers are flat black, blank, and opaque.

Add the following to standard spec 643.3.4.1 as paragraph four:

(4) If multiple messages on a single sign are required to be covered, minimize the number of holes created by covering the sign with a single rectangular shaped covering. Multiple coverings on a single sign is only permissible where necessary to avoid covering necessary content or as directed by the engineer. Submit sign covering plans to the engineer for single signs requiring multiple coverings 3 days before performing work. Obtain engineer approval before covering signs. Remove sign coverings before placing fixed messages signs unless otherwise directed by the engineer.

sef-643-005 (20180104)

62. Traffic Control.

Supplement standard spec 643.3.1 with the following:

Provide the City of Wauwatosa Police Department, City of Wauwatosa Public Works Department, and the engineer a current telephone number with which the contractor or their 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.

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.

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, advisory signs, sand barrel array, shoulder delineators or beam guard in place along the traveled roadways without the approval of the engineer.

Flagging operations shall follow standard spec 104.6.1.(4) and chapter 6E of the WMUTCD.

Replace standard spec 643.3.1.(7) with the following:

Provide equipment, forces, and materials to promptly restore any traffic control devices or pavement markings damaged or disturbed within 2 hours of being contacted.

63. General Requirements for Street Lighting and Traffic Signals.

All work shall be according to the plans, the State of Wisconsin Department of Transportation Standard Specifications for Highway and Structure Construction, 2025 Edition, the City of Wauwatosa Standard Specifications, and these special provisions.

When one or more documents conflict, the contractor shall comply with the City of Wauwatosa Standard Specifications, which can be referenced at:

https://www.wauwatosa.net/government/departments/public-works/engineering/standard-specifications

Failure to comply with the state standards and specifications may result in the cost of the corrections to be made at the contractors' expense. Any additional disruption of city or state-owned facilities shall be repaired or relocated as needed at the contractors' expense.

Notify Randy Michelz, City of Wauwatosa, at (414) 471-8429 at least three weeks prior to the beginning of the traffic signal work.

Furnish the engineer with material lists and specifications of all traffic control equipment for approval prior to installation.

64. General Requirements for Electrical Work.

Add the following to standard spec 651.3.3 (3):

Notify Randy Michelz, City of Wauwatosa, at (414) 471-8429 to coordinate the inspection for city owned traffic signals. The city's personnel will perform the inspection for the city owned and maintained traffic signals.

Requests for signal inspection will include a completed SE Region Traffic Signal Checklist.

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.

65. Electrical Conduit.

Replace standard spec 652.5(2) with the following:

(2) Payment for Conduit Rigid Metallic, Conduit Rigid Nonmetallic, Conduit Reinforced Thermosetting Resin, and Conduit Special bid items is full compensation for providing the conduit, conduit bodies, and fittings; for providing all conduit hangers, clips, attachments, and fittings used to support conduit on structures; for pull wires or ropes; for expansion fittings and caps; for making necessary connections into existing pull box, manhole, junction box or communication vault; for excavating, bedding, and backfilling, including any sand, concrete, or other required materials; for disposing of surplus materials; and for making inspections.

66. Pull Boxes Steel (Size).

Append standard spec 653.3 (1) with the following:

(4) The contractor shall use covers stamped “TRAFFIC SIGNAL” for all traffic signal pull boxes, “COMMUNICATIONS” for all communication pull boxes, and “STREET LIGHTING” for all street lighting pull boxes.

67. Pull Boxes Steel 24x36-Inch.

Supplement standard spec 653.2 with the following:

(5) Furnish a 5/8” Dia. By 8-foot-long copper-clad equipment grounding electrode required with bolted compression type copper clamp.

Replace standard spec 653.5(2) with the following:

(2) Payment for the Pull Boxes bid items is full compensation for providing pull boxes; for ground rod; for materials including grounding lugs; for aggregate, manhole frames and covers; for required pull box extensions; conduit extensions less than 10 feet long including fittings; and for excavating and backfilling. The department will pay separately for engineer-directed pull box drain duct under the Conduit Rigid Nonmetallic bid items as specified in standard spec 652.5.

68. Electrical Service Meter Breaker Pedestal Wisconsin Ave & Honey Creek Pkwy, Item 656.0201.01.

Append standard spec 656.2.3 with the following:

(2) The city will be responsible for electrical service installation or relocation requests. The city will be responsible for any charges from We Energies. Electrical utility company service installation or relocation and energy cost will be billed to and paid for by the maintaining authority. The new electric service should be requested 8-10 week prior to the time they will be required.

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

Append standard spec 656.5 with the following:

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

69. Signal Mounting Hardware.

Add the following to standard spec 658.2(7):

Use an approved type of pole or standard vertical mounting brackets/clamps for signal faces from an approved manufacturer.

70. Traffic Signal Faces.

Add the following to standard specification 658.3:

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

71. Crack and Damage Survey, Item 999.1501.S.

A Description

This special provision describes conducting a crack and damage survey of the residences and business located at:

- 8042 W Wisconsin Avenue
- 8043 W Wisconsin Avenue
- 8034 W Wisconsin Avenue
- 8035 W Wisconsin Avenue
- 8025 W Wisconsin Avenue
- 8026 W Wisconsin Avenue
- 7907 W Wisconsin Avenue
- 7910 W Wisconsin Avenue
- 644 N Honey Creek Parkway
- 660 N Honey Creek Parkway
- 700 N Honey Creek Parkway
- 714 N Honey Creek Parkway
- 732 N Honey Creek Parkway

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

B (Vacant)

C Construction

Before any construction activities, thoroughly inspect the building structures for existing defects, including interior and exterior walls. Electronically submit a written report with the inspector's name, date of inspection, descriptions and locations of defects, and digital images. The intent of the written report and digital images is to procure a record of the general physical condition of the building's interior and exterior walls and foundation.

Use a digital camera capable of producing sharp, grain free, high-contrast colored digital images with good shadow details. Label each digital image with the following information:

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

Before the start of any construction activities related to this survey, submit a copy of the written report and digital images to the engineer electronically.

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

Instead of digital images, a digital video camera capable of producing sharp, high contrast, colored digital video with good shadow detail may be used to perform this work.

D Measurement

The department will measure Crack and Damage Survey as single unit 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
999.1501.S	Crack and Damage Survey	EACH

Payment is full compensation for providing the before and after written reports, and for photographs or video.

stp-999-010 (20210708)

72. Streambed Stone, Item SPV.0035.01; Streambed Granular Fill, Item SPV.0035.02; Filter Gravel, Item SPV.0035.03; Pea Gravel, Item SPV.0035.04.

A Description

A.1 General

This special provision covers the work necessary for furnishing and installing rock and granular materials for watercourse channel construction, which includes: streambed stone, streambed granular fill, filter gravel, and pea gravel.

A.2 Definitions

Streambed Stone: Rock substrate placed to form the surface of the streambed. One grade of substrate stone is used.

Streambed Granular Fill: Granular material used to fill voids between larger streambed stone. Streambed granular fill is mixed with Streambed Stone.

Filter Gravel: A gravel or sand/gravel mixture placed as a layer between native subsoil and Streambed Stone. The Filter Gravel prevents the piping of fine soil particles into the voids in the stone. One grade of Filter Gravel shall be used.

Pea Gravel: 3/8-inch pea gravel placed as a layer above the Streambed Stone to fill small surface voids.

A.3 Submittals During Construction

Submit the following information to the engineer for approval:

1. Name, address, and phone number of all rock, stone and gravel suppliers, including location of quarry or pit.
2. Certified analysis of all materials to be used that show compliance with these specifications (including gradation analysis).
3. Submit samples or arrange for a visit to the quarry or pit by the engineer for approval for materials obtained off-site prior to construction start and delivery of materials.

A.4 Contractor Responsibility

Review the plans, specifications, geotechnical report and existing site conditions prior to bidding to ascertain the extent of the work requiring ground support systems.

B Materials

B.1 Streambed Stone

Streambed Stone is rounded rock for watercourse construction. Streambed Stone shall be naturally rounded in shape and have a naturally smooth surface such as stream or river stone. Streambed Stone shall be hard and durable stone with less than 35 percent wear when tested for resistance to abrasion in conformance to ASTM C535. Bulk density shall not be less than 160 pounds per dry cubic foot. The least dimension of any one piece shall not be less than 1/3 the greatest dimension.

Shot quarry stone, crushed rock, broken concrete or recycled construction products will not be allowed. Each load of Streambed Stone shall be reasonably well graded from the smallest to the maximum size specified. Stone size gradation for Streambed Stone shall conform to stone grades for Streambed stone. Lemke Stone, Inc., Lannon, WI, and Johnson Sand & Gravel, New Berlin, WI are two potential sources

for rounded rock that meets the specifications for Streambed stone. The contractor is free to acquire Streambed stone from an alternate source that meets the requirements stated in this section.

Stone Grades For Streambed Stone

Streambed Stone shall conform to the following gradation:

Size*	Percent Smaller by Weight
28-inch	100%
22-inch	65 – 85%
18-inch	40 – 50%
8-inch	10 – 20%
6-inch	0%

* The size is measured along the B-Axis, which is the second largest dimension of the stone (i.e., use the dimensions of length, height, and width to describe the stone; with length being the A-Axis and the longest dimension of the stone, then the B-Axis is the longer of the height and width dimensions).

B.2 Streambed Granular Fill

Natural gravel (not crushed), free from dirt, clay balls, roots, and organic material naturally rounded in shape and having a naturally smooth surface such as stream or river stone. Shot quarry stone, crushed rock, broken concrete or recycled construction products will not be allowed. Streambed Granular Fill shall meet the following gradation requirements:

Streambed Granular Fill

Stone Diameter	Percent Passing By Weight
6-inch	100%
5-inch	65 - 85%
4-inch	40 – 50%
2-inch	10 – 20%
1-inch	0%

B.3 Filter Gravel

Natural gravel (not crushed), free from dirt, clay balls, roots, and organic material naturally rounded in shape and having a naturally smooth surface such as stream or river stone. Shot quarry stone, crushed rock, broken concrete or recycled construction products will not be allowed. Filter Gravel shall meet the following gradation requirements:

Filter Gravel

Stone Diameter	Percent Passing By Weight
4-inch	100%
3-inch	65 – 85%
2.5-inch	40 – 50%
1.25-inch	10 – 20%
0.5-inch	0%

B.4 Pea Gravel

Furnish 3/8-inch pea gravel. Shot quarry stone, crushed rock, broken concrete or recycled construction products will not be allowed.

B.5 Material Approval

All tests necessary for the contractor to locate an approved source of Streambed Granular Fill, Filter Gravel, Pea Gravel, and Streambed Stone shall be made by the contractor. Certification that the material conforms to the Specification requirements along with copies of the test results from an approved commercial testing laboratory shall be submitted to the engineer for approval at least 30 days before the material is required for use. Sampling of the material source shall be done by the contractor under the

review by the engineer according to ASTM D75. Tentative approval of the material source shall be based on an inspection of the source by the engineer and the certified test results submitted by the contractor to the engineer.

No imported materials shall be delivered to the site until the proposed source and tests on the materials have been tentatively approved in writing by the engineer. Final approval of Streambed Granular Fill will be based on tests made on samples of material taken from the completed and compacted course. The completed course is defined as a course or layer that is ready for the next layer or the next phase of construction. All testing for final approval will be performed by the engineer.

Gradation tests shall be made at the place of production by the contractor prior to shipment. Samples of the finished product for gradation testing shall be taken as requested by the engineer, if variation in gradation is occurring, or if the material appears to depart from the Specifications. Test results shall be forwarded to the engineer within 48 hours after sampling. If tests conducted by the contractor or the engineer indicate that the material does not meet Specification requirements, material placement shall be terminated until corrective measures are taken. Material which does not conform to the Specification requirements and is placed in the work shall be removed and replaced at the contractor's expense. Sampling and testing performed by the contractor shall be done at no additional cost to the Owner.

C Construction

C.1 Erosion Control

Construction site erosion control must comply with the applicable erosion control ordinance and construction site erosion control plan and permit.

C.2 Tolerances

Construct all components of the channel to the lines and grade shown on the Plans. Final elevations shall be +/-0.1 ft. of those shown on the Plans. Surface elevations of stone materials shall be measured at the average surface height, which is defined as the elevations midway between the lowest and highest points on the surface.

C.3 Streambed Stone

Place Streambed Stone materials carefully to avoid disturbing the Filter Gravel. Minimum thickness of the stone materials shall be no less than 36. Streambed Granular Fill shall be mixed with the Streambed Stone at approximately 4 parts Streambed Stone to 1 part Streambed Granular Fill. Intermix the sizes of stone material to provide relatively uniform gradation between small and large material. Streambed Granular Fill shall be placed according to placing Streambed granular fill.

C.4 Placing Streambed Granular Fill

Streambed Granular Fill shall be roughly mixed with Streambed Stone, at approximately 4 parts Streambed Stone to 1 part Streambed Granular Fill. This rate of mixing shall not be exceeded. Mixing of the granular fill and stone may be undertaken either at a project staging area or in place with subsequent lifts or layers of Granular Fill and Streambed Stone. Reasonable care shall be exercised to minimize the amount of Streambed Stone without some Streambed Granular Fill. Furthermore, reasonable care shall be exercised to minimize the amount of Streambed Granular Fill that is not mixed with Streambed Stone.

C.5 Filter Gravel

Place Filter Gravel to the line, grade, and layer thickness shown on the Plans. Filter Gravel shall be placed as a filter material beneath the Streambed Stone at a thickness of 6 inches.

C.6 Pea Gravel

Place 1 part Pea Gravel as a layer over the mixture of Streambed Stone and Streambed Granular Fill and flush into the streambed with water from the stream. Additional Pea Gravel may have to be added after placement to achieve the line and grade shown on the plans.

D Measurement

The department will measure Streambed Stone, Streambed Granular Fill, Filter Gravel, and Pea Gravel by the cubic 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.0035.01	Streambed Stone	CY
SPV.0035.02	Streambed Granular Fill	CY
SPV.0035.03	Filter Gravel	CY
SPV.0035.04	Pea Gravel	CY

Payment is full compensation for furnishing and placing streambed stone, streambed granular fill, filter gravel, and pea gravel; for submittals and testing; and for mixing streambed stone and streambed granular fill, and for reapplying pea gravel as directed by the engineer.

73. Reinforced Concrete Cutoff Wall, Item SPV.0035.04.

A Description

This special provision describes furnishing, placing and curing cutoff walls at locations shown in the plans.

B Materials

B.1 Concrete

Furnish Grade A concrete conforming to standard spec 501. Concrete shall have a 28-day compressive strength of 3500 psi. Provide QMP for concrete conforming to standard spec 716 for class III ancillary concrete.

B.2 Reinforcement

Furnish Grade 60 uncoated steel reinforcement conforming to standard spec 505.

C Construction

Construct the cutoff walls conforming to 502.3 and the construction details.

D Measurement

The department will measure Reinforced Concrete Cutoff Wall in volume by the cubic 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.0035.04	Reinforced Concrete Cutoff Wall	CY

Payment for Reinforced Concrete Cutoff Wall is full compensation for concrete and reinforcement, for excavating, forming, furnishing, hauling, preparing, placing, finishing, curing, and protecting all materials; and for materials quality control testing.

74. Reconstruct MMSD Manhole, Item SPV.0060.03.

A Description

This special provision describes the reconstruction of a MMSD sanitary manhole to the elevation as shown in the plans.

B Materials

B.1 Manhole

Manhole cone sections shall be constructed of precast reinforced concrete sections. Precast manholes and cones shall conform to ASTM Specifications, C478, latest revision.

Steel reinforcement shall conform to C-478 requirements of ASTM specifications.

B.2 Frame and Cover

MMSD shall furnish the new manhole frame and cover.

B.3 Internal Manhole Chimney Seal

Provide internal manhole chimney seals unless specified otherwise in the plans and construction details.

Internal rubber sleeves used in connection with sealing leakage between the manhole frame and the extension or cone shall be extruded or molded from a high-grade rubber compound conforming to the applicable requirements of ASTM C443. The sleeves shall be double pleated and capable of a vertical expansion, when installed, of not less than 2 inches.

Expandable stainless steel bands for compressing the sleeve against the manhole shall be 16 gage by a minimum of 1-3/4 inches wide and shall be fabricated of stainless steel conforming to ASTM A240, Type 304. Screws, bolts and nuts used on the band shall be stainless steel conforming to ASTM A276, Type 304.

Materials shall meet the performance requirements of section 8.42.4 of the SSSW.

B.4 Concrete Adjusting Rings

Concrete grade rings shall not be less than 2 inches nor more than 6 inches high and shall contain a minimum of one No. 2 reinforcing rod centered within the ring in conformance with section 8.39.11 of the SSSW and ASTM C-478. Concrete shall be Class B in conformance with section 8.35.3 of the SSSW. A minimum of two grade rings shall be installed with a maximum allowance of 18-inch for adjustment. Multiple grade rings will not be allowed where one will suffice.

B.5 Joints

Joints for precast manholes shall meet the requirements of ASTM C-443, latest revision, except that sealant shall be butyl rubber gasket or butyl rubber rope. Flexible butyl rubber gaskets or rope shall comply with the physical requirements for Type “B” gaskets in AASHTO Designation M-198, or Federal Specification SSS-00210-A, sealing compound, preformed plastic for expansion joints and pipe joints.

Finish joints with a non-shrink grout finish meeting the requirements of ASTM C928.

B.6 External Manhole Joint Seal

External manhole joint seal shall conform to ASTM C-877 Type II and installed per manufacturer’s recommendations.

B.7 Steps

All manholes shall be provided with steps equally spaced vertically on center installed by the manufacturer as shown on the standard detail sheet. Steps shall be embedded into the riser or conical top section of the wall a minimum of 3 inches. Manhole steps shall be Type PS2-PFS as manufactured by M.A. Industries, Peachtree City, GA 30269; or equal with ½-inch diameter Grade 60 steel reinforcement coated with copolymer polypropylene plastic. Install steps 15-inch on center. Provide certified test data that the steps are capable of withstanding an 800-pound vertical load without sustaining more than a 3/8-inch permanent set when tested according to Section 10 of ASTM C 497.

B.8 Bentonite Waterstops

Bentonite waterstops shall be 1-inch by 3/4 inch size flexible strip of bentonite waterproofing compound with an adhesive surface on one side of the strip, waterstop Type RX.

B.9 Bonding Agent

Bonding agent for use on existing concrete surfaces shall be Sikastix 370, Sikadur Hi-Mod; Horn Co. Epoxtite Binder 2385; or equal.

B.10 Granular Backfill

Granular backfill shall meet the requirements of section 8.43.4 of the SSSW.

C Construction

Notify Michael Lee of MMSD, (414) 225-2241, at least three days in advance of the commencement of construction.

Contractor shall be trained and competent in making a confined space entry into the MMSD manhole, including providing equipment and personnel.

Upon the removal of the existing pavement and curb and gutter excavate around the full perimeter of the manhole to a depth below the bottom joint of the manhole barrel section to be removed. Remove and salvage the existing manhole frame and lid for MMSD. Remove the adjusting rings and the existing diameter manhole barrel section. Protect the manhole from any debris or excavated materials from entering the manhole. Furnish and install a precast concrete tapered cone section with top diameter of 36-inches. Place a butyl rubber gasket material between the remaining manhole barrel and the new cone section to provide a watertight seal.

Furnish and install precast concrete adjusting rings, minimum of 6 inches to maximum of 16 inches, to bring the top of the manhole frame to finished grade. Apply cement mortar to inside and outside surfaces of joints and adjusting rings.

Install the new frame and lid on the adjusting rings to finished grade. Align the cone section to have the opening over the top of the existing steps.

Install one back step opposite of the existing steps.

D Measurement

The department will measure Reconstruct MMSD Manhole 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.0060.03	Reconstruct MMSD Manhole	EACH

Payment is full compensation for furnishing and installing all materials including pre-cast cone section, steps, chimney adjustment rings, gaskets, joint seals, non-shrink grout, concrete, steel reinforcement, waterstops, backfill material; for furnishing all excavation, dewatering, bypass pumping, sheeting and shoring, and masonry work; for cutting and removing existing cast-in-place manhole sections, for backfilling including mechanical compaction and compaction testing; for removing sheeting and shoring; for all testing; for disposal of all surplus or waste material; and for clean-up.

75. Abandon MMSD Pump Station BS0401, Item SPV.0060.04.

A Description

This special provision describes completely or partially removing an existing MMSD pump station according to Standard Specifications for Sewer and Water Construction in Wisconsin (SSSW), latest edition; applicable City of Wauwatosa Municipal Codes; and as hereinafter provided.

B Materials

Furnish backfill granular grade 1 conforming to standard spec 209.2.2.

C Construction

Notify Michael Lee of MMSD, (414) 225-2241, at least three days in advance of the commencement of construction.

Contractor shall remove the existing pump station (concrete slabs, chambers, and walls) as shown on the plans along with any piping, vent pipes, valves, pumps, sluice gates, bar screens, ladders, power poles, meter cabinet, electrical enclosures, concrete bases, underground conduit, wiring, hydraulic power units, hydraulic lines and conduit, etc. in the station.

Completely remove pump station in areas above or at the proposed structure excavation and 3 feet below finished grade in areas outside the proposed structure excavation.

Remove walls as needed to allow pre-boring of pilling. Do no excavation below the structure excavation limits to remove the outer wall. Wall removal must be performed inside the pump station footprint.

Install bulkheads as shown on the plans.

Cut conduit to generator and remove to north project limits.

Remove antenna pole and concrete base.

Contact MMSD to arrange for their pickup of salvaged frames and lids.

Fill chamber with cellular concrete to the elevations shown on the plans.

Fill remaining chamber with backfill granular grade 1. Compact per standard spec 207.

Properly dispose of the station and appurtenances.

D Measurement

The department will measure Abandon MMSD Pump Station BS0401 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.0060.04	Abandon MMSD Pump Station BS0401	EACH

Payment is full compensation for excavating, removing, and backfilling the existing pump station and appurtenances; for coordinating with MMSD; for proper disposal of materials; for mechanical compaction; and for restoration.

76. Exposing MMSD MIS, Item SPV.0060.05; Exposing AT&T Duct Package, SPV.0060.06.

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

C.1 General

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

All utility line opening (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.

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 as applicable.

C.2 Exposing MMSD MIS

Expose the existing MMSD 39"x30" MIS along the north side of Wisconsin Avenue to facilitate construction at the new bridge abutments and pier.

C.3 Exposing AT&T Duct Package

Expose the AT&T Wisconsin underground facilities along the south side of Wisconsin Avenue to facilitate construction at the new bridge abutments and pier.

D Measurement

The department will measure Exposing MMSD MIS and Exposing AT&T Duct Package as 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 includes 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.0060.05	Exposing MMSD MIS	EACH
SPV.0060.06	Exposing AT&T Duct Package	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.

77. Adjusting Sanitary Manholes, Item SPV.0060.07.

A Description

This work includes adjusting sanitary manholes to an elevation as determined by the engineer as well as installing frame and lid, internal/external frame/chimney seal, according to the Standard Specifications for Sewer and Water Construction in Wisconsin, latest edition and amendments (SSSW) and as hereinafter provided.

Add or remove Cretex adjusting rings or equal as needed. This item applies to structures to be lowered less than 6 inches or raised less than 12 inches.

B Materials

B.1 General

Furnish seals by Cretex, or equal as approved by the city engineer.

B.2 Backfill Slurry

Backfill slurry shall meet the material and construction requirements of section 8.43.8 of the SSSW.

C Construction

C.1 General

The location of existing sanitary manholes to be adjusted is indicated on the plans. Adjust these items as shown in the plans. Adjust manholes as necessary so that the frames and lid when placed will be at the established required grade.

Set the frames and lids accurately, so the complete installation is at the correct elevation required to fit the adjoining surfaces. The frames shall be set in pavement areas so that they comply with the following surface requirements. Place a 6- foot straightedge over the centerline of each frame parallel to the direction of traffic at the completion of the paving. Make a measurement at each side of the frame and average the two measurements. If this average is greater than 5/8 inch, reset the frame to the correct plane and elevation. If the frame is higher than the adjacent pavement, then make the two measurements at each end of the straightedge and average them.

Install seals according to the manufacturer’s recommended installation procedures. Furnish and use backfill slurry in the manhole excavation area to existing surface or to appropriate depth for pavement restoration. Salvage and reinstall existing frames and lids.

C.2 Surface Preparation

Remove manhole cover and power wire brush the lower 3 inches of the manhole frame to remove any loose rust or scale and repair any imperfections by either grinding smooth or filling with mortar. A smooth, clean sealing surface is required. Realign the casting if it is offset more than approximately 2 inches from the chimney. Remove all loose and protruding mortar and brick from the upper 7-Inch chimney and clean surface by power wire brushing. Provide a 4-Inch wide sealing surface starting 2 inches down from the bottom of the frame.

All sealing surfaces must be circular, reasonably smooth, clean and free of any loose material or excessive voids. If such a surface does not exist for the bottom of the sleeve to seal against, use one-component, quick-set, high strength, non-shrink, polymer modified patching mortar which has been formulated for vertical or overhead use. If the bottom of the sleeve is to seal against the top of an eccentric (straight side) cone and an inadequately high vertical surface does not exist, contact the manufacturer to obtain details to build the required vertical surface.

Use caulk to fill minor irregularities in the bottom sealing surface. The caulk shall be a butyl rubber caulk conforming to AASHTO M-198, Type B. Apply a single bead of the caulk to the center portion of the lower sealing surface of the sleeve.

Any flaws in the manhole frame, such as minor cracks, pits or protrusions, shall be repaired by either filling with mortar or grinding smooth.

C.3 Manhole Seal

Adjusting rings and manhole frames shall be set with butyl rubber sealant troweled into a 1/4-inch-thick layer over the entire surface areas of the top of cone and all adjusting rings.

D Measurement

The department will measure Adjusting Sanitary Manholes as a unit at 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.0060.07	Adjusting Sanitary Manholes	EACH

Payment is full compensation for providing and installing all required materials including adjusting rings, internal/external frame/chimney seals, and masonry and fittings; for salvaging and reinstalling existing or new covers, including frames and lids; for excavating, backfilling, and compacting; for furnishing and placing backfill slurry; for disposing of surplus materials; and for cleaning out and restoring the structure.

78. Reconstructing Sanitary Manholes, Item SPV.0060.08.

A Description

This work includes reconstructing a sanitary manhole to an elevation as determined by the engineer, according to the Standard Specifications for Sewer and Water Construction in Wisconsin, latest edition and amendments (SSSW), and as hereinafter provided.

B Materials

B.1 Manhole

Manhole barrel sections shall be constructed of precast reinforced concrete sections.

Precast manholes and tops shall conform to ASTM Specifications, C478, latest revision.

B.2 Manhole Seal

Sanitary manhole seal and adjusting rings shall be Cretex or equal, shall meet the material requirements of section 8.42.3 and the performance requirements of section 8.42.4 of the SSSW.

B.3 Joints

Joints for precast manholes shall meet the requirements of ASTM C-443, latest revision, except that sealant shall be butyl rubber gasket or butyl rubber rope. Flexible butyl rubber gaskets or rope shall comply with the physical requirements for Type “B” gaskets in AASHTO Designation M-198, or Federal Specification SSS-00210-A, sealing compound, preformed plastic for expansion joints and pipe joints.

B.4 Steps

All manholes shall be provided with steps equally spaced vertically on center installed by the manufacturer as shown on the standard detail sheet. Steps shall be embedded into the riser or conical top section of the wall a minimum of 3 inches. Manhole steps shall be Type PS-2-BG as manufactured by M.A. Industries, Peachtree City, GA 30269; or equal. Provide certified test data that the steps are capable

of withstanding an 800- pound vertical load without sustaining more than a 3/8-inch permanent set when tested according to Section 10 of ASTM C 497.

B.5 Elastomeric Waterproofing Sealer

Elastomeric waterproofing membrane shall be a single component, bitumen-modified, moisture-curing polyurethane similar to TREMproof 60 as manufactured by Tremco, 10701 Shaker Blvd., Cleveland, Ohio 44104; Duramem V500 as manufactured by Pecora Corporation, 2601 Oakland Avenue, Garland, Texas 75040; Thiodeck C.F. as manufactured by Toch/Carboline Company, 350 Hanley Industrial Court, St. Louis, Missouri 63144; or equal.

B.6 Plastic Sheet

Plastic sheet shall be clear plastic, minimum 4 mils. thick, of length and width to cover elastomeric waterproofing sealer.

B.7 Granular Backfill

Granular backfill shall consist of hard durable particles or fragments of stone, gravel, or sand. Granular backfill shall conform to the following grading requirements:

GRADING REQUIREMENTS FOR GRANULAR BACKFILL

Sieve Sizes	Percent Passing by Weight
3 inches	100
2 inches	95 – 100
No. 4	35 - 60
No. 200	5 - 15

C Construction

C.1 General

Reconstruct manholes to conform to the detail on the standard detail sheet and in the locations shown in the plans.

Salvage and reinstall existing frames and covers.

C.2 Backfill

Backfill with granular backfill material. Place in suitable lifts not exceeding 8 inches loose depth and compact each lift to a minimum of 90 percent of maximum density as determined by AASHTO T 180. Compact with mechanical vibrating or impact tampers.

Remove all form materials and trash from the excavation before placing any backfill. Backfill around manholes only after the concrete has attained 2/3 of the specified compressive strength. Obtain the engineer's approval of concrete work and attained strength prior to backfilling. Backfill shall be brought up uniformly around manholes and structures to prevent unbalanced lateral loading.

Do not operate earth-moving equipment within 5 feet of walls of manholes for the purpose of depositing or compacting backfill materials. Compact backfill adjacent to concrete walls with hand-operated tampers or other equipment that will not damage the manhole.

C.3 Elastomeric Waterproofing Sealer

Elastomeric waterproofing sealer shall be applied to all gravity sewer manholes. Thoroughly sandblast the section of the manhole frame over which the sealer is to be applied, the manhole header, extension and cone and the top 12 inches of the manhole riser. All surfaces shall be free of dust, oil, rust, loose materials and other contaminants. Take necessary precautions to prevent rebound from the sandblasting operation to enter the sewer system. If the mortar between grade rings or brick courses is removed to a depth greater than 1/4 inch by the sandblasting, the joints shall be refilled with mortar as specified herein. All new masonry work shall be cured a minimum of 24 hours prior to applying the waterproofing sealer.

Apply the 4-inch wide bond breaker tape completely around the manhole circumference and centered over the mortar joint between the manhole frame and the manhole extension. Immediately before applying the sealer, wipe all surfaces with a cleaner and immediately prime. The cleaner and primer shall be furnished by the sealer manufacturer. Apply the sealer with a trowel, roller or by spraying to achieve a thickness of not less than 100 wet mils. Do not apply the sealer when the ambient temperature is below

40 degrees F. The sealer shall extend from 9 inches below the bottom of the manhole cone and be carried over the top and onto the flange of the frame a minimum of 5 inches.

Allow the sealer to cure a minimum of 24 hours before backfilling when the ambient temperature is above 70 degrees F, and 48 hours when the ambient temperature is below 70 degrees F. Immediately before backfilling, loosely wrap two layers of 4 mil plastic sheet over the sealed area to prevent direct contact between the sealer and the backfill material.

D Measurement

The department will measure Reconstructing Sanitary Manholes 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.0060.08	Reconstructing Sanitary Manholes	EACH

Payment is full compensation for providing and installing all required materials, including masonry and fittings: for salvaging and reinstalling existing covers, including frames, grates or lids; for furnishing all necessary excavation, backfilling, disposing of surplus material, and for cleaning out and restoring the work site.

79. Concrete Base Special, Item SPV.0060.09.

A Description

This special provision describes construction of a special concrete base for the Honey Creek Parkway Milwaukee County Park System wooden sign located in the southwest corner of the Wisconsin Avenue intersection with Honey Creek Parkway according to the requirements of standard spec 654 and the details as shown on the plans.

B Materials

Conform to standard spec 654.2 and the construction detail for Concrete Base Special.

C Construction

Conform to standard spec 654.3 and the construction detail for Concrete Base Special.

D Measurement

The department will measure Concrete Base Special by each individual unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.09	Concrete Base Special	EACH

Payment is full compensation for providing concrete bases; for anchor templates, roads, nuts, and washers; for bar steel reinforcement; for excavating, drilling, and backfilling; and for providing and removing casing.

80. Outlet Structure 55, Item SPV.0060.29; Outlet Structure 63, Item SPV.0060.30.

A Description

This special provision describes installation of the Honey Creek outfalls as shown in the plans. This item shall be submitted as a shop drawing.

B Materials

Furnish materials according to standard spec 504.2.

Provide foundation backfill according to standard spec 520.2.

Furnish concrete outfall structure, concrete lined channel extension, reinforcement, galvanized grate assemblies, concrete ties, and concrete work.

C Construction

Conform to standard spec 504.3 and the construction detail for Outlet Structure 55 and Outlet Structure 63.

Maintain and protect the existing waterway as shown in the plans and details for the outfall structure.

D Measurement

The department will measure Outlet Structure 55 and Outlet Structure 63 by each individual unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.29	Outlet Structure 55	EACH
SPV.0060.30	Outlet Structure 63	EACH

Payment is full compensation for all labor; for shop drawings; for excavation, removal and disposal of excess soil material; for all bedding stone material; for installation of the concrete outfall and wing walls; for furnishing and installing all required reinforcement, sleeves, filler, waterproofing materials and anchors; for furnishing and installing the galvanized grate assemblies with all associated hardware; and for connecting to storm structures as shown in the plans.

81. 24”x72” Catch Basin, Item SPV.0060.31; 30”x72” Catch Basin, Item SPV.0060.32.

A Description

This special provision describes installing 24”x72” and 30”x72” Catch Basins as shown on the plans.

B Materials

Furnish materials under these items according to the requirements of standard spec 611.2 and the details as shown on the plans.

C Construction

Install according to standard spec 611.3 and the construction detail shown on the plans.

D Measurement

The department will measure 24”x72” Catch Basin and 30”x72” Catch Basin by each individual unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.31	24”x72” Catch Basin	EACH
SPV.0060.32	30”x72” Catch Basin	EACH

Payment will conform to standard spec 611.5 and includes full compensation for all necessary bypass pumping; for furnishing and installing catch basins including, but not limited to a riser section, coring of holes into the box pipe and installing benches, backfilling as noted on the plan, and compacting.

82. 24”x72” Riser Inlet, Item SPV.0060.33.

A Description

This special provision describes installing 24”x72” Riser Inlets as shown on the plans.

B Materials

Conform to standard spec 611.2.

C Construction

Install according to standard spec 611.3 and the construction detail shown on the plans.

D Measurement

The department will measure 24”x72” Riser Inlet by each individual unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.33	24”x72” Riser Inlet	EACH

Payment will conform to standard spec 611.5 and includes full compensation for all necessary bypass pumping; for furnishing and installing riser inlets including, but not limited to a riser section, coring of holes into the box pipe and installing benches, backfilling as noted on the plan, and compacting.

83. Manhole 4-FT Riser, Item SPV.0060.34.

A Description

This special provision describes installing Manhole 4-FT Riser as shown on the plans. This item is only for the structures on the storm sewer box pipes.

B Materials

Conform to standard spec 611.2.

C Construction

Install according to standard spec 611.3 and the construction detail shown on the plans.

D Measurement

The department will measure Manhole 4-FT Riser by each individual unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.34	Manhole 4-FT Riser	EACH

Payment will conform to standard spec 611.5 and includes full compensation for all necessary bypass pumping; for furnishing and installing manhole 4-foot riser including, but not limited to a riser section, coring of holes into the box pipe and installing benches, backfilling as noted on the plan, and compacting; and for all work required for providing the openings in the top of the box culverts for installation of the riser structures.

84. Inlet Cover R-3246-AL, Item SPV.0060.35; Inlet Cover R-3293-2, Item SPV.0060.36; Inlet Cover R-3295-2(L), Item SPV.0060.37; Manhole Cover R-1661-B, SPV.0060.38.

A Description

Perform work under these items according to the requirements of standard spec 611 and the details as shown on the plans.

B Materials

Furnish materials under these items according to the requirements of standard spec 611.2 and the details as shown on the plans. Provide the Neenah inlet and manhole covers with the numbers listed in the bid item, or equivalent.

C Construction

Conform to standard spec 611.3.

D Measurement

The department will measure Inlet Cover (Type) and Manhole Cover (Type) by each individual unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.35	Inlet Cover R-3246-AL	EACH
SPV.0060.36	Inlet Cover R-3293-2	EACH
SPV.0060.37	Inlet Cover R-3295-2(L)	EACH
SPV.0060.38	Manhole Cover R-1661-B	EACH

Payment is full compensation for furnishing new covers, including frames and lids; and for installing and adjusting each cover.

85. Hydrant Assembly, Item SPV.0060.40.

A Description

This special provision describes furnishing and installing hydrant assembly.

B Materials

Furnish and install hydrant assembly according to standard specifications for Sewer and Water Construction in Wisconsin, latest edition; applicable City of Wauwatosa Specs and Municipal Codes; and as hereinafter provided.

Hydrants shall be red in color and shall conform to AWWA C-502, AWWA C-110, and AWWA C-111 and shall be made of cast iron or ductile iron or a combination of both. The working pressure shall be rated for 250 psig.

Hydrant shall have a breakable flange. Install any extensions below the breakable flange. Extensions shall be made of the same material as the hydrant.

Nozzle Arrangement shall have two 2.5-inch outlets and one 4.5-inch outlet.

Main Valve opening shall be 5.25-inch diameter.

Direction of operation shall be counter-clockwise.

Drain outlets shall be tapped with an IP thread to receive a drain plug.

C Construction

Hydrants shall be constructed at locations shown on the plans. Hydrants shall be located as shown or as directed in a manner that the possibility of damage from vehicles or injury to pedestrians will be minimized.

All hydrants shall stand plumb and shall have the pumper nozzle aligned as per the OWNER'S direction. Set hydrants to the established grade, with nozzles at least 18 inches above the ground or as directed. Connect each hydrant to the main with a 6-inch branch controlled by an independent gate valve.

Where a hydrant is set in soil that is pervious, provide drainage at the base of the hydrant by placing coarse gravel or crushed stone mixed with coarse sand, from the bottom of the trench to at least 6 inches above the waste opening in the hydrant and to a distance of 12 inches around the elbow.

Wherever a hydrant is set in clay or other impervious soil, a drainage pit shall be 2 feet in diameter and 3 feet deep and shall be excavated below each hydrant and filled compactly with coarse gravel or crushed stone mixed with coarse sand, under and around the elbow of the hydrant to a level of 6 inches above the waste opening.

The bowl of each hydrant shall be well braced against unexcavated earth at the end of the trench with concrete backing. Block or approved mechanical joint lugged retainer glands may be used.

Set elevation of breakaway flange at a minimum of 1 inch and a maximum of 4 inches above proposed grade.

Provide drain pocket at base of hydrant of 1.5 cubic yards of crushed stone or rock conforming to requirements of ASTM C33, Gradation Number 2. Backfill and compact as specified for adjacent water main.

Hydrant inlet shall be a restrained joint designed for use with ductile iron, cast iron, HDPE, and PVC pipe materials.

Inlet shall incorporate a stab-fit design using a single Type 304 stainless steel fastener and heat-treated ductile iron grippers. The assembly of mechanical joint restrainers using multiple fastens or wedge bolts that point load the pipe are not permitted.

The join design shall work with the pressure to achieve joint restraint. All accessories shall be factory installed.

Hydrants connected to the existing/abandoned watermain shall be removed and the hydrant lead bulkheaded. Removal of hydrants connected to the existing/abandoned watermain is incidental to the hydrant item.

D Measurement

The department will measure Hydrant Assembly by each hydrant 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.0060.40	Hydrant Assembly	EACH

Payment is full compensation for furnishing labor, materials, excavation, bedding, cover, backfill, pipe laying, plugs, fittings, tracer wire, warning tape, bulkheads, thrust restraint, sheathing, shoring, dewatering, cutting, cleanup, disinfection, and restoration, and for all installation.

86. Gate Valve & Valve Box 6-Inch, Item SPV.0060.41; Gate Valve & Valve Box 8-Inch, Item SPV.0060.42.

A Description

This special provision describes furnishing and installing gate valves and valve boxes.

B Materials

Furnish and install gate valves and valves boxes according to Standard Specifications for Sewer and Water Construction in Wisconsin, latest edition, and amendments, and as hereinafter provided.

Valves shall be smooth bore resilient seat gate valves meeting requirements of Chapter 4.8.0. and Chapter 8.27.0. Valves shall open left.

Each valve shall have manufacturer's name, pressure rating, and year of manufacture cast on the body. Prior to shipping from factory, hydrostatically pressure test to equal twice specified working pressure.

Provide resilient seat valves meeting all applicable requirements of AWWA C515, with cast iron body, bronze-mounted with bronze non-rising stems, and O-ring seals.

Valve boxes shall be Mueller or equal, cast-iron extension type and shall be according to the SWS.

Gate valve adapters as manufactured by Adapter, Inc, of Milwaukee, Wisconsin, or equal, shall be installed with each valve and shall be included in the price of the valve.

Gate valve inlet shall be a restrained joint designed for use with ductile iron, cast iron, HDPE, and PVC pipe materials.

Inlet shall incorporate a stab-fit design using a single Type 304 stainless steel fastener and heat-treated ductile iron grippers. The assembly of mechanical joint restrainers using multiple fastens or wedge bolts that point load the pipe are not permitted.

The join design shall work with the pressure to achieve joint restraint. All accessories shall be factory installed.

All valve inlets shall be the Romac ALPHA design, as furnished by AMERICAN Flow Control.

C Construction

All gate valves and valve boxes shall be constructed at locations shown on drawings.

Support valves in vertical position on level.

D Measurement

The department will measure Gate Valve & Valve Box 6-inch & 8-inch by each individual unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.41	Gate Valve & Valve Box 6-Inch	EACH
SPV.0060.42	Gate Valve & Valve Box 8-Inch	EACH

Payment is full compensation for furnishing all materials, including gate valve, valve box, valve support, water main connections, and other fittings; for all installation; for all excavation, backfilling, disposal of surplus material, cleanup, and restoring site of work.

87. Butterfly Valve & Valve Box 16-Inch, Item SPV.0060.43.

A Description

This special provision describes installing City of Wauwatosa furnished butterfly valves and furnishing and installing valve boxes.

B Materials

City will furnish five Butterfly Valves 16-inch. City will not furnish valve boxes.

Furnish valves boxes according to Standard Specifications for Sewer and Water Construction in Wisconsin, latest edition, and amendments, and as hereinafter provided.

Test each valve by hydrostatic pressure equal to twice the specified working pressure. All valves shall have mechanical joints with Cor-Blue bolts and nuts made of coated corrosion resistant steel. All exposed valve hardware shall be T304 stainless steel. All valves shall have a non-rising stem and shall open to the right (clockwise).

Furnish all valves with 6860 series roadway box and cover as manufactured by Tyler Union, Inc. or engineer approved equal, and shall be according to section 8.29 of the Standard Specs. The valve box shall be a ductile iron, three-piece screw type unit with a 5-¼" shaft and 17-¼" diameter (#6) base and set to the correct grade for the finished restoration (1/2 inch below grade in turf). The cover shall be marked "WATER".

C Construction

Install butterfly valves and valves boxes according to Standard Specifications for Sewer and Water Construction in Wisconsin, latest edition, and amendments, and as hereinafter provided.

Construction all butterfly valves and valve boxes at locations shown on the drawings.

Support valves in vertical position on level.

D Measurement

The department will measure Butterfly Valve & Valve Box 16-Inch by each individual unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.43	Butterfly Valve & Valve Box 16-Inch	EACH

Payment is full compensation for furnishing all materials, including valve box, valve support, water main connections, and other fittings; for all installation; for all excavation, backfilling, disposal of surplus material, cleanup, and restoring site of work.

88. Water Testing Manhole, Item SPV.0060.44.

A Description

This special provision describes installing water testing manhole.

B Materials

Manhole frames and covers shall be Neenah R-1580 with Type “B” self-sealing lids, non-rocking.

City will provide one Butterfly Valve 16-inch.

C Construction

Install water testing manhole and valve as detailed in the plans and adhere to Specifications for Sewer and Water Construction in Wisconsin, Current Edition and attached City of Wauwatosa Water Utility Special Conditions for Water Main Construction.

D Measurement

The department will measure Water Testing Manhole by each individual unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.44	Water Testing Manhole	EACH

Payment is full compensation for furnishing all materials, including manhole, frame, cover, valve box, valve support, water main connections, and other fittings; for all installation; for all excavation, backfilling, disposal of surplus material, cleanup, and restoring site of work.

89. Air Release Valve, Item SPV.0060.45.

A Description

This special provision describes installing air release valve.

B Materials

Conform to air release valve as detailed in the plans and adhere to Specifications for Sewer and Water Construction in Wisconsin, Current Edition.

C Construction

Install Air Release Valve as detailed in the plans and adhere to Specifications for Sewer and Water Construction in Wisconsin, Current Edition.

D Measurement

The department will measure Air Release Valve by each individual unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.45	Air Release Valve	EACH

Payment is full compensation for furnishing all materials, including valve boxes, piping, corporation stop, drain stop, covers, plugs, and other fittings; for all installation; for all excavation, backfilling, disposal of surplus material, cleanup, and restoring site of work.

90. Remove and Salvage Existing Lighting Units, Item SPV.0060.50.

A Description

This special provision describes removing, salvaging, and storing existing City of Wauwatosa and Milwaukee County lighting units according to the pertinent provisions of standard spec 204 and as hereinafter provided.

Specific removal items are noted in the plans.

B (Vacant)

C Construction

Arrange for the de-energizing of the lighting with the local electrical utility after receiving approval from the engineer that the existing lighting can be removed.

Notify the City of Wauwatosa and Milwaukee County at least seven days prior to the removal of the lighting equipment. Complete the removal work as soon as possible following shut shutdown of this equipment. Inspect salvaged equipment for damage or defects.

Remove all standards and poles per plan, cabling/wiring, luminaires, and mounting devices. Dispose of non-salvaged materials off the project site and off the right-of-way. Coordinate with the city and county for equipment pickup at least seven days prior to the removal.

For City of Wauwatosa, contact Mr. Randy Michelz, (414) 471-8429. Traffic and Electrical Superintendent.

For Milwaukee County, contact Mr. Tony Crivello, (414) 258-5195, Electrical Supervisor.

The city and county assume that all equipment is in good condition and in working order prior to the contractor's removal operation. Prior to removal, inspect and provide a list of any damaged or nonworking lighting equipment to the engineer and city.

D Measurement

The department will measure Remove and Salvage Existing Lighting Units by each individual unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.50	Remove and Salvage Existing Lighting Units	EACH

Payment is full compensation for removing, and disassembling lighting equipment, scrapping of some materials, disposing of scrap material and cabling/wiring, protecting from damage, and for coordinating the salvaged materials pickup.

91. Luminaire LED Medium, Item SPV.0060.51.

A Description

This special provision describes providing furnishing and installing luminaries with all required accessories as shown on the plans, and as hereinafter provided.

B Materials

Furnish decorative luminaires with the following specifications:

CREE Lighting Traveyo Series TRVMD-A-HT-2ME-8L-30K7-UL-GY-N-W10

The Luminaire LED Medium is to match City of Wauwatosa street lighting requirements.

C Construction

The installation of the Luminaire LED Medium shall be according to the manufacturer's instructions.

D Measurement

The department will measure Luminaire LED Medium as each individual unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.51	Luminaire LED Medium	EACH

Payment is full compensation for providing all materials including luminaries, lamps, fittings, hardware and attachments; and for luminaries fusing if required.

92. Install Concrete Pole, Item SPV.0060.52.

A Description

This special provision describes installing concrete poles furnished by the City of Wauwatosa with mast arm and all required accessories as shown on the plans, and as hereinafter provided.

B Materials

City will furnish concrete poles with the following specifications:

The poles shall be sky gray colored, polished finished with acrylic seal.

All standards furnished shall be cast in metal molds true to the design. Time of mixing shall be sufficient to ensure that all particles shall be thoroughly wetted.

The pole shafts shall be fiber reinforced, air-entrained concrete, with 5/8” minimum coverage over reinforcement (7,000 psi minimum). Concrete shall be placed in one continuous operation. When filled, the mold shall be rotated at a high speed to ensure a dense concrete by centrifugal force, and produce a cable raceway throughout the length of the standard not less than 2 ½” at the location of the hand holes and a minimum of 1½” at top of pole. The poles shall then be polished to a smooth ground finish. Reinforcing shall be according to this specification to assure that no cracking shall occur during normal handling.

The spun concrete poles are to be octagonal in shape and carry a 0.125 inch/foot taper and have a sky gray finish. Shaft length is in general to be a minimum of 27'-7" and a maximum of 28'-0". The pole is to be 23'-0" above grade. The butt diameter shall be 8" minimum and the top diameter shall be 5" minimum. The hand hole shall be 2 ½” x 12” minimum and 18" above grade and located on the opposite side of the pole from the curb. Two cable entrances shall be provided across from one another to run parallel with the curb line. Cable entrances shall be 18" below grade and a minimum size of 2-1/4" x 8". Cable entrances shall be sufficient in size to allow a single 1” conduit to enter the pole and terminate no less than 3” below the hand hole but no more than 6” below the hand hole.

The hand-hole cover shall be flush with pole. Poles shall be furnished with flush aluminum cover plate for hand hole and all other necessary hardware. This hardware shall include a removable metal cap which will protect the required open cable raceway at the top from the weather, nonferrous inserts for securing accessories such as cast aluminum pole cap, bracket brace, hand hole cover, etc., 6'-0" x 2" dia. mast arm of galvanized steel or aluminum with 1-1/4" slip fitter, stainless steel or silicone bronze nuts and bolts. Brackets for mast arm are to be one piece (no welds).

Manufacturer's conformance to specifications shall be certified by an independent testing laboratory.

C Construction

The installation of the concrete poles shall be according to the manufacturer’s instructions.

D Measurement

The department will measure Install Concrete Pole 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.0060.52	Install Concrete Pole	EACH

Payment is full compensation for installing city furnished poles and mast arms; for providing all materials including fittings, hardware and attachments; and for luminaries fusing if required.

93. Install Milwaukee County Furnished Pull Box 12x12x12-Inch, Item SPV.0060.53.

A Description

This special provision describes installing Milwaukee County furnished pull box in accordance to the pertinent provisions of Standard Specification 653, as shown on the plans, standard detail drawings, and hereinafter provided.

B Materials

B.1 Pull Box

Pull box dimensions shall be rectangular 12-inches wide by 12-inches long by 12-inches deep with an open bottom to be furnished by Milwaukee County.

B.2 Aggregate

Furnish a 3/4-inch dense aggregate base according to the plans and pertinent provisions of Standard Specification 305.2.

C Construction

Install non-conductive pull box according to the pertinent provisions of Standard Specification 653.3 and the manufacturer's recommended installation procedures. Place aggregate base to a depth of 1-foot under pull box and extending 1-foot beyond the outer edges of the pull box. The pull box shall be set flush with the proposed grade.

When shown on the plans, locate existing conduit and install non-conductive pull box positioned over the existing conduit.

D Measurement

The department will measure Install Milwaukee County Furnished Pull Box 12x12x12-Inch 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.0060.53	Install Milwaukee County Furnished Pull Box 12x12x12-Inch	EACH

Payment is full compensation for installing all materials; for drilling all holes for conduit connections; and for excavation, backfilling, and disposal of surplus material.

94. Wood Pole 60-Foot, Item SPV.0060.54.

A Description

Furnish and install wood poles and other incidental items as required and as shown on the plans, according to standard spec 651, and as hereinafter provided.

B Materials

Furnish wood poles that are Class 4 or larger with a 60-foot minimum overall length. The poles shall be western red cedar according to ANSI standards 05.1. Shave all poles the entire length.

Pressure treat wood poles used for freeway lighting with a 5 percent pentachlorophenol mixture with a minimum of 8 pounds per cubic foot net retention of the oil-borne preservative.

C Construction

Install the pole according to the pertinent provisions of standard spec 611.3.1.1, and as shown on the plans. As necessary, install #4 AWG grounding wire exothermically bonded to a 5/8-inch by 8-foot copper clad grounding electrode, cable guard, NEMA 3R junction box 3ft above grade level for splice, and incidentals as necessary.

D Measurement

The department will measure Wood Pole 60-Foot as a unit for each pole, installed completely as described above.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.54	Wood Pole 60-Foot	EACH

Payment is full compensation for furnishing and installing a wood pole; all excavation and backfill and for furnishing all labor, equipment, tools, and incidentals necessary to complete the work.

95. Removing 60-Foot Wood Pole, Item SPV.0060.55.

A Description

This special provision describes removing 60-foot wood poles as shown on the plans, and as hereinafter provided.

B (Vacant)

C Construction

In addition to removing the attached conduit and wiring according to standard spec 204, backfill all openings or holes to the elevation of the surrounding ground, and landscape all disturbed areas from these removals. Dispose of all materials off site.

D Measurement

The department will measure Removing 60-Foot Wood Pole as a unit for each pole, 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.0060.55	Removing 60-Foot Wood Pole	EACH

Payment is full compensation for removing wood pole; all excavation and backfill; removal and disposal of material; and for furnishing all labor, tools, equipment and incidentals necessary to complete the work.

96. Retroreflective Backplate 3S, Item SPV.0060.61.

A Description

This special provision describes installing 2-inch yellow retroreflective borders on traffic signal backplates, as shown in the plans.

B Materials

Provide 2-inch retroreflective sheeting or tape. Ensure material is approved by the City of Wauwatosa or their representative prior to use.

C Construction

Install the retroreflective border on signal heads as shown in the plans. Follow all manufacturer installation instructions. The retroreflective border must be installed inside a controlled environment.

D Measurement

The department will measure Retroreflective Backplate 3S as each individual backplate, 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.0060.61	Retroreflective Backplate 3S	EACH

Payment is full compensation for furnishing and installing the retroreflective borders.

97. Furnish and Install Traffic Signal Cabinet & Controller at Wisconsin Ave & Honey Creek Pkwy, Item SPV.0060.62.

A Description

This specification describes furnishing an operational NEMA TS2 Type 1 traffic signal control cabinet and controller ready for testing by the city and subsequent installation.

B Materials

B.1 General

Furnish and install equipment and assemble the cabinet conforming to the latest revision of NEMA Standards Publication TS 2 Version 2.06 (R2008) with Amendment 3-2009, Traffic Controller Assemblies with NTCIP Requirements, National Electrical Manufacturers Association, hereinafter called NEMA TS2 Standard, except where modified in this specification. Conform all work to the Wisconsin State Electrical Code (WSEC). Conform all work to standard spec 651, as supplemented or modified in this specification.

Provide cabinets designed for TS2 Type 1 operation. Pre-wire cabinets for a minimum of sixteen phases as specified herein.

Furnish and install at no extra cost any equipment and materials not specifically described, but required in order to perform the intended functions in the cabinet.

Provide arc flash protection within the cabinet as needed to satisfy NFPA 70E and OSHA requirements.

B.2 Cabinet

Furnish a door-in-door ground mounted (without anchor bolts) aluminum cabinet of clean-cut design and appearance. Provide a cabinet of minimum size 44 inches wide, minimum 24 inches deep and minimum 52 inches to maximum 60 inches high. The size of the cabinet shall provide ample space for housing the controller, all of the associated devices which are to be furnished with the controller, all other auxiliary devices herein specified, and all equipment to be furnished and installed by others.

The cabinet shall comply with the environmental and operating standards outlined in the NEMA TS2 Standard. The cabinet shall provide reasonable vandalism protection. The cabinet shall have a NEMA 3R rating.

Construct the cabinet from type 5052-H32 aluminum with a minimum thickness of 0.125 inches. Furnish the cabinet with a natural, uncoated, aluminum finish inside and outside. Continuously weld all seams. The surface shall be smooth, free of marks and scratches. Use stainless steel for all external hardware.

On the top of the cabinet, incorporate a 1-inch slope toward the rear to prevent rain accumulation. Incorporate a rain channel into the design of the main door opening to prevent liquids from entering the enclosure.

Include an exhaust plenum with a vent screen into the roof of the cabinet. Perforations in the vent screen shall not exceed 0.125 inches in diameter. Insulate the remaining area of the roof of the cabinet with a moisture resistant rigid foam board insulation with a minimum R value of 4.0 that can be perforated for an antenna.

Equip the lower section of the cabinet door with a louvered air entrance. The air inlet shall be large enough to allow sufficient air flow per the rated fan capacity. Louvers must satisfy the NEMA rod entry test for Type 3R ventilated enclosures. Secure a washable, aluminum, removable air filter to the air entrance. The filter shall fit snugly against the cabinet door wall. Attach an aluminum, easily removable, gasketed cover over the air filter and louver.

B.3 Cabinet Doors

The cabinet door opening shall be a minimum of 80 percent of the front surface of the cabinet. The main door and police door-in-door shall each close against a weatherproof and dust-proof, closed-cell neoprene gasket seal. The gasket material for the main door shall be a minimum of 0.188 inches thick by 1.00 inch wide. The gasket material for the police door shall be a minimum of 0.188 inches thick by 0.500 inches wide. Permanently bond the gaskets to the cabinet.

Equip the main door with a three-point latching mechanism. The upper and lower locking points of the latching mechanism shall each have a pair of nylon rollers. The handle on the main door shall utilize a shank of stainless steel 3/4 inches minimum diameter. The handle shall include a hasp for the attachment of an optional padlock. The cabinet door handle may turn either clockwise or counterclockwise to open, and shall not extend outwards past the edge of the door at any time. Position the lock assembly so the

key will not cause any interference with the handle, or a person's hand on the handle, when opening the cabinet door.

Include on the main door a solid stainless steel rod stop and catch mechanism capable of rigidly holding the door open at approximately 90, 120, and 180 degrees under windy conditions. The operator must be able to engage and disengage the catch with a shoed or booted foot.

The main door hinge shall be a one-piece, continuous piano hinge with a minimum 0.25 inch stainless steel pin running the entire length of the right side of the door (right-handed). Attach the hinge in such a manner that no rivets or bolts are exposed.

Equip the main door with a brass Corbin tumbler lock No. 2, swing away dust cap.

Electrically bond the door to the rest of the cabinet with a braided copper grounding conductor. The length of the grounding conductor shall allow the door to swing fully open, without using the stop bar, without stretching or breaking the grounding conductor. The grounding conductor shall not interfere with normal door operation.

Provide a door switch for the main cabinet door. When the door is opened the switch shall send a signal to the controller sufficient for the controller to log an alarm.

B.4 Auxiliary Panels

B.4.1 Intersection Lighting

Provide an intersection lighting control panel as described. The intersection lighting control panel shall consist of an aluminum panel 0.125 inches thick and approximately 5 inches by 10 inches. Determine the actual panel size by the cabinet's mounting rail placement. Attach to the panel a 2 pole-30 amp contactor-120vac coil (Square D #8910DPA32V02 or equal), and a heavy duty six position terminal block (Marathon DJ1606 or equal). Use wire sizes 10AWG for power and load wiring, and 16AWG for control wires. Wire the terminal strip as follows:

1. Control coil
2. L1 in
3. L2 in
4. Neutral in and control coil
5. L1 out
6. L2 out

Protect each output by a MOV (V150LA20A) wired between the output and neutral. Include a photo control (Intermatic #K4021C or equal). Mount the photo control just above the cabinet door and approximately 12 inches from the right side of the cabinet. Wire the photo control to a 3 position terminal strip using 16AWG wire color coded to match the photo control wiring connected to the intersection lighting control panel.

Provide panel cover that is secured on the top and bottom of the panel with a minimum of 4 thumb screws.

Provide a switch in the cabinet that can turn intersection lighting on/off.

B.4.2 Cabinet Heater

This specification describes furnishing a cabinet heater ready for operation within the associated traffic signal control cabinet.

Provide a 250-watt element heater. The heater shall be mountable on the face of the aluminum, louvered air filter cover such that feed air is supplied through the cover. Provide a protective, ventilated cover over the heater. Provide a cord and twist-off plug that will connect to the electrical receptacle on the cabinet door.

B.4.3 Vehicle Detection Interface Panel

Provide a 32-position interface panel or two 16-position panels. Each interface panel shall allow for the connection of 32 or 16 independent field loops, respectively. 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.

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.

Provide a pathway or mechanism for securing loop lead in cables neatly next to interface panel.

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

B.5 Shelves and Mountings

Mount a minimum of three vertical "C" channels on each interior side wall of the cabinet for the purpose of mounting the cabinet components. The channels shall accommodate spring mounted nuts or studs. Install three vertical "C" channels or three slotted rails on the interior back wall of the cabinet. All mounting channels and rails shall extend to within 7 inches of the top and bottom of the cabinets and shall be of sufficient strength to rigidly hold specified shelves and equipment.

Provide two full-width, 11-inch deep, fully adjustable, aluminum shelves to support the controller and other equipment. Mount the lower shelf at a height above the bottom of the cabinet such that the shelf and attached drawer does not interfere with the ability to tilt the terminal facility forward on its hinges for maintenance purposes. Mount the top shelf at least 13 inches above the surface of the lower shelf.

The controller and MMU2 will be located on the lower shelf. Locate the loop detector racks and other auxiliary equipment on the top shelf. The power supply may be mounted on either shelf.

Provide an under-shelf drawer beneath the lower shelf. The drawer shall be approximately 20 inches wide and a minimum of 12” deep. The drawer shall operate easily and smoothly, and shall have a stop to prevent inadvertently pulling the drawer out of its support. Design the stop to allow purposeful complete removal of the drawer without the use of tools. Provide a slide out shelf capable of supporting a 5 pound, 14” wide by 11” deep load. This slide out support can be the cover for the drawer, as long as it extends far enough out to support the entire 11” depth of the laptop.

Provide a fully wired receptacle on the door that is specifically designed to support the twist and lock style plug specified for the optional heater element. Locate receptacle such that when installed, heater should be mounted a minimum of 6.5” from the bottom of the door.

B.6 Auxiliary Cabinet Equipment

Ventilate the cabinet by means of a 120 VAC, 60HZ, tube axial compact type fan located in the top of the cabinet plenum. The fan’s free delivery airflow shall be equal to or greater than 100 cubic feet per minute. The magnetic field of the fan motor shall not affect the performance of control equipment. The fan bearings shall operate freely. The fan unit shall not crack, creep, warp, or have bearing failure within a seven-year duty cycle. The maximum noise level shall be less than 40 decibels. The fan unit shall be corrosion resistant. The thermostat's turn on setting shall be adjustable from 90 to 120 degrees F. The fan shall run until the cabinet temperature decreases below the turn-on temperature setting by approximately 30 degrees F. The fan shall be fused.

Mount a single LED light strip (GESS32-13200K or approved equal) at the top of the cabinet and the appropriate power supply to support up to four (4) light strip panels. Wire the power supply to an ON/OFF toggle switch. Mount two LED light strips under the lower shelf fed off the power supply on the top of the cabinet. Locate one strip on each side of the drawer.

Provide a thermostat with an adjustable setting from 0 to 100 degrees F. Install the thermostat on the interior ceiling of the cabinet well away from the cabinet light or any heat source. Provide a thermal limit switch to prevent the heater’s protective cover from exceeding 170 degrees F.

B.7 Terminals and Facilities

The terminal facility panel shall be constructed from 5052-H32 brushed aluminum of 0.125 inches minimum thickness and formed so as to eliminate any flexing when plug-in components are installed.

Mount the bottom of the terminal facility a minimum of nine inches from the bottom of the cabinet. Hinge the terminal facility at the bottom to allow easy access with simple tools to all wiring on the rear of the panel. It shall not be necessary to remove the lower shelf, the shelf drawer, or any shelf-mounted equipment to hinge down the terminal facility. Provide sufficient slack in the load bay wiring to allow for dropping the load bay.

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 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 one 16-channel, 8-position, TS2 detector rack with an integrally mounted BIU mounting. Rack shall be addressable. Power the detector rack by the cabinet power supply. Fasten the loop detector racks towards the left side of the top shelf. Additional racks shall be treated as add-on items.

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 Marathon (or approved equal) 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 MMU2 input and output terminations on the terminal facility. Identify 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 MMU2 (other than AC power), controller I/O, and logic ground shall be minimum 22 gauge wire. All wire colors shall be consistent in all cabinets furnished in one order.

B.8 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 MMU2 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 a minimum of five SDLC RS-485 Port 1 communication cables to allow full capabilities of that cabinet plus one SDLC RS-485 Port 1 communication cable for auxiliary use. 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 MMU2.

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.

B.9 Cabinet Switches

Locate the following switches on a maintenance panel on the inside of the cabinet door:

a. Controller On/Off

b. Stop Time (Three Positions)

Position Switch Label Function

Upper Stop Time Place stop time on the controller

Center Run Remove the stop time input to the controller

Lower Normal Connects the MMU2 to the controller stop time input

Locate the following switches behind the police access door:

a. Signal/Off

b. Flash/Normal

c. Hand/ auto

d. Coiled hand control and cable

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

B.10 Power Panel

B.10.1 Design

The power panel shall consist of a separate module, securely fastened to the interior right side wall of the cabinet. Wire the power panel to provide the necessary power to the cabinet, controller, MMU2, cabinet power supply, and all auxiliary equipment. Manufacture the power panel from 0.090-inch, 5052-H32 aluminum. Panel layout shall facilitate field inspection and maintenance accessibility without excessive disassembly or special tools.

Provide a light, tough, transparent, weather-resistant, non-yellowing, thermoplastic cover, rigidly mounted over the full power panel, with access holes for circuit breakers and other equipment, and open on the sides for ventilation.

All components of power panel shall meet or exceed the electrical requirements as laid out in section 5.4 of the NEMA TS2 Standard.

Provide all necessary components for a battery backup system to be retrofit into the cabinet without needing to make changes to the wiring of the power panel. Battery Backup system will support only essential equipment in the cabinet. Fan, heater, and lighting panel are examples of non-essential equipment not expected to be supported by the battery backup system.

Do not install a jumper between the equipment ground and neutral. Instead, provide this bonding jumper in a separate package labeled “For Grounding Purposes.”

B.10.2 Grounding System

On each side of the cabinet, provide a minimum 20-position neutral bus bar capable of connecting three #12 AWG wires per position. Also on each side of the cabinet, provide a minimum 20-position equipment ground bus bar capable of connecting three #12 AWG wires per position. Install this bus bar below the neutral bus bar.

B.10.3 Power Receptacles

Mount a 120 VAC 20 amp, NEMA 5-20R GFCI convenience outlet on the interior right side wall above or as part of the power panel. The outlet shall be fully operational and fuse protected.

Mount a 2-gang outlet on each side of the cabinet. Both of these outlets should be wired off the circuit breaker fed off the surge protector.

B.11 Auxiliary Devices

B.11.1 Flashers

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

B.11.2 Flash Transfer Relays

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

B.11.3 Cabinet Power Supply

Provide one 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.

B.11.4 NEMA Load Switches

Provide load switches as needed.

B.11.5 TS2 Type 1 controller

Provide McCain Flex NEMA TS2 type 1 controller.

B.11.6 NEMA MMU2

Provide EDI MMU2 Smart Monitor.

B.12 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.

B.13 Documentation

B.14 Cabinet Intersection Wiring Diagrams

At the time of the cabinet delivery, furnish with the cabinet two sets of printed 22x34-inch cabinet intersection wiring diagrams and one set of .dwg CAD files per cabinet. After cabinet acceptance is complete, if any cabinet wiring changes were made, revise the cabinet wiring diagrams and provide two sets of printed 22x34-inch cabinet intersection wiring diagrams and one set of .dwg CAD files reflecting any field changes.

C Construction

Furnish and install traffic signal controller and auxiliary equipment according to the manufacturer's instructions.

D Measurement

The department will measure Furnish and Install Traffic Signal Cabinet & Controller at Wisconsin Ave & Honey Creek Pkwy by each individual unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.62	Furnish and Install Traffic Signal Cabinet & Controller at Wisconsin Ave & Honey Creek Pkwy	EACH

Payment is full compensation for furnishing and installing the signal cabinet, controller and fittings as necessary to assure that the controller will perform the said functions.

98. Furnish and Install Accessible Pedestrian Push Button System at Wisconsin Ave & Honey Creek Pkwy, Item SPV.0060.63.

A Description

This special provision describes providing vandal resistant Audible Pedestrian Signal (APS) push button assemblies that provides a vibro-tactile ADA compliant 2-Inch push button with a raised directional arrow and custom message sounds during the walk cycle. During the “ped clearance” and “don’t walk” intervals locating sounds are emitted from inside the unit via a weatherproof speaker. The unit shall use 2-pair push button wires and interface with a single control unit located in the traffic control cabinet.

B Materials

B.1 General

Ensure APS complies with US Access Board’s Guidelines for Accessible Public Rights of Way (PROWAG) Section R306. In addition, ensure that the APS complies with and provides operation consistent with requirements of Sections 4E.09 through 4E.13 of the 2009 Edition of the Federal Highway Administration publication, Manual on Uniform Traffic Control Devices and conforms to all of the following requirements:

1. The Audible Pedestrian Push Button System shall be the Polara iCCU-S2 model with an iDS2 Push Button.
2. Sunlight visible “Red LED” lights when the button is pushed and remains on until the walk phase goes into effect.
3. Audible “Tick” sound is heard each time the button is pushed, as well as tactile feedback given.
4. Extended push button can turn on boost volumes, and/or mute all sounds except those on actuated crosswalk.
5. All audible sounds automatically adjust in volume in relation to ambient noise level.
6. Audio Amplifier Power Output: 15 W, 8 ohm, weatherproof.
7. Provide separate volume controls for locator tone, walk message, Clearance and extended button volumes.
8. Volume Control Automatic Adjustment Range: 35 dB max.
9. Microphone For Ambient Noise approximate frequency range: 170 Hz to 2.3 kHz.
10. Jumper Selectable Options: Chirp, Cuckoo, Walk Message, Rest In Walk, Location Message, Extended Push of Activation and Locating Tone.
11. Audible Locating Tone: 880 Hz plus harmonic, 0.1-second duration, 1-second interval. Operates during ped clearance and don’t walk interval. All tones shall meet MUTCD requirements.
12. 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.
13. 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).
14. Temperature Range: -40 degrees F to 165 degrees F.
15. Wind sensor to prevent runaway volume during windy conditions.
16. 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.
17. Pedestrian Push Button Interface accepts 12 to 48 AC/DC. Capable of global configuration changes and/or single unit changes.
18. Dimensions: Length: 14.09-Inch, Width: 5.4-Inch, Depth: 2.2-Inch.
19. Frame: cast aluminum, powder coated yellow.

20. Face Plate: aluminum, powder coated, painted black background.
21. Arrow Push Button: aluminum, powder coated. Direction of arrow can adjust to one of four directions.
22. 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.
23. Include a Pedestrian Push Button sign that shall be mounted to each push button assembly.

B.2 Central 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 12 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). The interface cable shall be included and considered incidental to the contract.

1. Pedestrian Walk/Don't Walk Inputs; Optically Isolated 80 – 150 Volts AC/DC 5mA Maximum.
2. General Purpose Outputs and Pedestrian Outputs; Optically Isolated 36 Volts AC/DC Peak, .3A Solid State Fused Contact Closure.
3. Fault Output; Normally Open and Closed Relay Contacts 125 Volts AC/DC 1A Maximum.
4. 4 Phase Pedestrian Push Button Power Output; Nominal 22 Volts DC, Short Circuit Protected – Auto Recovering.
5. General Purpose Inputs; 10 – 36 Volts AC/DC Peak 10mA Maximum, Optically Isolated.

C Construction

Install the audible pedestrian push button system as a complete unit per manufacturer installation requirements and install pedestrian push button sign onto push button assembly.

D Measurement

The department will measure Furnish and Install Accessible Pedestrian Push Button System at Wisconsin Ave & Honey Creek Pkwy by each individual unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.63	Furnish and Install Accessible Pedestrian Push Button System at Wisconsin Ave & Honey Creek Pkwy	EACH

Payment is full compensation for furnishing and installing all APS and pedestrian push button sign materials; and for cleaning up and properly disposing of waste.

99. Furnish and Install Emergency Vehicle Preemption System at Wisconsin Ave & Honey Creek Pkwy, Item SPV.0060.64.

A Description

This special provision describes 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 Tomar DETOC21-1IC-W detectors with integrated white confirmation LED. This equipment shall be furnished and installed by the contractor.

EVP Detector Cable will be paid for separately under Standard Pay Item 655.0900 Traffic Signal EVP Detector Cable.

Detectors shall be mounted on the mast arms and signal poles as shown on the Plans.

The traffic signal mast arms and poles shall be drilled and tapped to accommodate the mounting of the detector units as shown in the Plans. The installation method shall be approved by the village or their consultant who maintains their signal systems.

In the event, at installation, a noticeable obstruction is present in line with the detector, the contractor shall be obligated to advise the engineer before installation.

Unless otherwise directed by the village, 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.

The EVP detector cables shall be routed to the controller. Each lead shall be appropriately marked as to which street or avenue it is associated. The contractor will perform all terminations inside the cabinet.

The EVP as specified and shown in the Plans shall be complete in place, tested, and in full operation.

C Construction

Install the EVP detector heads with confirmation lights and mounting brackets as shown on the plans. The city will determine the exact location to ensure that the installation does not create a sight obstruction. The contractor will terminate the EVP cable ends and install the discriminators and card rack in the cabinet.

D Measurement

The department will measure Furnish and Install Emergency Vehicle Preemption System at Wisconsin Ave & Honey Creek Pkwy by each individual unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.64	Furnish and Install Emergency Vehicle Preemption System at Wisconsin Ave & Honey Creek Pkwy	EACH

Payment shall be full compensation for furnishing and installing the EVP Detector on signal poles or mast arms as shown on the plans, including extensions to poles if required; for aiming the detector; and for testing installing the EVP card in the cabinet and setting up the system.

100. Battery Backup System for Traffic Intersection at Wisconsin Ave & Honey Creek Pkwy, Item SPV.0060.65.

A Description

This special provision describes furnishing and installing a Field Hardened Battery Backup System and fully equipped cabinet to provide a battery back-up system (BBS) for traffic signal control applications at the intersection of Wisconsin Ave & Honey Creek Pkwy.

B Materials

B.1 General

This specification establishes the minimum requirements for a complete emergency battery back-up system for use at traffic signals utilizing Light Emitting Diodes (LED) signals and pedestrian heads.

The Battery Back-up System (BBS) shall include, but not be limited to the following:

1. UPS with Inverter, Charger, Tap Switching Transformer and Internal Power Transfer Switch
2. Automatic / Manual Bypass Transfer Switch unit
3. Batteries
4. Battery Management System
5. Cabinet
6. Mounting hardware
7. Wiring

The BBS shall provide reliable emergency power to a traffic signal in the event of a power failure or interruption.

B.2 Operation

The BBS shall provide the following operational modes when operating on battery power:

1. Full operation of all traffic signal devices
2. Flash operation
3. Combination of full and flash operation

The BBS shall provide a minimum run time of 8.0 hours of full time operation with a 450-watt load. The minimum battery size requirement is listed in section 7.0, Battery Type.

The BBS shall be compatible with Model 332, 336, and 337 cabinets; the ITS cabinet; model 170 and 2070 controllers and any NEMA style cabinet and enclosures; the advanced transportation controller; and all cabinet components for full time operation.

The BBS shall provide a minimum of 1100W/1100VA@25°C active output capacity with 83 percent minimum inverter efficiency with 30% minimum loading.

When operating in backup mode, the BBS output shall be 120VAC ± 2%, pure sine wave output, ≤3%THD, 60Hz ± 0.3 Hz.

The BBS DC system voltage shall be 48VDC nominal.

The maximum transfer time allowed, from disruption of normal utility line voltage to stabilized inverter line voltage from batteries, shall be 5 milliseconds (ms). The same maximum allowable time shall also apply when switching from the inverter line voltage to utility-line voltage. Transfers to and from battery operation shall not interfere with the operation of the other equipment in the intersection.

The BBS and all components shall operate without performance degradation over a temperature range of -40°C (-40°F) to +74°C (+165°F) with a maximum load of 70% of rated output of the BBS inverter. The BBS feedback level shall be tested and certified to Electrical Standards UL 1778 and CSA 107.3. The BBS shall have surge protection compliant with IEEE/ANSI C.62.41 Cat. A and B.

The BBS system shall have a Mean-Time-Before-Failure (MTBF) of 174,955 hours at a temperature of 25ºC (77ºF) and 103,030 hours at a temperature of 50ºC (122ºF) per Telcordia SR-232, 100% duty cycle, full load.

The BBS shall be easily installed, replaced, or removed by using easily removable cables for AC input, AC output, DC input, external transfer control/alarm and battery temperature sense.

The AC input and output shall hard wired connections.

The DC connection shall be a recessed one-piece Anderson Style connector rated to handle the maximum DC current required by the inverter while running on batteries.

The battery temperature probe connection inputs shall be panel-mounted Telco style connector. In the event of inverter/charger failure, battery failure or complete battery discharge, the automatic bypass transfer switch shall revert to Normally Closed (NC) (de-energized) state, where utility line power is connected to the cabinet.

The BBS Inverter Module shall be able to shut down in order to protect against internal damage in the event of an overload at the output. The Inverter shall support an overload up to 115% for 2 minutes and then turn off the inverter output. The fault recovers when the overload is removed and line power returns.

The BBS shall provide a (2) time-of-day schedule settings programmable by the user.

1. The time-of-day schedule shall allow the user to program schedule operational modes as required, per intersection.
2. The BBS time-of-day function when programmed shall automatically change operational modes based on the time-of-day schedule. Operational modes shall be Red Flash or Full Operation.
3. The BBS shall not switch from Flash Operation to Full Operation mode when the remaining battery capacity is ≤40 percent.

The BBS shall prevent a malfunction feedback to the cabinet or from feeding back to the utility service.

In the event of BBS failure (inverter/charger or battery) or complete battery discharge, the internal power transfer relay shall revert to Normally Closed (de-energized) state and provide utility power to the intersection when utility line power is available to the cabinet.

The BBS shall initiate an automatic shutdown when battery output reaches 42.0VDC.

The BBS shall be equipped with an integral system to prevent the battery from destructive discharge or overcharge.

B.3 Automatic Bypass Transfer Switch

The BBS shall include an Automatic/Manual Transfer Switch rated at 120VAC/30 amps.

The Automatic Bypass Transfer Switch shall be a combination automatic/manual bypass switch. Placing the bypass switch in the “Bypass” mode shall transfer the intersection load from the UPS output directly to commercial power. AC commercial power must still be available to the UPS input, allowing the UPS to keep the batteries charged. An Inverter Input breaker shall be provided and located on the Bypass Switch so to shut off commercial power to the UPS input, allowing safely disconnecting and removing the inverter. With the inverter turned off, the batteries can be safely disconnected from the system.

The Automatic Bypass Transfer Switch shall include a bypass indicator light that automatically notifies the user when the Manual bypass switch is in Bypass position. The indicator light shall be illuminated when in UPS mode.

The Automatic Transfer Switch shall have an optional bypass status relay with normally open, dry contacts that automatically close when the Manual bypass switch is in Bypass position.

The manual bypass switch and the automatic transfer relay shall be integrated together within the Automatic Bypass Transfer Switch allowing the manual bypass switch to be rated at 15 Amp and to be integrated with the bypass indicator light.

The Automatic Bypass Transfer Switch shall have terminal blocks capable of accepting #6 AWG wiring for the AC input and output with #10 AWG from the Automatic Bypass Transfer Switch to inverter/charger module.

B.4 Functionality

The BBS shall be Double Buck/Double Boost – Line-Interactive, True UPS.

1. The Double Buck/Double Boost mode shall have a minimum range of 85 - 175 VAC.
2. There shall not be any user definable transfer set points for the buck boost mode.
3. Whenever AVR mode is selected the output of the system shall be regulated between 108-130VAC. When the output of the system can no longer be maintained with this range, the BBS shall transfer to Backup Mode.
4. The BBS shall be equipped with an AC Input circuit breaker that protects both the UPS and the loads connected to the output. Should the AC Input breaker on the UPS trip, it shall allow the UPS to go to inverter mode to power the intersection off of batteries. Should an overload condition still exist when the inverter is energized the inverter will revert to its internal electronic protection, preventing damage to the inverter due to the overload or short circuit condition, on the output. Once this overload condition is cleared the inverter will energize and power the intersection utilizing the available battery power. If the condition does not clear itself, the inverter will stay in the standby mode until manually cleared by a technician.
5. The BBS shall have a flush mounted Battery circuit breaker installed on the front panel of the BBS inverter module.

The BBS shall have a user definable line qualify time. The user shall be able to select a minimum of six possible settings. The settings shall be 3, 10, 20, 30, 40 and 50 seconds. The default line qualify time shall be 3 seconds.

The BBS shall have an integral charger that is compatible with Gel and AGM battery topology. The charger shall be an intelligent charger with control systems that automatically incorporates bulk, absorption and float charging modes.

1. The integral intelligent charger shall use temperature compensation. The charging system shall compensate over a range of 2.5 - 6.0mV/°C per cell, user adjustable when required.
2. A temperature probe which plugs into the front panel of the BBS shall be used to monitor the internal temperature of the batteries. The Temperature sensor shall be 2 meter in length, external to the inverter/charger module and taped to the side of a center battery within the battery string.
3. The batteries shall not be recharged whenever the battery temperature exceeds 50°C (122°F).

4. The recharge time for the batteries from “protective low-cutoff” to 90 percent or more of full charge capacity shall not exceed 2-4 hours, subject to temperature compensation. The BBS charger shall be capable of providing 15 amps at 54VDC.

B.5 User Interfaces and Displays

The BBS inverter/charger unit shall include a backlit LCD display for viewing all status and configuration information. The screen shall be easily viewable in both bright sunlight and in darkness.

The screen shall be large enough to display the following information with the use of menu scrolling buttons to read required information. All active readings shall be real time.

i. Operating Mode (Line, Standby, Backup, Buck / Boost)
ii. Utility input voltage
iii. BBS output voltage and current
iv. Battery Temperature
v. Input Frequency
vi. Output Power
vii. Battery Voltage
viii. Charger Current
ix. Shed Timer Relays time to activation
x. Ethernet MAC Address and IP Address
xi. Accumulated output power in kW hours
xii. Battery Runtime Remaining
xiii. Unit Serial number
xiv. Unit Firmware Version
xv. Any alarms and faults
xvi. Keypad

The BBS inverter/charger unit shall include a keypad for navigating system information.

The BBS shall be provided with a web-based-interface for user configuration and management through a web browser.

The BBS shall allow the user to do the following through the web browser:

i. View Logs.
ii. Change modes of operation.
iii. Configure email alarms.
iv. Adjust line qualify time.
v. Program relay contacts.
vi. Configure network parameters.
vii. Inverter/charger firmware to be upgradeable remotely via Ethernet.
viii. Communication module firmware upgradeable remotely.

The BBS shall have discrete status LED indications on the front of the inverter/charger. Green Output LED shall be ON any time that the output of the BBS is in normal mode. When the BBS output is either in Backup Mode or AVR Modes the LED will flash On and Off. Red Fault LED shall be Solid On any time that there are any faults in the system. Red Flashing Alarm LED shall Flash On and Off any time that there are any alarms in the system.

The BBS shall maintain an event log containing a minimum of 200 of the most recent events recorded by the BBS. These events shall be down loadable remotely via Ethernet and automatically reported to the central monitoring software. The Events Log shall be date and time stamped.

The BBS shall display and log the following events, alarms, and faults.

i. Operating Mode
ii. Weak Battery
iii. Overload
iv. High and Low Temperatures
v. User Input, S2 is shorted
vi. Line Frequency out of specifications
vii. No temperature probe
viii. Low Battery
ix. Battery Breaker Open
x. BBS is performing a Self-Test
xi. Fan Fail
xii. Incorrect Firmware
xiii. AC Input Breaker Open
xiv. Short Circuit
xv. Output Voltage High
xvi. Output Voltage Low
xvii. Battery Voltage High
xviii. Battery Voltage Low
xix. Isolation Relay Fail
xx. Temperature High
xxi. Counters

The BBS shall keep track of the following:

i. The number of times that the unit was in Backup Mode.
ii. The accumulated number of hours and minutes that the unit has operated in Backup mode since the last reset.

The BBS shall provide the user six programmable dry relay contacts and one 48VDC relay contact. As a minimum, the programmable options shall be On Battery, Low Battery, Timer, Alarm, Fault, and Off. The BBS shall also have three input dry relay contacts. BBS Self-Test, User Alarm, and BBS Shutdown.

The relay contacts shall be made available on the front panel of the BBS via 6, 3 position plug-in terminal blocks with screw down wiring connections.

Each relay, C-1 through C-5 shall have their own common and their own set of normally open (NO) and normally closed (NC) terminals. The terminals for each relay shall be oriented as NO-C-NC on the terminal block. C-6 shall provide continuous 48 VDC voltage for powering of enclosure DC fan.

The contacts on the terminal block shall be labeled 1-18, left to right. Additionally, each set of contact shall be labeled with the NO-C-NC designation, as well as C1 to C6 from left to right. Printed labels noting all alarms and faults shall be provided with the BBS Inverter/Charger to be installed when required.

1. The relay contacts shall be rated at a minimum of 1 amp @ 250 VAC.
2. The dry relay contacts that are configured for “on battery” shall only energize when the Inverter is operating in Backup Mode.
3. The BBS shall include a timer that will energize the “timer” configured dry relay contact after the user configured time has elapsed. The timer is started when the BBS enters Backup Mode. The user shall be able to configure the timer to the required time. The format shall be Hours, Minutes, Seconds.

4. The BBS shall have an adjustable low battery relay setting. This setting shall be adjustable so that the user can set the point at which the low battery relay contact is energized.

B.6 Communications

The BBS shall be equipped with an industry standard RS-232 serial connection for user configuration and management. The serial port shall be an EIA-232 (DB9-Female) connector.

The BBS shall have an internal Ethernet communication interface for user configuration and management. The Ethernet Port shall be an RJ-45, EIA 568B Pin Out Connector.

The BBS shall include remote monitoring and alarms transmission capabilities through the Ethernet RJ-45 IP Addressable Port, using SNMP protocol. System shall have the capability of notifying Operations, Maintenance or TMC via e-mail of any alarms, faults or events, user selectable. E-mail set up must allow for different levels of notifications based on the criticalness of the alarms. Email notifications shall support 6 different users.

All BBS configuration and System menus shall be accessible and programmable from the RS-232 and Ethernet Port. The BBS shall support TCP and UDP over IP protocol communications. The BBS shall support FTP, Telnet, and HTTP. The BBS shall be SNMP compliant.

B.7 Batteries

The battery shall be comprised of extreme temperature, float cycle, GEL VRLA (Valve Regulated Lead Acid). Individual batteries shall meet the following specifications:

1. Voltage Rating: 12V
2. Amp-hour rating: 109 AH, at the 20-hour rate, to 1.75 Volts per cell, minimum battery rating. Larger AH batteries are acceptable providing they do not exceed the group size listed below.
3. Group size: Case 31

Batteries shall be easily replaced and commercially available off the shelf.

Batteries shall provide 100% runtime capacity out-of-box. Each battery must meet its specification without the requirement of cycling upon initial installation and after the initial 24-hour top off charge.

Batteries used for the BBS shall consist of 4 batteries configured for a 48 VDC battery buss system.

The battery system shall consist of one or more strings of extreme temperature; float cycle GEL VRLA (Valve Regulated Lead Acid) batteries. Batteries shall be certified to operate at extreme temperatures from –40°C to +71°C.

The batteries shall have maintenance-free threaded insert terminals eliminating annual torqueing. Battery terminals that require annual torqueing of each post connection shall not be permitted.

An integral lifting handle shall be provided on the batteries for ease of removal/installation.

The BBS equipment and batteries shall be easily replaced and shall not require any special tools for installation.

The BBS inverter and batteries shall be hot swappable. There shall be no disruption to the Traffic Signal when removing the inverter or batteries for maintenance.

All inverter and battery connections shall be of the quick disconnect type for ease of maintenance.

B.8 Cabinet

Furnish a non-ground mounted, aluminum, outdoor rated, NEMA type 3R traffic control cabinet of minimum size 24-inch-wide X 41-inch high X 15-inch deep and maximum size 24-inch wide X 51-inch high X 68-inch deep. The size of the cabinet shall be of sufficient size to provide ample space for housing all equipment specified herein, all equipment furnished with the BBS. Provide a minimum clear space of 3-inches in the front of a shelf mounted UPS, and minimum 1-inch on both sides, back, and top of the UPS. Slope the top of the cabinet towards the door with a 2-inch drip lip over the door and cabinet front. All sheet metal parts shall be 0.125-inch-thick aluminum of type 5052-H32. All seams shall be continuously welded.

Provide an access door on the front of the cabinet with a continuous hinge, door latch assembly with 3-point locking mechanism, #2 Corbin lock, dust cap, and two #2 keys. The door shall have a closed-cell neoprene gasket on all four edges. The continuous hinge shall be heavy gauge aluminum with ¼-inch diameter stainless steel hinge pin. Secure hinge with ¼-inch X 20 TPI stainless steel carriage bolts and stainless-steel nylon locking nuts. The 3-point locking system shall have ½-inch X ¼-inch required latch

bars and nylon rollers. Door handle shall be a ¾-inch solid stainless-steel inward-turning handle with provisions for padlocking. Provide a steel rod door holder. All hardware shall be stainless steel, unless otherwise specified.

Provide ventilation louvers on the front of the cabinet of sufficient open area to provide air flow for the cabinet fan. Provide a ½-inch air filter over all the louver area. Air filter shall slide into a channel and shall be easily removed and replaced.

Provide installed a minimum of three full width and depth, aluminum shelves sufficient to hold all equipment furnished with the BBS. All shelves shall have neoprene (or similar material) pads. The shelves shall not be the swing out type. The shelf locations shall be adjustable to within 6 inches of the top of the cabinet and 12 inches from the bottom of the cabinet. The shelves shall be capable of supporting up to 150 pounds.

1. The Inverter/Charger Unit shall be shelf or rack mounted on a standard EIA19” rack.
2. The Automatic Transfer switch shall be mounted on EIA 19” Rail.
3. All interconnect wiring shall be provided and shall be UL Style 1015 CSA TEW.

All necessary installation hardware (bolts, fasteners, washers, shelves, racks, etc.) shall be included.

The external cabinet shall be capable of housing batteries up to a group 31 size, inverter/charger power module, automatic transfer switch, control panels, wiring, wiring harnesses, and all other ancillary equipment.

The following options shall be available for the cabinet:

1. On-Battery lamp mounted externally on the top of the cabinet that illuminates when the BBX is operating in inverter mode.
2. Battery Heater Mats to increase battery capacity in cold climates.
3. Receptacle plate assembly that mounts on the transfer switch panel to provide utility power to the battery heater mats.
4. Automatic Generator Transfer switch that senses a generator is connected and automatically switches to the generator source.
5. Internal lamp with door push-button switch to illuminate the interior of the cabinet.
6. Status monitoring dry contacts for the Automatic Transfer Switch and the Generator Transfer Switch.

B.9 Maintenance

The BBS shall provide voltmeter standard probe input-jacks (+) and (-) to read the exact battery voltage drop at the inverter input.

The BBS Inverter Module shall be programmable to perform automatic self-testing, programmed in weekly intervals and programmed by the user to meet their specific requirements or manufacturer’s recommendation. During self-test the BBS Inverter Module shall identify a weak battery or multiple batteries in the string that have reached a weak state and notify maintenance by initiating a Weak Battery Alarm.

B.10 Remote Battery Monitoring

A remote battery monitor system (RBMS) shall be permanently installed into the UPS/Battery cabinet to monitor the four UPS batteries (4-12V battery blocks). The RBMS shall have the ability to monitor, read and record both the battery string and individual battery voltages, admittance (internal battery resistance), individual battery temperatures and to provide a real-time evaluation of the battery bank health.

The RBMS shall have a built-in web interface for communications over Ethernet. The device shall be hardened and operate at a temperature range of -40C to +65C. The device shall include individual 12-volt battery sensors and operate in the range of -40C to +80C. Communications shall be SNMP via TCP/IP.

The RBMS shall include software to automatically poll each intersection, up to 100 per software program, reading individual battery voltage, admittance and temperature, confirming each is within its user programmable parameters. The system shall have the ability to program the intervals as to when each reading is taken, by days, weeks or months. The software shall be provided as part of the system cost.

The RBMS shall also perform as a battery balancer, continuously monitoring all batteries in the string and to interface with the UPSs charger voltage/current to keep the batteries equal with all batteries within the

battery string. The RBMS shall allow for any single 12V battery within the battery string to be replaced without replacing all batteries in the string during the battery warranty period.

B.11 Warranty

The BBS System shall include a five-year manufacturer's warranty on parts and labor on the entire BBS System, including batteries, to the Agency when utilizing the BBS Manufacturers own designed enclosure, meeting the above cabinet specifications.

Should the agency decide not to use the enclosure provided by the BBS Manufacturer, the manufacturer shall provide a three-year warranty on parts and labor on the BBS Inverter Module only.

The BBS Manufacturer shall provide a 5-year unconditional full replacement warranty for every battery sold to the Agency with the BBS under this specification. Under the warranty time period, the battery must provide a minimum of 70% of its original capacity, otherwise it will be considered to be non-compliant to the warranty and replaced at no cost to the Agency by the BBS manufacturer.

B.12 Vendor Support

The BBS manufacturer shall provide at no charge, a toll-free technical support phone number. The toll-free phone number shall be included in the BBS manual.

Equipment manuals shall be provided for each BBS cabinet. Equipment manuals shall include installation, operation, programming, maintenance and troubleshooting.

B.13 Quality Assurance

Each BBS shall be manufactured according to a written manufacturer's Quality Assurance program. The QA program shall include, as a minimum, specific design and production QA procedures.

The BBS Power Module manufacturer shall be ISO 9001or ISO 9002 certified. The BBS Power Module shall be Telcordia SR-232 certified.

The manufacturer shall be certified to carry out the CSA and UL standards testing on the BBS system.

B.14 Cabinet Equipment

Provide and install a power distribution terminal block for wire connections, wire size up to #8AWG, from the traffic signal cabinet. Locate the block on one side of the UPS cabinet between one and two feet from the top of the cabinet. Provide a generator connection outlet installed on one side of the cabinet placement shall not interfere with the installation or use of batteries, UPS, or any switches.

Ventilate the UPS cabinet by means of an installed 120 VAC, 60HZ, tube axial compact type fan. The fan's free delivery airflow shall be greater than 2.83 cubic meters per minute. The magnetic field of the fan motor shall not affect the performance of control equipment. The fan bearings shall operate freely. The fan unit shall not crack, creep, warp, or have bearing failure within a 7-year duty cycle. The maximum noise level shall be less than 40 decibels. The fan unit shall be corrosion resistant. The fan shall be thermostatically controlled. Thermostat shall be set to manufacturer required settings. The fan shall be fused.

Provide a temperature sensor bonded to the pad, electrical power cord, and a thermal fuse in each power cord.

Provide a battery voltage balancer, battery cable for each battery, and interface cable of the size compatible with the battery string.

In all controller cabinets and auxiliary cabinets, the AC common, the logic ground, and the chassis ground shall be isolated from each other as detailed by NEMA Standard.

Each 120 VAC circuit that serves an inductive device, such as a fan motor or a mechanical relay, shall have a suppressor 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.

C Construction

Install Battery Backup System on the side of the traffic controller cabinet per manufactures instructions. The UPS enclosure must not interfere with the opening of the traffic cabinet door.

D Measurement

The department will measure Battery Backup System for Traffic Intersection at Wisconsin Ave & Honey Creek Pkwy by each individual unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.65	Battery Backup System for Traffic Intersection at Wisconsin Ave & Honey Creek Pkwy	EACH

Payment is full compensation for furnishing and installing the battery backup system with cabinet, fittings as are necessary to assure that the battery backup system will perform the said functions.

101. Non-Intrusive Vehicle Detection System, Item SPV.0060.66.

A Description

This specification defines the characteristics of and requirements for an Artificial Intelligence Tracked Entity Detection System (AI-TEDS). The system shall be the NoTraffic Vehicle Detection System.

The AI-TEDS detects traffic using fused video and radar sensors, object tracking, and machine learning algorithms, and incorporates a roadside unit (RSU) for V2X communications. It provides a secure cloud platform with a variety of ITS apps including those for turning movement counts, timing optimization, signal performance measures, safety analytics, priority/preemption, cabinet monitoring, alerting/notifications, and connected vehicle.

The AI-TEDS includes cellular data for remote connectivity and is backed by 24/7/365 live support and monitoring.

B Materials

All equipment and materials shall be new. All fasteners exposed to the elements shall be Type 304 or Type 316 passivated stainless steel. Sensor Units and Control Units shall have permanent labels that bear the name of the AI-TEDS manufacturer (“Manufacturer”), description, part number, date of manufacture, and serial number.

All equipment shall be tested by an independent third-party laboratory for conformance with NEMA TS 2 environmental requirements per the following procedures:

- NEMA TS 2 Section 2.2.7: Transients, Temperature, Voltage, and Humidity (excepting Test A)
- NEMA TS 2 Section 2.2.8: Vibration
- NEMA TS 2 Section 2.2.9: Shock/Impact

B.1 Hardware

B.1.1 Sensor Units

The AI-TEDS shall be supplied with one Sensor Unit per approach or as otherwise indicated on the contract documents. Sensor Units shall incorporate the traffic detection sensors comprising a 1080p HD video camera and 60 GHz radar, a Graphics Processing Unit (GPU), an Ethernet communications receptacle (8P8C), and a Wi-Fi radio. The Sensor Unit enclosure shall conform to IP-67 and MIL-STD-810G.

The Sensor Unit shall operate over a nominal input voltage range of 90 to 264 VAC at 50 or 60 Hz.

One variant of the Sensor Unit shall incorporate a roadside unit (RSU) comprising a V2X communications chipset with support for DSRC and C-V2X, as well as two omnidirectional V2X antennas. This variant of the Sensor Unit shall comply with all applicable FCC regulations for RSUs.

B.1.2 Control Unit

The AI-TEDS shall be supplied with a Control Unit. The Control Unit shall incorporate a Graphics Processing Unit (GPU), two Ethernet communications receptacles (8P8C), a Wi-Fi radio, a synchronous serial port that conforms to NEMA TS 2 Section 3.3.1 (Port 1), and a front panel user interface comprising an LCD and buttons.

B.1.3 Main Power & Communications Assembly

The AI-TEDS shall be supplied with a Main Power & Communications Assembly. The Main Power & Communications Assembly shall comprise a DIN rail to which the following components are mounted:

- Terminal blocks for utility AC power conductors

- Power supply for Control Unit
- Two cellular modems
- Firewall router

B.1.4 Sensor Unit Power Assembly

The AI-TEDS may be supplied with a Sensor Unit Power Assembly where power for Sensor Units is sourced from the transportation field cabinet. The Sensor Unit Power Assembly shall comprise a DIN rail to which the following components are mounted:

- Terminal blocks
- Web relay
- Surge suppressor and circuit breakers for Sensor Unit AC power conductors

B.1.5 Power

The AI-TEDS shall be powered from the traffic signal cabinet. Power cables without splices shall be routed to each unit providing adequate slack in the traffic signal cabinet, pull boxes and monotube pole.

B.1.6 Antenna

The AI-TEDS shall be supplied with a nine-in-one Antenna along with all material and hardware required to securely mount the Antenna to the transportation field cabinet. A 7/8-inch diameter hole shall be made to the top of the cabinet to mount the antenna on the top of the cabinet. It shall be sealed using an approved method by the engineer. The Antenna shall facilitate wireless communications for all AI-TEDS equipment in the transportation field cabinet including Wi-Fi, cellular, and GPS.

B.2 Software

B.2.1 Sensor Unit Software

The Sensor Unit shall include embedded software in non-volatile storage (“Sensor Unit Software”). The Sensor Unit Software shall be remotely upgradable via over-the-air (OTA) updates.

B.2.2 Control Unit Software

The Control Unit shall include embedded software in non-volatile storage (“Control Unit Software”). The Control Unit Software shall be remotely upgradable via over-the-air (OTA) updates.

The Control Unit Software shall have a browser user interface that supports viewing and editing all real-time and configuration data supported by the AI-TEDS. The browser user interface shall be compatible with the current versions of browsers based on the WebKit (Safari), Blink (Chrome, Edge), and Gecko (Firefox) rendering engines.

Access to the Control Unit Software shall be restricted to designated users. Users shall authenticate with the Control Unit Software via account credentials consisting of a username and password.

B.2.3 Cloud Software

The AI-TEDS shall include software-as-a-service (“Cloud Software”) that is hosted by the Manufacturer on a secure cloud platform. The Cloud Software shall be accessible via an internet domain name that is unique to the Infrastructure Owner/Operator (IOO). The Cloud Software shall be hosted in a discrete instance (“Cloud Software Hosted Instance”) that is unique to the IOO. The IOO’s Cloud Software Hosted Instance shall not contain data for any other IOO’s AI-TEDS, and no data for the IOO’s AI-TEDSs shall reside on any other IOO’s Cloud Software Hosted Instance.

The Cloud Software shall have a browser user interface that supports viewing and editing all real-time, historical, and configuration data supported by the AI-TEDS. The browser user interface shall be compatible with the current versions of browsers based on the WebKit (Safari), Blink (Chrome, Edge), and Gecko (Firefox) rendering engines.

Access to the Cloud Software shall be restricted to designed users. Users shall authenticate with the Cloud Software via account credentials consisting of a username and password. The Cloud Software shall support single sign on (SSO), allowing users to sign on with their existing IOO credentials.

The AI-TEDS shall include five years of access to and hosting of the Cloud Software.

B.4 Functionality

The AI-TEDS shall provide the following functionality.

B.4.1 Detection

The AI-TEDS shall provide stop bar and advance detection of traffic in a manner that is compatible with transportation field cabinets that conform to Caltrans TEES (“Model 33x”), NEMA TS 1, NEMA TS 2, ITS Cabinet, and ATC Cabinet (ATC 5301), as well as traffic signal controllers that conform to NTCIP 1202 and ATC 5201.

The AI-TEDS shall support at least 64 detection zones and report the presence of road users in these zones via detector inputs to a traffic signal controller. The AI-TEDS shall support the maximal quantity of detector inputs as are supported by the transportation field cabinet system. When a detection zone is occupied by the selected road user class(es), the associated detector input shall be ON; the detector input shall be OFF at all other times.

All processing of raw sensor data and computations performed thereon to detect, classify, and track road users shall occur in the Sensor Unit. The Sensor Unit shall transmit post-processed road user metadata to the Control Unit.

Detection shall be at least 98% accurate under typical environmental conditions. To substantiate detection accuracy, the Manufacturer shall provide at least four test reports, each from a different location.

The test reports shall be accompanied by a letter from a licensed professional engineer employed by the Manufacturer that certifies the accuracy of the test reports and any claims made therein, and de- scribes the methodologies used to conduct the tests and derive the results.

Sensor Fusion

The AI-TEDS shall automatically choose which data to use from the video sensor and which data to use from the radar sensor to achieve the most accurate detection for the given environmental conditions and detection zones. Detection zone configuration shall be performed via a single, unified interface per Sensor Unit and shall not require separate setup or configuration for individual sensors.

Upon a malfunction of either sensor, detection shall be provided by the remaining functional sensor.

Classification

The AI-TEDS shall classify each detected road user as one of six classes: automobile, truck, bus, motorcycle, bicycle, and pedestrian.

Tracking

The AI-TEDS shall track the position (lane, phase, and distance to stop bar) and trajectory (direction and speed) of each detected road user.

Failsafe Operation

Upon any anomaly that affects the ability of the AI-TEDS to provide accurate detection, including but not limited to equipment or communications failures, the AI-TEDS shall default to a safe condition via constant calls or other any other appropriate mechanism supported by the transportation field cabinet system.

B.4.2 Turning Movement Counts

The AI-TEDS shall store a count of the number of road users who turn right, proceed straight through, turn left, make a U-turn, and cross in the crosswalk (“Turning Movement Counts”).

The AI-TES shall provide a graphical user interface (GUI) in the Cloud Software for viewing historical Turning Movement Count data. The GUI shall support filtering Turning Movement Count data by date/time for either a single period or two periods (for side-by-side comparisons), by maneuver (left, through, right, etc.) and by approach. The GUI shall support downloads of Turning Movement Count data in CSV and PDF formats.

B.4.3 Signal Performance Measures

The AI-TEDS shall provide industry standard automated traffic signal performance measures

(“ATSPMs”). ATSPMs shall be automatically calculated upon commissioning of the AI-TEDS and shall not require additional setup or configuration by the user. ATSPMs shall be supported for all makes and models of traffic signal controllers, including those that do not natively support high-resolution data logging.

The AI-TEDS shall provide a GUI in the Cloud Software for viewing historical ATSPM data. The GUI shall support filtering ATSPM data by date/time for either a single period or two periods (for side-by- side

comparisons) and by road user class (car, truck, bus, etc.). The GUI shall support downloads of ATSPM data in CSV and PDF formats.

Maximum Delay

The ATSPMs shall include maximum delay. Maximum delay shall be calculated as the time difference between the vehicle's arrival during the red interval and the time that the phase turned green.

Average Delay

The ATSPMs shall include average delay. Average delay shall be calculated as the sum of the time between the arrival of all vehicles during red and the time the phase turns green, divided by the number of vehicles.

Pedestrian Delay

The ATSPMs shall include pedestrian delay. Pedestrian delay shall be calculated as the time difference between the time that the pedestrian call was received (pedestrian button pushed) and the time that the pedestrian phase was served (beginning of the Walk interval).

Coordination Analysis

The ATSPMs shall include arrivals on green and arrivals on red. Arrivals on green and arrivals on red shall be calculated by tracking approaching vehicles and associating their arrival at the intersection with the signal state. Arrivals on green and arrivals on red shall be reported in percentages for each on a per-cycle basis.

Split Analysis

The ATSPMs shall include split monitor analytics. Split monitor analytics shall comprise the duration that each phase was On during the cycle and the reason that the phase terminated (gap out, max out, or force off).

Volume Analysis

The ATSPMs shall include approach volume analysis. Approach volume analysis shall comprise the number of vehicles crossing the intersection during a user-specified period and the directional distribution factor (D-factor) for each approach (the ratio of one direction to the total of two opposing directions of traffic traveling during a selected hour), expressed as a percentage.

B.4.4 Abnormality Detection

The AI-TEDS shall provide alerts for abnormalities that disrupt the normal flow of traffic, including, but not limited to, crashes, temporary road work, and disabled vehicles. The AI-TEDS shall be capable of being remotely updated to add support for new types of abnormalities.

B.4.5 Intersection Safety Insights

The AI-TEDS shall count road users who enter the intersection (cross the stop line) during the Yellow Change Interval, Red Clearance Interval, and Full Red/Phase Off.

The AI-TEDS may provide a GUI in the Cloud Software for viewing historical stop line crossing data ("Intersection Safety Insights" or "ISI"). The GUI shall support filtering ISI data by date/time for either a single period or two periods (for side-by-side comparisons) and by road user class (car, truck, bus, etc.).

The GUI shall support downloads of ISI data in CSV and PDF formats. The GUI shall provide tabular and graphical views of ISI data and a video clip of each event.

B.4.6 Video Streaming

The AI-TEDS shall provide high-definition RTSP video streams encoded using H.264 and H.265. There shall be one stream for each Sensor Unit and one stream that combines the video from four Sensor Units (quad view).

Video streams shall display the state of the traffic signals ("Signal State Icons"). Signal State Icons shall be located on the downstream side of the stop line at each approach lane.

Video streams shall display phase numbers ("Phase Number Icons"). Phase Number Icons shall be located on the downstream side of the stop line at each approach lane.

Video streams shall display detectors ("Detection Zones"). Detection Zones shall be displayed using one of two colors depending on whether the zone is occupied.

B.4.7 Cellular Data

The AI-TEDS shall include 10 years of cellular data connectivity for the Control Unit and Sensor Units.**B.5 Documentation**

The AI-TEDS shall include user manuals with installation, operations, troubleshooting, and maintenance information for the AI-TEDS software and hardware. User manuals shall be provided as PDFs or online web pages.

B.6 Service and Support

B.6.1 Installation Support

The Manufacturer shall provide remote turn-on assistance by phone during normal business hours,

Monday through Friday. The manufacturer or the manufacturer's third-party representative shall provide on-site turn-on assistance, Monday through Friday, within five business days of being requested.

B.6.2 Training

The Manufacturer shall provide a maximum of two remote training sessions of a maximum of three hours each for up to 50 employees of the IOO and employees of the IOO's designated representatives. Topics shall include installation, configuration, operation, troubleshooting, and maintenance. Instructors shall be certified by the Manufacturer.

B.6.3 Monitoring

The AI-TEDS shall be monitored by the manufacturer for detection accuracy, reliability, faults, incidents, alarms, and other anomalies during all hours of the day, every day of the year (24/7/365). Monitoring personnel shall be knowledgeable in principles, practices, concepts, and theories of traffic engineering, traffic signalization, and traffic signal equipment.

The AI-TEDS shall include five years of monitoring.

B.6.4 Technical Support

The Manufacturer shall provide live 24/7/365 technical support via email and telephone. Technical support shall be actively staffed by at least one on-shift employee of the manufacturer at all times, including but not limited to weekends, overnights, and holidays; the use of technical support personnel who are on call during personal time, as well as other forms of passive, off-shift staffing, shall not fulfill this requirement.

The AI-TEDS shall include five years of technical support.

B.6.5 Software Updates

The AI-TEDS shall include five years of updates to the Sensor Unit Software, Control Unit Software, and Cloud Software.

B.7 Warranty

The manufacturer shall warrant that all manufacturer-supplied equipment and material is free from material and workmanship defects for a five-year period ("Hardware Warranty Period"). The Hardware Warranty Period shall start when the equipment is received by the IOO. During the Hardware Warranty Period, the manufacturer shall ship, at no cost to the IOO, replacements for defective equipment and material to the IOO's primary business location.

During the Hardware Warranty Period, warranty service from Manufacturer certified personnel shall be available from the Manufacturer or their designated third-party representative via telephone within four business hours of initial contact.

The Manufacturer or their designated third-party representative shall maintain an adequate inventory of parts to support maintenance and repair of the AI-TEDS.

B.8 Manufacturer Certifications

The Manufacturer of the AI-TEDS shall have SOC 2 Type II and ISO 27001 (Information Security Management) certifications.

C Construction

Install the burial grade cable, power cable, repeater board assembly (if required), pole/arm mounting bracket, extension arm and sensor unit(s) as shown on the plans (the final determination of location will

be made by the city to ensure best line of sight). The contractor shall install the detection equipment in the traffic signal control cabinet.

Install the burial grade ethernet cable to run continuously (without splices) from the traffic signal cabinet plus an additional 10 feet in the handhole or base. Leave 10 feet of cable in each pull box. If an ethernet cable run is greater than 300' from the cabinet to the camera mounting location, a repeater shall be installed, and the repeater shall be housed in a signal monotube base.

Mark each end of the lead appropriately to indicate the equipment label (i.e. VID1, VID2, etc.).

Programming will be performed by the city or city's contractor with assistance from the contractor when operation of the permanent signal begins.

Notify the city at least five working days prior to the date of programming.

D Measurement

The department will measure Non-Intrusive Vehicle Detection System by each individual unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.66	Non-Intrusive Vehicle Detection System	EACH

Payment is full compensation for furnishing and installing the Non-Intrusive Vehicle Detection System in the control cabinet and monotube arms and for all labor, tools, equipment, and incidentals necessary to complete the work.

102. Transport and Install City Furnished Poles Type 10, Item SPV.0060.68; Transport and Install City Furnished Monotube Arms 20-FT, Item SPV.0060.70; Transport and Install City Furnished Monotube Arms 25-FT, Item SPV.0060.71; Transport and Install City Furnished Luminaire Arms Steel 15-FT, Item SPV.0060.72.

A Description

This special provision describes transporting and installing city furnished luminaire arms, monotube poles and monotube arms as shown on the plans and as directed by the engineer.

B Materials

The city will furnish steel monotube poles and steel luminaire arms zinc coated according to ASTM A123. Design conforming to the edition of AASHTO design specifications and fatigue category the plans show.

The city will furnish steel monotube arms zinc coated according to ASTM A123. Design conforming to the edition of AASHTO design specifications and fatigue category the plans show.

The city will furnish monotube and luminaire arms from the QPL.

- The city will furnish a mounting device welded to the pole end of the monotube arm that allows the attachment of the arms to a pole as the plans show.
- The city will furnish stiffeners to gussets if required between the arm tube and the arm mounting device to provide adequate strength to resist side loads.
- The city will furnish a clean, uniform natural finish. No paint or other corrosion preventive maintenance coating is required.

Pick up the department furnished materials at the city's Department of Public Works Yard at 11100 W Walnut Rd, Wauwatosa, WI 53226. Notify Jessica Henderson at (414) 479-8978 and make arrangements for picking up the city furnished materials five working days prior to picking the materials up.

Provide all other needed materials in conformance with standard spec 651.2, 652.2, 653.2, 654.2, 655.2, 656.2, 657.2, 658.2 and 659.2.

C Construction

Perform work according to standard spec 651.3, 652.3, 653.3, 654.3, 655.3, 656.3, 657.3, 658.3 and 659.3 except as specified below.

D Measurement

The department will measure Transport and Install City Furnished (Equipment) as each individual pole or arm, installed and acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.68	Transport and Install City Furnished Monotube Poles Type 10	EACH
SPV.0060.70	Transport and Install City Furnished Monotube Arms 20-FT	EACH
SPV.0060.71	Transport and Install City Furnished Monotube Arms 25-FT	EACH
SPV.0060.72	Transport and Install City Furnished Luminaire Arms Steel 15-FT	EACH

Payment is full compensation for transporting and installing all materials, including all associated hardware, fittings, mounting devices, and attachments necessary to completely install the pole and arms.

103. Junction Boxes 18x6x6-Inch Special Watertight, Item SPV.0060.80.

A Description

This special provision describes furnishing and installing junction boxes in the abutment for future facilities. This work shall be according to the applicable provisions of standard spec 653 and as detailed in the plans.

B Materials

Junction boxes shall be 18x6x6-Inch and shall meet the pertinent requirement of standard spec 653.2. In addition, junction boxes shall be watertight boxes meeting NEMA Type 6P requirements.

Provide all other needed materials in conformance with standard spec 651.2, 652.2, 653.2, 654.2, 655.2, 656.2, 657.2, 658.2, and 659.2.

C Construction

The conduits and junction boxes shall be mounted at locations shown on the plans.

D Measurement

The department will measure Junction Boxes 18x6x6-Inch Special Watertight 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.0060.80	Junction Boxes 18x6x6-Inch Special Watertight	EACH

Payment is full compensation for furnishing and installing junction boxes; for furnishing all parts and fittings.

104. Salvaging Stone P-40-776, Item SPV.0060.82.

A Description

This special provision describes removing, salvaging, and storing the existing stone railings and stone veneer of Structure P-40-776. This work shall be according to the applicable provisions of standard spec 204 and as detailed in the plans.

B (Vacant)

C Construction

Remove and salvage section and pieces of the existing stone veneer and stone railings.

One area to salvage the stone is from the existing stone railings along Wisconsin Avenue. Stone from the existing railings shall be incorporated into the proposed stone facing in the new concrete parapets on the roadway facing side. Excess stones shall be incorporated into the proposed stone facing of the new abutments, wingwalls, pier, and outside face of parapet.

Another area to salvage the stone is from the vertical faces of the 4 wingwalls that are above the existing ground line. The area of salvaged stone is from the end of the wingwalls to the face of the abutment. Stone salvaged from the wingwalls may be incorporated into the proposed stone facing of the new abutments, wingwalls, pier, and outside face of parapet.

The concrete cap on the existing parapet, or any concrete replacement pieces that do not appear to be from the original construction, based on the engineer's inspection, need not be salvaged.

These stone pieces shall be removed and stored for reincorporation into the new work.

D Measurement

The department will measure Salvaging Stone P-40-776 as each individual unit of work, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.82	Salvaging Stone P-40-776	EACH

Payment is full compensation for removing, salvaging, and storing stone to be reincorporated into the work, and for disposing of pieces not utilized in the new bridge. Work associated with incorporating existing stone into the new bridge is paid for under other items.

105. Pavement Cleanup Project 2190-10-70, Item SPV.0075.01.

A Description

This special provision describes cleanup of dust and debris from pavements within and adjacent to the job site. Pavement Cleanup includes surveillance and reporting of all active haul routes.

B Materials

B.1 Pavement Cleanup

Furnish a vacuum-type street sweeper equipped with a power broom, water spray system, and a vacuum collection system.

Use vacuum equipment with a self-contained particulate collector capable of preventing discharge from the collection bin into the atmosphere.

Use a vacuum-type sweeper as the primary sweeper, except as specified in this special provision or approved by the engineer.

C Construction

C.1 Surveillance

Provide daily surveillance of active haul routes to identify if material is being tracked from the jobsite. Document the condition of the roads and all sweeping recommendations in a daily report. Submit reports to the engineer daily, including hourly metered tickets for that day's sweeping activities.

C.2 Pavement Cleanup

Keep all pavements, sidewalks, driveways, curb lanes and gutters within the project boundaries, free of dust and debris generated from all activity under the contract. Keep all pavements, sidewalks, driveways, curb lanes, and gutters adjacent to the project free of dust and debris that are caused by land disturbing, dust generating activities, as defined in the contractor's Dust Control Implementation Plan (DCIP). Provide routine sweeping of all pavements, sidewalks, driveways, curb lanes and gutters on local-street active haul routes as defined in the DCIP or as directed by the engineer. Include the following roadways for routine sweeping:

- Wisconsin Avenue
- Honey Creek Parkway
- Glenview Avenue (STH 181)
- Bluemound Road (USH 18)
- N. 76th Street
- And all other roadways approved by the department

In addition to routine sweeping, conduct sweepings as the engineer directs or approves, to eliminate dust problems that might arise during off-work hours or emergencies. Provide the engineer with a contact person available at all times to respond to requests for emergency sweeping. Coordinate with engineer to determine deadlines for responding to emergency sweeping requests and cleaning up spillage and material tracked to/from the project.

Skid steers with mechanical power brooms may only be used on sidewalks and driveways whose pavements will not support the weight of a street sweeper, unless otherwise approved by the engineer. Do not dry sweep. Ensure all broomed equipment used for sweeping has a functioning water bar.

D Measurement

The department will measure Pavement Cleanup Project by the hour, acceptably completed.

Tickets shall include:

- Date
- Company
- Operator name
- Equipment make/model
- Routes swept
- Total hours.

Total hours shall be to the nearest 0.25 hour that work under this item was performed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0075.01	Pavement Cleanup Project 2190-10-70	HRS

Payment is full compensation for daily surveillance; preparing and submitting the daily surveillance report with hourly metered tickets; mobilization; sweeping; and disposing of materials.

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106. Boulder Obstructions, Item SPV.0075.02.

A Description

A.1 General

This special provision describes removing, drilling, or coring through or otherwise clearing natural deposits and man-made subsurface obstructions when encountered during jacking, boring, or auguring procedures for trenchless utility construction.

A.2 Definitions

For excavation by jacking, boring, auguring, or trenchless methods, subsurface obstructions are defined as any objects, known/identified or unknown/unidentified man-made or naturally deposited that are encountered during jacking, boring or auguring operations for utility construction that prohibit advancement of the equipment.

Surface obstructions are defined as any objects, man-made or naturally deposited, encountered within 6 feet of the ground surface. Subsurface obstructions are defined as any obstructions that are encountered by the equipment at a depth greater than 6 feet below the ground surface.

Known obstructions are man-made obstructions that are shown or identified in the plans include materials, such as old concrete foundations or abandoned utilities. Unknown obstructions are man-made obstructions that are not shown or identified in the plans. Unknown/unidentified naturally deposited

obstructions are naturally occurring deposits such as rock, boulders, cobbles, nested cobbles and nested boulders greater than an average size of 12-inches. Unknown/unidentified naturally deposited obstructions less than an average size of 12-inches are not considered obstructions and therefore will be considered to be included in the appropriate bid item and are not applicable to the provision of this pay item.

B (Vacant)

C Construction

C.1 Submittals

For excavation by jacking, boring, auguring or trenchless methods, submit contingency plan describing methods, equipment, and procedures to be used to clear obstructions.

C.2 Obstruction Removal

Remove surface and subsurface obstructions at selected locations for construction. Use special tools and/or procedures when the contractor cannot advance the hole more than twelve (12) inches in sixty (60) minutes using conventional methods at maximum power, torque, and thrust. Other methods for obstruction removal can be employed to aid in the removal if acceptable to the engineer. Blasting is not permitted.

When a subsurface obstruction is encountered, notify the engineer in writing prior to beginning any work to remove the obstruction. Upon engineer acceptance of the notification, the contractor shall begin work according to the submitted and approved contingency plan to remove, treat, clear or otherwise make it possible for the jacking, boring, or auguring operation to advance past the obstruction(s) that impede forward progress.

If the contractor has exhausted all means of clearing the obstruction using methods delineated in the approved contingency plan, the contractor shall submit a revised plan to remove the obstruction, hereinafter referred to as the “correction plan”. Upon engineer acceptance of the correction plan, the contractor shall continue work according to the correction plan, to remove, treat, clear or otherwise make it possible for the trenchless technology operation to advance past the obstruction.

D Measurement

The department will measure Boulder Obstructions by the hour for each hour the contractor actively spends removing, coring or clearing natural deposits and man-made subsurface obstructions. A quantity of one hour will be paid upon determination that an obstruction is encountered that prevents forward progress.

Upon removal of the unknown man-made subsurface obstruction, portions of the final hour measured will be rounded up to the next whole hour. Down time spent planning for subsurface obstruction removal, time to develop a correction plan, or delays caused by the mobilization of special equipment and tools not readily available at the site will not be measured for payment.

Measurement Example		Paid Obstruction Hours
1	Equipment encounters possible obstruction. Contractor notifies engineer. Start clock.	0.00
2	Equipment does not advance 12-inches after attempting to do so for at least 60 minutes.	1.00
3	Contractor resumes work clearing obstruction the following day. Assume the obstruction is cleared in aggregate total of 1 hours and 15 minutes of time. Obstruction is identified to be a previously unknown and unidentified man-made obstruction.	2.00

Only man-made subsurface obstructions and natural deposits (rock, boulders, cobbles, nested cobbles and nested boulders) greater than an average size of 12-inches in 60 minutes will be measured for payment. Work to clear and remove surface obstructions and any natural deposits (rock, boulders, cobbles, nested cobbles and nested boulders) will not be measured separately for payment and shall be included in the applicable bid item.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0075.02	Boulder Obstructions	HRS

Payment is full compensation for removal of man-made and/or natural deposit obstructions; and for furnishing all materials, labor, equipment, additional concrete, and incidentals necessary to complete the work.

107. Concrete Curb & Gutter Integral 31-Inch, Item SPV.0090.01.

A Description

This special provision describes constructing mandatory integral concrete curb and gutter work that shall be according to the pertinent provisions of standard specification 601, the plan details and as hereinafter provided.

B Materials

Conform to standard spec 601.2.

C Construction

Conform to standard spec 601.3. Use 4% gutter cross slope unless otherwise noted in the plans.

D Measurement

The department will measure Concrete Curb & Gutter Integral 31-Inch by the linear foot, acceptably completed, measured along the flowline of the gutter.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.01	Concrete Curb & Gutter Integral 31-Inch	LF

Payment is full compensation for preparing the foundation; all special construction required at driveway entrances or curb ramps; for providing all materials, including concrete, expansion joints, and tie bars in unhardened concrete; for placing, finishing, protecting, and curing concrete; and for sawing joints.

108. Removing Existing Utility Duct Package, Item SPV.0090.02.

A Description

This special provision describes completely or partially removing existing utilities and disposing of all resulting materials according to the plans, standard specifications, Standard Specifications for Sewer and Water Construction in Wisconsin, latest edition and amendments (SSSW), and as hereinafter provided and these special provisions.

This item includes removing an existing 12 duct utility package with 9 copper cables and 3 fiber cables that are encased in concrete along the north side of Wisconsin Avenue due to conflicts with the proposed work. Prior to construction AT&T Wisconsin will remove cables from the existing conduit package, which will remain in place at the time of construction.

The item Removing Existing Utility Duct Package will only pay for removals within the following segments:

- Station 6+40 to Station 8+08
- Station 9+35 to Station 11+75

B Materials

Furnish Backfill Granular Grade 1 according to the pertinent requirements of standard spec 209 for use as backfill material as directed by the engineer.

C Construction

Perform work according to standard spec 204 and as hereinafter provided. The contractor is responsible for the safe methods and sequence of controlled removal operations. As directed by the engineer, completely remove the existing utility to the extent required to avoid interfering with new construction work.

Thoroughly clean the ends of the existing duct and plug the existing utility connections to remain with brick or concrete block masonry, or with any grade of concrete specified under standard spec 501.3.1.3, or any engineer-approved commercial grade of concrete.

Backfill all excavations or voids not occupied by other work under this contract according to standard spec 204.3.1.2. Compact backfill according to standard spec 207.3.6.2.

D Measurement

The department will measure Removing Existing Utility Duct Package by the linear foot, acceptably completed, measured horizontally to the nearest foot from face to face of bulkheads along the centerline of the duct.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.02	Removing Existing Utility Duct Package	LF

Payment is full compensation for all excavating; for cutting and removing existing utilities; for furnishing any required brick, concrete block, or concrete; for all plugging and bulkheading; for all backfilling; for furnishing, placing, and compacting Backfill Granular; for hauling and disposing of all materials.

109. Removing Existing Utility Pipe, Item SPV.0090.03.

A Description

This special provision describes completely or partially removing existing utilities and disposing of all resulting materials in accordance to the plans, standard specifications, Standard Specifications for Sewer and Water Construction in Wisconsin, latest edition and amendments (SSSW), and as hereinafter provided and these special provisions.

This item includes removing existing discontinued 12-inch cast iron and 2-inch polyethylene gas mains due to conflicts with the proposed work.
The item Removing Existing Utility Pipe will only pay for removals within the following segments:

- 12-inch cast iron main from Station 7+45 to Station 9+75
- 2-inch polyethylene (PE) main from Station 8+05, 106’ RT to Station 8+20, 34’ RT

B Materials

Furnish Backfill Granular Grade 1 in accordance to the pertinent requirements of section 209 of the standard specifications for use as backfill material as directed by the engineer.

C Construction

Perform work in accordance to section 204 of the standard specifications and as hereinafter provided. The contractor is responsible for the safe methods and sequence of controlled removal operations. As directed by the engineer, completely remove the existing utility to the extent required to avoid interfering with new construction work.

Thoroughly clean the ends of the existing pipe and plug the existing utility connections to remain with brick or concrete block masonry, or with any grade of concrete specified under subsection 501.3.1.3, or any engineer-approved commercial grade of concrete.

Backfill all excavations or voids not occupied by other work under this contract in accordance to subsection 204.3.1.2 of the standard specifications. Compact backfill in accordance to subsection 207.3.6.2 of the standard specifications.

D Measurement

The department will measure Removing Existing Utility Pipe by the linear foot, acceptably completed, measured horizontally to the nearest foot from face to face of bulkheads along the centerline of the pipe.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.03	Removing Existing Utility Pipe	LF

Payment is full compensation for all excavating; for cutting and removing existing utilities; for furnishing any required brick, concrete block, or concrete; for all plugging and bulkheading; for all backfilling; for furnishing, placing, and compacting Backfill Granular; for hauling and disposing of all materials.

110. Storm Sewer Box Pipe 5x2-FT, Item SPV.0090.31; Storm Sewer Box Pipe 8x5-FT, Item SPV.0090.32; Storm Sewer Box Pipe 8x3-FT, Item SPV.0090.33.

A Description

This special provision describes installing gravity storm sewer box pipe installation as shown on the plans, and according to standard spec 608 and Chapter 36 of the Bridge Manual.

B Materials

Furnish reinforced concrete box pipe conforming to ASTM C1577 and standard spec 608.2.

C Construction

Construct the storm sewer box pipe as detailed in the plan. Construct according to standard specification 608 and Chapter 36 of the Bridge Manual.

D Measurement

The department will measure Storm Sewer Box Pipe (Size) 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.0090.31	Storm Sewer Box Pipe 5x2-FT	LF
SPV.0090.32	Storm Sewer Box Pipe 8x5-FT	LF
SPV.0090.33	Storm Sewer Box Pipe 8x3-FT	LF

Payment will conform to standard spec 608.5 and includes full compensation for all necessary bypass pumping; for shop drawings; for furnishing and installing storm sewer box pipe including, but not limited to coring of holes into the box pipe and installing benches, bedding material, backfilling as noted on the plan, and compacting.

111. Slotted Corrugated Metal Drain 12-Inch, Item SPV.0090.34.

A Description

This special provision describes installing gravity storm sewer with slotted drain installation and diameter as noted on the plans.

B Materials

Pipe and end cap shall be corrugated metal pipe (CMP) according to AASTHO Designation M-36 and hot-dipped galvanized according to AASHTO Designation M-111. Pipe sizes 12-inch diameter shall be 0.064 inch thickness.

The slotted drain grate shall be made from structural steel suitably welded to form the open slot and hot-dip galvanized according to AASHTO Designation M-111. Slotted drain shall be connected to CMP by use of metal coupling band.

Lean grout backfill material shall be fine aggregate according to standard spec 501.2.5 Aggregates and standard spec 501.3.6 Site-Mixed Concrete. The mix design shall consist of 150 pounds of cement and approximately 30 gallons of water for each 3,000 pounds of fine aggregate.

C Construction

Construct the slotted corrugated metal drain as detailed in the plan. Construct according to standard spec 521.

Install slotted corrugated metal drain pipe and connect to storm structures as shown on the plans.

D Measurement

The department will measure Slotted Corrugated Metal Drain 12-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.0090.34	Slotted Corrugated Metal Drain 12-Inch	LF

Payment will conform to standard spec 521.5 and includes full compensation for all necessary bypass pumping; for excavation, removal and disposal of excess soil material; for furnishing and installing drain pipes including bedding and backfill; for connecting to storm structures as shown on the plans; and for compacting.

112. Pipe Underdrain Exploration, Item SPV.0090.35; Storm Sewer Lateral Exploration, Item SPV.0090.36.

A Description

This special provision describes performing the exploratory trenching in sufficient advance of the grading and storm sewer construction operations to allow uninterrupted progress of these operations.

B (Vacant)

C Construction

Construct the trench a minimum 12 inches wide and deep enough to intercept all existing pipes (underdrain pipes or storm sewer laterals). Do not backfill trench until approved by the engineer. Backfill with suitable fill material conforming to standard spec 209.

D Measurement

The department will measure Pipe Underdrain Exploration and Storm Sewer Lateral Exploration 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.0090.35	Pipe Underdrain Exploration	LF
SPV.0090.36	Storm Sewer Lateral Exploration	LF

Payment is full compensation for furnishing all excavating, for placing and compacting backfill material, and for restoring the work site.

113. PVC Hydrant Lead 6-Inch, Item SPV.0090.40; PVC Water Main 6-Inch, Item SPV.0090.41; PVC Water Main 8-Inch, Item SPV.0090.42; PVC Water Main 16-Inch, Item SPV.0090.43; PVC Water Main 16-Inch Within Casing Pipe, Item SPV.0090.44.

A Description

This special provision describes providing furnishing and installing water main.

B Materials

Furnish and install water main according to Standard Specifications for Sewer and Water Construction in Wisconsin, latest edition and as hereinafter provided.

Water main shall be PVC pipe, conforming to ASTM-D1784, Type 1, and Grade 1. Pipe manufacturer shall conform to AWWA C900 with a maximum DR of 18. Pipe O.D. shall be the same as cast iron. Pipe shall be listed by U.L. for Class 230 water main.

16-Inch water main within the casing pipe shall be Certa-Lok.

Fittings shall be short bodied ductile iron and shall conform to ANSI A21.53 (AWWA C153). Fittings shall have an inside profile such that a seal can be made between the machined pipe end and the fitting bell with a rubber ring. Mega Lug retainer glands shall be installed at all fitting locations except gate valves and hydrants. See the Valve (size) and Hydrants special provision for details. The cost for fittings shall be incidental to the overall cost of construction.

Joints shall be push-on type rubber gaskets and conform to ASTM C1869.

Provide electrical continuity through water main materials using, 10 gauge solid copper, tracing wire.

All cover material shall conform to the bedding material specifications as in the Standard Specifications for Sewer and Water Construction in Wisconsin.

Anchor tees shall be utilized wherever possible.

All granular backfill shall be compacted by means of mechanical vibration to achieve uniform consolidation in conformance with Section 2.16.14(b) of the SWSTABLE 1.

City will furnish four 16-inch 45-degree bends, two 16-inch 22.5-degree bend, two 16-inch high deflection couplings, two 16”x6” anchor tees, two 16”x8” anchor tees, and one 16”x16” tee.

C Construction

All construction shall be done in conformance with AWWA C900 for PVC water main.

Installation: Have sufficient and adequate equipment on the site of the work for unloading and lowering pipe and fittings into the trench. Exercise extreme care when handling all pipe, fittings, and special castings to prevent breakage. Under no circumstances shall they be dropped into the trench or so handled as to receive hard blows or jolts when being moved.

Field Inspection of Materials: Before lowering and while suspended, inspect the pipe or fittings for defects. All materials used in the work must pass field inspection.

Direction of Laying: Unless otherwise ordered, lay pipe with the bell ends facing the direction of laying. When the grade exceeds 30 feet of rise per one hundred feet of trench, face bells upgrade.

Joining of Pipe: Every precaution shall be taken to prevent foreign material from entering the pipe while it is being placed in the line.

Removal of Water: See the SWS and Sections 01060 and 02140.

Promptly repair all damage caused by dewatering the work.

Cutting of Pipe: All necessary pipe cuts shall adhere to the manufacturer’s instructions. Cut pipe at right angles to the centerline of the pipe. Cutting shall be done in a neat workmanlike manner without damage to the pipe and to leave smooth ends. Cut pipes with an approved mechanical cutter. The cut end of the pipe to be used with a rubber gasket joint shall be beveled by grinding or filing to match the angle and length of the factory bevel for that pipe. Remove all burrs and raised or sharp edges, prior to assembly, to avoid cutting the gasket.

Obstructions in Line or Grade: Whenever it becomes necessary to lay a main over, under or around a known obstruction, furnish and install the required fittings. The laying of such fittings will be paid for at the unit price bid for each size of main. No additional compensation will be paid to the contractor for any expenses incurred because of such obstruction. When an unknown underground structure interferes with the work to such an extent that an alteration of the plan is required, and which such alteration results in a change in the cost to the contractor, the engineer will issue a written change order for such altered work, specifying the basis of payment or credit for such altered work.

Buttresses and Lugged Retainer Glands: Approved mechanical joint lugged retainer glands may be used with PVC water main. The gland shall be such that it can replace the standardized mechanical joint gland and can be used with the standardized mechanical joint bell conforming to ANSU AWWA A2 1.53/C153

of latest revision. Twist off nuts, sized same as tee-head colts, shall be used to ensure proper actuating of restraining devices. The retainer glands shall have a pressure rating equal to that of the pipe on which it is used. The retainer glands shall have been tested to UNI-B-13-92, be listed by Underwriters Laboratories, and be approved by Factory Mutual. The restraint shall be EBAA iron series 2000 PV or approved equal.

Joint Deflection: The maximum allowable deflection will be as described in the Standard Specifications. If excess deflection is required, special bends shall be furnished to provide angular deflections.

Setting Valves: Valves in water mains shall be provided and installed in locations where shown on the plans. A valve box and valve box adapter shall be provided for every valve. The valve box shall not transmit shock or stress to the valve and shall be centered and plumb over the wrench nut of the valve, with the box cover flush with the surface of the finished grade or such level as may be directed.

Ten (10) gauge solid copper tracer wire shall be installed and secured directly above all utilities installed on this Project. Securely wrap the copper wire around the corporation a minimum of three turns and extend above and along the entire length of the pipe and run it up inside all valve boxes and hydrants, then wrap a minimum of six turns up to and terminating at the surface of the ground. At no time shall the copper wire be placed below the pipe. The costs for the installation of the copper wire shall be merged into the unit prices bid for the pipe and no additional compensation shall be allowed.

Protective Coating: Apply a protective coating of one heavy coat of Koppers Bitumastic 50 or 505 or equal to all straps, the rods, bolts, nuts and washers after installation. The coating shall be smooth, tough, tenacious, and impervious to water without any tendency to scale off and should not be brittle. Care should be taken that the coating shall be complete without bare spots.

Polyethylene Wrap: Corrosion protection shall be provided for all ductile iron tees, crosses, bends, etc. and all valves by use of polyethylene wrap. The polyethylene wrap shall conform to AWWA C-105 or ANSA A21.5. Wrap shall be Class "C" - black, with a minimum nominal thickness of 0.008 inches (8 mils). Tape for securing the wrap shall be a thermoplastic material with a pressure sensitive adhesive face capable of bonding to metal, bituminous coating, polyethylene and PVC water main. Tape shall have a minimum thickness of 8 mils, and a minimum width of 1 inch. The wrap shall extend approximately 18 inches beyond all joints. All seams shall be taped securely. The cover material shall be placed with care to prevent damage to the polyethylene wrap. Any rips or punctures in the wrap shall be repaired immediately.

Expose utilities, which cross the proposed facility prior to construction to allow engineer to check for conflicts. Protect utilities from disturbance throughout Work.

Whenever water mains cross over sewers, lay the water main at such an elevation that the bottom of the water main is at least 6 inches above the top of the sewer. Whenever water mains cross under sewers, maintain a minimum vertical separation of 18 inches between the top of the water main and the bottom of the sewer. At crossings, one full length of water pipe shall be centered on the sewer so that both joints will be as far from the sewer as possible.

Disinfect all new water mains prior to placing in service. Maintain disinfection solution in mains a minimum of 24 hours.

All pipes shall be clean at time of installation, which should result in a prompt safe water sample. Delays in disinfection shall in no way create liability on the part of the owner. Flushing of new water main shall be done by the contractor under engineer’s supervision. Do not allow disinfection solution to drain into storm sewer or wetland.

D Measurement

The department will measure PVC Hydrant Lead 6-Inch and PVC Water Main (Size) by the linear foot, acceptably completed and measured along centerline of pipe, center to center of junctions and fittings. Footage to be paid for shall include construction through valves and other fittings.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.40	PVC Hydrant Lead 6-Inch	LF
SPV.0090.41	PVC Water Main 6-Inch	LF
SPV.0090.42	PVC Water Main 8-Inch	LF
SPV.0090.43	PVC Water Main 16-Inch	LF
SPV.0090.44	PVC Water Main 16-Inch Within Casing Pipe	LF

Payment is full compensation for labor, materials, saw cutting, excavation, existing watermain and hydrant lead removal and disposal, bedding, covering, backfilling, pipe laying, plugs, fittings, bulkheads, trust restraint, sheathing, shoring, dewatering, connections to existing facilities where indicated on plans including necessary tees or fittings, abandoning/removal of existing facilities including valves, testing, disinfection, cleanup, and restoration; and for all installation.

114. HDPE Water Service 1-Inch, Item SPV.0090.45.

A Description

This special provision describes furnishing, installing, and reconnecting water service laterals.

B Materials

Furnish, install, and reconnect water service laterals from the new water main to existing water service lateral at curb stop or as shown on Drawings according to Chapters 5.5.0 and 5.6.0 of the Standard Specifications for Sewer and Water Construction in Wisconsin, latest edition, and as hereinafter provided. Where indicated on the plan all new and relocated curb stops shall be incidental to water service lateral installation.

Water services shall be HDPE, l-inch in diameter meeting requirements of the Standard Specifications for Sewer and Water Construction in Wisconsin, latest edition.

Corporation stops shall be A.Y. McDonald 74701Q for 1-inch or approved equal and shall conform to AWWA C800 Figures 2 and 3 for use with threaded service lines. Curb stops shall be A.Y. McDonald 76104Q or approved equal for use with threaded service lines and shall be provided with a curb box. The curb stop shall be on a 2-inch piece of hardwood. For new services, a 12-inch to 18-inch tailpiece of pipe shall extend out of the curb stop and have a peened end. Curb boxes shall be A.Y. McDonald 5614 or equal and have threaded lower section and 1.25-inch upper section. Extended length shall be 6.5 feet.

Stainless steel insert stiffeners will be required on all flexible plastic tubing connections.

C Construction

Install polyethylene water services from the proposed water main to the proposed curb stop box, as shown on the plans, or as directed by the owner or engineer. Install water service laterals with minimum amount of service interruption. Replace curb box for each water service reconnected. All curb boxes shall be installed at location shown on drawings or as directed by the owner or engineer.

A minimum of one foot of water lateral stub shall be placed on the backside of the curb stop.

No joints will be allowed in the water service piping between the corporation stop and curb stop.

All installation of water service piping shall meet the requirements and specifications of the manufacturer. Water service piping supplied shall be free of kinks, defects, and abrasions. Any pipe not meeting these requirements will be rejected and shall be immediately removed from the site and replaced with pipe that conforms to these requirements.

Ten gauge solid copper tracer wire shall be installed and secured directly above all polyethylene water services installed on this Project. This copper wire shall be securely wrapped around the corporation a minimum of three turns and extended above and along the entire length of the polyethylene lateral to the outside of the stop box, then wrapped a minimum of six turns up to and terminating at the surface of the ground. At no time shall the copper wire be placed below the polyethylene lateral or wrapped beneath the base of the stop box. The costs for the installation of the copper wire shall be merged into the unit prices bid for polyethylene water services and no additional compensation shall be allowed.

Backfill and compact as specified for adjacent water main.

D Measurement

The department will measure HDPE Water Service 1-Inch by the linear foot in place and quantity measured for payment by linear feet of work, acceptably completed, measured along centerline of tubing. Footage to be paid for shall include installation of corporation stops, curb stops, and curb boxes 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.0090.45	HDPE Water Service 1-Inch	LF

Payment is full compensation for replacing existing and installing new water service HDPE lateral 1-Inch, installation of corporation, saddles, tapping, insert stiffeners, service boxes, curb stops and curb boxes, furnishing labor, materials, excavation, bedding, backfill, pipe laying, fittings, sheathing, shoring, dewatering, connections to existing facilities, testing, and cleanup.

115. 30-Inch Casing Pipe, Item SPV.0090.46.

A Description

Bore and jack a steel casing pipe to the length and elevations and install PVC restrained joint pipe according to AWWA C-900 as shown on the plans, according to the Standard Specifications for Sewer and Water Construction in Wisconsin, latest Edition and addendums, conforming to City of Wauwatosa Standard Specifications, and as hereinafter provided.

B Materials

Casing Pipe shall be made of steel conforming to ASTM A-53-B, with a minimum wall thickness of 0.469-inch and shall be large enough to accommodate carrier pipe.

For casing pipe up to and including 30-inch diameter, provide extra strong, seamless carbon steel pipe conforming to ASTM A53, Grade B. For casing pipe over 24-inch diameter, provide extra strong, spiral welded steel pipe conforming to ASTM A139, Grade B. Provide all steel casing pipe fabricated in sections for welded field joints. Steel casing shall have minimum yield strength of 35,000 psi and shall be spiral-welded steel pipe, uncoated, or equal. The casing pipe must have sufficient thickness to withstand both earth loads and live loads imposed from traffic. Provide engineer with manufacturer certification of steel casing pipe, including minimum yield strength, manufacturer, and ASTM Grade and class.

Provide a casing design for each required casing location. Verify the adequacy of each casing design by a professional engineer registered in the State of Wisconsin and be knowledgeable of the specific site conditions and requirements. Submit to the engineer for documentation one copy of each casing design that is signed and sealed by the same professional engineer verifying the design two weeks prior to installation.

Provide link seal modular seals, or approved equal on both ends of the steel casing pipe after pipe installation. The seals shall be watertight and the type of seal shall be approved by the engineer before backfilling. Seals shall have type 316 stainless steel bolts and stainless steel bolts nuts.

Couplings shall be designed for use at or above the pressure class of the pipe with which they are utilized, and incorporate twin elastomeric sealing gaskets meeting the requirements of ASTM F 477. Joints are designed to meet the zero leakage test requirements of ASTM D 3139.

Pipe couplings shall be legibly and permanently marked in ink with critical information including nominal size, material type, dimension ratio, pressure class, applicable standards, manufacturer’s name or trademark, production record code, seal (mark) of testing agency verifying the suitability of the pipe material for potable water service

C Construction

Notify engineer before commencing casing installation. Provide complete installation at line and grade indicated on the drawings.

Prepare and submit a plan and obtain approval from the engineer for bore pit installation and insertion of the PVC carrier pipe into the casing. Include locations, dimensions, shoring, ground support, method of spoil removal, surface storage, grouting techniques for filling annular voids by over excavation if any,

methods of dewatering, pullback procedure, ballasting, use of rollers, side booms and side rollers, coating protection, internal cleaning, internal gauging, and purging in the plan.

All welds shall be free from embedded scale and slag and have a tensile strength across the weld not less than that of the thinner of the connected sections. Weld the joints of sections of casing pipe to be installed with a continuous circumferential weld.

Carrier pipe shall be centered and restrained using stainless steel factory-fabricated (wood not allowed) spacers in conformance with manufacturer's specifications. Provide spacers at intervals according to manufacturers' specifications with a minimum two spacers for each pipe length. Spacers shall be located within 2-feet of the end of casing. Design spacers to prevent uplifting of carrier pipe by hydrostatic forces and attach to pipe using stainless steel bands minimum (1-inch) wide. Spacers shall be a minimum 12-inch wide with a minimum 6 runners per spacer. Shell, risers and spacers shall be type 304 stainless steel or approved equal.

Store pipes on level ground free of sharp objects which could damage the pipe. Limit the stacking of the pipe to a height that will not cause excessive deformation of the bottom layers of pipes under anticipated temperature condition. Where necessary due to ground conditions, store the pipe on wooden sleepers, spaced suitably and of such widths as not to allow deformation of the pipe at the point of contact with the sleeper or between supports.

Pipe shall be homogenous throughout and free of voids cracks, inclusions and other defects and shall be uniform in color, density and other physical characteristics.

Plug all open ends of all sections of joined and/or installed pipe (not in service) at night to prevent anything from entering the pipe line or section. The practice of stuffing cloth or paper in the open ends of the pipe will be considered unacceptable.

Install link seal modular seals, or approved equal on both ends of the steel casing pipe after pipe installation. The seals shall be watertight and the type of seal shall be approved by the engineer before backfilling. Seals shall have type 316 stainless steel bolts and stainless steel nuts.

Store excavated material from the boring and receiving pits in locations that minimize the interference with operations, minimize environmental damage, and protect adjacent areas from flooding, runoff and sedimentation.

Damage to utilities and the resulting repair, temporary service cost, etc., shall be at the contractor's expense. Backfill access pits according to the appropriate specifications.

Properly sheet/shore all excavations according to relevant specifications for trench safety systems. Any damage resulting from improperly shored excavations is at the contractor's expense. Obtain approval from the engineer upon completion.

D Measurement

The department will measure 30-Inch Casing Pipe by the linear foot of pipe in place measured along the top centerline of the casing, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.46	30-Inch Casing Pipe	LF

Payment is full compensation for furnishing sheeting; shoring; bracing; boring and receiving pit excavations; dewatering; casing pipe; removing shoring; removing sheeting; removing bracing; spacers; end seals and lubricant work; and for all installation.

116. Construction Staking Water Main, Item SPV.0090.47.

A Description

This special provision describes contractor-performed construction staking required to establish the horizontal and vertical position for water main, including hydrants, gate valves, valve boxes, water main pipe, water main manholes, water services, and bore pits according to the pertinent provisions of standard spec 650 and as hereinafter provided.

B (Vacant)

C Construction

Conform to standard spec 650.3.

D Measurement

The department will measure Construction Staking Water Main 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.0090.47	Construction Staking Water Main	LF

Payment is according to the pertinent provisions of standard specification 650.5 and also includes setting construction stakes as necessary for water main construction and installation, including hydrants, gate valves, valve boxes, water main pipe, water main manholes, water services, and bore pits.

117. Cable Aerial Aluminum 4 AWG Triplex, Item SPV.0090.50.

A Description

This special provision describes furnishing, installing, and connecting temporary overhead cable complete with all splicing, identifications, terminations and guy wires at wood poles. Remove the overhead cable after the temporary lighting is approved for removal.

B Materials

Overhead cable shall be aluminum conductors according to ASTM B 230 and shall be Class B stranded according to ASTM B 231, and shall conform to the values listed in the table below:

Phase Conductor				**Messenger Wire**	
Size AWG	**Stranding**	**Avg. Insulation Thickness**		**Min. Size AWG**	**Stranding**
		mm	mils		
4	7	1.1	45	4	6/1

The aerial cable shall be an assembly of insulated aluminum conductors and a steel messenger wire according to ANSI/ICEA S-76-474. The cable assembly may have the messenger wire intertwined with the insulated cables or lashed to the insulated cables by a factory wrap. The cable shall be assembled according to ANSI/ICEA S-76-474.

All cable shall be rated 600-V. The cable shall be rated 105º C dry and 90º C wet and shall be suitable for installation in wet and dry locations, and resistant to oils and chemicals, and UV rated. Clearly print on the cable the UL listing mark, cable voltage, insulation type and ratings, as well as the cable size, in a color contrasting with the insulation color. When specified, identify each cable installed with its complete circuit number at each termination, splice, junction box or other location where the wire is accessible.

Color code all electric cables installed. Color code neutral wires white. Single phase three wire runs of cable shall be color-coded one black, one red, and one white. Where applicable, color code insulated ground wires green. Color striping of cables will not be acceptable in lieu of the specified color-coding means.

Make the luminaire connections to the aerial cable with listed parallel tap insulation piercing connectors. The connector shall be rated for 600-V and be listed under UL Standard 486B.

C Construction

Overhead cable as shown on temporary lighting plans will not be needed for final lighting. Remove temporary overhead cable. Removal of temporary overhead cable will be incidental to this pay item and it will become property of the contractor. The bid price shall reflect the salvage value of the temporary overhead cable.

Upon written request of the contractor, the engineer may permit to reuse removed temporary overhead cable of ampacity equivalent to the specified cable and of a type and condition approved by the engineer, if possible.

Install guy wires as necessary per WisDOT standard details for Span Wire Temporary Traffic Signal.

Conform to standard spec 655.3.5(9) for ground resistance testing.

D Measurement

The department will measure Cable Aerial Aluminum 4 AWG Triplex in length by the linear foot in place and will be taken as the length of the messenger wire. Measurement will be made in a straight line between changes in direction and to the centers of light standards and control cabinets. Sag of the aerial cable or vertical cable will not be measured for payment. The rewiring to facilitate relocation of the cable due to staging or other construction requirements will not be measured for payment.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.50	Cable Aerial Aluminum 4 AWG Triplex	LF

Payment is full compensation for providing electrical wire; for making all connections; for providing all connectors, including wire nuts, fuses, fuse holders, splices, tape, and insulators; for providing messenger wire, and guy wires; and for removing temporary overhead cable.

118. Vibration Monitoring, Item SPV.0135.01.

A Description

This special provision describes developing a vibration monitoring plan, deploying seismographs for continuous monitoring and recording, documentation, and reporting.

B (Vacant)

C Construction

C.1 General

Vibration Monitoring establishes vibration recordings at the closest affected locations. This spans the entire duration of operations for various vibration inducing activities identified within this special provision unless monitored readings are sufficiently below nuisance limits in Figure 1 and engineer determines that continued monitoring will be at the contractor's discretion.

C.2 Equipment

Use a seismograph meeting the requirements of Wisconsin Department of Safety and Professional Services SPS307.43. Use monitoring equipment with an instantaneous alert notification system that consists of a text message or an e-mail alert message automatically sent directly to the engineer any time the nuisance limits in Figure 1 are exceeded.

C.3 Preconstruction Survey

The engineer will conduct preconstruction surveys of structures that may be potentially affected by vibration before any work. The engineer will visually inspect and record all existing defects in the structures before construction. Photographs or video may be used to assist in documentation.

The contractor may conduct and document pre-construction surveys of any additional nearby buildings or structures not identified by the engineer. Provide results to engineer before construction. Any damage resulting from excessive vibration-causing operations or claims of damage during construction is the responsibility of the contractor to resolve.

C.4 Monitoring Plan

Submit a monitoring plan that includes the following:

- Location of each vibration-inducing activity to be monitored
- Locations at which the approved seismographs will be placed
- Anticipated vibration levels at the closest building(s) or other sensitive facility during the various activities

- Anticipated monitoring duration for each monitoring location
- Maximum allowable vibration limits
- Mitigation plan to reduce potentially excessive vibration levels to acceptable limits.

Obtain the engineer's acceptance seven calendar days before any vibration-inducing activity for the project.

C.5 Monitoring and Recording

Monitor the following operations:

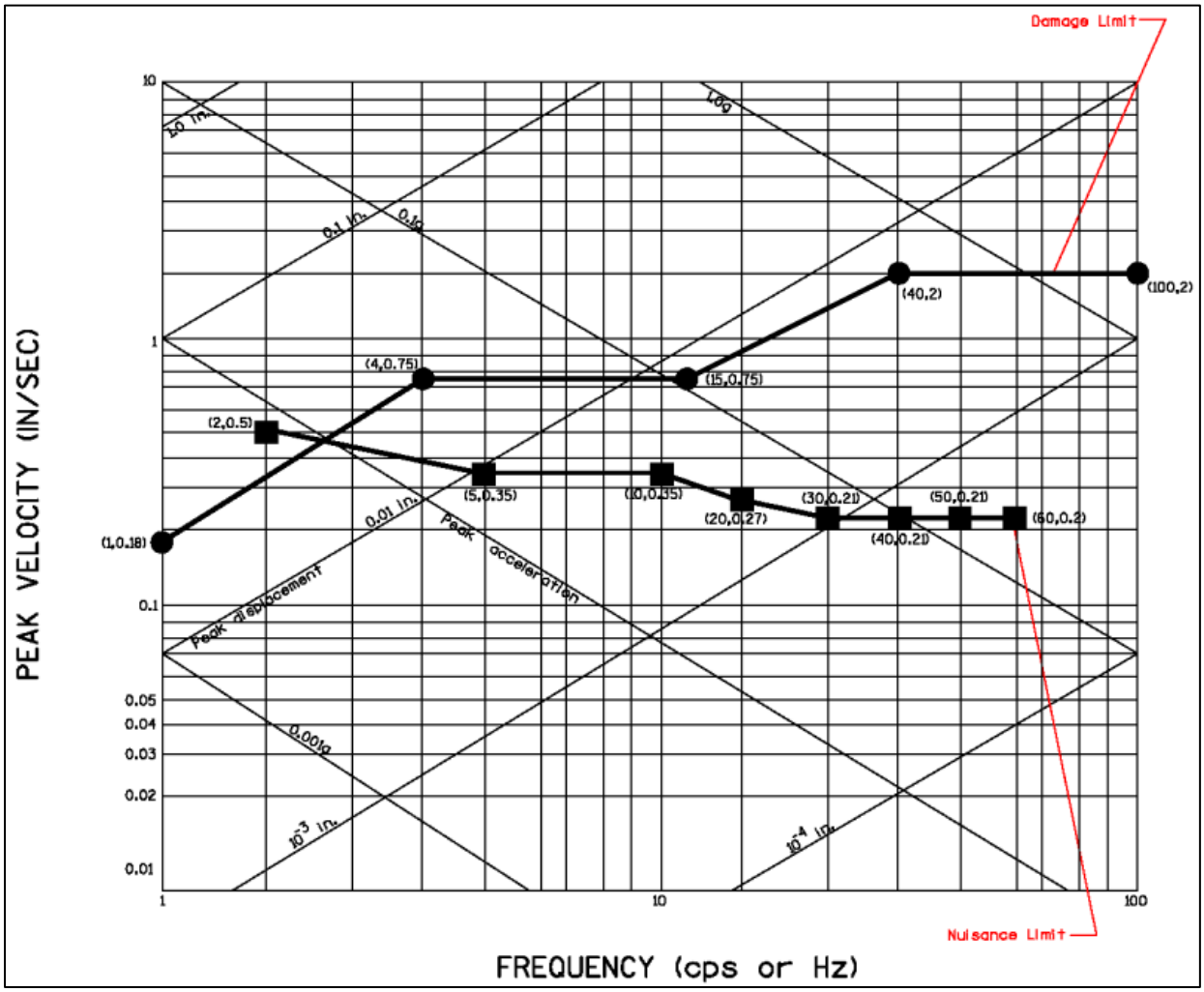
- Bridge pile driving or bridge demolition
- Sheet pile installation and removal
- Asphalt compaction
- Pavement breaking
- All compaction activities utilizing large vibratory rollers
- Any other activities that may cause vibration damage to adjacent buildings, structures, or utilities.

Ensure that a qualified person operates and continuously monitors the vibration monitoring equipment. If any vibration levels exceed the nuisance levels shown, immediately halt the vibration-inducing work, and notify the engineer.

Monitor between the construction vibration source and the closest structure or other sensitive facility subject to vibration damage, and as close as practical to the subject structure or facility. Monitor vibration levels according to Figure 1 and SPS 307.43.

Compare the measured peak particle velocity and frequency data to the nuisance limits specified in Figure 1. Record peak particle velocity and frequency in three mutually perpendicular directions.

Figure 1: Amplitude of Vertical Vibrations



C.6 Reporting

Furnish a weekly bound report of data recorded at each location to the engineer by 4 PM CST every Friday. Additionally, provide a separate daily report documenting any work that was halted before the next vibration-causing workday. Include the following in both reports:

- Date vibration monitoring operations began for each location with an associated compilation of total days currently monitored at each site.
- Identification of vibration inducing activities monitored each day at each location
- Serial number of vibration monitoring instrument used and record of latest calibration.
- Description of contractor's equipment.
- Name of qualified observer and interpreter.
- Distance and direction of recording station from vibration source.
- Surficial material type at recording station.
- Principal frequency and particle velocity in each component direction.
- Copy of records of seismograph readings, dated and signed by the person qualified to perform vibration monitoring.
- Contractor documentation of any operational changes necessary to reduce vibration levels below nuisance levels.

D Measurement

The department will measure Vibration Monitoring by months, or partial months where applicable, for each seismograph monitoring site, 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.0135.01	Vibration Monitoring	MON

Payment of the item Vibration Monitoring is full compensation for providing, setting up and removal of recording unit, an approved vibration monitoring plan, continuous monitoring and recording vibrations, and reporting. No payment for Vibration Monitoring will be made without agreement on recommended locations. Continued monitoring at locations where readings are sufficiently below nuisance limits will be at the contractor's expense.

Any pre-construction surveys of additional nearby buildings or structures not identified by the engineer will be conducted at no additional cost to the department.

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119. Concrete Sidewalk 5-Inch Special, Item SPV.0165.01.

A Description

This special provision describes constructing concrete sidewalk on B-40-1033 according to the pertinent provisions of standard spec 602 and as hereinafter provided.

B Materials

Conform to standard spec 602.2, the plan details, and sidewalk details.

C Construction

Conform to standard spec 602.3, the plan details, and sidewalk details.

Install concrete sidewalk with a 5-inch thickness above Structure Backfill Type A and Geotextile Type DF Schedule A as shown on the plans.

D Measurement

The department will measure Concrete Sidewalk 5-Inch Special by 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.0165.01	Concrete Sidewalk 5-Inch Special	SF

Payment is in accordance with standard spec 602.5.2.

The department will pay separately for the Structure Backfill Type A and Geotextile Type DF Schedule A.

120. Removing Concrete Channel, Item SPV.0180.01.

A Description

This special provision describes removing the existing concrete channel material lining Honey Creek according to the pertinent provisions of standard spec 204 and as hereinafter provided.

B (Vacant)

C Construction

Conform to the pertinent provisions of standard spec 204.3 as shown on the plans.

D Measurement

The department will measure Removing Concrete Channel by square yard, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0180.01	Removing Concrete Channel	SY

Payment is according to standard spec 204.5.

121. Concrete Channel Lining, Item SPV.0180.02.

A Description

This special provision describes furnishing, placing and curing concrete channel lining at locations shown in the plans.

B Materials

B.1 Concrete

Furnish Grade A concrete conforming to standard spec 501. Concrete shall have a 28-day compressive strength of 3500 psi. Provide QMP for concrete conforming to standard spec 716 for class III ancillary concrete.

B.2 Reinforcement

Furnish Grade 60 uncoated steel reinforcement conforming to standard spec 505.

C Construction

Construct the concrete channel lining conforming to 502.3 and the construction details.

D Measurement

The department will measure Concrete Channel Lining by 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.0180.02	Concrete Channel Lining	SY

Payment is full compensation for concrete and reinforcement, for excavating, forming, dewatering, furnishing, hauling, preparing, placing, finishing, curing, and protecting all materials; and for materials quality control testing.

122. Installing Salvaged Stone Facing, Item SPV.0180.81; Stone Facing, Item SPV.0180.82.

A Description

This special provision describes cleaning, cutting, and installing salvaged stone and new stone as facing on the new bridge. This work shall be according to the applicable provisions of standard spec 502 and as detailed in the plans.

B Materials

B.1. Stone

All new rock shall be clean, hard, and durable quarry stone or natural stone with less than 35 percent wear when tested for resistance to abrasion in conformance to ASTM C 535. Bulk density shall not be less than 150 pounds per dry cubic foot. Placement shall be as shown on the drawings.

B.2 Mortar

Mortar for stone work shall conform to property requirements given in Table 2 of ASTM C270, based on 28 day laboratory testing. Use Type O mortar for repointing. Use Portland cement ASTM C150, Type I; hydrated lime ASTM C207, Type S; sand ASTM C144. No air entrained admixtures nor cement material admixtures (fly ash, slag, pozzolonas) shall be used in the mortar. No antifreeze compounds or other substances shall be used in the mortar to lower freezing point. Calcium Chloride or admixtures containing Calcium Chloride shall not be used in mortar. Water shall be clean and free of deleterious amounts of acid, alkalis or organic materials. Mortar color shall be custom color to match to existing mortar. Use the same brands of cement and lime and the same source of sand throughout the project. Do not use any admixture unless specifically reviewed by the engineer. Mortar shall be used within 2 hours of mixing at temperatures over 76°F and 2 ½ hours at temperatures over 40°F and under 76°F. Retempering of mortars that have stiffened due to water loss through evaporation shall be accomplished by adding water to restore required consistency. Do not retemper after mortar has achieved initial set.

B.3 Dovetail Anchors and Anchor Slots

Anchors, anchor slots, and any misc. hardware shall be hot dipped galvanized steel.

C Construction

Prepare shop drawings detailing typical intended layout of the stone facing.

Clean existing stone salvaged from the existing bridge by methods that do not damage the stone. Cut stone as needed to be incorporated into the new bridge.

Place the stone to the lines, elevations, and tolerances as shown on the plans. Perform all stone shaping or dressing before laying the stone in the fascia and do not allow any dressing or hammering that might loosen the stone after placement.

The contractor shall not construct stone masonry in freezing weather, or if the stone contains frost, except with the engineer’s written permission and subject to any conditions required.

Clean each stone surface until free of foreign matter, loose rock grains, and rock dust, then saturate with water before setting. Ensure the bed receiving the stone is clean and well moistened. Bed all stones in freshly made mortar. Ensure the vertical joints in each course are staggered with those in adjoining courses by at least 6 inches.

Always try to properly point the face joints before the mortar sets. If this is not possible, prepare the joints for pointing by raking them out to a depth of 2 inches before the mortar sets. Take care not to smear the stone face surfaces with the mortar forced out of the joints, or that used in pointing. If any stone is moved or the joint broken, take up the stone, thoroughly clean the mortar from the bed and joints, and reset the stone in fresh mortar.

D Measurement

The department will measure Installing Salvaged Stone Facing and Stone Facing by 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.0180.81	Installing Salvaged Stone Facing	SY
SPV.0180.82	Stone Facing	SY

Payment is full compensation for selecting stone, selecting placement, for cleaning and cutting the salvaged stone, placing stone, for all anchors, hardware, and anchor slots necessary to secure the facing, for mortar and finishing of mortar.

123. Anti Graffiti Coating, Item SPV.0180.83.

A Description

This special provision describes furnishing and applying a permanent liquid anti-graffiti coating to the abutments, wingwalls, pier, and stone facing on the parapets for the purpose of preventing the adsorption of paint components.

B Materials

Provide an anti-graffiti coating compatible for use on stained or painted concrete, masonry, and quarry stone surfaces. The Anti-Graffiti Coating must be compatible for use on unpainted, stained or painted concrete or quarry stone surfaces.

The following products or equal may be used as an Anti-Graffiti Coating:

a. Anti-Graffiti Coating by Sherwin Williams.

b. Permaclean 1496 Matte Finish by TK Products.

c. Duraguard 310 CRU by Chem Masters.

C Construction

C.1 Surface Preparation

Clean all surfaces that are to be coated to ensure that the surface is free of all laitance, dirt, dust, grease, efflorescence, graffiti, or other foreign material in order to accept the coating material according to product requirements. Correct any surface problems that may be created as a direct result of his surface preparation methods, at contractor’s expense.

C.2 Application

Apply the anti-graffiti coating to the exposed face of all new and salvage stone facing. Do not coat the driving and walking surfaces.

C.3 Test Block

Prior to applying the coating system to the completed structure, prepare a test block for new stone, salvaged stone, and concrete on which to apply the coating so the engineer will be able to assess the adequacy and color of the product and the application methods yield the desired results. Test block to be a representative of materials to be placed on the bridge. Concrete test block to be 12”x12”. Notify the engineer no less than 24 hours in advance of applying the coating to the test blocks to allow them time to arrange for witnessing the application Allow coated test block to cure according to product manufacturer requirements before the engineer will accept the product for incorporation into the final structure.

If the test block is not accepted, prepare another test block and repeat the process, using either a different product or different application methods. Repeat this procedure until the test block is accepted by the engineer. Use the same application means and methods when applying the product to the structure that were used in preparing the accepted test block.

D Measurement

The department will measure Anti Graffiti Coating by 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.0180.83	Anti Graffiti Coating	SY

Payment is full compensation for furnishing and applying the coating; for preparing the concrete or stone surface; for correcting overspray or splatter; and for making concrete and stone test blocks and applying up to three coats of coating.

124. Excavation, Hauling, and Disposal of Sediment, Item SPV.0195.01.

A Description

A.1 General

This special provision describes excavating, loading, hauling, and disposing of sediment 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
(866) 909-4458

Green For Life (GFL) Environmental Emerald Park Landfill
W124S10629 South 124th Street
Muskego, WI 53150
(414) 529-1360

Waste Management Metro RDF
10712 S 124th Street
Franklin, WI 53132
(414) 529-6180

Perform this work conforming to standard spec 205 and 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 sediment.

A.2 Notice to the Contractor–Sediment Locations

Potentially contaminated sediment is present at the following location(s) as shown of the plans:

Honey Creek native stream sediment

- Station 136+18.61 to 139+81.00, from approximately 1 to 3+ feet bgs. The estimated volume of contaminated soil to be excavated at this location is 2,353 CY (approximately 4,000 tons using a conversion factor of 1.7 tons per cubic yard).

Information regarding the department's hazardous materials program and the potential for handling and disposal of sediment contaminated or otherwise is available by contacting:

Name:	Andrew Malsom
Address:	141 NW Barstow Street, Waukesha, WI 53187-0798
Phone:	(262) 548-6705
Fax:	(262) -548-6891
e-mail:	andrew.malsom@dot.state.wi.us

A.3 Coordination

Coordinate work under this contract with the environment consultant retained by the department:

Consultant:	TRC Environmental Corporation
Address:	6737 W. Washington St., Suite 3460, West Allis, WI 53214
Contact:	Bryan Bergmann
Phone:	(262) 901-2126 office / (262) 227-9210 cell

Fax: (262) 879-1220
E-mail: bbergmann@trccompanies.com

The role of the environmental consultant will be limited to:

1. Determining the location and limits of sediment to be excavated based on plans.
2. Identifying sediment to be hauled to the landfill facility;
3. Documenting that activities associated with management of sediment are in conformance with the sediment management methods for this project as specified herein; and
4. Obtaining the necessary approvals for disposal of sediment 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 area listed in A.2 to the environmental consultant. Also notify the environmental consultant at least three calendar days before beginning excavation activities in the area listed in A.2.

Identify the DNR approved landfill facility that will be used for disposal of contaminated sediment and provide this information to the environmental consultant no later than 30 calendar days before beginning excavation activities in the area listed in A.2 or at the preconstruction conference, whichever comes first. The environmental consultant will be responsible for obtaining the necessary approvals for disposal of sediments from the landfill facility. Do not transport sediment offsite without prior approval from the environmental consultant.

Coordinate with the environmental consultant to ensure that the environmental consultant has the opportunity to be present during excavation activities in the area identified in A.2. Before commencing sediment excavation work required by the plans, coordinate with the environmental consultant to provide a representative sediment sample retrieved from the area documented in section A.2.

Provide 10 days lead time for sediment sample laboratory analytical results to be obtained and landfill acceptance permitting to be established. No sediment shall be removed from the project during this time. Following landfill acceptance permitting communicated by the environmental consultant, perform sediment excavation on a continuous basis until the sediment excavation is completed.

A.4 Health and Safety Requirements

Add the following to standard spec 107.1:

During excavation activities, the project will encounter sediment. This material may be contaminated with metals, PAH's, PCB's, or VOC's. 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 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.

Disposal of sediment at the disposal facility is subject to the facility's safety policies.

B (Vacant)

C Construction

Add the following to standard spec 205.3:

Control operations to minimize the quantity of sediment excavated. Directly load and haul sediment designated by the environmental consultant for offsite disposal to the DNR approved landfill facility. Verify that vehicles used to transport contaminated material are licensed for such activity according to applicable state and federal regulations. Sediment transported in trucks must be managed to preclude spillage or leakage onto public roadways. It is recommended that sediment be dewatered prior to transport by truck. Sediment that has been dewatered (i.e., no free water) should be transported in lined or watertight trucks, adequately covered/tarped over the top, to prevent the spilling or air dispersal of fugitive material.

Measures must also be implemented to prevent the off-site tracking of sediment from the loading and unloading operation sites. This can be accomplished with the use of a stone tracking pad and/or a truck wash station. All trucks, equipment, and staging areas used in the loading and transport of sediment

should be thoroughly cleaned and/or decontaminated, as appropriate. In addition, all efforts must be made to keep streets free of any sediment released during transport operations; if needed, routine/periodic sweeping and street cleaning should be undertaken.

D Measurement

The department will measure Excavation, Hauling, and Disposal of Sediment in tons of contaminated sediment, accepted by the landfill facility as documented by weight tickets generated by the landfill facility. Load tickets must be delivered to the engineer within 10 business days of the date on which the sediment was accepted 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.0195.01	Excavation, Hauling, and Disposal of Sediment	TON

Payment is full compensation for excavating, segregating, loading, hauling, and disposal of contaminated sediment; obtaining solid waste collection and transportation service operating licenses; assisting in the collection sediment samples for field evaluation; and for dewatering of sediment before transport, if necessary.

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

Make the following revisions to the standard specifications.

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107 Legal Relations and Responsibility to the Public

Add subsection 107.27 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.

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646 Pavement Markings

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.

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.

526.3.4 Construction, Backfilling, Inspection and Maintenance

Replace paragraph (3) to correct link from 203.3.4 to 203.3.5 effective with the November 2024 letting.

(3) Maintain temporary structures and approaches in place until no longer needed. Unless the engineer directs otherwise, completely remove and dispose of as specified in 203.3.5. Contractor-furnished materials remain the contractor's property upon removal.

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

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).

BUY AMERICA PROVISION

Buy America (as documented in 88 FR 57750 (2 CFR part 184 and 200) from the Office of Management and Budget: Federal Register: Guidance for Grants and Agreements) shall be domestic products and permanently incorporated in this project as classified in the following three categories, and as noted in the Construction and Materials Manual (CMM):

1. Iron and Steel

   All iron and steel manufacturing and coating processes (from the initial melting stage through the application of coatings) must have occurred within the United States. Coating includes epoxy coating, galvanizing, painting and any other coating that protects or enhances the value of a material subject to the requirements of Buy America.

   The exemption of the iron and steel manufacturing and coating processes Buy America requirement is the minimal use of foreign materials if the total cost of such material permanently incorporated in the product does not exceed one-tenth of one percent (1/10 of 1%) of the total contract cost or $2,500.00, whichever is greater. For purposes of this paragraph, the cost is that shown to be the value of the subject products as they are delivered to the project.

2. Manufactured Product

   All manufactured products (as defined in CMM 228.5) are covered under a previous waiver from 1983 and are currently exempt from Buy America.

3. Construction Material

   All construction materials (as defined in 88 FR 57750 (2 CFR part 184 and 200) and as referenced in CMM 228.5) must comply with Buy America. All manufacturing process of construction materials must occur in the United States.

88 FR 55817 (DOT-OST-2022-0124) allows a limited waiver of Buy America requirements for de minimis costs and small grants.

- The Total value of the non-compliant products is no more than the lesser of $1,000,000 or 5% of total applicable costs for the project[1]; or
- The total amount of Federal financial assistance applied to the project, through awards or subaward, is below $500,000[2]

The contractor shall take actions and provide documentation conforming to CMM 228.5 to ensure compliance with this Buy America 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, manufactured products, and construction materials conform to this Buy America provision.

Form DT4567 is available at: https://wisconsindot.gov/Documents/formdocs/dt4567.docx

Attach a list of iron or steel and construction material exemptions and their associated costs to the certification form using the Buy America Exemption Tracking Tool, available at:

https://wisconsindot.gov/hccidocs/contracting-info/buy-america-exemption-tracking-tool.xlsx

1 The de minimis public interest waiver does not apply to iron and steel subject to the requirements of 23 U.S.C. 313 on financial assistant administered by FHWA. The de minimis threshold in 23 CFR 635.410(b)(4) continues to apply for iron and steel.
2 The small grant portion of the waiver does not apply to iron, steel, and manufactured goods subject to the requirements of 49 U.S.C. 22905(a).

Proposal ID: 20250211015 **Project(s):** 2190-10-70, 2190-10-71

Federal ID(s): N/A, N/A

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	201.0210 Grubbing	1,872.000 SY	_____.____	_____.____
0004	201.0220 Grubbing	186.000 ID	_____.____	_____.____
0006	203.0270 Removing Structure Over Waterway Debris Capture (structure) 01. P-40-776	1.000 EACH	_____.____	_____.____
0008	204.0100 Removing Concrete Pavement	3,598.000 SY	_____.____	_____.____
0010	204.0120 Removing Asphaltic Surface Milling	669.000 SY	_____.____	_____.____
0012	204.0150 Removing Curb & Gutter	639.000 LF	_____.____	_____.____
0014	204.0155 Removing Concrete Sidewalk	555.000 SY	_____.____	_____.____
0016	204.0195 Removing Concrete Bases	5.000 EACH	_____.____	_____.____
0018	204.0210 Removing Manholes	3.000 EACH	_____.____	_____.____
0020	204.0215 Removing Catch Basins	7.000 EACH	_____.____	_____.____
0022	204.0245 Removing Storm Sewer (size) 04.12-Inch	174.000 LF	_____.____	_____.____
0024	204.0245 Removing Storm Sewer (size) 05. 18-Inch	151.000 LF	_____.____	_____.____
0026	204.0245 Removing Storm Sewer (size) 06. 24-Inch	101.000 LF	_____.____	_____.____
0028	204.0280 Sealing Pipes	1.000 EACH	_____.____	_____.____
0030	204.0291.S Abandoning Sewer	20.000 CY	_____.____	_____.____

Proposal ID: 20250211015 **Project(s):** 2190-10-70, 2190-10-71

Federal ID(s): N/A, N/A

SECTION: 0001 Contract Items

Alt Set ID: **Alt Mbr ID:**

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0032	204.9060.S Removing (item description) 01. Lighting Units	2.000 EACH	_____.____	_____.____
0034	205.0100 Excavation Common	1,895.000 CY	_____.____	_____.____
0036	206.1001 Excavation for Structures Bridges (structure) 01. B-40-1033	1.000 EACH	_____.____	_____.____
0038	206.5001 Cofferdams (structure) 01. B-40-1033	1.000 EACH	_____.____	_____.____
0040	208.0100 Borrow	760.000 CY	_____.____	_____.____
0042	209.1100 Backfill Granular Grade 1	1,525.000 CY	_____.____	_____.____
0044	209.2100 Backfill Granular Grade 2	1,487.000 CY	_____.____	_____.____
0046	210.1500 Backfill Structure Type A	1,427.000 TON	_____.____	_____.____
0048	213.0100 Finishing Roadway (project) 01. 2190-10-70	1.000 EACH	_____.____	_____.____
0050	305.0120 Base Aggregate Dense 1 1/4-Inch	3,109.000 TON	_____.____	_____.____
0052	310.0110 Base Aggregate Open-Graded	34.000 TON	_____.____	_____.____
0054	405.0100 Coloring Concrete WisDOT Red	15.000 CY	_____.____	_____.____
0056	415.0080 Concrete Pavement 8-Inch	1,787.000 SY	_____.____	_____.____
0058	416.0610 Drilled Tie Bars	146.000 EACH	_____.____	_____.____
0060	416.0620 Drilled Dowel Bars	117.000 EACH	_____.____	_____.____

Proposal ID: 20250211015 **Project(s):** 2190-10-70, 2190-10-71

Federal ID(s): N/A, N/A

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	455.0605 Tack Coat	507.000 GAL	_____.____	_____.____
0064	460.2000 Incentive Density HMA Pavement	580.000 DOL	1.00000	580.00
0066	460.6223 HMA Pavement 3 MT 58-28 S	517.000 TON	_____.____	_____.____
0068	460.6224 HMA Pavement 4 MT 58-28 S	382.000 TON	_____.____	_____.____
0070	465.0105 Asphaltic Surface	49.000 TON	_____.____	_____.____
0072	502.0100 Concrete Masonry Bridges	1,020.000 CY	_____.____	_____.____
0074	502.3200 Protective Surface Treatment	394.000 SY	_____.____	_____.____
0076	502.3210 Pigmented Surface Sealer	73.000 SY	_____.____	_____.____
0078	505.0400 Bar Steel Reinforcement HS Structures	37,460.000 LB	_____.____	_____.____
0080	505.0600 Bar Steel Reinforcement HS Coated Structures	113,460.000 LB	_____.____	_____.____
0082	513.2001 Railing Pipe	21.000 LF	_____.____	_____.____
0084	513.8011 Railing Steel Pedestrian Type C2	48.000 LF	_____.____	_____.____
0086	516.0500 Rubberized Membrane Waterproofing	68.000 SY	_____.____	_____.____
0088	516.0610.S Sheet Membrane Waterproofing for Buried Structures 01. B-40-1033	370.000 SY	_____.____	_____.____
0090	520.8000 Concrete Collars for Pipe	1.000 EACH	_____.____	_____.____

Proposal ID: 20250211015 **Project(s):** 2190-10-70, 2190-10-71

Federal ID(s): N/A, N/A

SECTION: 0001 Contract Items

Alt Set ID: **Alt Mbr ID:**

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0092	522.1012 Apron Endwalls for Culvert Pipe Reinforced Concrete 12-Inch	1.000 EACH	_____.____	_____.____
0094	522.1018 Apron Endwalls for Culvert Pipe Reinforced Concrete 18-Inch	2.000 EACH	_____.____	_____.____
0096	522.1024 Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	1.000 EACH	_____.____	_____.____
0098	522.1030 Apron Endwalls for Culvert Pipe Reinforced Concrete 30-Inch	1.000 EACH	_____.____	_____.____
0100	522.2634 Apron Endwalls for Culvert Pipe Reinforced Concrete Horizontal Elliptical 34x53-Inch	1.000 EACH	_____.____	_____.____
0102	550.0020 Pre-Boring Rock or Consolidated Materials	4,230.000 LF	_____.____	_____.____
0104	550.1120 Piling Steel HP 12-Inch X 53 Lb	4,230.000 LF	_____.____	_____.____
0106	601.0319 Concrete Curb & Gutter 19-Inch	25.000 LF	_____.____	_____.____
0108	601.0331 Concrete Curb & Gutter 31-Inch	1,281.000 LF	_____.____	_____.____
0110	602.0410 Concrete Sidewalk 5-Inch	4,728.000 SF	_____.____	_____.____
0112	602.0515 Curb Ramp Detectable Warning Field Natural Patina	112.000 SF	_____.____	_____.____
0114	602.0815 Concrete Driveway 7-Inch	164.000 SY	_____.____	_____.____
0116	606.0100 Riprap Light	342.000 CY	_____.____	_____.____
0118	606.0200 Riprap Medium	43.000 CY	_____.____	_____.____

Proposal ID: 20250211015 **Project(s):** 2190-10-70, 2190-10-71

Federal ID(s): N/A, N/A

SECTION: 0001 Contract Items

Alt Set ID: **Alt Mbr ID:**

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0120	606.0300 Riprap Heavy	20.000 CY	_____.____	_____.____
0122	608.0318 Storm Sewer Pipe Reinforced Concrete Class III 18-Inch	120.000 LF	_____.____	_____.____
0124	608.0324 Storm Sewer Pipe Reinforced Concrete Class III 24-Inch	238.000 LF	_____.____	_____.____
0126	608.0330 Storm Sewer Pipe Reinforced Concrete Class III 30-Inch	140.000 LF	_____.____	_____.____
0128	608.0342 Storm Sewer Pipe Reinforced Concrete Class III 42-Inch	96.000 LF	_____.____	_____.____
0130	608.0512 Storm Sewer Pipe Reinforced Concrete Class V 12-Inch	148.000 LF	_____.____	_____.____
0132	608.0515 Storm Sewer Pipe Reinforced Concrete Class V 15-Inch	116.000 LF	_____.____	_____.____
0134	608.0518 Storm Sewer Pipe Reinforced Concrete Class V 18-Inch	39.000 LF	_____.____	_____.____
0136	608.0524 Storm Sewer Pipe Reinforced Concrete Class V 24-Inch	78.000 LF	_____.____	_____.____
0138	608.0530 Storm Sewer Pipe Reinforced Concrete Class V 30-Inch	33.000 LF	_____.____	_____.____
0140	608.2334 Storm Sewer Pipe Reinforced Concrete Horizontal Elliptical Class HE-III 34x53-Inch	26.000 LF	_____.____	_____.____
0142	611.0606 Inlet Covers Type B	4.000 EACH	_____.____	_____.____
0144	611.0612 Inlet Covers Type C	1.000 EACH	_____.____	_____.____

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Federal ID(s): N/A, N/A

SECTION: 0001 Contract Items

Alt Set ID: **Alt Mbr ID:**

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0146	611.0642 Inlet Covers Type MS	1.000 EACH	_____.____	_____.____
0148	611.2004 Manholes 4-FT Diameter	2.000 EACH	_____.____	_____.____
0150	611.2005 Manholes 5-FT Diameter	2.000 EACH	_____.____	_____.____
0152	611.2006 Manholes 6-FT Diameter	2.000 EACH	_____.____	_____.____
0154	611.2007 Manholes 7-FT Diameter	1.000 EACH	_____.____	_____.____
0156	611.3004 Inlets 4-FT Diameter	6.000 EACH	_____.____	_____.____
0158	611.3220 Inlets 2x2-FT	4.000 EACH	_____.____	_____.____
0160	611.3901 Inlets Median 1 Grate	1.000 EACH	_____.____	_____.____
0162	612.0106 Pipe Underdrain 6-Inch	400.000 LF	_____.____	_____.____
0164	612.0204 Pipe Underdrain Unperforated 4-Inch	100.000 LF	_____.____	_____.____
0166	612.0206 Pipe Underdrain Unperforated 6-Inch	53.000 LF	_____.____	_____.____
0168	612.0404 Pipe Underdrain Wrapped 4-Inch	200.000 LF	_____.____	_____.____
0170	612.0406 Pipe Underdrain Wrapped 6-Inch	245.000 LF	_____.____	_____.____
0172	612.0804 Apron Endwalls for Underdrain Reinforced Concrete 4-Inch	4.000 EACH	_____.____	_____.____
0174	612.0806 Apron Endwalls for Underdrain Reinforced Concrete 6-Inch	2.000 EACH	_____.____	_____.____

Proposal ID: 20250211015 **Project(s):** 2190-10-70, 2190-10-71

Federal ID(s): N/A, N/A

SECTION: 0001 Contract Items

Alt Set ID: **Alt Mbr ID:**

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0176	616.0700.S Fence Safety	1,760.000 LF	_____.____	_____.____
0178	618.0100 Maintenance and Repair of Haul Roads (project) 01. 2190-10-70	1.000 EACH	_____.____	_____.____
0180	619.1000 Mobilization	1.000 EACH	_____.____	_____.____
0182	623.0200 Dust Control Surface Treatment	6,063.000 SY	_____.____	_____.____
0184	624.0100 Water	17.000 MGAL	_____.____	_____.____
0186	625.0100 Topsoil	5,373.000 SY	_____.____	_____.____
0188	627.0200 Mulching	5,373.000 SY	_____.____	_____.____
0190	628.1104 Erosion Bales	303.000 EACH	_____.____	_____.____
0192	628.1504 Silt Fence	1,694.000 LF	_____.____	_____.____
0194	628.1520 Silt Fence Maintenance	1,694.000 LF	_____.____	_____.____
0196	628.1905 Mobilizations Erosion Control	6.000 EACH	_____.____	_____.____
0198	628.1910 Mobilizations Emergency Erosion Control	16.000 EACH	_____.____	_____.____
0200	628.2006 Erosion Mat Urban Class I Type A	1,090.000 SY	_____.____	_____.____
0202	628.2027 Erosion Mat Class II Type C	898.000 SY	_____.____	_____.____
0204	628.6510 Soil Stabilizer Type B	1.000 ACRE	_____.____	_____.____
0206	628.7010 Inlet Protection Type B	8.000 EACH	_____.____	_____.____

Proposal ID: 20250211015 **Project(s):** 2190-10-70, 2190-10-71

Federal ID(s): N/A, N/A

SECTION: 0001 Contract Items

Alt Set ID: **Alt Mbr ID:**

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0208	628.7020 Inlet Protection Type D	54.000 EACH	_____.____	_____.____
0210	628.7555 Culvert Pipe Checks	2.000 EACH	_____.____	_____.____
0212	628.7560 Tracking Pads	4.000 EACH	_____.____	_____.____
0214	629.0210 Fertilizer Type B	4.000 CWT	_____.____	_____.____
0216	630.0140 Seeding Mixture No. 40	20.000 LB	_____.____	_____.____
0218	630.0175 Seeding Mixture No. 75	7.000 LB	_____.____	_____.____
0220	630.0200 Seeding Temporary	147.000 LB	_____.____	_____.____
0222	630.0400 Seeding Nurse Crop	8.000 LB	_____.____	_____.____
0224	630.0500 Seed Water	182.000 MGAL	_____.____	_____.____
0226	631.0300 Sod Water	1,369.000 MGAL	_____.____	_____.____
0228	631.1000 Sod Lawn	3,388.000 SY	_____.____	_____.____
0230	633.5200 Markers Culvert End	6.000 EACH	_____.____	_____.____
0232	634.0814 Posts Tubular Steel 2x2-Inch X 14-FT	2.000 EACH	_____.____	_____.____
0234	637.2210 Signs Type II Reflective H	5.000 SF	_____.____	_____.____
0236	637.2215 Signs Type II Reflective H Folding	20.720 SF	_____.____	_____.____
0238	637.2230 Signs Type II Reflective F	42.000 SF	_____.____	_____.____

Proposal ID: 20250211015 **Project(s):** 2190-10-70, 2190-10-71

Federal ID(s): N/A, N/A

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	638.2102 Moving Signs Type II	2.000 EACH	_____.____	_____.____
0242	638.2602 Removing Signs Type II	1.000 EACH	_____.____	_____.____
0244	638.3620 Erecting State Owned Signs Type II	4.000 EACH	_____.____	_____.____
0246	642.5201 Field Office Type C	1.000 EACH	_____.____	_____.____
0248	643.0300 Traffic Control Drums	5,490.000 DAY	_____.____	_____.____
0250	643.0420 Traffic Control Barricades Type III	11,310.000 DAY	_____.____	_____.____
0252	643.0705 Traffic Control Warning Lights Type A	22,620.000 DAY	_____.____	_____.____
0254	643.0715 Traffic Control Warning Lights Type C	147.000 DAY	_____.____	_____.____
0256	643.0800 Traffic Control Arrow Boards	14.000 DAY	_____.____	_____.____
0258	643.0900 Traffic Control Signs	41,108.000 DAY	_____.____	_____.____
0260	643.0920 Traffic Control Covering Signs Type II	5.000 EACH	_____.____	_____.____
0262	643.1000 Traffic Control Signs Fixed Message	253.500 SF	_____.____	_____.____
0264	643.1050 Traffic Control Signs PCMS	28.000 DAY	_____.____	_____.____
0266	643.1070 Traffic Control Cones 42-Inch	794.000 DAY	_____.____	_____.____
0268	643.3150 Temporary Marking Line Removable Tape 4-Inch	890.000 LF	_____.____	_____.____

Proposal ID: 20250211015 **Project(s):** 2190-10-70, 2190-10-71

Federal ID(s): N/A, N/A

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	643.3990 Temporary Marking Removable Mask Out Tape 12-Inch	360.000 LF	_____.____	_____.____
0272	643.5000 Traffic Control	1.000 EACH	_____.____	_____.____
0274	645.0111 Geotextile Type DF Schedule A	1,006.000 SY	_____.____	_____.____
0276	645.0120 Geotextile Type HR	25.000 SY	_____.____	_____.____
0278	645.0130 Geotextile Type R	827.000 SY	_____.____	_____.____
0280	645.0220 Geogrid Type SR	325.000 SY	_____.____	_____.____
0282	646.1020 Marking Line Epoxy 4-Inch	4,993.000 LF	_____.____	_____.____
0284	646.3020 Marking Line Epoxy 8-Inch	164.000 LF	_____.____	_____.____
0286	646.5020 Marking Arrow Epoxy	2.000 EACH	_____.____	_____.____
0288	646.6020 Marking Stop Line Epoxy 12-Inch	270.000 LF	_____.____	_____.____
0290	646.6120 Marking Stop Line Epoxy 18-Inch	95.000 LF	_____.____	_____.____
0292	646.7420 Marking Crosswalk Epoxy Transverse Line 6-Inch	107.000 LF	_____.____	_____.____
0294	646.7520 Marking Crosswalk Epoxy Block Style 24-Inch	224.000 LF	_____.____	_____.____
0296	646.9010 Marking Removal Line Water Blasting 4-Inch	300.000 LF	_____.____	_____.____
0298	646.9110 Marking Removal Line Water Blasting 8-Inch	60.000 LF	_____.____	_____.____

Proposal ID: 20250211015 **Project(s):** 2190-10-70, 2190-10-71

Federal ID(s): N/A, N/A

SECTION: 0001 Contract Items

Alt Set ID: **Alt Mbr ID:**

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0300	646.9210 Marking Removal Line Water Blasting Wide	22.000 LF	_____.____	_____.____
0302	646.9310 Marking Removal Special Marking Water Blasting	2.000 EACH	_____.____	_____.____
0304	650.4000 Construction Staking Storm Sewer	50.000 EACH	_____.____	_____.____
0306	650.5000 Construction Staking Base	815.000 LF	_____.____	_____.____
0308	650.5500 Construction Staking Curb Gutter and Curb & Gutter	954.000 LF	_____.____	_____.____
0310	650.6501 Construction Staking Structure Layout (structure) 01. B-40-1033	1.000 EACH	_____.____	_____.____
0312	650.7000 Construction Staking Concrete Pavement	566.000 LF	_____.____	_____.____
0314	650.8000 Construction Staking Resurfacing Reference	338.000 LF	_____.____	_____.____
0316	650.8501 Construction Staking Electrical Installations (project) 01. 2190-10-70	1.000 EACH	_____.____	_____.____
0318	650.9000 Construction Staking Curb Ramps	8.000 EACH	_____.____	_____.____
0320	650.9500 Construction Staking Sidewalk (project) 01. 2190-10-70	1.000 EACH	_____.____	_____.____
0322	650.9911 Construction Staking Supplemental Control (project) 01. 2190-10-70	1.000 EACH	_____.____	_____.____
0324	650.9920 Construction Staking Slope Stakes	1,524.000 LF	_____.____	_____.____
0326	652.0125 Conduit Rigid Metallic 2-Inch	120.000 LF	_____.____	_____.____

Proposal ID: 20250211015 **Project(s):** 2190-10-70, 2190-10-71

Federal ID(s): N/A, N/A

SECTION: 0001 Contract Items

Alt Set ID: **Alt Mbr ID:**

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0328	652.0215 Conduit Rigid Nonmetallic Schedule 40 1 1/4-Inch	374.000 LF	_____.____	_____.____
0330	652.0225 Conduit Rigid Nonmetallic Schedule 40 2-Inch	1,520.000 LF	_____.____	_____.____
0332	652.0235 Conduit Rigid Nonmetallic Schedule 40 3-Inch	394.000 LF	_____.____	_____.____
0334	652.0615 Conduit Special 3-Inch	389.000 LF	_____.____	_____.____
0336	653.0135 Pull Boxes Steel 24x36-Inch	3.000 EACH	_____.____	_____.____
0338	653.0140 Pull Boxes Steel 24x42-Inch	10.000 EACH	_____.____	_____.____
0340	653.0222 Junction Boxes 18x12x6-Inch	8.000 EACH	_____.____	_____.____
0342	654.0101 Concrete Bases Type 1	7.000 EACH	_____.____	_____.____
0344	654.0110 Concrete Bases Type 10	4.000 EACH	_____.____	_____.____
0346	654.0217 Concrete Control Cabinet Bases Type 9 Special	1.000 EACH	_____.____	_____.____
0348	655.0230 Cable Traffic Signal 5-14 AWG	469.000 LF	_____.____	_____.____
0350	655.0240 Cable Traffic Signal 7-14 AWG	341.000 LF	_____.____	_____.____
0352	655.0260 Cable Traffic Signal 12-14 AWG	1,162.000 LF	_____.____	_____.____
0354	655.0320 Cable Type UF 2-10 AWG Grounded	527.000 LF	_____.____	_____.____
0356	655.0515 Electrical Wire Traffic Signals 10 AWG	642.000 LF	_____.____	_____.____

Proposal ID: 20250211015 **Project(s):** 2190-10-70, 2190-10-71

Federal ID(s): N/A, N/A

SECTION: 0001 Contract Items

Alt Set ID: **Alt Mbr ID:**

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0358	655.0610 Electrical Wire Lighting 12 AWG	804.000 LF	_____.____	_____.____
0360	655.0615 Electrical Wire Lighting 10 AWG	300.000 LF	_____.____	_____.____
0362	655.0620 Electrical Wire Lighting 8 AWG	568.000 LF	_____.____	_____.____
0364	655.0630 Electrical Wire Lighting 4 AWG	4,516.000 LF	_____.____	_____.____
0366	655.0900 Traffic Signal EVP Detector Cable	577.000 LF	_____.____	_____.____
0368	656.0201 Electrical Service Meter Breaker Pedestal (location) 01. W Wisconsin Ave & Honey Creek Pkwy	1.000 EACH	_____.____	_____.____
0370	657.0100 Pedestal Bases	7.000 EACH	_____.____	_____.____
0372	657.0405 Traffic Signal Standards Aluminum 3.5-FT	3.000 EACH	_____.____	_____.____
0374	657.0420 Traffic Signal Standards Aluminum 13-FT	4.000 EACH	_____.____	_____.____
0376	658.0173 Traffic Signal Face 3S 12-Inch	12.000 EACH	_____.____	_____.____
0378	658.0416 Pedestrian Signal Face 16-Inch	8.000 EACH	_____.____	_____.____
0380	658.5070 Signal Mounting Hardware (location) 01. W Wisconsin Ave & Honey Creek Pkwy	1.000 EACH	_____.____	_____.____
0382	659.5000.S Lamp, Ballast, LED, Switch Disposal by Contractor	2.000 EACH	_____.____	_____.____
0384	673.0105 Communication Vault Type 1	3.000 EACH	_____.____	_____.____
0386	673.0200 Tracer Wire Marker Posts	2.000 EACH	_____.____	_____.____

Proposal ID: 20250211015 **Project(s):** 2190-10-70, 2190-10-71

Federal ID(s): N/A, N/A

SECTION: 0001 Contract Items

Alt Set ID: **Alt Mbr ID:**

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0388	690.0150 Sawing Asphalt	157.000 LF	_____.____	_____.____
0390	690.0250 Sawing Concrete	2,133.000 LF	_____.____	_____.____
0392	715.0502 Incentive Strength Concrete Structures	6,120.000 DOL	1.00000	6,120.00
0394	715.0720 Incentive Compressive Strength Concrete Pavement	541.000 DOL	1.00000	541.00
0396	999.1501.S Crack and Damage Survey	13.000 EACH	_____.____	_____.____
0398	SPV.0035 Special 01. Streambed Stone	1,509.000 CY	_____.____	_____.____
0400	SPV.0035 Special 02. Streambed Granular Fill	378.000 CY	_____.____	_____.____
0402	SPV.0035 Special 03. Filter Gravel	369.000 CY	_____.____	_____.____
0404	SPV.0035 Special 04. Pea Gravel	378.000 CY	_____.____	_____.____
0406	SPV.0035 Special 05. Reinforced Concrete Cutoff Wall	18.000 CY	_____.____	_____.____
0408	SPV.0060 Special 03. Reconstruct MMSD Manhole	4.000 EACH	_____.____	_____.____
0410	SPV.0060 Special 04. Abandon MMSD Pump Station BS0401	1.000 EACH	_____.____	_____.____
0412	SPV.0060 Special 05. Exposing MMSD MIS	3.000 EACH	_____.____	_____.____
0414	SPV.0060 Special 06. Exposing AT&T Duct Package	3.000 EACH	_____.____	_____.____
0416	SPV.0060 Special 07. Adjusting Sanitary Manholes	2.000 EACH	_____.____	_____.____

Proposal ID: 20250211015 **Project(s):** 2190-10-70, 2190-10-71

Federal ID(s): N/A, N/A

SECTION: 0001 Contract Items

Alt Set ID: **Alt Mbr ID:**

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0418	SPV.0060 Special 08. Reconstructing Sanitary Manholes	3.000 EACH	_____.____	_____.____
0420	SPV.0060 Special 09. Concrete Base Special	1.000 EACH	_____.____	_____.____
0422	SPV.0060 Special 30. Outlet Structure 63	1.000 EACH	_____.____	_____.____
0424	SPV.0060 Special 31. 24"x72" Catch Basin	7.000 EACH	_____.____	_____.____
0426	SPV.0060 Special 32. 30"x72" Catch Basin	12.000 EACH	_____.____	_____.____
0428	SPV.0060 Special 33. 24"x72" Riser Inlet	7.000 EACH	_____.____	_____.____
0430	SPV.0060 Special 34. Manhole 4-Ft Riser	2.000 EACH	_____.____	_____.____
0432	SPV.0060 Special 35. Inlet Cover R-3246-AL	6.000 EACH	_____.____	_____.____
0434	SPV.0060 Special 36. Inlet Cover R-3293-2	12.000 EACH	_____.____	_____.____
0436	SPV.0060 Special 37. Inlet Cover R-3295-2(L)	14.000 EACH	_____.____	_____.____
0438	SPV.0060 Special 38. Manhole Cover R-1661-B	8.000 EACH	_____.____	_____.____
0440	SPV.0060 Special 40. Hydrant Assembly	2.000 EACH	_____.____	_____.____
0442	SPV.0060 Special 41. Gate Valve & Valve Box 6-Inch	2.000 EACH	_____.____	_____.____
0444	SPV.0060 Special 42. Gate Valve & Valve Box 8-Inch	2.000 EACH	_____.____	_____.____
0446	SPV.0060 Special 43. Butterfly Valve & Valve Box 16-Inch	5.000 EACH	_____.____	_____.____

Proposal ID: 20250211015 **Project(s):** 2190-10-70, 2190-10-71

Federal ID(s): N/A, N/A

SECTION: 0001 Contract Items

Alt Set ID: **Alt Mbr ID:**

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0448	SPV.0060 Special 44. Water Testing Manhole	1.000 EACH	_____.____	_____.____
0450	SPV.0060 Special 45. Air Release Valve	1.000 EACH	_____.____	_____.____
0452	SPV.0060 Special 50. Remove and Salvage Existing Lighting Units	3.000 EACH	_____.____	_____.____
0454	SPV.0060 Special 51. Luminaire LED Medium	6.000 EACH	_____.____	_____.____
0456	SPV.0060 Special 52. Install Concrete Pole	2.000 EACH	_____.____	_____.____
0458	SPV.0060 Special 53. Install Milwaukee County Furnished Pull Box 12x12x12-Inch	2.000 EACH	_____.____	_____.____
0460	SPV.0060 Special 54. Wood Pole 60-Foot	4.000 EACH	_____.____	_____.____
0462	SPV.0060 Special 55. Removing 60-Foot Wood Pole	4.000 EACH	_____.____	_____.____
0464	SPV.0060 Special 61. Retroreflective Backplate 3S	12.000 EACH	_____.____	_____.____
0466	SPV.0060 Special 62. Furn & Ins Traf Sig Cab & Ctrl at WI Ave & Honey Cr Pkwy	1.000 EACH	_____.____	_____.____
0468	SPV.0060 Special 63. Furn & Ins Access Ped Push Button Sys at WI Ave & Honey Cr Pkwy	1.000 EACH	_____.____	_____.____
0470	SPV.0060 Special 64. Furn & Ins Emerg Veh Preemption Sys at WI Ave & Honey Cr Pkwy	1.000 EACH	_____.____	_____.____
0472	SPV.0060 Special 65. Battery Backup Sys for Traffic Intersection at WI Ave & Honey Cr Pkwy	1.000 EACH	_____.____	_____.____

Proposal ID: 20250211015 **Project(s):** 2190-10-70, 2190-10-71

Federal ID(s): N/A, N/A

SECTION: 0001 Contract Items

Alt Set ID: **Alt Mbr ID:**

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0474	SPV.0060 Special 66. Non-Intrusive Vehicle Detection System	1.000 EACH	_____.____	_____.____
0476	SPV.0060 Special 68. Transport & Install City Furnished Poles Type 10	4.000 EACH	_____.____	_____.____
0478	SPV.0060 Special 70. Transport & Install City Furnished Monotube Arms 20-Ft	3.000 EACH	_____.____	_____.____
0480	SPV.0060 Special 71. Transport & Install City Furnished Monotube Arms 25-Ft	1.000 EACH	_____.____	_____.____
0482	SPV.0060 Special 72. Transport & Install City Furnished Luminaire Arms Steel 15-Ft	4.000 EACH	_____.____	_____.____
0484	SPV.0060 Special 80. Junction Boxes 18x6x6-Inch Special Watertight	4.000 EACH	_____.____	_____.____
0486	SPV.0060 Special 82. Salvaging Stone P-40-776	1.000 EACH	_____.____	_____.____
0488	SPV.0075 Special 01. Pavement Cleanup Project 2190-10-70	40.000 HRS	260.00000	10,400.00
0490	SPV.0075 Special 02. Boulder Obstructions	8.000 HRS	2,000.00000	16,000.00
0492	SPV.0090 Special 01. Concrete Curb & Gutter Integral 31-Inch	350.000 LF	_____.____	_____.____
0494	SPV.0090 Special 02. Removing Existing Utility Duct Package	415.000 LF	_____.____	_____.____
0496	SPV.0090 Special 03. Removing Existing Utility Pipe	173.000 LF	_____.____	_____.____
0498	SPV.0090 Special 32. Storm Sewer Box Pipe 8x5-Ft	271.000 LF	_____.____	_____.____

Proposal ID: 20250211015 **Project(s):** 2190-10-70, 2190-10-71

Federal ID(s): N/A, N/A

SECTION: 0001 Contract Items

Alt Set ID: **Alt Mbr ID:**

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0500	SPV.0090 Special 33. Storm Sewer Box Pipe 8x3-Ft	26.000 LF	_____.____	_____.____
0502	SPV.0090 Special 34. Slotted Corrugated Metal Drain 12-Inch	223.000 LF	_____.____	_____.____
0504	SPV.0090 Special 35. Pipe Underdrain Exploration	100.000 LF	_____.____	_____.____
0506	SPV.0090 Special 36. Storm Sewer Lateral Exploration	100.000 LF	_____.____	_____.____
0508	SPV.0090 Special 40. PVC Hydrant Lead 6-Inch	42.000 LF	_____.____	_____.____
0510	SPV.0090 Special 41. PVC Watermain 6-Inch	10.000 LF	_____.____	_____.____
0512	SPV.0090 Special 42. PVC Water Main 8-Inch	80.000 LF	_____.____	_____.____
0514	SPV.0090 Special 43. PVC Water Main 16-Inch	960.000 LF	_____.____	_____.____
0516	SPV.0090 Special 44. PVC Water Main 16-Inch Within Casing Pipe	154.000 LF	_____.____	_____.____
0518	SPV.0090 Special 45. HDPE Water Service 1-Inch	380.000 LF	_____.____	_____.____
0520	SPV.0090 Special 46. 30-Inch Casing Pipe	150.000 LF	_____.____	_____.____
0522	SPV.0090 Special 47. Construction Staking Water Main	1,100.000 LF	_____.____	_____.____
0524	SPV.0090 Special 50. Cable Aerial Aluminum 4 AWG Triplex	575.000 LF	_____.____	_____.____
0526	SPV.0135 Special 01. Vibration Monitoring	8.000 MON	_____.____	_____.____

Proposal ID: 20250211015 **Project(s):** 2190-10-70, 2190-10-71

Federal ID(s): N/A, N/A

SECTION: 0001 Contract Items

Alt Set ID: **Alt Mbr ID:**

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0528	SPV.0165 Special 01. Concrete Sidewalk 5-Inch Special	1,352.000 SF	_____._____	_____._____
0530	SPV.0180 Special 01. Removing Concrete Channel	1,596.000 SY	_____._____	_____._____
0532	SPV.0180 Special 02. Concrete Channel Lining	70.000 SY	_____._____	_____._____
0534	SPV.0180 Special 81. Installing Salvaged Stone Facing	88.000 SY	_____._____	_____._____
0536	SPV.0180 Special 82. Stone Facing	265.000 SY	_____._____	_____._____
0538	SPV.0180 Special 83. Anti Graffiti Coating	470.000 SY	_____._____	_____._____
0540	SPV.0195 Special 01. Excavation, Hauling, and Disposal of Sediment	1,486.000 TON	_____._____	_____._____

Section: 0001 **Total:** _____._____

Total Bid: _____._____

PLEASE ATTACH ADDENDA HERE

Wisconsin Department of Transportation

Division of Transportation Systems Development
Bureau of Project Development
4822 Madison Yards Way, 4th Floor South
Madison, WI 53705

Telephone: (608) 266-1631
Facsimile (FAX): (608) 266-8459

February 6, 2025

NOTICE TO ALL CONTRACTORS:

Proposal #15: 2190-10-70
C Wauwatosa W Wisconsin Ave
Bridge Over Honey Creek P-40-776
Local Street
Milwaukee County

2190-10-71
C Wauwatosa W Wisconsin Ave
Bridge Over Honey Creek P-40-776
Const/Watermain
Milwaukee County

Letting of February 11, 2025

This is Addendum No. 01, which provides for the following:

Special Provisions:

Revised Special Provisions	
Article No.	Description
6	Utilities
11	Hauling Restrictions
68	Electrical Service Meter Breaker Pedestal Wisconsin Ave & Honey Creek Pkwy, Item 656.0201.01
80	Outlet Structure 55, Item SPV.0060.29; Outlet Structure 63, Item SPV.0060.30
124	Excavation, Hauling, and Disposal of Sediment, Item SPV.0195.01

Added Special Provisions	
Article No.	Description
125	Pre-Boring Rock or Consolidated Materials

Schedule of Items:

Revised Bid Item Quantities					
Bid Item	Item Description	Unit	Proposal Total Prior to Addendum	Proposal Quantity Change	Proposal Total After Addendum
205.0100	Excavation Common	CY	1895	-63	1832
652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	1520	374	1894
652.0235	Conduit Rigid Nonmetallic Schedule 40 3-Inch	LF	394	389	783
653.0135	Pull Boxes Steel 24x36-Inch	EACH	3	2	5
SPV.0195.01	Excavation, Hauling, and Disposal of Sediment	TON	1486	-75	1411

Deleted Bid Item Quantities					
Bid Item	Item Description	Unit	Proposal Total Prior to Addendum	Proposal Quantity Change (-)	Proposal Total After Addendum
652.0615	Conduit Special 3-Inch	LF	389	-389	0

Plan Sheets:

Revised Plan Sheets	
Plan Sheet	Plan Sheet Title (brief description of changes to sheet)
11	Proposed Typical Sections (Updated stream typical section dimension)
46	Contour Plan (Updated stream grading)
59	Watermain Plan and Profile (Updated watermain elevations)
60	Watermain Plan and Profile (Updated watermain elevations)
73	Traffic Signal Plan (Added meter breaker pedestal location and associated conduit/pull boxes)
76	Traffic Signal Plan (Added meter breaker pedestal location and associated conduit/pull boxes)
95	Miscellaneous Quantities (Updated stream earthwork)
104	Miscellaneous Quantities (Updated Conduit, Pull Box, and Concrete Base tables)
120	Plan and Profile: Honey Creek Stream Realignment (Updated stream linework)
121	Plan and Profile: Honey Creek Paths (Added light pole callout)
230	Earthwork Data (Updated stream earthwork)
252	Cross Sections: Honey Creek Stream Realignment (Updated stream grading)
253	Cross Sections: Honey Creek Stream Realignment (Updated stream grading)

The responsibility for notifying potential subcontractors and suppliers of these changes remains with the prime contractor.

Sincerely,

Mike Coleman

Proposal Development Specialist
Proposal Management Section

ADDENDUM NO. 01

2190-10-70, 2190-10-71

February 6, 2025

Special Provisions

6. Utilities.

Replace entire article language with the following:

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.

Known utilities in the project area are as follows:

2190-10-70: Local Street

The following utilities will require work during construction:

Milwaukee Metropolitan Sewerage District (MMSD) has existing underground combined sewer facilities within the project limits. The existing 39”x30” MIS along the north side of Wisconsin Avenue and the existing 24” MIS along the center of Honey Creek Parkway will remain in place. Expose the MMSD underground facilities as needed to facilitate construction at the new bridge abutments and pier under the bid item Exposing MMSD MIS. Use caution when working in these locations.

Reconstruct MMSD manholes and Abandon MMSD Pump Station BS0401 as shown in the plans and bid items.

Wauwatosa, City of – Sewer has existing underground sewer facilities within the project limits. Adjust and reconstruct sanitary manholes as shown in the plans and bid items.

Wauwatosa, City of – Water has existing underground water facilities within the project limits. Install new water facilities as shown in the plans and bid items.

We Energies – Electric has existing overhead electric facilities within the project limits. We Energies – Electric plans to remove their existing poles, associated wire, and equipment prior to construction based on an anticipated contractor start of April 2025. We Energies – Electric will install the electrical service for the new traffic signal along city-owned land west of Honey Creek and north of Wisconsin Avenue in conjunction with traffic signal and grading operations. It is anticipated that We Energies – Electric will need 5 working days to complete this work.

The following utility owners have facilities within the project limits that need adjustments:

AT&T Wisconsin has existing underground communications facilities within the project limits. AT&T Wisconsin plans to complete relocations prior to construction based on an anticipated contractor start of April 2025. Between station 6+18 and station 11+83, AT&T Wisconsin is rerouting their underground facilities to the south side of Wisconsin Avenue and will relocate between the proposed bridge piles 10 feet below the proposed water main prior to construction. There will be approximately 16-inches between the AT&T Wisconsin facilities and the pre-bored bridge piles. Expose the AT&T Wisconsin underground facilities as needed to facilitate construction at the new bridge abutments and pier under the bid item Exposing AT&T Duct Package. Use caution when working in these locations. Prior to construction, AT&T will remove cables from their existing conduit package, which will remain in place.

Spectrum has existing underground communications facilities within the project limits. Spectrum plans to discontinue their fiber and coax facilities in place prior to construction based on an anticipated contractor start of April 2025.

Verizon Business has existing underground communications facilities within the project limits. Verizon Business plans to discontinue their underground facilities in place prior to construction based on an anticipated contractor start of April 2025.

We Energies – Gas has existing underground gas facilities within the project limits. We Energies – Gas plans to reroute their underground facilities to the north side of Wisconsin Avenue and north of the new bridge and complete relocations prior to construction based on an anticipated contractor start of April 2025. We Energies – Gas will remove three discontinued mains that conflict with the proposed work prior to construction based on an anticipated contractor start of April 2025.

The following utility owners have facilities within the project limits; however, no adjustments are anticipated:

Everstream has existing underground communications facilities within the project limits along the south side of Wisconsin Avenue and south of the new bridge.

2190-10-71: Const/Watermain

All coordination was done under Project 2190-10-70.

11. Hauling Restrictions.

Replace entire article language with the following:

Replace standard spec 107.2 with the following:

(1) Hauling will not be allowed on Honey Creek Parkway in the City of Wauwatosa. Hauling will be allowed on Glenview Avenue and 76th Street south of Wisconsin Avenue in the City of Wauwatosa.

(2) Present to the department, five business days before proposed hauling, a proposed haul route plan detailing haul routes that are not part of the state trunk highway system. Include the months, days of the week, time of day, number of trucks, types of trucks and maximum loads of trucks anticipated to accomplish the project work in the haul route submittal.

(3) The department will review the submittal and either approve or provide a letter with comments and proposed revisions to the contractor within five business days of its receipt. If approved, the department will subsequently survey the existing condition of that haul route to establish a baseline for assessing damage that the contractor's hauling operations might cause.

(4) At all times, conduct operations in a manner that will cause a minimum of disruption to traffic on existing roadways. Obtain all permits required that may be required, including hauling of materials. Cost of all permits are incidental to the project.

68. Electrical Service Meter Breaker Pedestal Wisconsin Ave & Honey Creek Pkwy, Item 656.0201.01.

Replace entire article language with the following:

Append standard spec 656.2.3 with the following:

(2) The city will be responsible for electrical service installation or relocation requests. The city will be responsible for any charges from We Energies. Electrical utility company service installation or relocation and energy cost will be billed to and paid for by the maintaining authority. The new electric service should be requested 8-10 week prior to the time they will be required.

(3) Install the free-standing meter breaker pedestal so the electrical utility company can install the service lateral. Install a 2” conduit from the point of service from the utility to the meter breaker pedestal. Finish grade the service trench, replace topsoil that is lost or contaminated with other materials, fertilize, seed, and mulch all areas that are disturbed by the electrical utility company.

Append standard spec 656.5 with the following:

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

(9) The department will pay separately for 2-inch conduit.

80. Outlet Structure 55, Item SPV.0060.29; Outlet Structure 63, Item SPV.0060.30.

Replace the article and article title with the following:

80. Outlet Structure 63, Item SPV.0060.30.

A Description

This special provision describes installation of the Honey Creek outfalls as shown in the plans. This item shall be submitted as a shop drawing.

B Materials

Furnish materials according to standard spec 504.2.

Provide foundation backfill according to standard spec 520.2.

Furnish concrete outfall structure, concrete lined channel extension, reinforcement, galvanized grate assemblies, concrete ties, and concrete work.

C Construction

Conform to standard spec 504.3 and the construction detail for Outlet Structure 63.

Maintain and protect the existing waterway as shown in the plans and details for the outfall structure.

D Measurement

The department will measure Outlet Structure 63 by each individual unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.30	Outlet Structure 63	EACH

Payment is full compensation for all labor; for shop drawings; for excavation, removal and disposal of excess soil material; for all bedding stone material; for installation of the concrete outfall and wing walls; for furnishing and installing all required reinforcement, sleeves, filler, waterproofing materials and anchors; for furnishing and installing the galvanized grate assemblies with all associated hardware; and for connecting to storm structures as shown in the plans.

124. Excavation, Hauling, and Disposal of Sediment, Item SPV.0195.01.

Replace the bulleted text under Honey Creek native stream sediment in Section A.2 with the following:

- Station 136+18.61 to 139+81.00, from approximately 1 to 3+ feet bgs. The estimated volume of contaminated soil to be excavated at this location is 830 CY (approximately 1,411 tons using a conversion factor of 1.7 tons per cubic yard).

125. Pre-Boring Rock or Consolidated Materials.

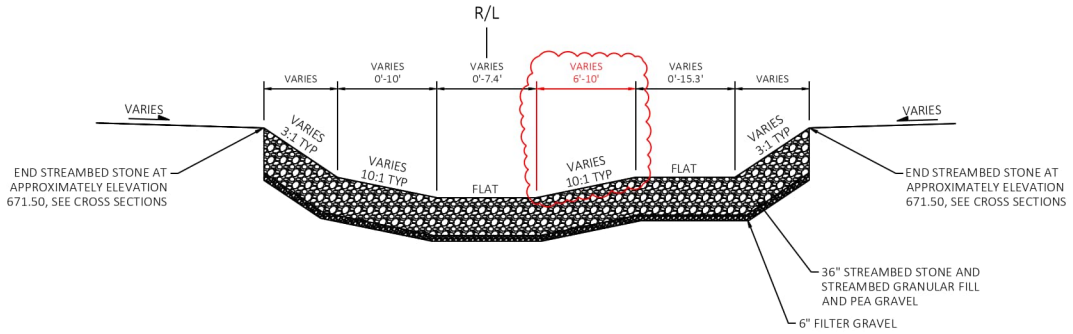
Replace standard spec 550.3.9.3 paragraph (3) with the following:

(3) Firmly seat piles after preboring and backfill within the rock or consolidated material with a cement grout. Remove the casing, backfill the piles with cement grout.

Schedule of Items
Attached, dated February 6, 2025, are the revised Schedule of Items Pages 1 – 19.

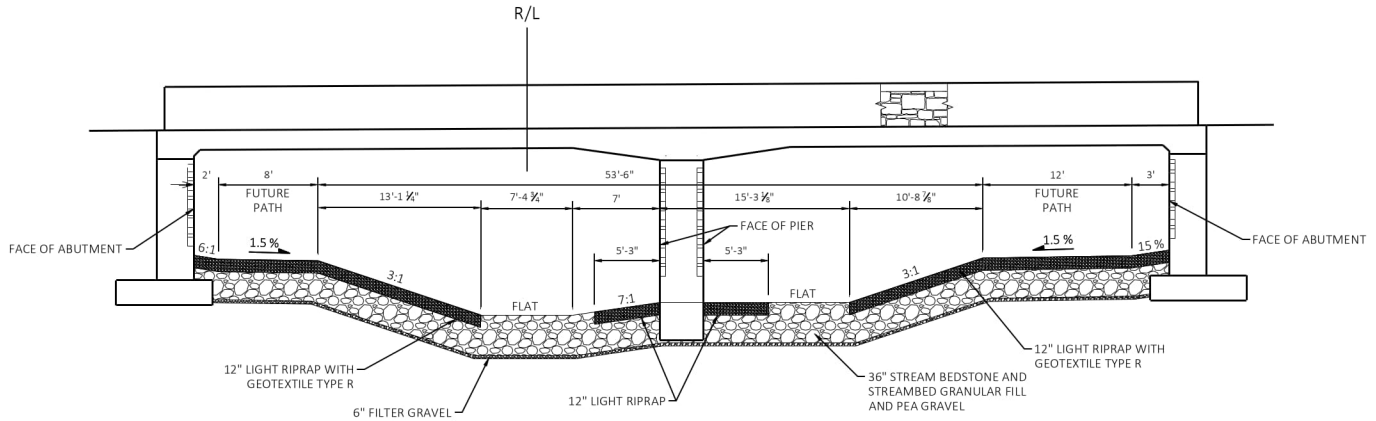
Plan Sheets
The following 8½ x 11-inch sheets are attached and made part of the plans for this proposal:
Revised: 11, 46, 59, 60, 73, 76, 95, 104, 120, 121, 230, 252, 253.

END OF ADDENDUM



PROPOSED TYPICAL SECTION HONEY CREEK

STREAM REALIGNMENT
STA 136+19 - STA 137+50
STA 138+75 - STA 139+81



NOTE:
REPLACE TOP 12" OF STREAMBED STONE WITH RIPRAP WHERE SHOWN

PROPOSED TYPICAL SECTION HONEY CREEK

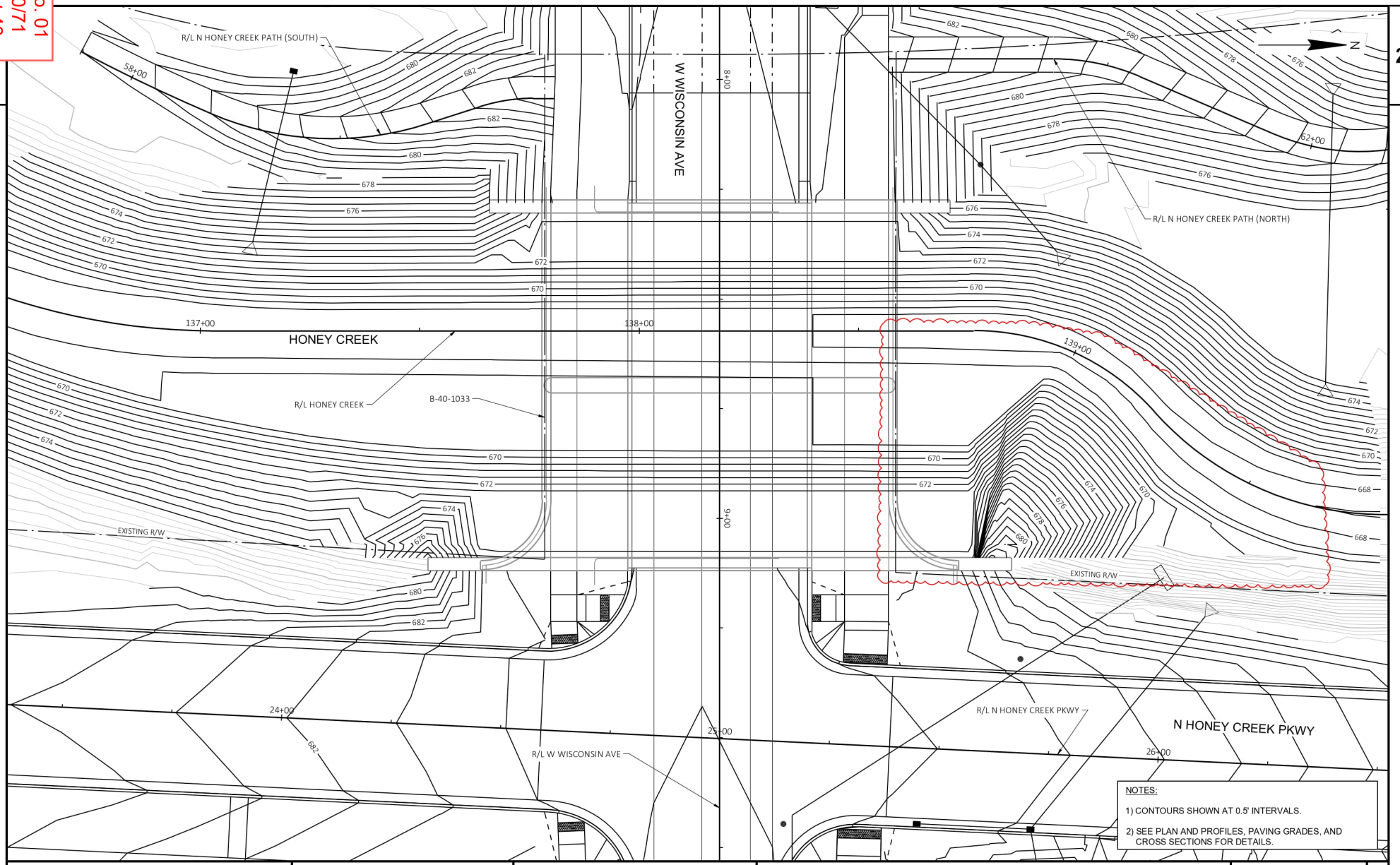
STA 137+50 - STA 138+75

Addendum No. 01
ID 2190-10-70/71
Revised Sheet 11
February 6, 2025

PROJECT NO: 2190-10-70 & 2190-10-71	HWY: W. WISCONSIN AVE	COUNTY: MILWAUKEE	PROPOSED TYPICAL SECTIONS	SHEET 11	E

FILE NAME : S:\MILW_CO\WAUWATOSA\GOV\210102_WISCONSIN AVENUE BRIDGE\21901000\SHEETSPLAN\020301-TS.DWG
LAYOUT NAME - 07
PLOT DATE : 1/13/2025 11:50 AM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : ##########
WISDOT/CADDS SHEET 42

Addendum No. 01
ID 2190-10-70/71
Revised Sheet 46
February 6, 2025



NOTES:

1) CONTOURS SHOWN AT 0.5' INTERVALS.

2) SEE PLAN AND PROFILES, PAVING GRADES, AND CROSS SECTIONS FOR DETAILS.

PROJECT NO: 2190-10-70 & 2190-10-71	HWY: W. WISCONSIN AVE	COUNTY: MILWAUKEE	CONTOUR PLAN	SHEET 46	E

FILE NAME : S:\MILW_CO\WAUWATOSA\GOV\210102_WISCONSIN AVENUE BRIDGE\21901000\SHEETSPLAN\021701-CM.DWG
LAYOUT NAME - 01

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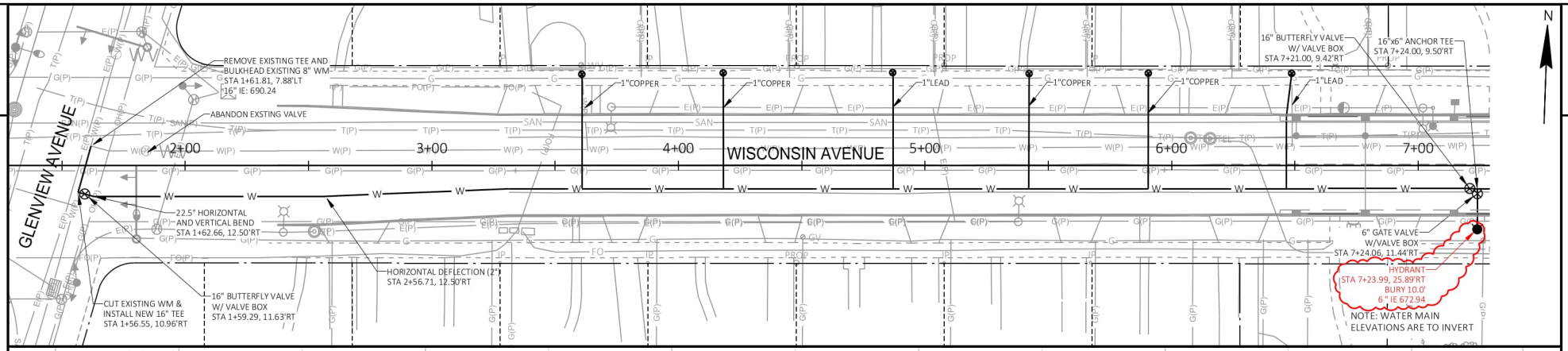
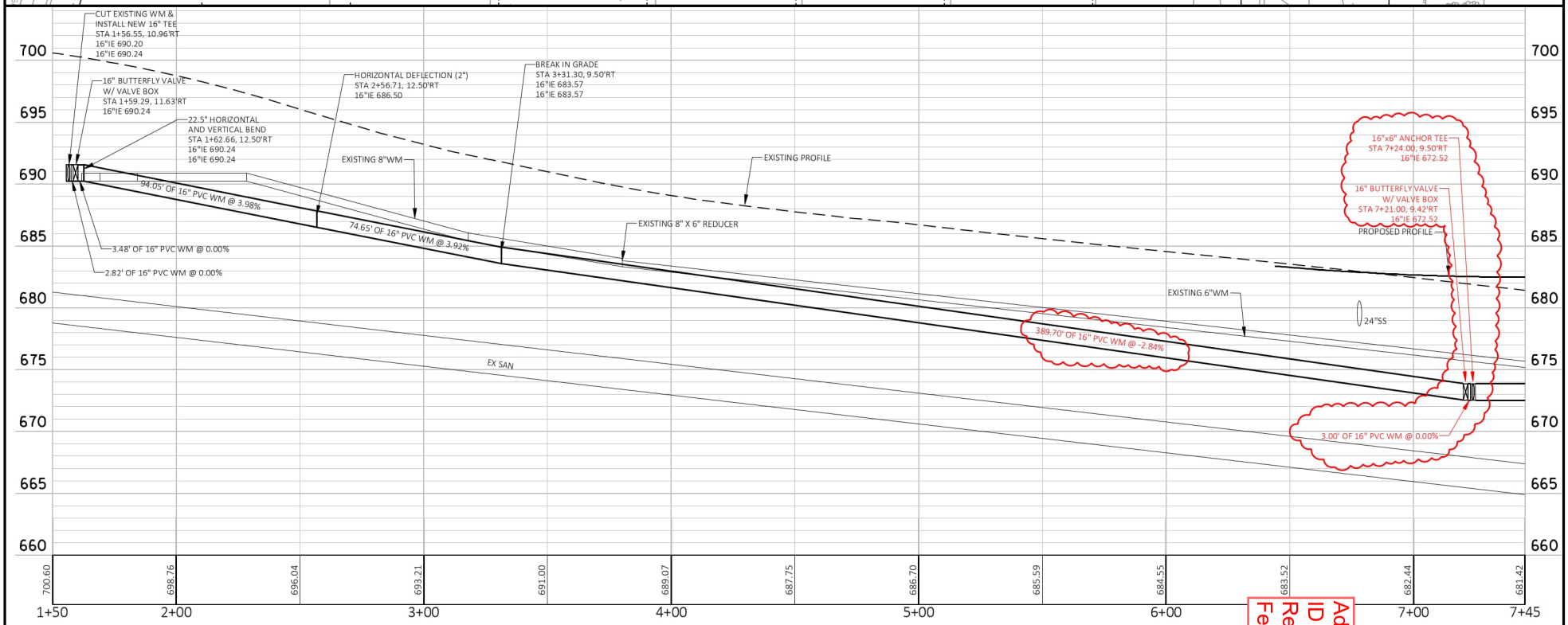
WISDOT/CADDS SHEET 42





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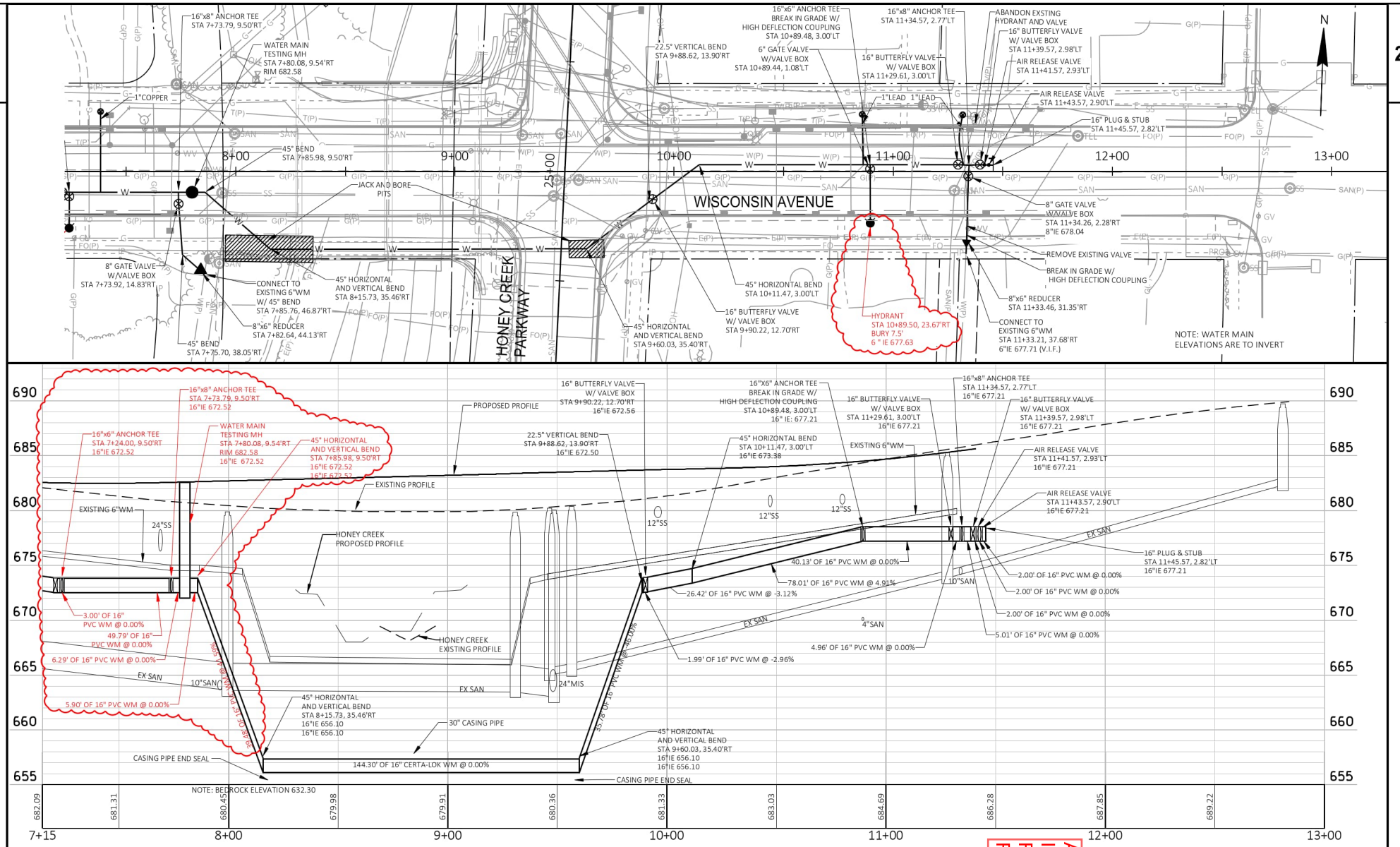
LAYOUT NAME - WM-1
PLOT DATE : 2/5/2025 9:39 AM
PLOT BY : WALTER A. WOLAK II
PLOT NAME :

WISDOT/CADDS SHEET 41

Addendum No. 01
ID 2190-10-70/71
Revised Sheet 59
February 6, 2025



PROJECT NO: 2190-10-70 & 2190-10-71	HWY: W. WISCONSIN AVE	COUNTY: MILWAUKEE	WATERMAIN PLAN AND PROFILE	SHEET 60	E

FILE NAME : S:\MILW_CO\WAUWATOSA\GOV\210102_WISCONSIN AVENUE BRIDGE\21901000\DESIGN\PIPENETWORKS\PIPENTWRK-WISAVE-WM.DWG
LAYOUT NAME - WM-2
PLOT DATE : 2/5/2025 9:39 AM
PLOT BY : WALTER A. WOLAK II
PLOT NAME
PLOT SCALE : ##########

WISDOT/CADDS SHEET 41

Addendum No. 01
ID 2190-10-70/71
Revised Sheet 60
February 6, 2025

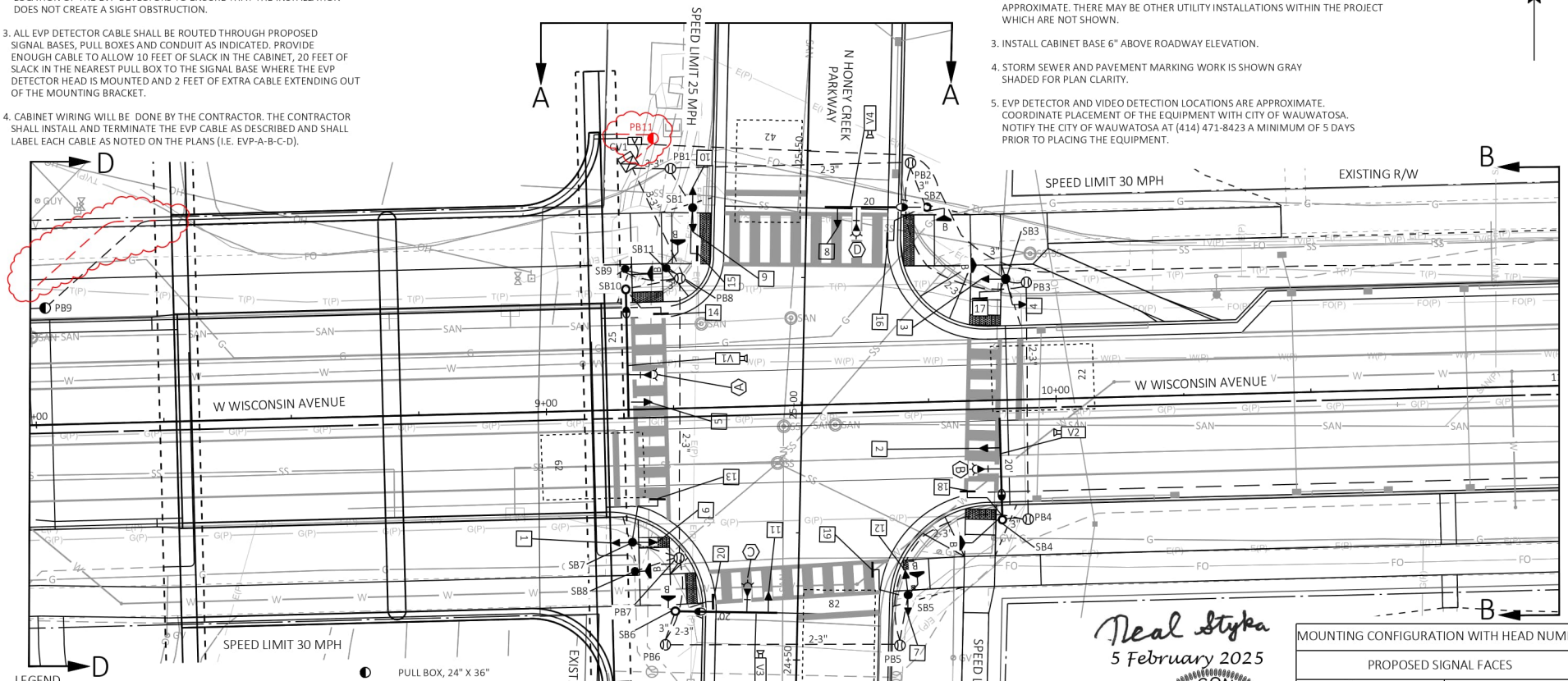
Addendum No. 01
ID 2190-10-70/71
Revised Sheet 73
February 6, 2025

EVP CONSTRUCTION NOTES:

1. INSTALL THE TRAFFIC SIGNAL EMERGENCY VEHICLE PRE-EMPTION DETECTOR CABLE TO RUN CONTINUOUSLY (WITHOUT SPLICES) FROM THE CABINET TO THE DETECTOR HEADS. MOUNT THE EVP DETECTOR HEADS AND WIRE THEM PER MANUFACTURES INSTRUCTIONS.
2. THE CITY OR IT'S ORIGINAL CONTRACTOR WILL DETERMINE THE EXACT LOCATION OF THE EVP DETECTORS TO ENSURE THAT THE INSTALLATION DOES NOT CREATE A SIGHT OBSTRUCTION.
3. ALL EVP DETECTOR CABLE SHALL BE ROUTED THROUGH PROPOSED SIGNAL BASES, PULL BOXES AND CONDUIT AS INDICATED. PROVIDE ENOUGH CABLE TO ALLOW 10 FEET OF SLACK IN THE CABINET, 20 FEET OF SLACK IN THE NEAREST PULL BOX TO THE SIGNAL BASE WHERE THE EVP DETECTOR HEAD IS MOUNTED AND 2 FEET OF EXTRA CABLE EXTENDING OUT OF THE MOUNTING BRACKET.
4. CABINET WIRING WILL BE DONE BY THE CONTRACTOR. THE CONTRACTOR SHALL INSTALL AND TERMINATE THE EVP CABLE AS DESCRIBED AND SHALL LABEL EACH CABLE AS NOTED ON THE PLANS (I.E. EVP-A-B-C-D).

CONSTRUCTION NOTES:

1. THE CONTRACTOR SHALL HAVE THE PULL BOXES AND CONDUIT RUNS INSPECTED 5 WORKING DAYS PRIOR TO PLACING SIGNAL CABLE INTO SYSTEM. CONTACT RANDY MICHELZ, TRAFFIC AND ELECTRICAL SUPERINTENDENT AT (414) 471-8429
2. THE LOCATIONS OF THE EXISTING AND PROPOSED UTILITY INSTALLATIONS ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT WHICH ARE NOT SHOWN.
3. INSTALL CABINET BASE 6" ABOVE ROADWAY ELEVATION.
4. STORM SEWER AND PAVEMENT MARKING WORK IS SHOWN GRAY SHADED FOR PLAN CLARITY.
5. EVP DETECTOR AND VIDEO DETECTION LOCATIONS ARE APPROXIMATE. COORDINATE PLACEMENT OF THE EQUIPMENT WITH CITY OF WAUWATOSA. NOTIFY THE CITY OF WAUWATOSA AT (414) 471-8423 A MINIMUM OF 5 DAYS PRIOR TO PLACING THE EQUIPMENT.



N

LEGEND

- CONTROL CABINET
- COMMUNICATION VAULT TYPE 1
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL OR TRANSFORMER BASE
- (XX) MONOTUBE - TYPE 10 BASE, POLE, 15'-30' ARM
- PEDESTRIAN HEAD
- ACCESIBLE PEDESTRIAN PUSH BUTTON
- VX VIDEO DETECTION CAMERA
- VIDEO DETECTION AREA
- PULL BOX, 24" X 36"
- PULL BOX, 24" X 42"
- CONFIRMATION LIGHT
- XX SIGNAL HEAD NUMBER
- R RED CIRCULAR INDICATOR
- Y YELLOW CIRCULAR INDICATOR
- G GREEN CIRCULAR INDICATOR
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- X EVP DESIGNATOR
- EVP DETECTOR HEAD
- LUMINAIRE AND ARM

NOTES:
- ALL LENSES ARE 12-INCH
- GRAYSHADE REPRESENTS EXISTING

Neal Styka
5 February 2025

WISCONSIN
NEAL STYKA
E-43008-6
MILWAUKEE, WI
PROFESSIONAL ENGINEER

MOUNTING CONFIGURATION WITH HEAD NUMBER	
PROPOSED SIGNAL FACES	
R Y G 1,2,3,4,5,6,7, 8,9,10,11,12	13,14,15,16, 17,18,19,20,

STRUCTURE NUMBERS

SB2 = S-40-2144-01
SB4 = S-40-2144-02
SB7 = S-40-2144-03
SB11 = S-40-2144-04

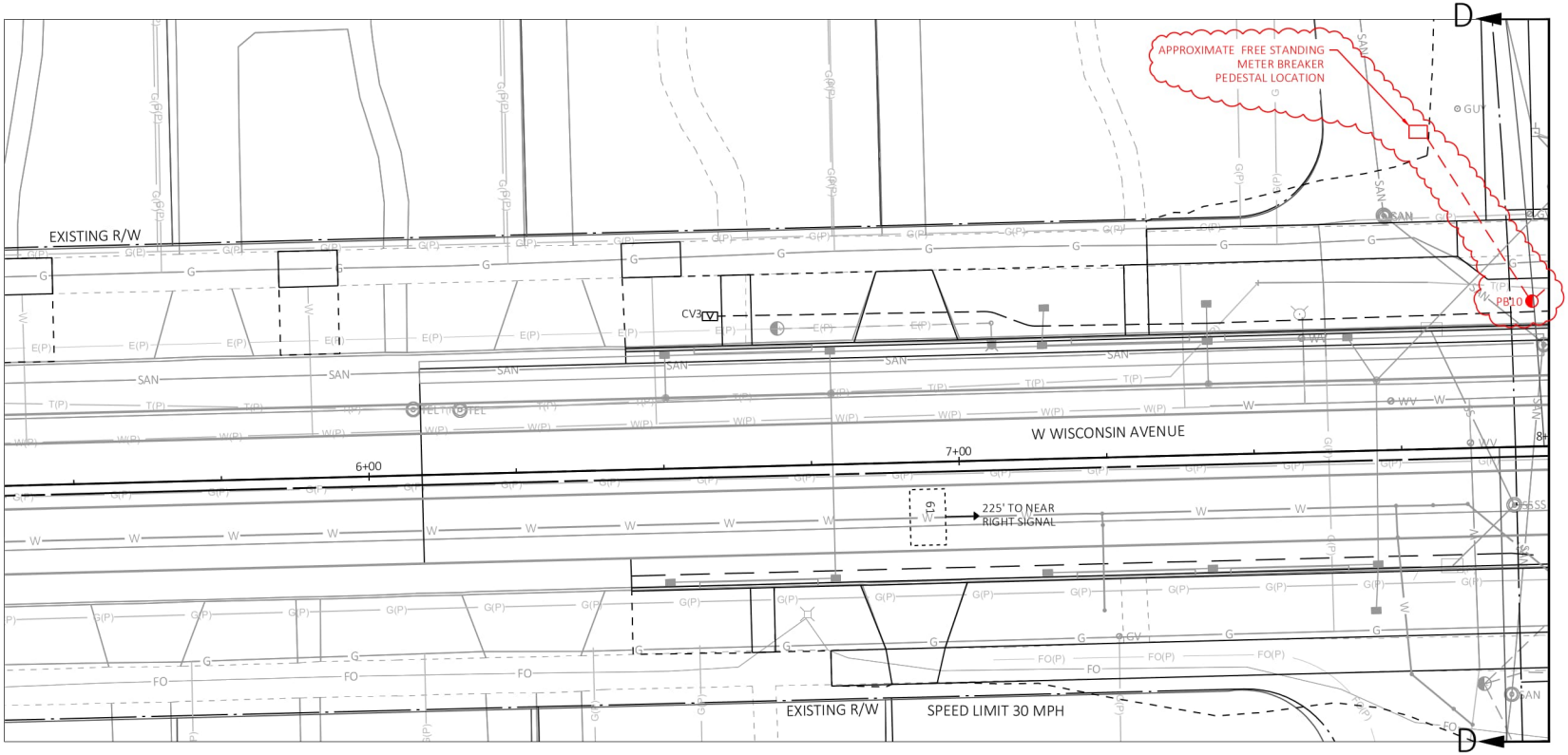
TRAFFIC CONTROL SIGNAL
W.WISCONSIN AVENUE AND HONEY CREEK PARKWAY
CITY OF WAUWATOSA
MILWAUKEE COUNTY
CABINET TYPE:TS2
CONTROLLER TYPE:SWARCO MCCAIN

REGION CONTACT: RANDY MICHELZ
DESIGNED BY: KAPUR & ASSOCIATES, INC.
REVISED BY:
PAGE 01 OF 05

PROJECT NO: 2190-10-70 & 2190-10-71	HWY: W. WISCONSIN AVE	COUNTY: MILWAUKEE	TRAFFIC SIGNAL PLAN	SHEET 73	E

FILE NAME : S:\MILW_CO\WAUWATOSA\GOV\210102_WISCONSIN AVENUE BRIDGE\21901000\SHEETSPLAN\024201_SP.DWG
LAYOUT NAME - 024201_sp - 01
PLOT DATE : 2/5/2025 12:57 PM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 42



LEGEND

- CONTROL CABINET
- COMMUNICATION VAULT TYPE 1
- NONMETALLIC CONDUIT 2", UNLESS OTHERWISE NOTED
- SIGNAL HEAD, TRAFFIC SIGNAL STANDARD, PEDESTAL OR TRANSFORMER BASE
- MONOTUBE - TYPE 10 BASE, POLE, 15'-30' ARM
- PEDESTRIAN HEAD
- ACCESIBLE PEDESTRIAN PUSH BUTTON
- VIDEO DETECTION CAMERA
- VIDEO DETECTION AREA
- PULL BOX, 24" X 36"
- PULL BOX, 24" X 42"
- CONFIRMATION LIGHT
- SIGNAL HEAD NUMBER
- RED CIRCULAR INDICATOR
- YELLOW CIRCULAR INDICATOR
- GREEN CIRCULAR INDICATOR
- WALK/DON'T WALK INDICATOR 16" (COUNTDOWN TIMER)
- EVP DESIGNATOR
- EVP DETECTOR HEAD
- LUMINAIRE AND ARM

Addendum No. 01
ID 2190-10-70/71
Revised Sheet 76
February 6, 2025

TRAFFIC CONTROL SIGNAL
W.WISCONSIN AVENUE AND HONEY CREEK PARKWAY
CITY OF WAUWATOSA
MILWAUKEE COUNTY
CABINET TYPE: TS2
CONTROLLER TYPE: SWARCO MCCAIN

REGION CONTACT: RANDY MICHELZ
DESIGNED BY: KAPUR & ASSOCIATES, INC.
REVISED BY:

PAGE 04 OF 05

PROJECT NO: 2190-10-70 & 2190-10-71	HWY: W. WISCONSIN AVE	COUNTY: MILWAUKEE	TRAFFIC SIGNAL PLAN	SHEET 76	E

FILE NAME : S:\MILW_CO\WAUWATOSA\GOV\210102_WISCONSIN AVENUE BRIDGE\21901000\SHEETSPLAN\024201_SP.DWG
LAYOUT NAME - 024201_sp - 04
PLOT DATE : 2/5/2025 1:29 PM
PLOT BY : WALTER A. WOLAK II
PLOT NAME :
PLOT SCALE : ##########

WISDOT/CADDS SHEET 42

	FROM/TO STATION	205.0100 EXCAVATION COMMON (1)		REMOVAL OF CONTAMINATED MATERIAL (4)	SPV.0195.01 EXCAVATION, HAULING, AND DISPOSAL OF SEDIMENT (5)	AVAILABLE MATERIAL (6)	UNEXPANDED FILL	EXPANDED FILL (7)	209.2100 BACKFILL GRANULAR GRADE 2 (8)	MASS ORDINATE +/- (9)	WASTE	208.0100 BORROW	COMMENT
		CUT (2)	EBS EXCAVATION (3)					FACTOR 1.00	FACTOR 1.00				
		CY	CY	CY	TON	CY	CY	CY	CY	CY	CY	CY	
CAT 0010													
WISCONSIN AVE	6+09.00/11+81.00	442		0	0	442	457	457	690	-15			
PATH SOUTH	57+87.03/59+00.00	3		0	0	3	126	126	0	-123			
PATH NORTH	61+00.00/63+51.00	19		0	0	19	374	374	0	-355			
HONEY CREEK STREAM	136+18.61/139+81.00	1,068		830	1,411	1,068	240	240	0		828		
UNDISTRIBUTED			69						69		69		
2190-10-70 CAT 0010 TOTALS		1,592		830	1,411	1,532	1,197	1,197	750	-493	888	493	
CAT 0020													
HONEY CREEK PARKWAY SOUTH	22+90.00/24+59.00	102		0	0	102	228	228	263	-126			
HONEY CREEK PARKWAY NORTH	25+38.00/27+50.00	88		0	0	88	229	229	424	-141			
UNDISTRIBUTED			50						50		50		
2190-10-70 CAT 0020 TOTALS		240		0	0	190	457	457	737	-267	50	267	

NOTES:

(1) EXCAVATION COMMON DOES NOT INCLUDE REMOVAL OF CONTAMINATED MATERIAL.

(2) NO ADDITIONS OR SUBTRACTIONS HAVE BEEN MADE FOR SALVAGED/UNSUABLE PAVEMENT OR CONCRETE CHANNEL MATERIAL. EXISTING CONCRETE CHANNEL IS ASSUMED TO BE 8 INCHES THICK.

(3) EBS EXCAVATION TO BE BACKFILLED WITH BACKFILL GRANULAR GRADE 2.

(4) MATERIAL REMOVED FROM THE EXISTING STREAMBED BELOW THE CONCRETE CHANNEL IS ASSUMED TO BE CONTAMINATED. ANY MATERIAL DETERMINED NOT CONTAMINATED SHALL BE REMOVED UNDER ITEM 205.0100 EXCAVATION COMMON. MATERIAL EXCAVATED FOR STREAM CONSTRUCTION MAY BE USED AS FILL WITHIN THE STREAM AREA, BUT SHALL NOT BE USED AS FILL IN OTHER AREAS OF THE PROJECT.

(5) CONTAMINATED SEDIMENT ASSUMED DENSITY OF 1.7 TON/CY

(6) AVAILABLE MATERIAL = CUT (NO ADJUSTMENTS HAVE BEEN MADE FOR SALVAGED/UNUSUABLE PAVEMENT OR CONCRETE CHANNEL MATERIAL). MATERIAL EXCAVATED ALONG HONEY CREEK STREAM SHALL NOT BE USED AS FILL FOR ANY OTHER DIVISION.

(7) EXPANDED FILL FACTOR = 1.00

(8) BACKFILL GRANULAR GRADE 2 TO BE USED AS ROADWAY FILL. SEE CONSTRUCTION DETAIL.

(9) THE MASS ORDINATE + OR - QTY CALCULATED FOR THE DIVISION. PLUS QUANTITY INDICATES AN EXCESS OF MATERIAL WITHIN THE DIVISION. MINUS INDICATES A SHORTAGE OF MATERIAL WITHIN THE DIVISION. EXCESS MATERIAL FROM HONEY CREEK STREAM EXCAVATION IS EXCLUDED FROM THE MASS ORDINATE AND SHOWN AS WASTE.

(10) FACTORS USED TO COMPUTE ANTICIPATED WASTE AND THE COMPUTED WASTE VOLUME IDENTIFIED ARE FOR GENERAL INFORMATION ONLY.

(11) STORM SEWER AND WATER MAIN EXCAVATION ARE NOT INCLUDED IN THIS TABLE AND SHOULD BE CONSIDERED ADDITIONAL WASTE. EXCAVATION FOR THESE ITEMS IS INCIDENTAL TO THE RESPECTIVE BID ITEMS.

Addendum No. 01
ID 2190-10-70
Revised Sheet 95
February 6, 2025

CONDUIT

FROM	TO	* 652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	* 652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH LF	652.0615 CONDUIT SPECIAL 3-INCH LF
CB1	PB1	--	24	--
PB1	SB1	9	--	--
PB1	PB2	--	94	--
PB2	SB2	--	9	--
PB2	PB3	--	84	--
PB3	SB3	4	--	--
PB3	PB4	--	93	--
PB4	SB4	--	5	--
PB4	PB5	--	90	--
PB5	SB5	10	--	--
PB5	PB6	--	92	--
PB6	SB6	--	8	--
PB6	PB7	--	36	--
PB7	SB7	10	--	--
PB7	SB8	10	--	--
PB7	PB8	--	110	--
PB8	SB9	12	--	--
PB8	SB10	--	10	--
PB8	SB11	4	--	--
PB8	CB1	--	75	--
CB1	CV1	5	--	--
CV1	CV2	273	--	--
CV1	BRIDGE	3	--	--
PB9	CV3	144	--	--
BRIDGE	PB9	28	--	--
CB1	PB11	7	--	--
PB11	BRIDGE	32	--	--
BRIDGE	PB10	31	--	--
PB10	PEDESTAL	32	--	--
	TOTAL 0040	614	730	0

ABOVE GROUND SIGNAL CABLE

FROM	TO HEAD NO.	655.0230 CABLE TRAFFIC SIGNAL 5-14 AWG LF
SB1	9	27
SB1	10	27
SB1	15	23
SB2	8	48
SB2	16	23
SB2	BUTTON	6
SB3	3	27
SB3	4	27
SB3	17	23
SB3	BUTTON	6
SB4	2	43
SB4	18	23
SB4	BUTTON	6
SB5	BUTTON	6
SB5	7	27
SB5	12	27
SB5	19	23
SB6	11	48
SB6	20	23
SB6	BUTTON	6
SB7	1	27
SB7	6	27
SB7	13	23
SB8	BUTTON	6
SB9	BUTTON	6
SB10	5	53
SB10	14	23
SB11	BUTTON	6
	TOTAL 0040	469

UNDERGROUND CABLE

FROM	TO	655.0240 CABLE TRAFFIC SIGNAL 7-14 AWG LF	655.0260 CABLE TRAFFIC SIGNAL 12-14 AWG LF
CB1	SB1	--	52
CB1	SB2	--	114
CB1	SB3	--	166
CB1	SB4	--	228
CB1	SB5	--	294
CB1	SB6	--	169
CB1	SB7	--	139
CB1	SB8	138	--
CB1	SB9	71	--
CB1	SB10	69	--
CB1	SB11	63	--
	TOTAL 0040	341	1,162

ELECTRICAL WIRE

FROM	TO	655.0515 ELECTRICAL WIRE TRAFFIC SIGNALS 10 AWG LF
CB1	SB1	52
SB1	SB2	104
SB2	SB3	94
SB3	SB4	94
SB4	SB5	81
SB5	SB6	102
SB6	SB7	73
SB7	SB8	42
SB8	SB9	112
SB9	SB10	43
SB10	SB11	37
SB11	CB1	63
PB1	CB1	38
PB2	SB2	29
PB3	SB3	24
PB4	SB4	24
PB5	SB5	30
PB6	PB6	27
PB7	PB7	30
PB8	CB1	59
	TOTAL 0040	642

PULL BOX

PULL BOX	STATION	OFFSET	* 653.0135 PULL BOXES STEEL 24X36-INCH EACH	* 653.0140 PULL BOXES STEEL 24X42-INCH EACH
PB1	9+26	47.0' LT	--	1
PB2	9+73	47.0' LT	--	1
PB3	9+95	22.9' LT	--	1
PB4	9+94	23.5' RT	--	1
PB5	9+68	47.6' RT	--	1
PB6	9+22	46.3' RT	--	1
PB7	9+25	29.4' RT	--	1
PB8	9+27	25.5' LT	--	1
PB9	8+02	22.9' LT	1	--
PB10	7+98	24.6' LT	1	--
PB11	9+22	53.1' LT	1	--
		TOTAL 0040	3	8

EVP DETECTOR CABLE

CATEGORY	SIGNAL BASE NO.	655.0900 TRAFFIC SIGNAL EVP DETECTOR CABLE LF
0010	SB10 (HEAD A)	94
0010	SB4 (HEAD B)	201
0010	SB6 (HEAD C)	161
0010	SB2 (HEAD D)	121
	TOTAL 0040	577

LIGHTING WIRE

FROM	TO	655.0320 CABLE TYPE UF 2-10 AWG GROUNDED LF	* 655.0610 ELECTRICAL WIRE LIGHTING 12 AWG LF
CB1	SB2	116	--
SB2	LUMIN (1)	--	144
SB2	SB4	169	--
SB4	LUMIN (1)	--	144
SB10	SB6	169	--
SB6	LUMIN (1)	--	144
CB1	SB10	73	--
SB10	LUMIN (1)	--	144
	TOTAL 0040	527	576

CONCRETE BASE

BASE NO	STATION	OFFSET	654.0101 CONCRETE BASES TYPE 1 EACH	654.0110 CONCRETE BASES TYPE 10 EACH	654.0217 CONCRETE CONTROL CABINET BASES TYPE 9 SPECIAL EACH
SB1	9+29.72	39.3' LT	1	--	--
SB2	9+75.64	38.2' LT	--	1	--
SB3	9+90.69	23.7' LT	1	--	--
SB4	9+88.85	23.5' RT	--	1	--
SB5	9+70.00	37.8' RT	1	--	--
SB6	9+24.30	39.8' RT	1	--	--
SB7	9+16.21	26.0' RT	--	1	--
SB8	9+16.59	31.8' RT	1	--	--
SB9	9+16.1	27.6' LT	1	--	--
SB10	9+16.22	23.6' LT	--	1	--
SB11	9+24.25	27.6' LT	1	--	--
CB1	9+17.57	48.2' LT	--	--	1
		TOTAL 0040	7	4	1

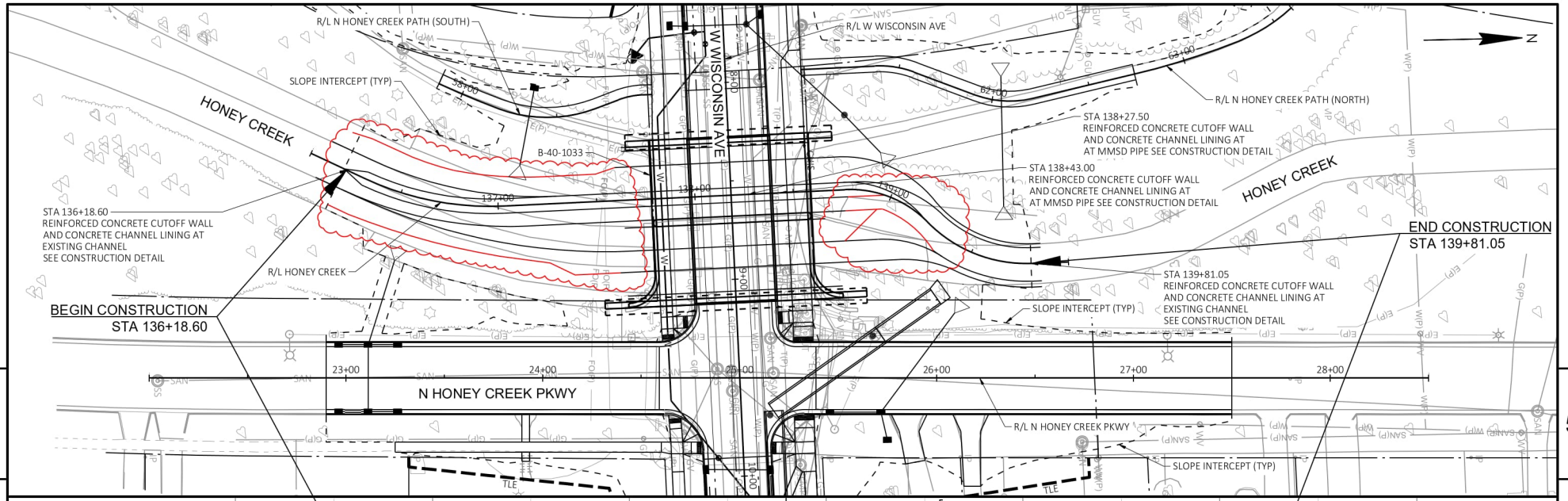
* - ADDITIONAL QUANTITIES SHOWN ELSEWHERE

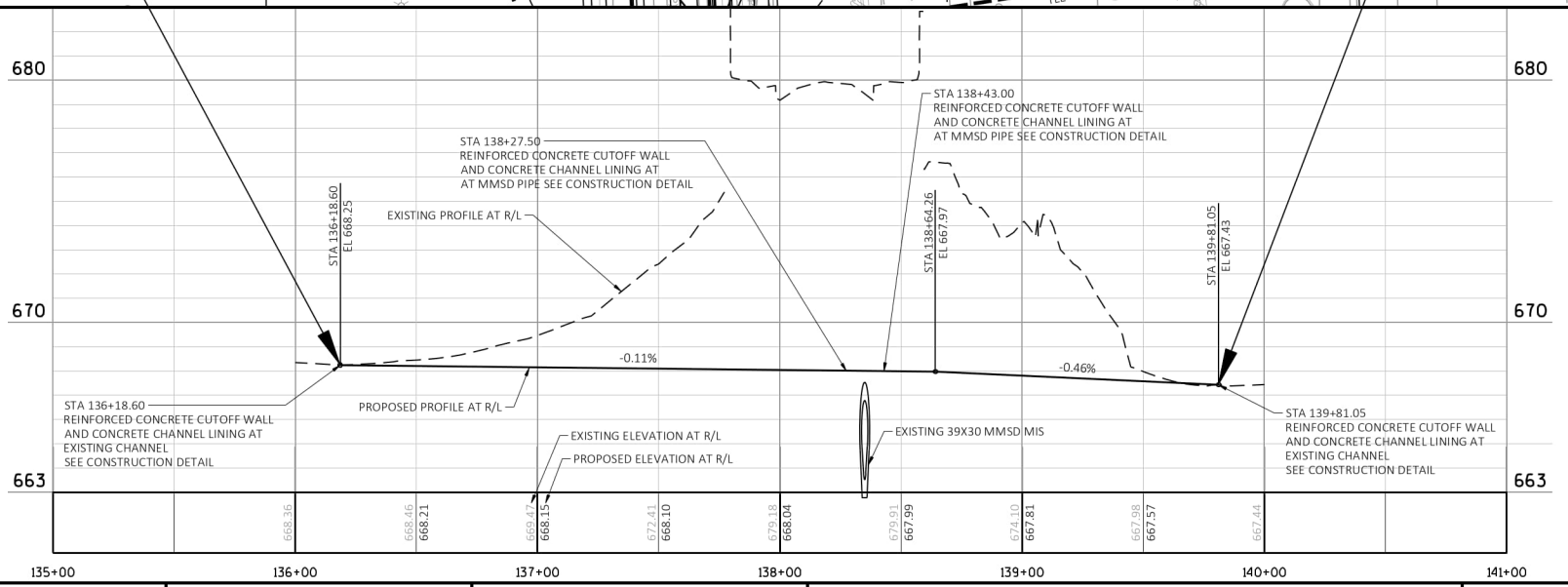
W WISCONSIN AVE. AND N HONEY CREEK PKWY.
CITY OF WAUWATOSA
MILWAUKEE COUNTY
2190-10-70
CATEGORY 0040

Addendum No. 01
ID 2190-10-70
Revised Sheet 104
February 6, 2025

PROJECT NO: 2190-10-70	HWY: W. WISCONSIN AVE	COUNTY: MILWAUKEE	MISCELLANEOUS QUANTITIES	SHEET 104	E

FILE NAME : S:\MILW_CO\WAUWATOSA\GOV\210102_WISCONSIN AVENUE BRIDGE\21901000\SHEETSPLAN\030201_MQ-SIGNALS.DWG
LAYOUT NAME - 01
PLOT DATE : 2/5/2025 1:45 PM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : 1" = 1'
WISDOT/CADDS SHEET 42



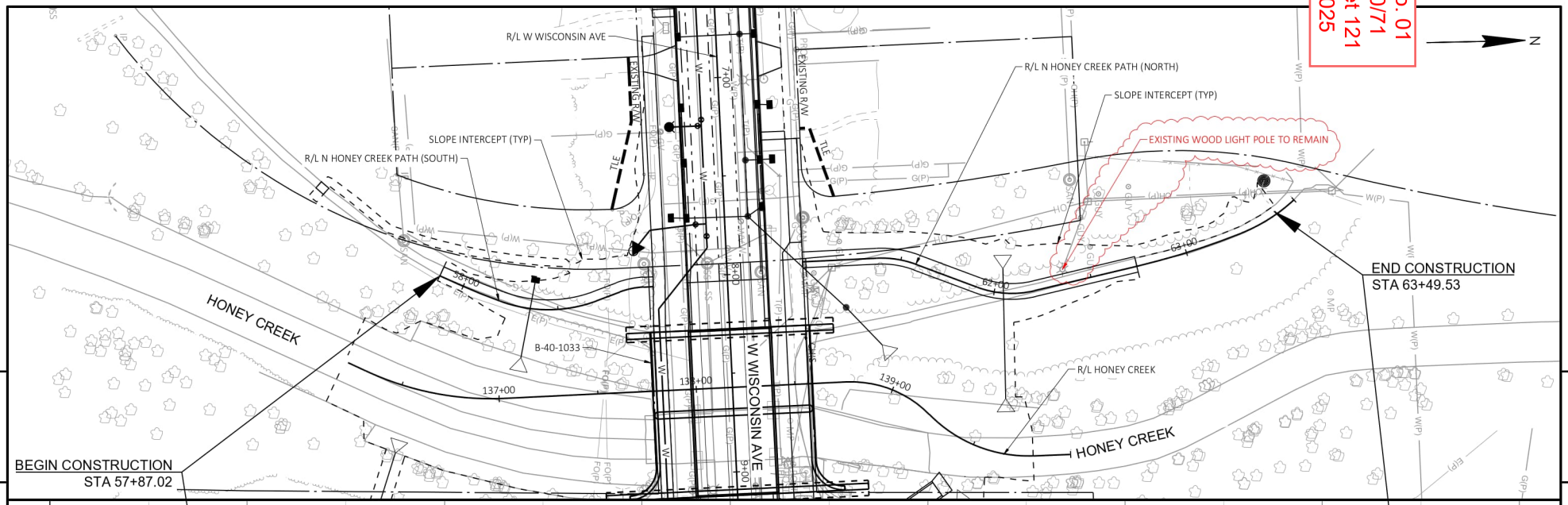


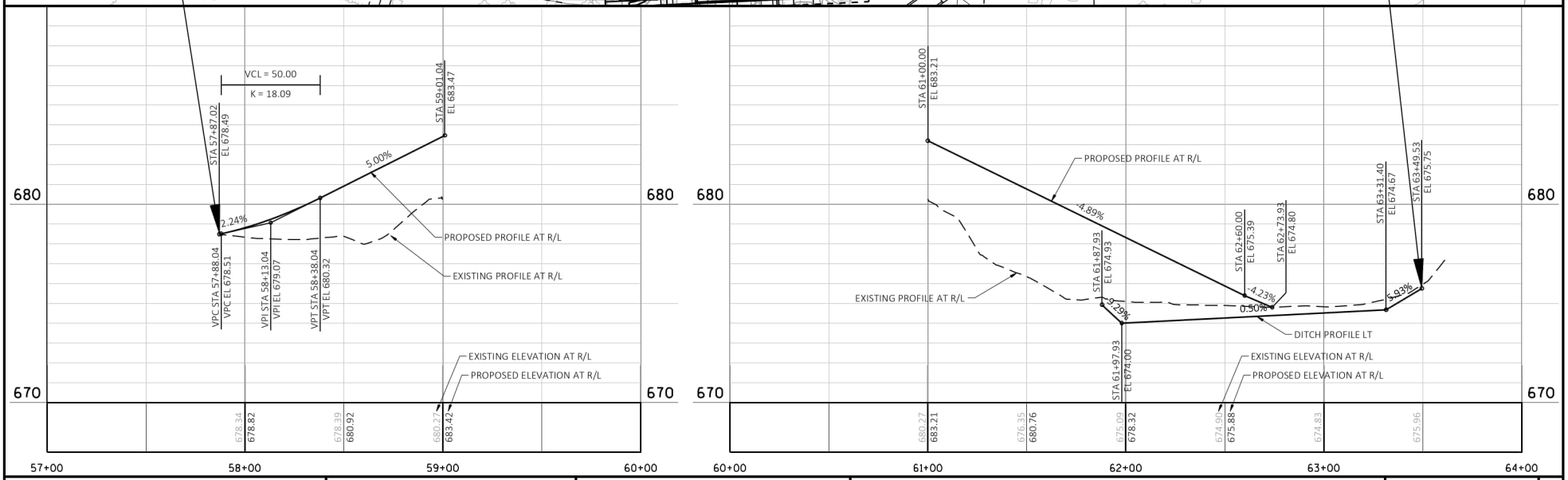
PROJECT NO: 2190-10-70 & 2190-10-71	HWY: W. WISCONSIN AVE	COUNTY: MILWAUKEE	PLAN AND PROFILE: HONEY CREEK STREAM REALIGNMENT	SHEET 120	E

FILE NAME : S:\MILW_CO\WAUWATOSA\GOV\210102_WISCONSIN AVENUE BRIDGE\21901000\SHEETSPLAN\050103-PP-CREEK.DWG
LAYOUT NAME - 050101 - (1)CREEK
PLOT DATE : 1/13/2025 11:55 AM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : 1 IN:50 FT
WISDOT/CADDS SHEET 44

Addendum No. 01
ID 2190-10-70/71
Revised Sheet 120
February 6, 2025

Addendum No. 01
ID 2190-10-70/71
Revised Sheet 121
February 6, 2025





PROJECT NO: 2190-10-70 & 2190-10-71	HWY: W. WISCONSIN AVE	COUNTY: MILWAUKEE	PLAN AND PROFILE: HONEY CREEK PATHS	SHEET 121	E

FILE NAME : S:\MILW_CO\WAUWATOSA\GOV\210102_WISCONSIN AVENUE BRIDGE\21901000\SHEETSPLAN\050104-PP-PATH.DWG
LAYOUT NAME - PATHS
PLOT DATE : 1/17/2025 10:19 AM
PLOT BY : WALTER A. WOLAK II
PLOT NAME :
PLOT SCALE : 1 IN:50 FT

CAT 0010 - HONEY CREEK STREAM

STATION	REAL STATION	DISTANCE	AREA (SF)			INCREMENTAL VOL (CY) (UNADJUSTED)			CUMULATIVE VOL (CY)			
			CUT	REMOVAL OF CONTAMINATED MATERIAL	FILL	CUT	REMOVAL OF CONTAMINATED MATERIAL	FILL	CUT	REMOVAL OF CONTAMINATED MATERIAL	EXPANDED FILL	MASS ORDINATE
									1.00	1.00	1.00	
						NOTE 1	NOTE 2	NOTE 3	NOTE 1	NOTE 2		NOTE 5
136+18.61	13618.61	0.00	26.17	107.56	1.18	0	0	0	0	0	0	0
136+50.00	13650.00	31.39	25.61	117.44	6.25	30	131	4	30	131	4	26
137+00.00	13700.00	50.00	36.83	135.60	23.76	58	234	28	88	365	32	56
137+50.00	13750.00	50.00	161.51	171.63	0.00	184	284	22	272	649	54	218
137+60.00	13760.00	10.00	210.32	168.68	0.04	69	63	0	341	712	54	287
STRUCTURE EXCAVATION/BACKFILL												
138+75.00	13875.00	0.00	395.91	31.86	1.25	0	0	0	341	712	54	287
139+00.00	13900.00	25.00	280.70	0.10	127.60	313	15	60	654	727	114	540
139+50.00	13950.00	50.00	94.08	47.66	5.71	347	44	123	1,001	771	237	764
139+81.00	13981.00	31.00	22.77	55.35	0.11	67	59	3	1,068	830	240	828

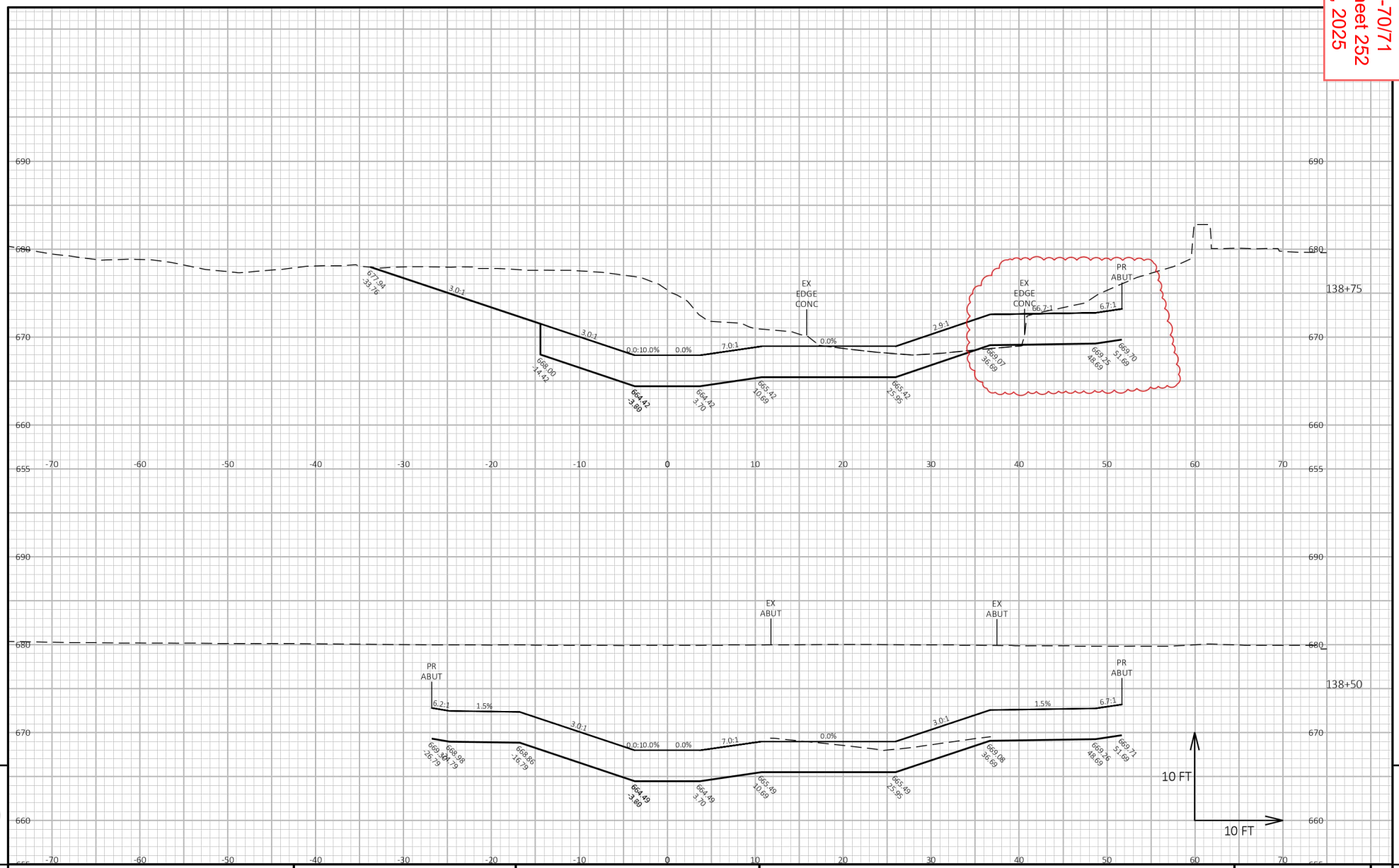
NOTES:	
1 - CUT	NO ADJUSTMENT HAS BEEN MADE FOR SALVAGED/UNUSABLE PAVEMENT OR CONCRETE CHANNEL MATERIAL
2 - REMOVAL OF CONTAMINATED MATERIAL	ASSUMED CONTAMINATED MATERIAL IS EXCLUDED FROM CUT AND MASS ORDINATE
3 - FILL	NO ADJUSTMENT HAS BEEN MADE FOR SALVAGED/UNUSABLE PAVEMENT OR CONCRETE CHANNEL MATERIAL
4 - GRANULAR BACKFILL	GRANULAR BACKFILL PER CONSTRUCTION DETAIL IS EXCLUDED FROM FILL AND MASS ORDINATE
5 - MASS ORDINATE	CUT - (FILL* FILL FACTOR)

Addendum No. 01
ID 2190-10-70/71
Revised Sheet 230
February 6, 2025

9

9

Addendum No. 01
ID 2190-10-70/71
Revised Sheet 252
February 6, 2025

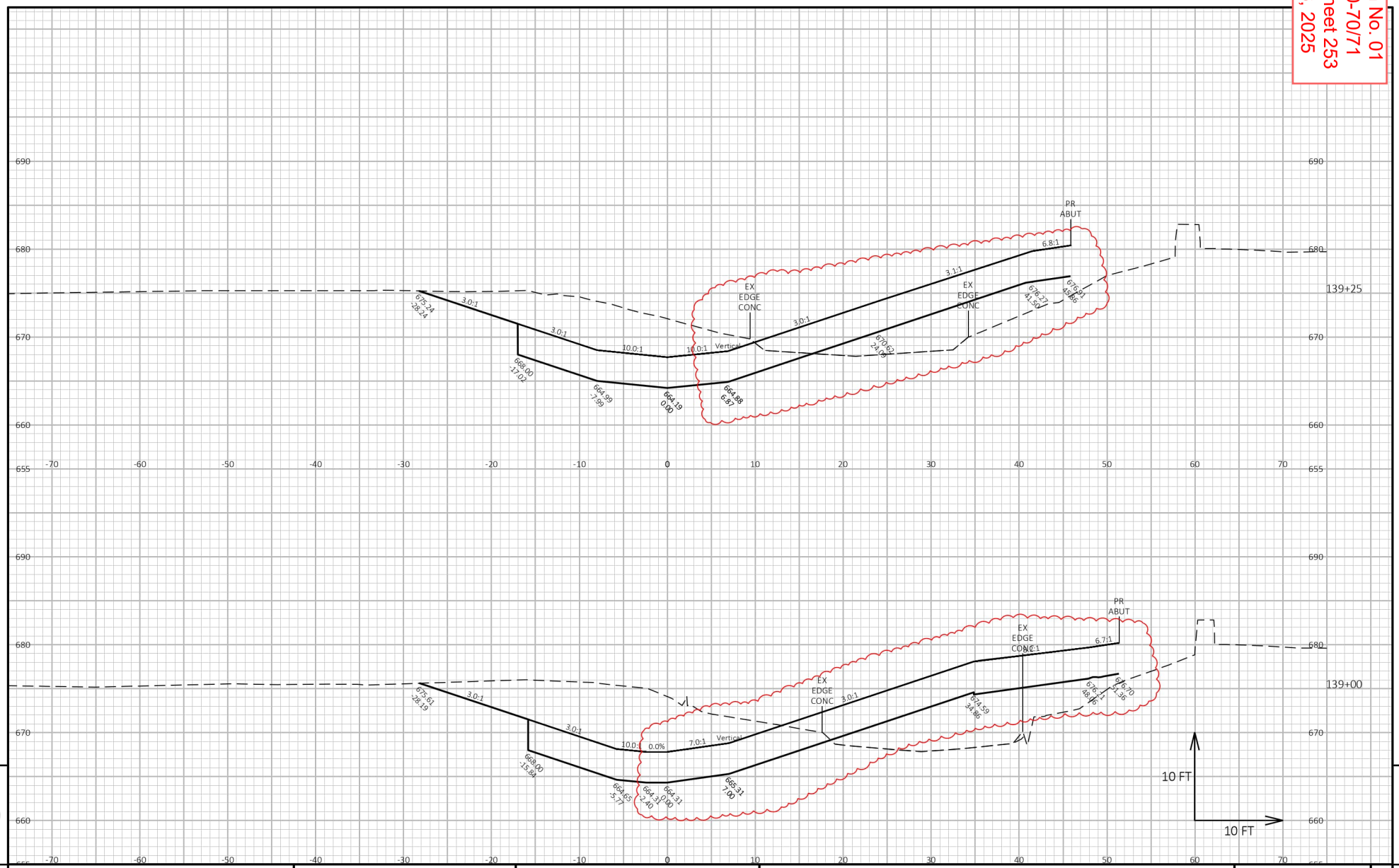


9 9

PROJECT NO: 2190-10-70 & 2190-10-71	HWY: W. WISCONSIN AVE	COUNTY: MILWAUKEE	CROSS SECTIONS: HONEY CREEK STREAM REALIGNMENT	SHEET 252	E

FILE NAME : S:\MILW_CO\WAUWATOSA\GOV\210102_WISCONSIN AVENUE BRIDGE\21901000\DESIGN\CORRIDORS\CRDR_HONEYCREEK_STREAM.DWG
LAYOUT NAME - XS-STREAM-6
PLOT DATE : 1/13/2025 11:59 AM PLOT BY : WALTER A. WOLAK II PLOT NAME : PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.
WISDOT/CADDS SHEET 49

Addendum No. 01
ID 2190-10-70/71
Revised Sheet 253
February 6, 2025



PROJECT NO: 2190-10-70 & 2190-10-71	HWY: W. WISCONSIN AVE	COUNTY: MILWAUKEE	CROSS SECTIONS: HONEY CREEK STREAM REALIGNMENT	SHEET 253	E

FILE NAME : S:\MILW_CO\WAUWATOSA\GOV\210102_WISCONSIN AVENUE BRIDGE\21901000\DESIGN\CORRIDORS\CRDR_HONEYCREEK_STREAM.DWG
LAYOUT NAME - XS-STREAM-7
PLOT DATE : 1/13/2025 12:00 PM
PLOT BY : WALTER A. WOLAK II
PLOT NAME :
PLOT SCALE : 1 IN:10 FT HORZ. / 1 IN:10 FT VERT.
WISDOT/CADDS SHEET 49

Proposal ID: 20250211015 **Project(s):** 2190-10-70, 2190-10-71

Federal ID(s): N/A, N/A

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	201.0210 Grubbing	1,872.000 SY	_____.____	_____.____
0004	201.0220 Grubbing	186.000 ID	_____.____	_____.____
0006	203.0270 Removing Structure Over Waterway Debris Capture (structure) 01. P-40-776	1.000 EACH	_____.____	_____.____
0008	204.0100 Removing Concrete Pavement	3,598.000 SY	_____.____	_____.____
0010	204.0120 Removing Asphaltic Surface Milling	669.000 SY	_____.____	_____.____
0012	204.0150 Removing Curb & Gutter	639.000 LF	_____.____	_____.____
0014	204.0155 Removing Concrete Sidewalk	555.000 SY	_____.____	_____.____
0016	204.0195 Removing Concrete Bases	5.000 EACH	_____.____	_____.____
0018	204.0210 Removing Manholes	3.000 EACH	_____.____	_____.____
0020	204.0215 Removing Catch Basins	7.000 EACH	_____.____	_____.____
0022	204.0245 Removing Storm Sewer (size) 04.12-Inch	174.000 LF	_____.____	_____.____
0024	204.0245 Removing Storm Sewer (size) 05. 18-Inch	151.000 LF	_____.____	_____.____
0026	204.0245 Removing Storm Sewer (size) 06. 24-Inch	101.000 LF	_____.____	_____.____
0028	204.0280 Sealing Pipes	1.000 EACH	_____.____	_____.____
0030	204.0291.S Abandoning Sewer	20.000 CY	_____.____	_____.____

Proposal ID: 20250211015 **Project(s):** 2190-10-70, 2190-10-71

Federal ID(s): N/A, N/A

SECTION: 0001 Contract Items

Alt Set ID: **Alt Mbr ID:**

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0032	204.9060.S Removing (item description) 01. Lighting Units	2.000 EACH	_____.____	_____.____
0034	205.0100 Excavation Common	1,832.000 CY	_____.____	_____.____
0036	206.1001 Excavation for Structures Bridges (structure) 01. B-40-1033	1.000 EACH	_____.____	_____.____
0038	206.5001 Cofferdams (structure) 01. B-40-1033	1.000 EACH	_____.____	_____.____
0040	208.0100 Borrow	760.000 CY	_____.____	_____.____
0042	209.1100 Backfill Granular Grade 1	1,525.000 CY	_____.____	_____.____
0044	209.2100 Backfill Granular Grade 2	1,487.000 CY	_____.____	_____.____
0046	210.1500 Backfill Structure Type A	1,427.000 TON	_____.____	_____.____
0048	213.0100 Finishing Roadway (project) 01. 2190-10-70	1.000 EACH	_____.____	_____.____
0050	305.0120 Base Aggregate Dense 1 1/4-Inch	3,109.000 TON	_____.____	_____.____
0052	310.0110 Base Aggregate Open-Graded	34.000 TON	_____.____	_____.____
0054	405.0100 Coloring Concrete WisDOT Red	15.000 CY	_____.____	_____.____
0056	415.0080 Concrete Pavement 8-Inch	1,787.000 SY	_____.____	_____.____
0058	416.0610 Drilled Tie Bars	146.000 EACH	_____.____	_____.____
0060	416.0620 Drilled Dowel Bars	117.000 EACH	_____.____	_____.____

Proposal ID: 20250211015 **Project(s):** 2190-10-70, 2190-10-71

Federal ID(s): N/A, N/A

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	455.0605 Tack Coat	507.000 GAL	_____.____	_____.____
0064	460.2000 Incentive Density HMA Pavement	580.000 DOL	1.00000	580.00
0066	460.6223 HMA Pavement 3 MT 58-28 S	517.000 TON	_____.____	_____.____
0068	460.6224 HMA Pavement 4 MT 58-28 S	382.000 TON	_____.____	_____.____
0070	465.0105 Asphaltic Surface	49.000 TON	_____.____	_____.____
0072	502.0100 Concrete Masonry Bridges	1,020.000 CY	_____.____	_____.____
0074	502.3200 Protective Surface Treatment	394.000 SY	_____.____	_____.____
0076	502.3210 Pigmented Surface Sealer	73.000 SY	_____.____	_____.____
0078	505.0400 Bar Steel Reinforcement HS Structures	37,460.000 LB	_____.____	_____.____
0080	505.0600 Bar Steel Reinforcement HS Coated Structures	113,460.000 LB	_____.____	_____.____
0082	513.2001 Railing Pipe	21.000 LF	_____.____	_____.____
0084	513.8011 Railing Steel Pedestrian Type C2	48.000 LF	_____.____	_____.____
0086	516.0500 Rubberized Membrane Waterproofing	68.000 SY	_____.____	_____.____
0088	516.0610.S Sheet Membrane Waterproofing for Buried Structures 01. B-40-1033	370.000 SY	_____.____	_____.____
0090	520.8000 Concrete Collars for Pipe	1.000 EACH	_____.____	_____.____

Proposal ID: 20250211015 **Project(s):** 2190-10-70, 2190-10-71

Federal ID(s): N/A, N/A

SECTION: 0001 Contract Items

Alt Set ID: **Alt Mbr ID:**

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0092	522.1012 Apron Endwalls for Culvert Pipe Reinforced Concrete 12-Inch	1.000 EACH	_____.____	_____.____
0094	522.1018 Apron Endwalls for Culvert Pipe Reinforced Concrete 18-Inch	2.000 EACH	_____.____	_____.____
0096	522.1024 Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	1.000 EACH	_____.____	_____.____
0098	522.1030 Apron Endwalls for Culvert Pipe Reinforced Concrete 30-Inch	1.000 EACH	_____.____	_____.____
0100	522.2634 Apron Endwalls for Culvert Pipe Reinforced Concrete Horizontal Elliptical 34x53-Inch	1.000 EACH	_____.____	_____.____
0102	550.0020 Pre-Boring Rock or Consolidated Materials	4,230.000 LF	_____.____	_____.____
0104	550.1120 Piling Steel HP 12-Inch X 53 Lb	4,230.000 LF	_____.____	_____.____
0106	601.0319 Concrete Curb & Gutter 19-Inch	25.000 LF	_____.____	_____.____
0108	601.0331 Concrete Curb & Gutter 31-Inch	1,281.000 LF	_____.____	_____.____
0110	602.0410 Concrete Sidewalk 5-Inch	4,728.000 SF	_____.____	_____.____
0112	602.0515 Curb Ramp Detectable Warning Field Natural Patina	112.000 SF	_____.____	_____.____
0114	602.0815 Concrete Driveway 7-Inch	164.000 SY	_____.____	_____.____
0116	606.0100 Riprap Light	342.000 CY	_____.____	_____.____
0118	606.0200 Riprap Medium	43.000 CY	_____.____	_____.____

Proposal ID: 20250211015 **Project(s):** 2190-10-70, 2190-10-71

Federal ID(s): N/A, N/A

SECTION: 0001 Contract Items

Alt Set ID: **Alt Mbr ID:**

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0120	606.0300 Riprap Heavy	20.000 CY	_____.____	_____.____
0122	608.0318 Storm Sewer Pipe Reinforced Concrete Class III 18-Inch	120.000 LF	_____.____	_____.____
0124	608.0324 Storm Sewer Pipe Reinforced Concrete Class III 24-Inch	238.000 LF	_____.____	_____.____
0126	608.0330 Storm Sewer Pipe Reinforced Concrete Class III 30-Inch	140.000 LF	_____.____	_____.____
0128	608.0342 Storm Sewer Pipe Reinforced Concrete Class III 42-Inch	96.000 LF	_____.____	_____.____
0130	608.0512 Storm Sewer Pipe Reinforced Concrete Class V 12-Inch	148.000 LF	_____.____	_____.____
0132	608.0515 Storm Sewer Pipe Reinforced Concrete Class V 15-Inch	116.000 LF	_____.____	_____.____
0134	608.0518 Storm Sewer Pipe Reinforced Concrete Class V 18-Inch	39.000 LF	_____.____	_____.____
0136	608.0524 Storm Sewer Pipe Reinforced Concrete Class V 24-Inch	78.000 LF	_____.____	_____.____
0138	608.0530 Storm Sewer Pipe Reinforced Concrete Class V 30-Inch	33.000 LF	_____.____	_____.____
0140	608.2334 Storm Sewer Pipe Reinforced Concrete Horizontal Elliptical Class HE-III 34x53-Inch	26.000 LF	_____.____	_____.____
0142	611.0606 Inlet Covers Type B	4.000 EACH	_____.____	_____.____
0144	611.0612 Inlet Covers Type C	1.000 EACH	_____.____	_____.____

Proposal ID: 20250211015 **Project(s):** 2190-10-70, 2190-10-71

Federal ID(s): N/A, N/A

SECTION: 0001 Contract Items

Alt Set ID: **Alt Mbr ID:**

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0146	611.0642 Inlet Covers Type MS	1.000 EACH	_____.____	_____.____
0148	611.2004 Manholes 4-FT Diameter	2.000 EACH	_____.____	_____.____
0150	611.2005 Manholes 5-FT Diameter	2.000 EACH	_____.____	_____.____
0152	611.2006 Manholes 6-FT Diameter	2.000 EACH	_____.____	_____.____
0154	611.2007 Manholes 7-FT Diameter	1.000 EACH	_____.____	_____.____
0156	611.3004 Inlets 4-FT Diameter	6.000 EACH	_____.____	_____.____
0158	611.3220 Inlets 2x2-FT	4.000 EACH	_____.____	_____.____
0160	611.3901 Inlets Median 1 Grate	1.000 EACH	_____.____	_____.____
0162	612.0106 Pipe Underdrain 6-Inch	400.000 LF	_____.____	_____.____
0164	612.0204 Pipe Underdrain Unperforated 4-Inch	100.000 LF	_____.____	_____.____
0166	612.0206 Pipe Underdrain Unperforated 6-Inch	53.000 LF	_____.____	_____.____
0168	612.0404 Pipe Underdrain Wrapped 4-Inch	200.000 LF	_____.____	_____.____
0170	612.0406 Pipe Underdrain Wrapped 6-Inch	245.000 LF	_____.____	_____.____
0172	612.0804 Apron Endwalls for Underdrain Reinforced Concrete 4-Inch	4.000 EACH	_____.____	_____.____
0174	612.0806 Apron Endwalls for Underdrain Reinforced Concrete 6-Inch	2.000 EACH	_____.____	_____.____

Proposal ID: 20250211015 **Project(s):** 2190-10-70, 2190-10-71

Federal ID(s): N/A, N/A

SECTION: 0001 Contract Items

Alt Set ID: **Alt Mbr ID:**

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0176	616.0700.S Fence Safety	1,760.000 LF	_____.____	_____.____
0178	618.0100 Maintenance and Repair of Haul Roads (project) 01. 2190-10-70	1.000 EACH	_____.____	_____.____
0180	619.1000 Mobilization	1.000 EACH	_____.____	_____.____
0182	623.0200 Dust Control Surface Treatment	6,063.000 SY	_____.____	_____.____
0184	624.0100 Water	17.000 MGAL	_____.____	_____.____
0186	625.0100 Topsoil	5,373.000 SY	_____.____	_____.____
0188	627.0200 Mulching	5,373.000 SY	_____.____	_____.____
0190	628.1104 Erosion Bales	303.000 EACH	_____.____	_____.____
0192	628.1504 Silt Fence	1,694.000 LF	_____.____	_____.____
0194	628.1520 Silt Fence Maintenance	1,694.000 LF	_____.____	_____.____
0196	628.1905 Mobilizations Erosion Control	6.000 EACH	_____.____	_____.____
0198	628.1910 Mobilizations Emergency Erosion Control	16.000 EACH	_____.____	_____.____
0200	628.2006 Erosion Mat Urban Class I Type A	1,090.000 SY	_____.____	_____.____
0202	628.2027 Erosion Mat Class II Type C	898.000 SY	_____.____	_____.____
0204	628.6510 Soil Stabilizer Type B	1.000 ACRE	_____.____	_____.____
0206	628.7010 Inlet Protection Type B	8.000 EACH	_____.____	_____.____

Proposal ID: 20250211015 **Project(s):** 2190-10-70, 2190-10-71

Federal ID(s): N/A, N/A

SECTION: 0001 Contract Items

Alt Set ID: **Alt Mbr ID:**

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0208	628.7020 Inlet Protection Type D	54.000 EACH	_____.____	_____.____
0210	628.7555 Culvert Pipe Checks	2.000 EACH	_____.____	_____.____
0212	628.7560 Tracking Pads	4.000 EACH	_____.____	_____.____
0214	629.0210 Fertilizer Type B	4.000 CWT	_____.____	_____.____
0216	630.0140 Seeding Mixture No. 40	20.000 LB	_____.____	_____.____
0218	630.0175 Seeding Mixture No. 75	7.000 LB	_____.____	_____.____
0220	630.0200 Seeding Temporary	147.000 LB	_____.____	_____.____
0222	630.0400 Seeding Nurse Crop	8.000 LB	_____.____	_____.____
0224	630.0500 Seed Water	182.000 MGAL	_____.____	_____.____
0226	631.0300 Sod Water	1,369.000 MGAL	_____.____	_____.____
0228	631.1000 Sod Lawn	3,388.000 SY	_____.____	_____.____
0230	633.5200 Markers Culvert End	6.000 EACH	_____.____	_____.____
0232	634.0814 Posts Tubular Steel 2x2-Inch X 14-FT	2.000 EACH	_____.____	_____.____
0234	637.2210 Signs Type II Reflective H	5.000 SF	_____.____	_____.____
0236	637.2215 Signs Type II Reflective H Folding	20.720 SF	_____.____	_____.____
0238	637.2230 Signs Type II Reflective F	42.000 SF	_____.____	_____.____

Proposal ID: 20250211015 **Project(s):** 2190-10-70, 2190-10-71

Federal ID(s): N/A, N/A

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	638.2102 Moving Signs Type II	2.000 EACH	_____.____	_____.____
0242	638.2602 Removing Signs Type II	1.000 EACH	_____.____	_____.____
0244	638.3620 Erecting State Owned Signs Type II	4.000 EACH	_____.____	_____.____
0246	642.5201 Field Office Type C	1.000 EACH	_____.____	_____.____
0248	643.0300 Traffic Control Drums	5,490.000 DAY	_____.____	_____.____
0250	643.0420 Traffic Control Barricades Type III	11,310.000 DAY	_____.____	_____.____
0252	643.0705 Traffic Control Warning Lights Type A	22,620.000 DAY	_____.____	_____.____
0254	643.0715 Traffic Control Warning Lights Type C	147.000 DAY	_____.____	_____.____
0256	643.0800 Traffic Control Arrow Boards	14.000 DAY	_____.____	_____.____
0258	643.0900 Traffic Control Signs	41,108.000 DAY	_____.____	_____.____
0260	643.0920 Traffic Control Covering Signs Type II	5.000 EACH	_____.____	_____.____
0262	643.1000 Traffic Control Signs Fixed Message	253.500 SF	_____.____	_____.____
0264	643.1050 Traffic Control Signs PCMS	28.000 DAY	_____.____	_____.____
0266	643.1070 Traffic Control Cones 42-Inch	794.000 DAY	_____.____	_____.____
0268	643.3150 Temporary Marking Line Removable Tape 4-Inch	890.000 LF	_____.____	_____.____

Proposal ID: 20250211015 **Project(s):** 2190-10-70, 2190-10-71

Federal ID(s): N/A, N/A

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	643.3990 Temporary Marking Removable Mask Out Tape 12-Inch	360.000 LF	_____.____	_____.____
0272	643.5000 Traffic Control	1.000 EACH	_____.____	_____.____
0274	645.0111 Geotextile Type DF Schedule A	1,006.000 SY	_____.____	_____.____
0276	645.0120 Geotextile Type HR	25.000 SY	_____.____	_____.____
0278	645.0130 Geotextile Type R	827.000 SY	_____.____	_____.____
0280	645.0220 Geogrid Type SR	325.000 SY	_____.____	_____.____
0282	646.1020 Marking Line Epoxy 4-Inch	4,993.000 LF	_____.____	_____.____
0284	646.3020 Marking Line Epoxy 8-Inch	164.000 LF	_____.____	_____.____
0286	646.5020 Marking Arrow Epoxy	2.000 EACH	_____.____	_____.____
0288	646.6020 Marking Stop Line Epoxy 12-Inch	270.000 LF	_____.____	_____.____
0290	646.6120 Marking Stop Line Epoxy 18-Inch	95.000 LF	_____.____	_____.____
0292	646.7420 Marking Crosswalk Epoxy Transverse Line 6-Inch	107.000 LF	_____.____	_____.____
0294	646.7520 Marking Crosswalk Epoxy Block Style 24-Inch	224.000 LF	_____.____	_____.____
0296	646.9010 Marking Removal Line Water Blasting 4-Inch	300.000 LF	_____.____	_____.____
0298	646.9110 Marking Removal Line Water Blasting 8-Inch	60.000 LF	_____.____	_____.____

Proposal ID: 20250211015 **Project(s):** 2190-10-70, 2190-10-71

Federal ID(s): N/A, N/A

SECTION: 0001 Contract Items

Alt Set ID: **Alt Mbr ID:**

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0300	646.9210 Marking Removal Line Water Blasting Wide	22.000 LF	_____.____	_____.____
0302	646.9310 Marking Removal Special Marking Water Blasting	2.000 EACH	_____.____	_____.____
0304	650.4000 Construction Staking Storm Sewer	50.000 EACH	_____.____	_____.____
0306	650.5000 Construction Staking Base	815.000 LF	_____.____	_____.____
0308	650.5500 Construction Staking Curb Gutter and Curb & Gutter	954.000 LF	_____.____	_____.____
0310	650.6501 Construction Staking Structure Layout (structure) 01. B-40-1033	1.000 EACH	_____.____	_____.____
0312	650.7000 Construction Staking Concrete Pavement	566.000 LF	_____.____	_____.____
0314	650.8000 Construction Staking Resurfacing Reference	338.000 LF	_____.____	_____.____
0316	650.8501 Construction Staking Electrical Installations (project) 01. 2190-10-70	1.000 EACH	_____.____	_____.____
0318	650.9000 Construction Staking Curb Ramps	8.000 EACH	_____.____	_____.____
0320	650.9500 Construction Staking Sidewalk (project) 01. 2190-10-70	1.000 EACH	_____.____	_____.____
0322	650.9911 Construction Staking Supplemental Control (project) 01. 2190-10-70	1.000 EACH	_____.____	_____.____
0324	650.9920 Construction Staking Slope Stakes	1,524.000 LF	_____.____	_____.____
0326	652.0125 Conduit Rigid Metallic 2-Inch	120.000 LF	_____.____	_____.____

Proposal ID: 20250211015 **Project(s):** 2190-10-70, 2190-10-71

Federal ID(s): N/A, N/A

SECTION: 0001 Contract Items

Alt Set ID: **Alt Mbr ID:**

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0328	652.0215 Conduit Rigid Nonmetallic Schedule 40 1 1/4-Inch	374.000 LF	_____.____	_____.____
0330	652.0225 Conduit Rigid Nonmetallic Schedule 40 2-Inch	1,894.000 LF	_____.____	_____.____
0332	652.0235 Conduit Rigid Nonmetallic Schedule 40 3-Inch	783.000 LF	_____.____	_____.____
0336	653.0135 Pull Boxes Steel 24x36-Inch	5.000 EACH	_____.____	_____.____
0338	653.0140 Pull Boxes Steel 24x42-Inch	10.000 EACH	_____.____	_____.____
0340	653.0222 Junction Boxes 18x12x6-Inch	8.000 EACH	_____.____	_____.____
0342	654.0101 Concrete Bases Type 1	7.000 EACH	_____.____	_____.____
0344	654.0110 Concrete Bases Type 10	4.000 EACH	_____.____	_____.____
0346	654.0217 Concrete Control Cabinet Bases Type 9 Special	1.000 EACH	_____.____	_____.____
0348	655.0230 Cable Traffic Signal 5-14 AWG	469.000 LF	_____.____	_____.____
0350	655.0240 Cable Traffic Signal 7-14 AWG	341.000 LF	_____.____	_____.____
0352	655.0260 Cable Traffic Signal 12-14 AWG	1,162.000 LF	_____.____	_____.____
0354	655.0320 Cable Type UF 2-10 AWG Grounded	527.000 LF	_____.____	_____.____
0356	655.0515 Electrical Wire Traffic Signals 10 AWG	642.000 LF	_____.____	_____.____
0358	655.0610 Electrical Wire Lighting 12 AWG	804.000 LF	_____.____	_____.____

Proposal ID: 20250211015 **Project(s):** 2190-10-70, 2190-10-71

Federal ID(s): N/A, N/A

SECTION: 0001 Contract Items

Alt Set ID: **Alt Mbr ID:**

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0360	655.0615 Electrical Wire Lighting 10 AWG	300.000 LF	_____.____	_____.____
0362	655.0620 Electrical Wire Lighting 8 AWG	568.000 LF	_____.____	_____.____
0364	655.0630 Electrical Wire Lighting 4 AWG	4,516.000 LF	_____.____	_____.____
0366	655.0900 Traffic Signal EVP Detector Cable	577.000 LF	_____.____	_____.____
0368	656.0201 Electrical Service Meter Breaker Pedestal (location) 01. W Wisconsin Ave & Honey Creek Pkwy	1.000 EACH	_____.____	_____.____
0370	657.0100 Pedestal Bases	7.000 EACH	_____.____	_____.____
0372	657.0405 Traffic Signal Standards Aluminum 3.5-FT	3.000 EACH	_____.____	_____.____
0374	657.0420 Traffic Signal Standards Aluminum 13-FT	4.000 EACH	_____.____	_____.____
0376	658.0173 Traffic Signal Face 3S 12-Inch	12.000 EACH	_____.____	_____.____
0378	658.0416 Pedestrian Signal Face 16-Inch	8.000 EACH	_____.____	_____.____
0380	658.5070 Signal Mounting Hardware (location) 01. W Wisconsin Ave & Honey Creek Pkwy	1.000 EACH	_____.____	_____.____
0382	659.5000.S Lamp, Ballast, LED, Switch Disposal by Contractor	2.000 EACH	_____.____	_____.____
0384	673.0105 Communication Vault Type 1	3.000 EACH	_____.____	_____.____
0386	673.0200 Tracer Wire Marker Posts	2.000 EACH	_____.____	_____.____
0388	690.0150 Sawing Asphalt	157.000 LF	_____.____	_____.____

Proposal ID: 20250211015 **Project(s):** 2190-10-70, 2190-10-71

Federal ID(s): N/A, N/A

SECTION: 0001 Contract Items

Alt Set ID: **Alt Mbr ID:**

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0390	690.0250 Sawing Concrete	2,133.000 LF	_____.____	_____.____
0392	715.0502 Incentive Strength Concrete Structures	6,120.000 DOL	1.00000	6,120.00
0394	715.0720 Incentive Compressive Strength Concrete Pavement	541.000 DOL	1.00000	541.00
0396	999.1501.S Crack and Damage Survey	13.000 EACH	_____.____	_____.____
0398	SPV.0035 Special 01. Streambed Stone	1,509.000 CY	_____.____	_____.____
0400	SPV.0035 Special 02. Streambed Granular Fill	378.000 CY	_____.____	_____.____
0402	SPV.0035 Special 03. Filter Gravel	369.000 CY	_____.____	_____.____
0404	SPV.0035 Special 04. Pea Gravel	378.000 CY	_____.____	_____.____
0406	SPV.0035 Special 05. Reinforced Concrete Cutoff Wall	18.000 CY	_____.____	_____.____
0408	SPV.0060 Special 03. Reconstruct MMSD Manhole	4.000 EACH	_____.____	_____.____
0410	SPV.0060 Special 04. Abandon MMSD Pump Station BS0401	1.000 EACH	_____.____	_____.____
0412	SPV.0060 Special 05. Exposing MMSD MIS	3.000 EACH	_____.____	_____.____
0414	SPV.0060 Special 06. Exposing AT&T Duct Package	3.000 EACH	_____.____	_____.____
0416	SPV.0060 Special 07. Adjusting Sanitary Manholes	2.000 EACH	_____.____	_____.____
0418	SPV.0060 Special 08. Reconstructing Sanitary Manholes	3.000 EACH	_____.____	_____.____

Proposal ID: 20250211015 **Project(s):** 2190-10-70, 2190-10-71

Federal ID(s): N/A, N/A

SECTION: 0001 Contract Items

Alt Set ID: **Alt Mbr ID:**

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0420	SPV.0060 Special 09. Concrete Base Special	1.000 EACH	_____.____	_____.____
0422	SPV.0060 Special 30. Outlet Structure 63	1.000 EACH	_____.____	_____.____
0424	SPV.0060 Special 31. 24"x72" Catch Basin	7.000 EACH	_____.____	_____.____
0426	SPV.0060 Special 32. 30"x72" Catch Basin	12.000 EACH	_____.____	_____.____
0428	SPV.0060 Special 33. 24"x72" Riser Inlet	7.000 EACH	_____.____	_____.____
0430	SPV.0060 Special 34. Manhole 4-Ft Riser	2.000 EACH	_____.____	_____.____
0432	SPV.0060 Special 35. Inlet Cover R-3246-AL	6.000 EACH	_____.____	_____.____
0434	SPV.0060 Special 36. Inlet Cover R-3293-2	12.000 EACH	_____.____	_____.____
0436	SPV.0060 Special 37. Inlet Cover R-3295-2(L)	14.000 EACH	_____.____	_____.____
0438	SPV.0060 Special 38. Manhole Cover R-1661-B	8.000 EACH	_____.____	_____.____
0440	SPV.0060 Special 40. Hydrant Assembly	2.000 EACH	_____.____	_____.____
0442	SPV.0060 Special 41. Gate Valve & Valve Box 6-Inch	2.000 EACH	_____.____	_____.____
0444	SPV.0060 Special 42. Gate Valve & Valve Box 8-Inch	2.000 EACH	_____.____	_____.____
0446	SPV.0060 Special 43. Butterfly Valve & Valve Box 16-Inch	5.000 EACH	_____.____	_____.____
0448	SPV.0060 Special 44. Water Testing Manhole	1.000 EACH	_____.____	_____.____

Proposal ID: 20250211015 **Project(s):** 2190-10-70, 2190-10-71

Federal ID(s): N/A, N/A

SECTION: 0001 Contract Items

Alt Set ID: **Alt Mbr ID:**

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0450	SPV.0060 Special 45. Air Release Valve	1.000 EACH	_____.____	_____.____
0452	SPV.0060 Special 50. Remove and Salvage Existing Lighting Units	3.000 EACH	_____.____	_____.____
0454	SPV.0060 Special 51. Luminaire LED Medium	6.000 EACH	_____.____	_____.____
0456	SPV.0060 Special 52. Install Concrete Pole	2.000 EACH	_____.____	_____.____
0458	SPV.0060 Special 53. Install Milwaukee County Furnished Pull Box 12x12x12-Inch	2.000 EACH	_____.____	_____.____
0460	SPV.0060 Special 54. Wood Pole 60-Foot	4.000 EACH	_____.____	_____.____
0462	SPV.0060 Special 55. Removing 60-Foot Wood Pole	4.000 EACH	_____.____	_____.____
0464	SPV.0060 Special 61. Retroreflective Backplate 3S	12.000 EACH	_____.____	_____.____
0466	SPV.0060 Special 62. Furn & Ins Traf Sig Cab & Ctrl at WI Ave & Honey Cr Pkwy	1.000 EACH	_____.____	_____.____
0468	SPV.0060 Special 63. Furn & Ins Access Ped Push Button Sys at WI Ave & Honey Cr Pkwy	1.000 EACH	_____.____	_____.____
0470	SPV.0060 Special 64. Furn & Ins Emerg Veh Preemption Sys at WI Ave & Honey Cr Pkwy	1.000 EACH	_____.____	_____.____
0472	SPV.0060 Special 65. Battery Backup Sys for Traffic Intersection at WI Ave & Honey Cr Pkwy	1.000 EACH	_____.____	_____.____
0474	SPV.0060 Special 66. Non-Intrusive Vehicle Detection System	1.000 EACH	_____.____	_____.____

Proposal ID: 20250211015 **Project(s):** 2190-10-70, 2190-10-71

Federal ID(s): N/A, N/A

SECTION: 0001 Contract Items

Alt Set ID: **Alt Mbr ID:**

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0476	SPV.0060 Special 68. Transport & Install City Furnished Poles Type 10	4.000 EACH	_____.____	_____.____
0478	SPV.0060 Special 70. Transport & Install City Furnished Monotube Arms 20-Ft	3.000 EACH	_____.____	_____.____
0480	SPV.0060 Special 71. Transport & Install City Furnished Monotube Arms 25-Ft	1.000 EACH	_____.____	_____.____
0482	SPV.0060 Special 72. Transport & Install City Furnished Luminaire Arms Steel 15-Ft	4.000 EACH	_____.____	_____.____
0484	SPV.0060 Special 80. Junction Boxes 18x6x6-Inch Special Watertight	4.000 EACH	_____.____	_____.____
0486	SPV.0060 Special 82. Salvaging Stone P-40-776	1.000 EACH	_____.____	_____.____
0488	SPV.0075 Special 01. Pavement Cleanup Project 2190-10-70	40.000 HRS	260.00000	10,400.00
0490	SPV.0075 Special 02. Boulder Obstructions	8.000 HRS	2,000.00000	16,000.00
0492	SPV.0090 Special 01. Concrete Curb & Gutter Integral 31-Inch	350.000 LF	_____.____	_____.____
0494	SPV.0090 Special 02. Removing Existing Utility Duct Package	415.000 LF	_____.____	_____.____
0496	SPV.0090 Special 03. Removing Existing Utility Pipe	173.000 LF	_____.____	_____.____
0498	SPV.0090 Special 32. Storm Sewer Box Pipe 8x5-Ft	271.000 LF	_____.____	_____.____
0500	SPV.0090 Special 33. Storm Sewer Box Pipe 8x3-Ft	26.000 LF	_____.____	_____.____

Proposal ID: 20250211015 **Project(s):** 2190-10-70, 2190-10-71

Federal ID(s): N/A, N/A

SECTION: 0001 Contract Items

Alt Set ID: **Alt Mbr ID:**

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0502	SPV.0090 Special 34. Slotted Corrugated Metal Drain 12-Inch	223.000 LF	_____.____	_____.____
0504	SPV.0090 Special 35. Pipe Underdrain Exploration	100.000 LF	_____.____	_____.____
0506	SPV.0090 Special 36. Storm Sewer Lateral Exploration	100.000 LF	_____.____	_____.____
0508	SPV.0090 Special 40. PVC Hydrant Lead 6-Inch	42.000 LF	_____.____	_____.____
0510	SPV.0090 Special 41. PVC Watermain 6-Inch	10.000 LF	_____.____	_____.____
0512	SPV.0090 Special 42. PVC Water Main 8-Inch	80.000 LF	_____.____	_____.____
0514	SPV.0090 Special 43. PVC Water Main 16-Inch	960.000 LF	_____.____	_____.____
0516	SPV.0090 Special 44. PVC Water Main 16-Inch Within Casing Pipe	154.000 LF	_____.____	_____.____
0518	SPV.0090 Special 45. HDPE Water Service 1-Inch	380.000 LF	_____.____	_____.____
0520	SPV.0090 Special 46. 30-Inch Casing Pipe	150.000 LF	_____.____	_____.____
0522	SPV.0090 Special 47. Construction Staking Water Main	1,100.000 LF	_____.____	_____.____
0524	SPV.0090 Special 50. Cable Aerial Aluminum 4 AWG Triplex	575.000 LF	_____.____	_____.____
0526	SPV.0135 Special 01. Vibration Monitoring	8.000 MON	_____.____	_____.____
0528	SPV.0165 Special 01. Concrete Sidewalk 5-Inch Special	1,352.000 SF	_____.____	_____.____

Proposal ID: 20250211015 **Project(s):** 2190-10-70, 2190-10-71

Federal ID(s): N/A, N/A

SECTION: 0001 Contract Items

Alt Set ID: **Alt Mbr ID:**

Proposal Line Number	Item ID Description	Approximate Quantity and Units	Unit Price	Bid Amount
0530	SPV.0180 Special 01. Removing Concrete Channel	1,596.000 SY	_____.____	_____.____
0532	SPV.0180 Special 02. Concrete Channel Lining	70.000 SY	_____.____	_____.____
0534	SPV.0180 Special 81. Installing Salvaged Stone Facing	88.000 SY	_____.____	_____.____
0536	SPV.0180 Special 82. Stone Facing	265.000 SY	_____.____	_____.____
0538	SPV.0180 Special 83. Anti Graffiti Coating	470.000 SY	_____.____	_____.____
0540	SPV.0195 Special 01. Excavation, Hauling, and Disposal of Sediment	1,411.000 TON	_____.____	_____.____

Section: 0001 **Total:** _____.____

Total Bid: _____.____

Wisconsin Department of Transportation

Division of Transportation Systems Development
Bureau of Project Development
4822 Madison Yards Way, 4th Floor South
Madison, WI 53705

Telephone: (608) 266-1631
Facsimile (FAX): (608) 266-8459

February 7, 2025

NOTICE TO ALL CONTRACTORS:

Proposal #15: 2190-10-70
C Wauwatosa W Wisconsin Ave
Bridge Over Honey Creek P-40-776
Local Street
Milwaukee County

2190-10-71
C Wauwatosa W Wisconsin Ave
Bridge Over Honey Creek P-40-776
Const/Watermain
Milwaukee County

Letting of February 11, 2025

This is Addendum No. 02, which provides for the following:

Special Provisions:

Deleted Special Provisions	
Article No.	Description
26	Notice to Contractor – Protecting and Support Utilities

The responsibility for notifying potential subcontractors and suppliers of these changes remains with the prime contractor.

Sincerely,

Mike Coleman
Proposal Development Specialist
Proposal Management Section

ADDENDUM NO. 01

2190-10-70, 2190-10-71

February 7, 2025

Special Provisions

26. DELETED

END OF ADDENDUM