HIGHWAY WORK PROPOSAL

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

Proposal Number: 009

COUNTY	STATE PROJECT	FEDERAL	PROJECT DESCRIPTION	HIGHWAY
Dane	5992-11-31	WISC 2022233	City Of Madison, University Avenue; Shorewood Blvd To University Bay Dr	LOC STR
Dane	5992-11-33	N/A	City Of Madison, University Avenue; Shorewood Blvd To University Bay Dr	LOC STR
Dane	5992-11-32	N/A	City Of Madison, University Avenue; Shorewood Blvd To University Bay Dr	LOC STR

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: $690,000.00 Payable to: Wisconsin Department of Transportation	Attach Proposal Guaranty on back of this PAGE.
Bid Submittal Date: March 8, 2022 Time (Local Time): 11:00 am	Firm Name, Address, City, State, Zip Code SAMPLE NOT FOR BIDDING PURPOSES
Contract Completion Time August 11, 2023	
Assigned Disadvantaged Business Enterprise Goal 6%	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: Excavation, Rock Excavation, Base, Concrete Pavement, HMA Pavement, Asphaltic Surface, Curb and Gutter, Sidewalk, Signs, Pavement Marking, Bridge Construction, Bridge Painting, Storm Sewer, Street Lighting, Traffic Signals, Retaining Walls, Sanitary Sewer, Water Main	
Notice of Award Dated	Date Guaranty Returned

PLEASE ATTACH
PROPOSAL GUARANTY HERE

Effective with November 2007 Letting

PROPOSAL REQUIREMENTS AND CONDITIONS

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

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

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

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

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

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

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

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

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

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

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

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

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

Effective with August 2015 Letting

BID PREPARATION

Preparing the Proposal Schedule of Items

A General

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

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

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

(3) The department will provide bidding information through the department's web site at:
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 departments 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:

1. Have a properly executed annual bid bond on file with the department.

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

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

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

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

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

(1) Download the latest schedule of items from the Wisconsin pages of the Bid Express™ web site reflecting the latest addenda posted on the department's web site at:
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.

C Waiver of Electronic Submittal

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

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

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

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

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

PROPOSAL BID BOND

Wisconsin Department of Transportation

DT1303 1/2006

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

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

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

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

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

PRINCIPAL

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

(Signature and Title)

(Company Name)

(Signature and Title)

(Company Name)

(Signature and Title)

(Company Name)

(Signature and Title)

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

(Signature of Attorney-in-Fact)

NOTARY FOR PRINCIPAL

(Date)

State of Wisconsin)
) ss.
_____ County)

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

(Signature, Notary Public, State of Wisconsin)

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

(Date Commission Expires)

Notary Seal

NOTARY FOR SURETY

(Date)

State of Wisconsin)
) ss.
_____ County)

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

(Signature, Notary Public, State of Wisconsin)

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

(Date Commission Expires)

Notary Seal

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

CERTIFICATE OF ANNUAL BID BOND

Wisconsin Department of Transportation

DT1305 8/2003

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

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

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

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

(Signature of Authorized Contractor Representative) (Date)

March 2010

LIST OF SUBCONTRACTORS

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

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

Name of Subcontractor	Class of Work	Estimated Value

DECEMBER 2000

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

Instructions for Certification

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Special Provisions

Table of Contents

Article	Description	Page #
1.	General	5
2.	Scope of Work.	5
3.	Prosecution and Progress.	5
4.	Traffic.	12
5.	Lane Rental Fee Assessment.	16
6.	Utilities.	17
8.	Railroad Insurance and Coordination - Wisconsin and Southern Railroad Company.	21
9.	Hauling Restrictions.	24
10.	Information to Bidders, WPDES General Construction Storm Water Discharge Permit.	24
11.	Health and Safety Requirements for Workers Remediating Petroleum Contamination.	25
12.	Erosion Control.	25
13.	Notice to Contractor – Contamination Beyond Construction Limits.	26
14.	Notice to Contractor – Traffic Signal Equipment Lead Time.	27
15.	Notice to Contractor – Monitoring of Railroad Structure.	27
16.	Coordination with Businesses and Residents.	27
17.	Public Convenience and Safety.	28
18.	Municipality Acceptance of Sanitary Sewer and Water Main Construction.	28
19.	Referenced Construction Specifications.	28
20.	Preservation of Existing Trees.	28
21.	General Provisions for City of Madison Storm Sewer.	29
22.	General Provisions for City of Madison Sanitary Sewer.	30
23.	General Provisions for Madison Metropolitan Sanitary District (MMSD).	33
24.	General Provisions for City of Madison Water Main.	34
25.	General Provisions for City Conduit Installation.	38
26.	General Provisions for City Traffic Signals.	38
27.	General Provisions for City Electrical Systems.	39
46.	Seismograph Project 5992-11-31, Item 999.1001.S.	74
47.	Crack and Damage Survey, Item 999.1501.S.	75
48.	Abandon Sanitary Sewer–Slurry, Item SPV.0035.001.	75
49.	Rock Excavation for Sanitary Sewer, Item SPV.0035.002.	76
50.	Rock Excavation for Water Main, Item SPV.0035.003.	77
51.	Settlement Monitoring, Item SPV.0060.001.	77
52.	Locate and Reference Property Corners, Item SPV.0060.002.	79
53.	Reset Property Corners, Item SPV.0060.003.	80
54.	Precast Sign Post Base, Item SPV.0060.004.	81
55.	Sign Post Base for Concrete Installation, Item SPV.0060.005.	81
56.	Project Dewatering, Item SPV.0060.006.	82

57. Wastewater Control, Item SPV.0060.007; Wastewater Control MMSD, Item SPV.0060.015. 85
58. Construction Staking Sanitary Sewer, Item SPV.0060.008. 86
59. Construction Staking Water Main, Item SPV.0060.009. 86
60. Inlet Cover Type H Special, Item SPV.0060.010; Inlet Cover Type H-S Special, Item SPV.0060.011. 87
61. Manhole Cover Type J Special, Item SPV.0060.012. 87
62. Temporary Inlet Cover, Item SPV.0060.013. 88
63. Storm Sewer Pipe 96-Inch Bend, Item SPV.0060.014. 88
64. Inlet 2x3-FT Special, Item SPV.0060.016. 88
65. Manhole Special, Item SPV.0060.017. 89
66. Storm Sewer Tap, Item SPV.0060.018. 89
67. MMSD Sanitary Sewer Bypassing, Item SPV.0060.019. 90
68. Close Storm Sewer Connection, Item SPV.0060.020. 91
69. Construction Staking Project 5992-11-31, Item SPV.0060.021; Construction Staking Project 5992-11-33, Item SPV.0060.022. 91
70. Implement Tree Protection Plan, Item SPV.0060.023. 92
71. Furnish and Install Fluorocarbon Gaskets, 6-Inch, Item SPV.0060.024; Furnish and Install Fluorocarbon Gaskets, 8-Inch, Item SPV.0060.025; Furnish and Install Fluorocarbon Gaskets, 12-Inch, Item SPV.0060.026; Furnish and Install Fluorocarbon Gaskets, 16-Inch, Item SPV.0060.027. 92
72. MMSD Sanitary Sewer Manhole (6-Foot Diameter), Item SPV.0060.028; MMSD Sanitary Sewer Manhole (7-Foot Diameter), Item SPV.0060.029; Interceptor Sewer Manhole, (6-Foot Diameter), Item SPV.0060.057. 93
73. Utility Line Opening (ULO), Item SPV.0060.030. 95
74. Sewer Electronic Markers, Item SPV.0060.031. 96
75. Sanitary Lateral Reconnect, Item SPV.0060.032. 96
76. Sanitary Sewer Tap, Item SPV.0060.033. 97
77. Sanitary Sewer Access Structure (4-Foot Diameter), Item SPV.0060.034; Sanitary Sewer Access Structure (5-Foot Diameter), Item SPV.0060.035. 97
78. Sanitary Sewer Internal Chimney Seal, Item SPV.0060.036. 98
79. Remove Sanitary Sewer Access Structure, Item SPV.0060.037 99
80. Abandon Sanitary Sewer Access Structure, Item SPV.0060.039 99
81. Abandon Sanitary Sewer–Pipe Plug, Item SPV.0060.040. 100
82. Furnish & Install 6-Inch Water Valve, 6-Inch, Item SPV 0060.041; Furnish & Install 8-Inch Water Valve, 8-Inch; Item SPV.0060.042; Furnish & Install 12-Inch Water Valve, 12-Inch, Item SPV.0060.043; Furnish & Install 16-Inch Water Valve, 16-Inch, Item SPV.0060.044. 100
83. Furnish and Install Hydrant / Salvage Existing Hydrant, Item SPV.0060.045. 101
84. Reconnect Water Service Lateral, 1-inch, Item SPV.0060.046; Reconnect Water Service Lateral, 2-inch, Item SPV.0060.048. 101
85. Cut-In or Connect-To Existing Water System, Item SPV.0060.049 102
86. Abandon Water Valve Box, Item SPV.0060.051. 102
87. Abandon Water Valve Access Structure, Item SPV.0060.052. 103
88. Furnish and Install Insulation, Item SPV.0060.053. 103
89. Adjust Water Valve Box Sections, Item SPV.0060.054. 104
90. Furnish and Install Anode, Item SPV.0060.055. 104

91. Clay Trench Plug, Item SPV.0060.056. 105
92. Interceptor Manhole Lining System, Item SPV.0060.058. 106
93. Adjust MMSD Special, Item SPV.0060.059. 109
94. MMSD Manhole 02-048 Flat Top Replacement, Item SPV.0060.060. 110
95. Rock Excavation for Concrete Bases, Item SPV.0060.061. 112
96. Electrical Pull Box, Type I, Item SPV.0060.062; Electrical Pull Box, Type III, Item SPV.0060.063; Electrical Pull Box, Type V, Item SPV.0060.064; Electrical Pull Box, Type VII, Item SPV.0060.065. 112
97. Concrete Base Type G, Item SPV.0060.066; Concrete Base Type LB-3, Item SPV.0060.067; Concrete Base Type LB-8, Item SPV.0060.068; Concrete Base Type P, Item SPV.0060.069. 113
98. Concrete Bases Type G Spread Footing, Item SPV.0060.070 114
99. Transformer Base 16-Inch Steel, Item SPV.0060.071 115
100. Pole 20-Foot 7 Gauge, Item SPV.0060.072; Pole 30-Foot, 7 Gauge Single Mount, Item SPV.0060.073; Pole 30-Foot, 7 Gauge Twin Mount, Item SPV.0060.074; Pole 30-Foot, 11 Gauge Single Mount, Item SPV.0060.075; Pole 30-Foot, 11 Gauge Twin Mount, Item SPV.0060.076. 116
101. Monotube Pole, Type 9, Item SPV.0060.077; Monotube Arm, 25-Foot, Item SPV.0060.080; Monotube Arm, 30-Foot, Item SPV.0060.081. 117
102. LED Luminaire and Mounting Bracket Type V, Item SPV.0060.079; LED Luminaire and Mounting Bracket Type I, Item SPV.0060.082; LED Luminaire and Mounting Bracket Type II, Item SPV.0060.083; LED Luminaire and Mounting Bracket Type III, Item SPV.0060.084; LED Luminaire and Mounting Bracket Type IV, Item SPV.0060.085. 119
103. Traffic Signal Trombone Arm Aluminum 12-Foot, Item SPV.0060.086; Traffic Signal Trombone Arm Aluminum 15-Foot, Item SPV.0060.087; Traffic Signal Trombone Arm Aluminum 18-Foot, Item SPV.0060.088; Traffic Signal Trombone Arm Aluminum 20-Foot, Item SPV.0060.089; Traffic Signal Trombone Arm Aluminum 22-Foot, Item SPV.0060.090. 120
104. Traffic Signal Heads 12-Inch, 3-Section Vertical, Item SPV.0060.091; Traffic Signal Heads 12-Inch, 4-Section Vertical, Item SPV.0060.092; Traffic Signal Heads 12-Inch, 5-Section Vertical, Item SPV.0060.093; Traffic Signal Heads 16-Inch Pedestrian with Countdown, Item SPV.0060.094. 121
105. Backplates Signal Face, 3-Section 12-Inch, Item SPV.0060.095; Backplates Signal Face, 4-Section 12-Inch, Item SPV.0060.096; Backplates Signal Face, 5-Section 12-Inch, Item SPV.0060.097. 122
106. NEMA TS2 Type 1 Traffic Signal Control Cabinet, Item SPV.0060.098. 123
107. Traffic Signal Controller, Item SPV.0060.099. 138
108. Optical Signal Preempt, Item SPV.0060.100. 138
109. Traffic Signal Ethernet Switch, Item SPV.0060.101. 139
110. Malfunction Management Unit (MMU), Item SPV.0060.102. 140
111. Lighting Control Cabinet, Item SPV.0060.103. 141
112. Vehicular Detection System Programming Unit, Item SPV.0060.104. 142
113. No Right Turn Blank Out Sign, Item SPV.0060.105. 144
114. Temporary Traffic Signals (Hill), Item SPV.0060.106; Temporary Traffic Signals (Ridge), Item SPV.0060.107; Temporary Traffic Signals (Farley), Item SPV.0060.108. 144
115. Temporary Street Lighting System Maintenance and Operations, Item SPV.0060.109 147
116. Temporary Wood Poles, Item SPV.0060.110. 148
117. Temporary Lighting Arms, Item SPV.0060.111. 149
118. Temporary Luminaires Utility, Item SPV.0060.112. 149
119. Reconstruct Bench and Flowlines, Item SPV.0060.113. 150

120. Salvage Hydrant, Item SPV.0060.115. 150
121. Concrete Curb and Gutter 24-Inch Type D Special, Item SPV.0090.001; Concrete Curb 24-Inch Type D Special, Item SPV.0090.002 Concrete Curb and Gutter 24-Inch Type A Special, Item SPV.0090.007. 151
122. Pedestrian Railing, Item SPV.0090.003. 151
123. Sign Post, Item SPV.0090.004; Reflective Sign Post, Item SPV.0090.005. 153
124. Loop Detector Lead-In Cable Special, Item, SPV.0090.006. 154
125. Temporary Asphaltic Curb, Item SPV.0090.008. 154
126. Storm Sewer Pipe Reinforced Concrete Class IV 96-Inch, Item SPV.0090.011. 155
127. Storm Sewer Pipe Reinforced Concrete Class IV 96-Inch Rock Cut, Item SPV.0090.012. 155
128. Remove Pipe Sanitary, Item SPV.0090.019. 156
129. Sanitary Sewer Lateral, Item SPV.0090.020. 156
130. Sanitary Sewer Pipe PVC, 8-Inch, Item SPV.0090.021; Sanitary Sewer Pipe PVC, 10-Inch, Item SPV.0090.022; Sanitary Sewer Pipe PVC, 12-Inch, Item SPV.0090.023. 158
131. Select Fill for Sanitary Sewer, Item SPV.0090.024. 159
132. Furnish and Install Watermain Pipe & Fittings, 6-Inch, Item SPV.0090.025; Furnish and Install Watermain Pipe & Fittings, 8-Inch, Item SPV.0090.026; Furnish and Install Watermain Pipe & Fittings, 12-Inch, Item SPV.0090.027; Furnish and Install Watermain Pipe & Fittings, 16-Inch, Item SPV.0090.028; Furnish and Install Watermain Pipe & Fittings, 10-Inch, Item SPV.0090.029. 159
133. Select Fill for Water Main, Item SPV.0090.030 160
134. Interceptor Sewer, 30-Inch, Item SPV.0090.031; MMSD Sanitary Sewer, 36-Inch, Item SPV.0090.037. 160
135. Trenchless Casing Pipe, 48-Inch Steel Minimum, Item SPV.0090.032. 168
136. Fiber Optic Cable 12-Count, Item SPV.0090.033; Fiber Optic Cable 288-Count, Item SPV.0090.034. 170
137. Electrical Wire Lighting, 14-3 Grounded, Item, SPV.0090.035. 170
138. Temporary Overhead Span Wire, Item SPV.0090.036. 171
139. Railing Steel Pedestrian Ornamental, Item SPV.0090.041. 171
140. Wall Concrete Panel Mechanically Stabilized Earth R-13-360, Item SPV.0165.001; Wall Concrete Panel Mechanically Stabilized Earth R-13-361, Item SPV.0165.002. 172
141. Wall Modular Block Gravity Landscape, Item SPV.0165.003. 180
142. High Friction Colored Surface – Bike Box Green, Item SPV.0165.004. 184
143. Pavement Cleanup Project 5992-11-31, Item SPV.0170.001. 187
144. Stabilization Clear Stone, 3-Inch, Item SPV.0195.001. 187
145. Granular Backfill, Interceptor Sewer, Item SPV.0195.002. 188
146. Excavation, Hauling, and Disposal of Petroleum Contaminated Soil, Item SPV.0195.003. 189
147. Excavating, Loading, Hauling, and Landfill Disposal of Cinder-Contaminated Soil, Item SPV.0195.004. 193
148. Construct Inside Drop 8-Inch, Item SPV.0200.001. 196

SPECIAL PROVISIONS

1. General.

Perform the work under this construction contract for Project ID 5992-11-31, ID 5992-11-32 and ID 5992-11-33, City of Madison, University Avenue, (Shorewood Blvd. – University Bay Drive), Local Street, Dane 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, 2022 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 (20210708)

2. Scope of Work.

The work under this contract shall consist of removals, excavation common, base aggregate, HMA pavement, concrete curb and gutter, concrete sidewalk, storm sewer, 96" storm sewer open cut, 96" storm sewer micro tunneling, temporary shoring, sanitary sewer, water main, erosion control, traffic control, restoration, pavement marking, permanent signing, street lighting, temporary and permanent traffic signals, B-13-0891, R-13-0360, R-13-0361, S-13-0586 and all incidental items necessary to complete the work as shown on the plans and included in the proposal and contract.

104-005 (20090901)

3. Prosecution and Progress.

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

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

Prior to beginning operations under this contract submit in writing a proposed schedule of operations and method of coordination and handling traffic to the engineer for approval.

The contract time for completion is based on an expedited work schedule and will require extraordinary forces and equipment. Included in this "Prosecution and Progress" special provision are interim and final completion dates. These dates indicate that work efforts will require multiple or concurrent controlling operations to occur at the same time. This information is included to assist the contractor and its subcontractors and shall not be interpreted as a demonstration of specified means and methods or work periods other than intermediate and completion dates. Indicate on the proposed schedule of operations that a large force and adequate equipment will be needed to assure that the work will be completed within the established contract time.

Be advised that there may be multiple mobilizations and/or remobilizations to complete construction operations, for example such items as: HMA pavement, concrete curb and gutter, traffic control, signing, pavement marking, traffic signals, street lighting, finishing items and other incidental items related to the staging. No additional payment will be made, by the department, for additional mobilizations.

Anticipate cold weather concrete paving and ancillary concrete work (curb, median barrier, etc.). Plan to heat aggregates and water for mixes and that the heating of the aggregate and water is considered incidental to those concrete items. There will be no adverse weather delay for cold weather construction.

Conform the schedule of operations to the construction staging as shown in the traffic control plans and as described herein unless modifications to the schedule are approved in writing by the engineer.

Winter weather work, excavation for frozen ground, high ground water and dewatering during winter months shall not be considered adverse weather delays to construction.

B Contractor Coordination and Advance Notification

The prime contractor shall have a superintendent or designated representative on the job site during all controlling work operations, including periods limited to only subcontractor work operations, to serve as a primary contact person and to coordinate all work operations.

Hold progress meetings once a week. The contractor's superintendent or designated representative and subcontractor's representatives for ongoing subcontract work or subcontractor work to begin within the next two weeks are to attend and provide a written schedule of the next week(s) operations. Include begin and end dates of specific prime and subcontractor work operations. Invite utilities, City of Madison, City of Madison Police and Fire Departments, Village of Shorewood Hills, Metro Transit, VA Hospital, UW Hospital, Dane County EMS, American Family Children's Hospital and Ronald McDonald House representatives to attend the progress meetings. Agenda items at the meeting will include review of the contractor's schedule and subcontractors' schedule, utility conflicts and relocation schedule, evaluation of progress and pay items, and making revisions if necessary. Plans and specifications for upcoming work will be reviewed to prevent potential problems or conflicts between contractors.

Based on the progress meeting, if a new revised schedule is requested by the engineer, submit it within seven calendar days. Failure to submit a new schedule within seven days shall result in the engineer holding pay requests until received.

Coordinate with the City of Madison and Village of Shorewood Hills to provide access for garbage collection.

Coordinate with the US Postal Service to provide access for mail delivery.

Notify Metro Transit two weeks prior to construction. Notify one week prior to traffic switches, street closures, and reopening the road to through traffic for bus routing. Contact Tim Sobota at (608) 261-4289.

Metro Transit will remove the existing bus shelters. Contact Tim Sobota at (608) 261-4289 at least two weeks prior to requiring the removal of the shelter.

Contact and coordinate with City of Madison for signal timing and phasing setup for temporary signals prior to the start of a traffic change or stage. City of Madison contact is Jerry Schippa, (608) 266-4761.

Notify the City of Madison Engineering Department, City of Madison Police and Fire Departments, Village of Shorewood Hills, VA Hospital, UW Hospital, American Family Children's Hospital and Dane County EMS at least three days in advance of all traffic switches and closures of existing streets.

Notify business owners and residents at least two days prior to restricting access and three days prior to closing access. Schedule sidewalk and driveway approach removal and replacement so that the time lapse between removal and replacement is minimal. See the Traffic article of these special provisions for information on residential and business property access.

Portable Changeable Message Signs

Coordinate the locations of portable changeable message signs with the engineer. Obtain acceptance from the engineer for all messages for all portable changeable message signs.

Use portable changeable message signs two weeks in advance of and during roadway lane alterations to indicate such alterations and to notify drivers of changing stages and traffic patterns.

C Work Restrictions

C1 General

Do not close traffic lanes University Avenue outside the allowed time periods specified in the Traffic article of these special provisions.

Do not perform work on this project during on the following dates:

- **Wisconsin Badger home football games**: September 3, September 17, September 24, October 15 and November 5, 2022
- **University of Wisconsin-Madison Graduation**: May 13 and 14, 2022 and May 12 and 13, 2023
- **Ironman**: September 10 and 11, 2022

C2 Interim Liquidated Damages – Shorewood Boulevard: 4 Calendar Days

Shorewood Boulevard will be allowed to be closed for 4 consecutive calendars days (Friday to Monday) during Stage 2 for the replacement of the 12x4 box storm sewer, and shall be open by 12:01 AM on a Tuesday. Do not reopen the roadway until all debris and equipment are removed from the traveled way and all signs, barrels, barricades, and traffic control devices required to close Shorewood Blvd. are covered, moved, or removed.

If the contractor fails to complete all work to reopen the Shorewood Boulevard within 4 consecutive calendar days (Friday to Monday) of closing the roadway during Stage 2, and open by 12:01 AM on a Tuesday, the department will assess the contractor $2,175 in interim liquidated damages for each calendar day the roadway remains closed beyond 4 calendar days. An entire calendar day will be charged for any period of time within a calendar day that the roadway remains closed beyond 12:01 AM.

C3 Interim Liquidated Damages – Marshall Court (2 Weekends): 2 Calendar Days

Marshall Court will be allowed to be closed for 2 weekends during Stage 2 for the installation of the 96-inch storm sewer and intersection improvements, and be open by 7 PM on a Sunday. See the Traffic article of these special provisions for weekend hours. Do not reopen the roadway until all debris and equipment are removed from the traveled way and all signs, barrels, barricades, and traffic control devices required to close Marshall Court are covered, moved, or removed.

If the contractor fails to complete all work to reopen the Marshall Court at the end of Weekend 1 during Stage 2 as specified in the Traffic article of these special provision, and be open by 7 PM on a Sunday, the department will assess the contractor $2,175 in interim liquidated damages for each calendar day the roadway remains closed beyond 7 PM on a Sunday. An entire calendar day will be charged for any period of time within a calendar day that the road remains closed beyond 7 PM.

If the contractor fails to complete all work to reopen the Marshall Court at the end of Weekend 2 during Stage 2 as specified in the Traffic article of these special provision, and be open by 7 PM on a Sunday, the department will assess the contractor $2,175 in interim liquidated damages for each calendar day the roadway remains closed beyond 7 PM on a Sunday. An entire calendar day will be charged for any period of time within a calendar day that the road remains closed beyond 7 PM.

C4 Interim Liquidated Damages – University Bay Drive (2 Weekends): 2 Calendar Days

University Bay Drive will be allowed to be closed for 2 weekends during Stage 2 for the installation of the 96-inch storm sewer and intersection improvements, and be open by 7 PM on a Sunday. See the Traffic article of these special provisions for weekend hours. Do not reopen the roadway until all debris and equipment are removed from the traveled way and all signs, barrels, barricades, and traffic control devices required to close University Bay Drive are covered, moved, or removed.

If the contractor fails to complete all work to reopen the University Bay Drive at the end of Weekend 1 during Stage 2 as specified in the Traffic article of these special provision, and be open by 7 PM on a Sunday, the department will assess the contractor $2,175 in interim liquidated damages for each calendar day beyond 7 PM on a Sunday the roadway remains closed beyond the weekend. An entire calendar day will be charged for any period of time within a calendar day that the road remains closed beyond 7 PM.

If the contractor fails to complete all work to reopen the University Bay Drive at the end of Weekend 2 during Stage 2 as specified in the Traffic article of these special provision, and be open by 7 PM on a Sunday, the department will assess the contractor $2,175 in interim liquidated damages for each calendar day the roadway remains closed beyond 7 PM on a Sunday. An entire calendar day will be charged for any period of time within a calendar day that the road remains closed beyond 7 PM.

C5 Interim Liquidated Damages – University Bay Drive Pedestrian Overpass: 1 Calendar Day

University Bay Drive will be allowed to be closed for 1 night during Stage 2 for the installation of the pedestrian overpass, and be open by 6 AM. Do not reopen the roadway until all debris and equipment are removed from the traveled way and all signs, barrels, barricades, and traffic control devices required to close University Bay Drive are covered, moved, or removed.

If the contractor fails to complete all work to reopen the University Bay Drive by 6 AM, the department will assess the contractor $2,175 in interim liquidated damages for each calendar day beyond 6 AM the roadway remains closed. An entire calendar day will be charged for any period of time within a calendar day that the road remains closed beyond 6 AM.

C6 Interim Liquidated Damages – Stage 3A: October 16, 2022

Complete all work to open all traffic lanes to their condition as shown in Stage 3A to remain over winter 2022-2023 by October 16, 2022.

If the contractor fails to complete all work to open all lanes as shown in Stage 3A by October 16, 2022, the department will assess the contractor $2,175 in interim liquidated damages for each calendar day the path remains closed beyond 12:01 AM, October 17, 2022. An entire calendar day will be charged for any period of time within a calendar day that the roadway remains closed beyond 12:01 AM.

C7 Interim Liquidated Damages – Stage 2/Stage 2A Closure of Shared-Use Path: 90 Calendar Days

The shared-use path will be allowed to be closed for the construction of structures B-13-891, R-13-360 and R-13-360 for 90 days, and must be opened prior to the traffic switch to Stage 3. Do not reopen the path until all debris and equipment are removed from the traveled way and all signs, barrels, barricades, and traffic control devices required to close the path are covered, moved, or removed.

If the contractor fails to complete all work to reopen the shared-use path prior to the traffic switch to Stage 3 within 90 calendar days, the department will assess the contractor $2,175 in interim liquidated damages for each calendar day the path remains closed beyond 90 calendar days. An entire calendar day will be charged for any period of time within a calendar day that the roadway remains closed beyond 12:01 AM.

C8 Interim Liquidated Damages – Hill Street (1 Weekend): 2 Calendar Days

Hill Street will be allowed to be closed for 2 calendar days for 1 weekend during Stage 4 for the replacement of sanitary sewer. See the Traffic article of these special provisions for weekend hours. Do not reopen the roadway until all debris and equipment are removed from the traveled way and all signs, barrels, barricades, and traffic control devices required to close Hill Street are covered, moved, or removed.

If the contractor fails to complete all work to reopen Hill Street during a weekend in Stage 4 as specified in the Traffic article of these special provision, and be open by 7 PM on a Sunday, the department will assess the contractor $2,175 in interim liquidated damages for each calendar day beyond 7 PM on a Sunday the roadway remains closed beyond the weekend. An entire calendar day will be charged for any period of time within a calendar day that the road remains closed beyond 7 PM.

C9 Interim Liquidated Damages – Schmitt Place (1 Weekend): 2 Calendar Days

Schmitt Place will be allowed to be closed for 2 calendar days for 1 weekend during Stage 4 for the replacement of sanitary sewer. See the Traffic article of these special provisions for weekend hours. Do not reopen the roadway until all debris and equipment are removed from the traveled way and all signs, barrels, barricades, and traffic control devices required to close Schmitt Place are covered, moved, or removed.

If the contractor fails to complete all work to reopen Schmitt Place during a weekend in Stage 4 as specified in the Traffic article of these special provision, and be open by 7 PM on a Sunday, the department will assess the contractor $2,175 in interim liquidated damages for each calendar day beyond 7 PM on a Sunday the roadway remains closed beyond the weekend. An entire calendar day will be charged for any period of time within a calendar day that the road remains closed beyond 7 PM.

C10 Interim Liquidated Damages – Ridge Street (1 Weekend): 2 Calendar Days

Ridge Street will be allowed to be closed for 2 calendar days for 1 weekend during Stage 4 for the replacement of sanitary sewer. See the Traffic article of these special provisions for weekend hours. Do not reopen the roadway until all debris and equipment are removed from the traveled way and all signs, barrels, barricades, and traffic control devices required to close Ridge Street are covered, moved, or removed.

If the contractor fails to complete all work to reopen Ridge Street during a weekend in Stage 4 as specified in the Traffic article of these special provision, and be open by 7 PM on a Sunday, the department will assess the contractor $2,175 in interim liquidated damages for each calendar day beyond 7 PM on a Sunday the roadway remains closed beyond the weekend. An entire calendar day will be charged for any period of time within a calendar day that the road remains closed beyond 7 PM.

C11 Interim Liquidated Damages – Franklin Avenue (1 Weekend): 2 Calendar Days

Franklin Avenue will be allowed to be closed for 2 calendar days for 1 weekend during Stage 4 for the replacement of sanitary sewer. See the Traffic article of these special provisions for weekend hours. Do not reopen the roadway until all debris and equipment are removed from the traveled way and all signs,

barrels, barricades, and traffic control devices required to close Franklin Avenue are covered, moved, or removed.

If the contractor fails to complete all work to reopen Franklin Avenue during a weekend in Stage 4 as specified in the Traffic article of these special provision, and be open by 7 PM on a Sunday, the department will assess the contractor $2,175 in interim liquidated damages for each calendar day beyond 7 PM on a Sunday the roadway remains closed beyond the weekend. An entire calendar day will be charged for any period of time within a calendar day that the road remains closed beyond 7 PM.

C12 Interim Liquidated Damages – Farley Avenue: 4 Calendar Days

Farley Avenue Shorewood Boulevard will be allowed to be closed for 4 consecutive calendars days (Friday to Monday) during Stage 2 for the replacement of the 12x4 box storm sewer, and shall be open by 12:01 AM on a Tuesday. Do not reopen the roadway until all debris and equipment are removed from the traveled way and all signs, barrels, barricades, and traffic control devices required to close Shorewood Blvd. are covered, moved, or removed.

If the contractor fails to complete all work to reopen the Shorewood Boulevard within 4 consecutive calendar days (Friday to Monday) of closing the roadway during Stage 2, and open by 12:01 AM on a Tuesday, the department will assess the contractor $2,175 in interim liquidated damages for each calendar day the roadway remains closed beyond 4 calendar days. An entire calendar day will be charged for any period of time within a calendar day that the roadway remains closed beyond 12:01 AM.

If contract time expires prior to completing all work specified in the contract, additional liquidated damages will be affixed in accordance to subsection 108.11 of the standard specifications.

C13 Interim Completions

C13.1 Marshall Court (One Week)

Marshall Court will be allowed to be closed for one week during Stage 2 for the replacement of the railroad crossing. Coordinate the closure with WSOR. Do not reopen the roadway until all debris and equipment are removed from the traveled way and all signs, barrels, barricades, and traffic control devices required to close Marshall Court are covered, moved, or removed.

C13.2 University Bay Drive (One Week)

University Bay Drive will be allowed to be closed for one week during Stage 2 for the replacement of the railroad crossing. Coordinate the closure with WSOR. Do not reopen the roadway until all debris and equipment are removed from the traveled way and all signs, barrels, barricades, and traffic control devices required to close Marshall Court are covered, moved, or removed.

C14 Other

Marshall Court and University Bay Drive will not be allowed to be closed concurrently.

Maintain access to Overlook Terrace at all times with a minimum of a 10-foot access through flagging operations and 2-way 20-foot access through staged construction.

Maintain a minimum of two 10-foot driving lanes on Farley Avenue at all times through staged construction and flagging operations.

Adjacent intersections will not be allowed to be closed concurrently.

Site Access Requirements at 700 University Bay Drive

Maintain a minimum 10-foot wide 24 hour per day, 7 day per week, open access to the building garage and surface parking lot, except as follows: upon 7 days advance notice to Owner, access may be temporarily closed between the hours of 9:30 am to 3:00 pm, and from 6:00 pm to 9:00 pm, provided that the wait time for traffic entering and exiting does not exceed 5 minutes and that contractor employ a flagman to pause traffic and safely direct ingress and egress by Owner's tenants and invitees. Access during the above specified times may be maintained on existing or proposed base course or pavement. Do not perform work on the weekends.

Site Access Requirements at Well 6 (2757 University Avenue)

Madison Water Utility's Well 6 is located at the southeast corner of the intersection of University Ave and Franklin Ave. The well is operated daily, year round. The well is visited every day by Madison Water Utility staff who require access to the facility, though not necessarily driveway access. Treatment chemical deliveries to the facility occur every Tuesday between noon and 5pm and DO require driveway access. Maintain driveway access to the site every Tuesday between noon and 5pm for chemical delivery throughout project construction.

Site Access Requirements at 2801 University Avenue (Spirit Mart)

Contact the property owner a minimum of five (5 days) prior to driveway and sidewalk work to coordinate impacts to the adjacent gas pump access.

Site Access Requirements at 2701 University Avenue

Do not occupy or disturb the parking area within the TLE.

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

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

Equip vehicles with a tailgate and adequate sideboards when hauling material subject to spillage on all roadways. Use covers and/or other protective devices to prevent spillage as directed by the engineer. Immediately clean up any debris or spillage that falls onto live traffic lanes or shoulders.

There are several encroachments within the right-of-way that will not be altered by this project. It is the responsibility of the contractor to avoid these encroachments. The contractor is responsible for any damage to encroachments and for returning the encroachments to their original condition if any damage occurs. The following is a list of the known encroachments to avoid:

1. Stone Wall (139+90'EB' – 140+95'EB', RT)
2. Stone Wall & Planting Bed (141+16'EB' – 142+21'EB', RT)
3. Stone Wall (142+21'EB' – 143+23'EB', RT)
4. Timber Wall & Planting Bed (143+54'EB' – 144+42'EB', RT)
5. Fencing (144+84'WB' – 144+91'WB', LT)
6. Timber Wall & Planting Bed (146+41'EB' – 147+50'EB', RT)
7. Timber Wall & Planting Bed (147+50'EB' – 148+53'EB', RT)
8. Planting Bed (158+69'EB' – 158+86'EB', RT)
9. Stone Wall & Planting Bed (1620+'EB' – 163+46'EB', RT)
10. Light Poles & Planting Bed (163+46'EB' – 165+85'EB', RT)
11. Stone Retaining Wall (26+04'BD' – 27+23'BD', RT)

Existing trees, street light poles, hydrants and other utility poles are to remain in place during construction unless otherwise noted in the plan. Conduct an on-site visit prior to bidding to determine any special measures required for proper clearance between trees, hydrants, and poles for the paving and grading equipment.

Provide ingress and egress locations to the engineer ten working days in advance of anticipated use. Do not use the ingress or egress locations until approved by the engineer. Sign and/or use flag persons at the ingress and egress locations as directed by the engineer and according to standard spec 104.6.1 (4).

Maintain a 12-foot wide emergency access route, within the work zone, during construction at University Bay Drive. The 12-foot wide emergency access route shall be free of all obstruction. The emergency access route shall be graded and maintained so that the route is drivable for an emergency vehicle. Under limited construction operations when access cannot be maintained, the construction engineer shall be provided a ten day notice to allow time for coordination with all emergency responders. During road closures, the superintendent or representative shall monitor the work activities to ensure that emergency vehicles are able to access the roadway.

Provide 21-days notice to the City of Madison before disrupting any fiber optic cables, vaults, etc. Work includes but is not limited to the install and removals of the temp wood poles, or any activities that would be critical for the City of Madison to adjust fiber connections.

Lighting (existing, permanent, temporary) shall be in operation during nighttime hours at ALL times.

D Construction General

Typical construction sections are provided in the traffic control plans. Conform with the work zone protection as shown in the typical construction sections. Provide a minimum of 6 feet lateral clearance from the edge of travel lane to the work zone. In areas where 6 feet of lateral clearance cannot be provided, protect work zone with temporary concrete barrier. Provide a maximum 3:1 slope from the edge of the lateral clearance zone to sub-grade excavations. Limit the length of open utility trenches adjacent to the lateral clearance to 100 feet. Backfill or plate utility trenches adjacent to the lateral clearance zone during non-workinghours.

E Construction Operations

Conform the schedule of operations to the construction staging as shown in the traffic control plans and as described herein unless modifications to the schedule are approved in writing by the engineer.

Project 5992-11-31

The department anticipates that the schedule for each stage is as follows:

- Stage 1 – Place temporary pavement, crossovers and pavement marking for Stage 1A and Stage 2 bi-directional traffic. Begin construction of B-13-891, R-13-360 and R-13-361
- Stage 1A – Construct east portion of 96-inch storm sewer
- Stage 1B – Continue construction of east portion of 96-inch storm sewer
- Stage 2 – Reconstruct University Avenue westbound, north intersections and University Bay Drive northbound
- Stage 2A - Reconstruct University Bay Drive southbound
- Stage 3 – Construct median drainage, place temporary pavement and pavement marking for Stage 3A winter traffic
- Stage 3A - Construct crossovers and pavement marking for Stage 4 bi-directional traffic
- Stage 4 – Reconstruct University Avenue eastbound and south intersections
- Stage 5 – Complete University Avenue median
- Stage 6 – Complete University Avenue upper HMA layer

Project 5992-11-32

The department anticipates that the watermain and sanitary sewer improvements may be constructed during the following stages of the University Avenue staging under project 5992-11-31:

- Stage 1 – Place water main valves
- Stage 2 – reconstruct water main on westbound lanes of University Avenue and northbound lanes of University Bay Drive
- Stage 2A - reconstruct water main on southbound lanes of University Bay Drive
- Stage 3 – reconstruct median water main
- Stage 3A – No work anticipated
- Stage 4 – reconstruct water main and sanitary sewer on eastbound lanes of University Avenue

Project 5992-11-33

The department anticipates that the MMSD sanitary interceptor improvements may be constructed during the following stages of the University Avenue staging under project 5992-11-31:

- Stage 2 – construct sanitary sewer interceptors on westbound lanes of University Avenue

F Contractor Obligations:

Standard spec 105.5.1 (5) Contractor Obligations is hereby revised as follows:

Employ a competent superintendent or designate a representative capable of reading and understanding the contract and experienced in the type of work being performed. The superintendent or designated representative shall be the authorized agent of the contractor and shall have full authority to execute the engineer's directions or instructions without delay. Ensure that the superintendent or designated representative is on the project or immediately accessible on site to the engineer during all hours of each work day. Notify the engineer promptly when replacing the superintendent or designated representative.

4. Traffic.

A General

Keep University Avenue open to two lanes of through traffic in each direction at all times for the duration of this project with the exception of the lane closure described in this article.

Perform the work under this contract in a manner that will interfere as little as possible with active traffic. Materials or equipment may be stored within the right-of-way only at locations meeting the approval of the engineer.

At times it will be necessary to close the second lane of eastbound and/or westbound University Avenue between for work such as making utility connections, placing, maintaining and removing traffic control devices including temporary signals, installing permanent signals, paving and to facilitate other construction operations. Perform these closures only during off-peak hours as specified in the Lane Closure section of this article. Request approval from the engineer for these second lane closures on University Avenue in writing at least 3 working days in advance of the requested lane closure. Include justification for the lane closure and the anticipated duration of the closure in the request. Do not proceed with the lane closure if the request is not approved by the engineer.

B Traffic Operations During All Stages

- Maintain two lanes of traffic in each direction at all times on University Avenue, except during Stage 3A which will require three lanes of traffic in each direction at all times*.
- Maintain one lane of traffic in each direction at all times on University Bay Drive, except during Stage 3A which will require two lanes of traffic in each direction at all times *.
- Maintain the existing number of lanes of traffic in each direction at all times on local roads*.
- Maintain mainline traffic on University Avenue and University Bay Drive and local roads on a paved concrete or asphalt surface at all times. Local roads may be maintained on base aggregate for one day as approved by the engineer.
- Maintain a minimum lane width of 11-feet.
- Maintain 18-foot clear width during eastbound single lane closures.

**Lane closures allowed as specified in the Lane Closures and Roadway Closures sections of this article.*

<u>Stage 1 Traffic</u>

- University Avenue will remain on the existing outside lanes. Two (2) lanes of traffic will be maintained in the eastbound and westbound direction except as specified in the Lane Closure section.
- University Bay Drive will remain on the existing lanes, except for one day when traffic is shifted to the northbound lanes to complete water valve and hydrant installation.
- Local road traffic will be maintained on all existing lanes.
- Pedestrian movements will utilize all existing crossings.

<u>Stage 1A Traffic</u>

- University Avenue will remain on the existing outside lanes west of University Bay Drive. Westbound traffic will remain on the existing outside lanes and eastbound traffic will utilize crossovers east of University Bay Drive to switch to the westbound side of the road. Two (2) lanes of traffic will be maintained in the eastbound and westbound direction except as specified in the Lane Closure section.
- University Bay Drive will remain on the existing lanes.
- Local road traffic will be maintained on all existing lanes.
- Pedestrian movements will utilize all existing crossings.

<u>Stage 1B Traffic</u>

- University Avenue will remain on the existing outside lanes. Two (2) lanes of traffic will be maintained in the eastbound and westbound direction except as specified in the Lane Closure section.
- University Bay Drive will remain on the existing lanes.
- Local road traffic will be maintained on all existing lanes.
- Pedestrian movements will utilize all existing crossings.

Stage 2 Traffic

- University Avenue westbound traffic will utilize a crossover west of Shorewood Blvd to switch to the eastbound lanes and a crossover east of University Bay Drive to switch back to the westbound lanes. University Avenue eastbound traffic will remain on the outside lanes. Two (2) lanes of traffic will be maintained in the eastbound and westbound direction except as specified in the Lane Closure section.
- University Bay Drive traffic will be shifted to the existing southbound lanes. One lane of traffic will be maintained in each direction at all times except as specified in the Lane Closure section and Prosecution and Progress article.
- Local road traffic will be maintained on all existing lanes except as specified in the Lane Closure section and Prosecution and Progress article.
- Pedestrian movements will remain on the existing south sidewalk and the following intersections:
  - Shorewood Blvd intersection: pedestrians will utilize the existing west crosswalk.
  - Marshall Ct/Ridge Street intersection: pedestrians will utilize the temporary east crosswalk
  - University Bay Drive intersection: pedestrians will utilize the temporary west crosswalk
  - University Bay Drive: pedestrians will utilize the west sidewalk and a temporary crosswalk on the south side of the Overlook Terrace intersection.
  - Shared-Use Path: the shared-use path will be detoured.

Stage 2A Traffic

- University Avenue will remain in the same traffic pattern as Stage 2.
- University Bay Drive traffic will be shifted to the newly constructed northbound lanes. One lane of traffic will be maintained in each direction at all times except as specified in the Lane Closure section and Prosecution and Progress article.
- Local road traffic will remain in the same traffic pattern as Stage 2.
- Pedestrian movements will remain the same as Stage 2 except as follows:
  - University Bay Drive intersection: pedestrians will utilize the temporary east crosswalk
  - University Bay Drive: pedestrians will utilize the east sidewalk and a crosswalk on the north side of the Overlook Terrace intersection.

Stage 3 Traffic

- University Avenue westbound traffic will shift to the newly constructed westbound lanes. University Avenue eastbound traffic will remain on the outside lanes. Two (2) lanes of traffic will be maintained in the eastbound and westbound direction except as specified in the Lane Closure section.
- University Bay Drive will be on the newly constructed lanes.
- Local road traffic will be maintained on all lanes.
- Pedestrian movements will utilize all Stage 2 crossings, except University Bay Drive will be open to all new crossings.

Stage 3A Traffic

- University Avenue westbound traffic will remain on the newly constructed westbound lanes. University Avenue eastbound traffic will remain on the existing lanes. Three (3) lanes of traffic will be maintained in the eastbound and westbound direction except as specified in the Lane Closure section.
- University Bay Drive will be on the newly constructed lanes.
- Local road traffic will be maintained on all lanes.
- Pedestrian movements will utilize all newly constructed and existing crossings.

Stage 4 Traffic

- University Avenue eastbound traffic will utilize a crossover west of Shorewood Blvd to switch to the westbound lanes and a crossover east of University Bay Drive to switch back to the eastbound lanes. University Avenue westbound traffic will remain on the outside lanes. Two (2) lanes of traffic will be maintained in the eastbound and westbound direction except as specified in the Lane Closure section.
- University Bay Drive traffic will remain on the newly constructed lanes.
- Local road traffic will be maintained on all lanes except as specified in the Lane Closure section and Prosecution and Progress article.
- Pedestrian movements will utilize the newly constructed north sidewalk and the following intersections:
  - Shorewood Blvd intersection: pedestrians will utilize the existing west crosswalk.

- § Marshall Ct/Ridge Street intersection: pedestrians will utilize the temporary east crosswalk
- § University Bay Drive intersection: pedestrians will utilize the temporary west crosswalk
- § Old University Avenue: pedestrians will be detoured

Stage 5 Traffic

- o University Avenue westbound traffic will remain on the westbound lanes. University Avenue eastbound traffic will be shifted to the newly constructed eastbound lanes. Two (2) lanes of traffic will be maintained in the eastbound and northbound direction except as specified in the Lane Closure section.
- o University Bay Drive will remain on all lanes.
- o Local road traffic will be maintained on all lanes.
- o Pedestrian movements will be maintained on all sidewalk. Intersection crosswalk will be staged to maintain crossing movements.

Stage 6 Traffic

- o University Avenue westbound traffic will shift on the westbound lanes to maintain two lanes of traffic. University Avenue eastbound traffic will shift on the eastbound lanes to maintain two lanes of traffic. Two (2) lanes of traffic will be maintained in the eastbound and northbound direction except as specified in the Lane Closure section.
- o University Bay Drive will remain on all lanes.
- o Local road traffic will be maintained on all lanes.
- o Pedestrian movements will be maintained on all sidewalk. Intersection crosswalk will be staged to maintain crossing movements.

Coordinate and stage all construction activities within the areas of local traffic routes, as required to maintain a traveled way conforming to all above requirements.

Do not switch traffic over to the next construction stage until all signing, pavement marking, reflectors, lighting, tubular marker posts, barricades, and traffic control drums for the stage are in place, temporary signals for the stage are in place and operational, and conflicting pavement markings and signs are removed as shown in the traffic control and temporary signal plans and as directed by the engineer.

Use drums and barricades to direct local vehicular in the work zone and to protect and delineate hazards such as open excavations, abrupt drop-offs, and exposed manholes, inlets, hydrants, etc. The use of such devices shall be incidental to the operation which creates the hazard.

Place roadway signing and roadway temporary pavement marking as detailed on the plans and in conformance to the Manual on Uniform Traffic Control Devices (MUTCD), latest edition. Traffic control shall be completely in place by the end of the working day of a traffic switch.

Do not deliver or store materials and equipment within open travel lanes, open side roads or open sidewalks during any stage of construction. Temporary lane closures and/or halting of traffic within open roadways and pedestrian paths require flaggers and will not be permitted outside of the permitted closure times listed in this article.

Conduct operations in a manner that will cause the least interference to traffic and pedestrian movements. Maintain vehicle and pedestrian access at all times to buildings within the limits of construction. Access to residential parcels may be restricted for up to one calendar day in order to construct driveways in front of residential access points. Notify property owners at least two working days prior to closing their access point. Maintaining property access is incidental to the Traffic Control bid item.

C Lane Closures

Single lane closures on University Avenue may be permitted during off-peak hours as defined below in this article. During the times when one lane is allowed to be closed, a minimum clear width of 16 feet shall be maintained at all times. Times listed for lane closures include setup and breakdown of any equipment and traffic control devices.

Off-Peak Hours:

9:00 AM to 3:00 PM Monday, Tuesday, Wednesday, Thursday and Friday

Weekend Hours:

7:00 AM Saturday to 7:00 PM Sunday

Request approval from the engineer for all lane closures. Include justification for the lane closure and the anticipated duration in the request. A request does not constitute approval. Terminate single lane

closures prior to the end of the Permitted Lane Closure Times. Failure to obtain approval or reopen closed lanes at the required time shall be subject to assessments specified under the Prosecution and Progress article of these special provisions.

Provide arrow boards for use during all single lane closures in accordance to the MUTCD. Arrow boards for single lane closures will be paid for under the item Traffic Control Arrow Boards for each day with a single lane closure where an arrow board is in use.

Flagging operations will be allowed along all local roads, to accommodate the roadway and structure work between one (1) hour after sunrise and one (1) hour before sunset. Use sunset and sunrise information from the nearest National Weather Service office. Delays due to flagging may not exceed 5 minutes in any direction. The engineer will have the ability to suspend work activities in the event any undesirable traffic congestion develops that has the potential to cause lengthy motorist delay or unsafe workings conditions.

D Local Access to Project

Maintain local traffic access at all times during the construction except as specified in the Prosecution and Progress article of these special provisions. Stage construction activities as required to maintain local traffic access in accordance with the permitted closure and flagging operation times listed in this article of these special provisions.

Construct and maintain a local traffic access route on any section of roadway that will carry only local traffic conforming to the following criteria:

- Number of Lanes: One (1) lane in each direction
- Lane Width: Minimum of eleven (11) foot width OR one lane roadway with flagging
- Driving Surface: Acceptable driving surfaces include base aggregate dense, asphaltic surface temporary, HMA pavement, concrete pavement and milled surfaces.

E Residential and Business Property Access

Maintain vehicular access at all times to all driveways, parking lots, public alleys, and side roads throughout construction; except during paving and utility installation operations occurring in the immediate vicinity of the access location. Maintain and keep open access locations, where alternative access is not available at all times by closing one driveway at a time, building half the driveway at a time and/or plating concrete work. Plating of concrete work, as directed by the engineer, is incidental to the item requiring the plating. When an access or parking area must be limited due to construction operations, notify the engineer, property owners, and occupants of the premises at least two days prior to the beginning of the construction operation. Complete the work in a reasonable time and manner to resume access to the driveway or side road. In parking lots that are being reconstructed, stage operations so that parking and access is maintained on existing or proposed base aggregate or pavement.

Coordinate with each business for the best time to construct driveways and sidewalks so as not to interrupt business operations during open hours.

Maintain emergency vehicle access and delivery vehicle access at all times to all properties throughout construction; except during paving and utility installation operations occurring in the immediate vicinity of the property. When access must be limited due to construction operations, notify the police and fire departments, the engineer and property owners and occupants at least two days prior to the beginning of the construction operation. Complete the work in a reasonable time and manner to resume access to the property.

For vehicle access, furnish, construct, and maintain a ramp of compacted base aggregate dense between closed side streets or open cross streets or driveway access and the work zone at all times, including down to excavated subgrade. The maximum ramp slope shall be 12% and delineated with traffic control drums. Use drums, barricades, flexible tubular markers, and safety fence to direct vehicular traffic in the work zone if required by the engineer. Protect and delineate hazards such as open excavations, abrupt drop-offs, and exposed manholes, inlets, and hydrants, with wedged material, drums, barricades, and safety fence as shown in the plans, special provisions, or as directed by the engineer.

Maintaining property access as described above is considered incidental to the Traffic Control bid item.

F Pedestrian Access

Maintain pedestrian access to residences, businesses, public parking lots, and schools or provide where necessary, as directed by the engineer. Provide a temporary surface for pedestrian access at all times in areas of sidewalk construction. Construct the temporary pedestrian surface to meet Americans with Disabilities Act Accessibility Guidelines (ADAAG) requirements consisting of temporary pedestrian

surface asphalt, temporary pedestrian surface plywood, temporary pedestrian surface plate, or alternative material as approved by the engineer. Gravel or base course material is not acceptable. Maintain ADAAG accessible pedestrian access surfaces and walkways that are free from mud, sand, and construction debris.

Furnish and install temporary crosswalks for maintaining crosswalks through the construction zone.

Furnish and install temporary curb ramps when existing or finished curb ramps are not in place.

Furnish and install temporary pedestrian safety fence along existing and temporary sidewalk surface where there are drop-offs greater than 6-inches within 1-foot of the sidewalk edge and a grass or turf buffer does not exist to delineate the edge of sidewalk for vision impaired pedestrians.

Traffic control drums or barrels shall not be used for guidance along pedestrian access routes.

If additional special pedestrian access needs are identified along the project, provide for that access as directed by the engineer.

G Construction Access

All construction access is subject to approval of the engineer. Construction traffic cannot travel counter-directional adjacent to University Avenue traffic except behind concrete barrier temporary precast.

Construction operations affecting the traveling public's safety on University Avenue will not be allowed during snow and ice conditions, or any other adverse weather conditions, unless approved by the engineer.

Delivery of equipment to University Avenue requiring the use of a semi-tractor and trailer shall only occur during those hours identified as University Avenue off-peak hours.

H Winter Shutdown and Winter Maintenance

Winter shutdown will commence with the completion of Stage 3 in the Fall of 2022. Do not resume work until April 10, 2023 unless approved by the engineer. Provide a start date in writing at least 14 days prior to the planned recommencement of work in 2023. Upon approval the engineer will issue the notice to proceed within 10 days of the approved start date.

Snow may be plowed from the traveled roadway into the work site by the maintaining authority. The contractor is responsible for any snow removal from the work site that may be required to continue work operations.

Re-install or adjust any traffic control devices that may be damaged, removed, or shifted as part of normal winter maintenance operations. Clean and maintain traffic control devices as necessary or directed as a result of winter maintenance operations.

Anticipated locations of traffic control devices are shown in the plans. Review the work site with the engineer for locations where additional area may be available to maximize lane and shoulder widths over winter months to aid in winter maintenance operations and to maximize snow storage area. Adjust traffic control devices in these areas.

Snow plowing, ice removal including any road salt which may be required, maintenance and cleaning of traffic control devices, and other winter maintenance activities are incidental other items of work under this contract.

5. Lane Rental Fee Assessment.

A General

The contract designates some lane closures to perform the work. The contractor will not incur a Lane Rental Fee Assessment for closing lanes during the allowable lane closure times. The contractor will incur a Lane Rental Fee Assessment for each lane closure outside of the allowable lane closure times. If a lane is obstructed at any time due to contractor operations, it is considered a closure. The purpose of lane rental is to enforce compliance of lane restrictions and discourage unnecessary closures.

The allowable lane closure times are shown in the Traffic article.

Submit the dates of the proposed lane and roadway restrictions to the engineer as part of the progress schedule.

B Lane Rental Fee Assessment

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

- $2,175 per lane, per direction of travel, per hour broken into 15-minute increments

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

The engineer, or designated representative, will be the sole authority in determining time period length for the Lane Rental Fee Assessment.

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

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

Lane Rental Fee Assessment will be in effect from the time of the Notice to Proceed until the department issues final acceptance. If interim completion time or contract time expires before the completion of specified work in the contract, additional liquidated damages will be assessed as specified in standard spec 108.11 or as specified within this contract.

stp-108-065 (20161130)

6. Utilities.

Additional detailed information regarding the location of vacated, relocated, and/or removed utility facilities is available in the work plan provided by each utility company or on the permits issued to them. View these documents at the City of Madison office during normal working hours.

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 10 to 12 working days in advance of when the prior work will be completed and the site will be available to the utility owner. Follow-up with a confirmation notice to the engineer and the utility owner 3 to 5 working days before the site will be ready for the utility owner to begin its work.

Underground and overhead utility facilities are located within the project limits. Utility adjustments are required for this construction project as noted below. Coordinate construction activities with a call to Diggers Hotline or a direct call to the utilities that have facilities in the area as required per state statute. Use caution to ensure the integrity of underground facilities and maintain code clearances from overhead facilities at all times.

Contact each utility company listed in the plans, prior to preparing bids, to obtain current information on the status of existing and any new utility relocation work.

Utility companies will be performing utility work and adjustments within the limits and during the life of the project. The contractor shall cooperate and coordinate construction activities with these utility companies.

There may be discontinued utility facilities within the project limits. If a conflict with a discontinued utility facility is encountered, contact the appropriate utility owner/representative to coordinate construction activities and proper removal and disposal of said facility as necessary.

Utility working days shown herein are as defined in Wisconsin Administrative Code Chapter Trans 220.

Project 5992-11-31, 5992-11-32 and 5992-11-33

Known utilities in the project area are as follows and station locations are approximate locations:

American Transmission Company (Electric). American Transmission Company has high voltage underground facilities at the following locations:

- o North side of University Avenue along the entire length of the project and crossing to the south side at 173+85'EB'
- o Marshall Court crossing at 50+50'MC'

- University Bay crossing at 21+55'BD'
- North side of the proposed pedestrian path from 50+50 to 55+25 then crossing to the south side of the proposed path and on the north side of the existing path from 55+25 to east of the project limits.

These existing facilities will remain in place.

When work is being conducted near ATC facilities the following is required:

- An ATC representative to be on-site for all blasting activities

A five (5) day prior notice is required for scheduling a representative on site

AT&T (Communication). AT&T has underground communications facilities at the following locations:

University Avenue: Along the westbound lanes from west of the beginning of the project to 147+05'EB', then shifting to the median from 147+05'EB' to 165+00'EB', then shifting to the eastbound lanes from 165+00'EB' to east of the project limits.

Shorewood: along the east side of the roadway from University Avenue to north of the project limits.

Schmitt Place: along the west side of the roadway from University Avenue to south of the project limits.

Pedestrian Path: along the path from west of the path limits to 55+05.

University Bay Drive: along the west side of the roadway from 21+45'BD' to north of the project limits with a crossing at 23+15'BD'

The AT&T facilities will be adjusted as follows:

- AT&T will need to be on site for any construction operations completed underneath the AT&T facilities. Contact AT&T at least one week prior to needing staff on site.
- The existing underground duct at the following locations will be lowered to avoid conflict with the proposed storm sewer:

  -Station 139+05'WB' to Station 139+85'WB'

  -Station 140+85'WB' to Station 141+70'WB'

  -Station 145+35'WB' to Station 146+05'WB'

  -Station 148+65'WB' to Station 149+45'WB'

- The pedestal at Station 140+38'WB' will be removed.
- The existing underground duct crossing at Station 144+70'EB' will be lowered to avoid conflict with the proposed storm sewer. This duct crossing will be braced during the 96-inch storm sewer operations.
- The manhole at Station 151+55'WB', LT will be adjusted to final grade during construction. This work is anticipated to take one (1) day during Stage 2 to complete. Contact AT&T at least one week prior to needing this work completed.
- The manhole at Station 158+95'EB' and Station 159+20'EB' will be adjusted to final grade during construction. This work is anticipated to take one (1) day during Stage 5 to complete. Contact AT&T at least one week prior to needing this work completed.
- The manhole at Station 166+10'EB', RT will be adjusted to final grade during construction. This work is anticipated to take one (1) day during Stage 5 to complete. Contact AT&T at least one week prior to needing this work completed.
- A new underground facility will be installed under the south side of Catafalque Court from Station 50+25 to Station 54+00 then extend along the northern right-of-way line to University Bay Drive.
- A new underground facility will be installed from Station 59+60 to Station 55+90 along the new north right-of-way line then extend northern along University Bay Drive under the east sidewalk, then cross University Bay Drive at Station 22+80'BD' to the west terrace.

CenturyLink/Lumen (Communication). CenturyLink/Lumen has underground communications facilities at the following locations:

University Avenue: along the south side of the roadway within the MG&E electric duct and crossing at Marshall Court (approximately Station 152+10EB).

The CenturyLink/Lumen facilities will be adjusted as follows:

- CenturyLink/Lumen will install a handhole along Marshal Court at Station 51+50MC and will discontinue the crossing on University Avenue. This work will be completed prior to construction.

Charter Communications. Charter Communications has telephone and fiber optic facilities at the following locations:

University Avenue: located on the MG&E-Electric poles on the south side of the roadway from Franklin Avenue to east of the project limits.

University Bay Drive: underground located on the west side of the roadway from Marshall Court to north of the project limits.

Charter Communications will discontinue the overhead facility from Station 159+90'EB' to Station 166+77'EB'. The property service lines from Station 70+00'UA' to Station 73+40'UA' will be lowered approximate 1-foot below the proposed subgrade. This work will be completed prior to construction.

Madison Gas and Electric (Electric). Madison Gas and Electric has overhead and underground facilities at the following locations:

University Avenue: underground located on the south side of the roadway for the entire length of the project. Overhead located on the south side of the roadway from Franklin Ave to the east end of the project. Underground crossing on the west side of the Shorewood Blvd intersection and at 164+90'EB'. Overhead crossing at 165+80'EB'.

Schmitt Place: along the west side of the roadway from University Avenue to south of the project limits.

Ridge Street: along the east side of the roadway from University Avenue to south of the project limits.

Franklin Ave: along the east side of the roadway from University Avenue to south of the project limits.

Farley Ave: along the west side of the roadway from University Avenue to south of the project limits.

University Bay Drive: overhead on the west side of the roadway to 21+50'BD'. Underground on the west side of the roadway from 21+50'BD' to north of the project limits. Crossing at 23+05'BD'.

Pedestrian Path: underground duct on the north side of the existing path from 55+65 to east of the project.

The MG&E electric facilities will be adjusted as follows:

- The existing underground duct from the west end of the project limits to 159+90'EB will remain in place except as noted below. The manholes will be adjusted to final grade during construction. This work is anticipated to take one-half (1/2) day per manhole during Stage 4 to complete. Contact MG&E-Electric at least 2 weeks prior to needing this work completed.
- The existing underground duct at Station 139+00'EB', RT will be lowered to avoid conflict with the proposed sanitary sewer during construction. This work is anticipated to be complete during Stage 4 Hill Street closure to complete. Contact MG&E-Electric at least 2 weeks prior to needing this work completed.
- The existing underground duct at Station 145+25'EB', RT will be lowered to avoid conflict with the proposed storm sewer. This work will be completed prior to construction.
- The existing overhead facility from Station 159+90'EB' to Station 166+77'EB' will be removed. This work will be completed prior to construction.
- The existing duct crossing at Station 165+10'WB' will be raised during construction. This work is anticipated to take five (5) days during Stage 2 to complete. Contact MG&E-Electric at least 2 weeks prior to needing this work completed.
- The existing duct will be lowered at Pier 5 of structure B-13-891. Care should be taken during pile driving operations to avoid impacting the duct.
- The existing duct from Station 56+05 to the east end of the project limits/pedestrian path will remain in place. Care should be taken during the R-13-361 construction operations to avoid impacting the duct.
- The existing pole at Station 21+35'BD', 20' RT will be removed. An underground electric line will be installed below the proposed subgrade. This work will be completed prior to construction.
- The existing pole at Station 21+50'BD', 53' LT will be removed. The existing duct extending north from this pole to Station 21+75'BD' will be discontinued. This work will be completed prior to construction.

Madison Gas and Electric (Gas). Madison Gas and Electric has natural gas facilities at the following locations:

University Avenue: located on the south side of the roadway for the entire length of the project and on the north side of the roadway from Shorewood Blvd to 144+80'EB'. Crossing at 165+93'EB'.

Ridge Street: along the east side of the roadway from University Avenue to south of the project limits.

Franklin Ave: along the east side of the roadway from University Avenue to south of the project limits.

Farley Ave: along both sides of the roadway from University Avenue to south of the project limits.

University Bay Drive: along the west side of the roadway form University Avenue to north of the project limits. Crossing at 21+87'BD' and 23+10'BD'.

The regulator station in the northwest quadrant of the University Avenue and University Bay Drive intersection will be relocated outside of the project limits. This work will be completed prior to construction.

City of Madison (Signals, Lights, and Communications). The City of Madison has facilities within the project limits and all improvements are included in project 5992-11-31.

City of Madison (Sanitary Sewer). The City of Madison has sanitary sewer at the following locations:

University Avenue: located in the median from 138+22'EB' to 148+75'EB' then shifting to the eastbound lanes from 148+75'EB to 157+30'EB'. Crossing at 139+67'EB', 144+81'EB', 151+75'EB', 155+50'EB', 159+12'EB' and 166+20'EB'.

Schmitt Place: along the center of the roadway from University Avenue to south of the project limits.

Ridge Street: along the center of the roadway from University Avenue to south of the project limits.

Franklin Ave: along the west side of the roadway from University Avenue to south of the project limits.

Farley Ave: along the center of the roadway from University Avenue to south of the project limits.

The City of Madison Sanitary Sewer improvements are included as part of project 5992-11-32.

City of Madison (Water). The City of Madison has water main at the following locations:

University Avenue: located in the median and eastbound lanes for the entire length of the project. Crossing at 138+80'EB', 144+72'EB', 151+72'EB', 164+53'EB' and 166+24'EB'.

Schmitt Place: along the west side of the roadway from University Avenue to south of the project limits.

Ridge Street: along the west side of the roadway from University Avenue to south of the project limits.

Franklin Ave: along the east side of the roadway from University Avenue to south of the project limits.

Farley Ave: along the east side of the roadway from University Avenue to south of the project limits.

University Bay Drive: along the east side of the roadway from University Avenue to the north project limits.

The City of Madison Water improvements are included as part of project 5992-11-32.

Madison Metropolitan Sewerage District (Sanitary Sewer). The Madison Metropolitan Sewerage District (MMSD) has facilities at the following locations:

University Avenue: located in the median and eastbound lanes from 151+57'EB to the east end of the project and on the north side of the roadway from University Bay Drive to the east end of the project.

Catafalque Court: along the north side of the roadway for the entire length of the project.

University Bay Drive: crossing at 21+50'BD'.

MMSD improvements are included as part of project 5992-11-31 and 5992-11-33. Coordinate with MMSD for the inspection of the MMSD sanitary, interceptor and manhole structures will be required.

ResTech (Communication). ResTech has underground communications facilities at the following locations:

University Bay Drive: crossing at 23+05'BD'.

ResTech will remove the crossing during construction. This work is anticipated to take two (2) days, one day during Stage 2 and one day during Stage 2A to complete. Contact Restech at least 5 days prior to needing this work completed.

Village of Shorewood Hills (Sanitary Sewer). The Village of Shorewood Hills has sanitary sewer at the following locations:

Shorewood Blvd: along the center of the roadway from University Avenue to north of the project limits.

University Bay Drive: along the center of the roadway from 21+50'BD' to the north project limits.

No conflicts are anticipated.

Village of Shorewood Hills (Water). The Village of Shorewood Hills has water main at the following locations:

Shorewood Blvd: along the east side of the roadway from University Avenue to north of the project limits.

University Bay Drive: along the west side of the roadway from 21+75'BD' to the north project limits.

The Village of Shorewood Hills Water improvements are included as part of project 5992-11-32.

TDS Telecom. TDS Telecom has telephone and fiber optic facilities at the following locations:

University Avenue: along the south side of the roadway within the MG&E electric duct and overhead poles.

TDS Telecom facilities will be adjusted as follows:

o The existing overhead facility from Station 159+90'EB' to the east of the project will be removed with the MG&E electric facility and relocated with the MG&E electric facilities. This work will be completed prior to construction.

UW Health. UW Health has underground fiber optic facilities at the following locations:

University Avenue: on the north side of the roadway along the railroad corridor from the west end to University Bay Drive.

University Bay Drive: located on the east side of the roadway from 21+00'BD to the north project limits. Crossing at 21+00'BD'.

The existing vault at Station 31+00'BD', RT will be relocated to Station 21+60'BD', RT. This work is anticipated to take four (4) days during Stage 2 to complete. Contact UW Health at least 2 weeks prior to needing this work completed.

Wisconsin Independent Network (Communication). Wisconsin Independent Network (WIN) has underground communications facilities at the following locations:

University Avenue: located in the City of Madison conduit in the median from 137+60'EB' to 139+27'EB' and on the north side from University Bay Drive to 167+45'BD'. Crossings at 137+60'BD', 139+24'EB' and 167+45'EB.

Farley Ave: along the east side of the roadway from University Avenue to south of the project limits.

Wisconsin Independent Network will move the facilities located in the City of Madison along with the relocation of the City of Madison conduit that is included as part of project 5992-11-31. Contact Wisconsin Independent Network at least 5 days prior to needing this work completed.

7. Work By Others – Electrical.

The City of Madison Traffic Signals and Communications Units will perform the following work for project 5992-11-31 traffic signal, lighting, and communication systems:

- Complete and authorize electrical service installation applications
- Install and program contractor furnished traffic signal control cabinets, controller, malfunction management unit, vehicular detection system programming unit and equipment
- Furnish, install, and maintain all materials and equipment necessary for temporary fiber optic communications systems including installing/removing aerial cabling, splicing, and integration
- Complete all splicing and integration of permanent fiber optic systems
- Provide all permanent traffic signal timing

8. Railroad Insurance and Coordination - Wisconsin and Southern Railroad Company.

A. Description

Comply with standard spec 107.17 for all work affecting Wisconsin and Southern Railroad Company property and any existing tracks.

A.1 Railroad Insurance Requirements

In addition to standard spec 107.26, provide railroad protective liability insurance coverage as specified in standard spec 107.17.3. Insurance is filed in the name of Wisconsin and Southern Railroad Company.

Notify evidence of the required coverage, and duration to Amanda Haggerty, Office Administrator; 1890 E Johnson Street, Madison, WI 53704; Telephone (608) 620-2048; E-mail: ahaggerty@watcocompanies.com.

Also send a copy to the following: Teri Beckman, SW Madison Region Railroad Coordinator; 2101 Wright Street, Madison, WI 53704; Telephone (608) 733-1923; E-mail: teri.beckman@dot.wi.gov

Include the following information on the insurance document:

- Project ID: 5992-11-30
- Work Performed: Reconstruct Pavement

#	Route Name	City/County	Crossing ID	RR Subdivision	RR Milepost
1	University Bay	Madison, Dane County	391732P	Prairie	141.00
2	Marshall Court	Madison, Dane County	391733W	Prairie	141.27

A.2 Train Operation

Approximately 1 through freight trains operate daily at up to 5 mph to 10 mph. Approximately 10 switching trains a day.

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

Construction Contact

Roger Schaalma, Superintendent of Maintenance of Way, Wisconsin and Southern Railroad Co.; 1890 East Johnson Street, Madison, WI 53704; Telephone (608) 620-2044; E-mail rschaalma@watcocompanies.com for consultation on railroad requirements during construction.

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

Flagging Contact

See Construction Contact. Reference the Crossing ID, Wisconsin Milepost and Subdivision found in A.1.

Cable Locate Contact

In addition to contacting Diggers Hotline, contact Construction Contact at least five working days before the locate is needed. Reference the Crossing ID, Wisconsin Milepost and Subdivision found in A.1.

WSOR will only locate railroad owned facilities located in the railroad right-of-way. The railroad does not locate any other utilities.

A.4 Work by Railroad

The railroad will perform the work described in this section, except for work described in other special provisions and will be accomplished without cost to the contractor. Replace crossing, signals and gates.

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

A.5 Temporary Grade Crossing

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

B Railroad Flagging

Arrange with the railroad for the flagging of trains and safety of railroad operations if clearances specified in subsection 107.17.1 are not maintained during construction operations. At any other time in railroad representative's judgment, the contractor's work or operations constitute an intrusion into the track zone

and create an extraordinary hazard to railroad traffic, and at any other time when flagging protection is necessary for safety to comply with the operating rules of the railroad.

Projects with concurrent activity may require more than one flagger.

Projects with heavy contractor activity within 25 feet of the centerline of any track or unusual or heavy impact on railroad facilities will normally require a full-time flagger.

The department and railroad will monitor operations for compliance with the above flagging requirements. Violations may result in removal from railroad property until arrangements to adhere to the flagging requirements are satisfied. If the railroad imposes additional flagging requirements beyond the above flagging requirements due to the previous violations, the contractor shall bear all costs of the additional flagging requirements.

C Flagging by Railroad– Railroad Does Not Pay Flagging Costs

C.1 General

Replace paragraph (1,3 and 4) of standard spec 107.17.1 with the following:

(1) Coordinate with the railroad for all work performed within 25 feet of the track centerline including equipment or extensions of equipment that can fall within 25 feet of the track centerline or adjacent facilities or when working on railroad right-of-way. Include the following on all submittals and other written communications with the railroad:

- WisDOT crossing number.
- Railroad milepost.
- Railroad subdivision.

(3) Perform all work within 25 feet of the track centerline including equipment or extensions of equipment that can fall within 25 feet of the track centerline or adjacent facilities or when working on railroad right-of-way in a way that does not interfere with the safe and uninterrupted operation of railroad traffic. Maintain clearances during construction as follows:

1. Do not operate equipment closer than 25 feet horizontally from a track centerline or 22 feet vertically above the top of a rail, except under the protection of railroad flaggers.

2. Do not store materials or equipment closer than 25 feet horizontally from a track centerline.

3. Provide an obstruction-free work zone adjacent to a track extending 12 feet or more horizontally on both sides of the track centerline. Keep this work zone free of construction debris.

4. Unless the railroad's chief engineering officer approves otherwise in writing, maintain minimum clearances from falsework, forms, shoring, and other temporary fixed objects as follows:

4.1 Provide 12 feet, plus 1.5 inches per degree of track curvature, measured horizontally from the track centerline.

4.2 Provide 21 feet, plus compensation for super-elevated track, measured vertically above the top of the highest rail.

(4) Comply with the railroad’s rules and regulations when work is within 25 feet of the track centerline including equipment or extensions of equipment that can fall within 25 feet of the track centerline or adjacent facilities or when working on railroad right-of-way. If the railroad’s chief engineering officer requires, arrange with the railroad to obtain the services of qualified railroad employees to protect railroad traffic through the work area. Bear the cost of these services and make payment directly to the railroad. Notify the appropriate railroad representative as listed in section A.3 above, in writing, at least 40 business days before starting work near a track. Provide the specific time planned to start the operations.

C.2 Rates - Wisconsin and Southern Railroad Company

The following rates, reimbursement provisions, and excluded conditions will be used to determine the contractor’s cost of flagging:

- $95 per hour for up to nine-hours at the work-site per day (including wages, labor surcharges, meals, lodging, vehicle and mileage expenses),
- $140 per hour for all hours over nine in any week-day (including wages, labor surcharges, meals, lodging, vehicle and mileage expenses),
- $190 per hour for up to nine hours at the work-site on Saturdays (including wages, labor surcharges, meals, lodging, vehicle and mileage expenses),

- $190 per hour for all hours over nine on Saturdays (including wages, labor surcharges, meal, lodging, vehicle and mileage expenses).

$190 per hour for up to nine hours on Sundays or holidays (including wages, labor surcharges, meal, lodging, vehicle and mileage expenses).

C.3 Reimbursement Provisions

The actual cost for flagging will be billed by the railroad. After the completion of the work requiring flagging protection as provided in section B above, the department will reimburse 50% of the cost of such services up to the rates provided above based on paid railroad invoices, except for the excluded conditions enumerated below. In the event actual flagging rates exceed the rates stated above, the department will reimburse 100% of the portion of the rate that is greater than the rates stated above.

C.4 Excluded Conditions

The department will not reimburse any of the cost for additional flagging attributable to the following:

1. Additional flagging requirements imposed by the railroad beyond the flagging requirements provided in subsection B above due to violations by the contractor.
2. Temporary construction crossings arranged for by the contractor.

The contractor shall bear all costs of the additional flagging requirements for the excluded conditions.

C.5 Payment for Flagging

The department will pay for the department's portion of flagging reimbursement as specified in section C of this provision under the following item:

ITEM NUMBER	DESCRIPTION	UNIT
801.0117	Railroad Flagging Reimbursement	DOL

The reimbursement payment, as shown on the Schedule of Items, is solely for department accounting purposes. Actual flagging costs will vary based on the contractor's means and methods.

Railroads may issue progressive invoices. Notify the railroad when the work is completed and request a final invoice from the railroad. Promptly pay railroad-flagging invoices, less any charges that may be in dispute. The department will withhold flagging reimbursement until any disputed charges are resolved and the final invoice is paid. No reimbursement for flagging will be made by the department if a violation of subsection B is documented.

stp-107-034 (20200629)

9. Hauling Restrictions.

Conduct operations in a manner that will cause a minimum of inconvenience to the free flow of traffic on roadways carrying University Avenue traffic at all times.

Use City of Madison designated truck routes for material haul roads as detailed in standard spec 618.

Equip all vehicles traveling on public roads, hauling materials or removals that are subject to spillage, by either wind or vibration, with tailgates and adequate sideboards. Use canvas covers and any other protective devices to prevent spillage as determined necessary by the engineer. Comply with all local ordinances.

10. Information to Bidders, WPDES General Construction Storm Water Discharge Permit.

The department has obtained coverage through the Wisconsin Department of Natural Resources to discharge storm water associated with land disturbing construction activities of this contract under the Wisconsin Pollutant Discharge Elimination System General Construction Storm Water Discharge Permit (WPDES Permit No. WI-S066796-1). A certificate of permit coverage is available from the regional office by contacting Zachary Pearson, P.E, Local Program Project Manager, WisDOT – SW Region at (608) 246-5319. Post the permit in a conspicuous place at the construction site.

stp-107-056 (20180628)

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

Add the following to standard spec 107.1(2):

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

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

Develop, delineate, and enforce the health and safety exclusions zones for each contaminated site location pursuant to 29 CFR 1910.120.

stp-107-115 (20150630)

12. Erosion Control.

Supplement standard spec 107.20 with the following:

Erosion control best management practices (BMP's) shown on the plans are at suggested locations. The actual locations will be determined by the contractor's ECIP and by the engineer. Include each dewatering (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, and re-application of topsoil to minimize the period of exposure to possible erosion.

Provide the ECIP 14 days prior to the pre-construction conference. Do not implement the ECIP until department approval, and perform all work in accordance to the approved ECIP.

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

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

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

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 describing in words and pictorial format an appropriate BMP for sediment removal, in accordance to WisDNR Storm Water Construction Technical Standard, Code 1061, Dewatering. 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 project.

Keep all public roadways clean and free from dirt and debris at all times. Provide a self-contained mechanical or air conveyance street sweeper, and dispose of the accumulated material.

Do not wash out equipment in drainage ways or direct conduits to waters of the state. Keep slurry out of inlets and drainage ways. Remove all temporary erosion control measures after disturbed areas are stabilized or at the direction of the engineer.

Prepare an Erosion Control Implementation Plan (ECIP) amendment detailing an over-winter erosion control plan for 2022/2023. Present this ECIP amendment at a pre-winter shut down meeting with DNR and department staff prior to October 17.

Delete the last sentence of standard spec 107.20(7) and replace it with the following:

Provide the permanent erosion control measures immediately after performing grading operations, unless temporary erosion control measures are specified or authorized by the engineer.

13. Notice to Contractor – Contamination Beyond Construction Limits.

A Phase 1 Hazardous Materials Site Assessment was prepared for this project and identified sites that have the potential for soil and ground water contamination.

The following sites have the potential for hazardous materials to be present on the property, but the likelihood to be encountered during construction was determined to be low and did not warrant a subsurface investigation. The Phase 1 HMA indicated that potentially petroleum-contaminated soil may be present at the following site(s):

Site 1. Station 138+85WB - 139+50WB left. Groundwater and soil contamination previously identified, caused by LUST(s) that previously occupied site. Site was granted closure in 2003, with known residual contamination. Groundwater flow is to the north, away from University Avenue; residual soil contamination has not migrated off site.

Site 3. 139+50WB - 143+50WB left. Former Dry Cleaner site(s) identified in City Directory listings from the 1950s. Former Byrns Oil Company per 1941 City Directory (3232)/ (3032 in 1946 Directory). Currently a strip shopping center with adjacent surface parking. No identified records of previous contamination.

Site 7. 152+50EB - 153+87EB right. Former gas station site; currently used as a dry cleaner. Leaking Underground Storage Tank site was closed in 1998. **Soils above water table:** The dry cleaner portion of this site has previously identified soil and sub-slab vapor contamination with chlorinated volatile organic compounds (VOCs). A vapor mitigation system was installed at the sited to address the sub-slab vapors. Residual soil contamination exists that must be properly managed should it be excavated or removed. The residual soil contamination was identified at a depth of 2-3 feet below ground surface in the area under the existing building and directly behind the building (within 10 feet). There is no indication that any contaminated soil is located in front of the building or near the University Avenue right-of-way. **Groundwater:** The dry cleaner closure report stated one groundwater monitor well was installed and PCE levels were not a concern. The LUST Closure Request letter to WDNR, the monitor wells results were Non Detect for the VOCs sampled.

Site 10. 156+90EB - 157+66EB right. A release of dry-cleaning solvent was reported to the WDNR on June 18, 2002. Subsequent site investigation has included sampling of numerous soil borings and groundwater monitoring wells to delineate the extent of contamination in soil and groundwater. Identified soil contamination was limited to the property with the highest concentrations found near the southwest corner of the former drycleaner facility. Soils: There is no indication that contaminated soils are within the University Avenue right-of-way. Groundwater: in October 2015, residual dry cleaning solvent (PCE) was detected at concentrations in excess of enforcement standard in samples from five of the 13 groundwater monitoring wells sampled, including across University Avenue, migrating from south to north.

Site 13 Station 157+75 EB Right – 158+88 EB Right . Petroleum contaminated soil and groundwater that originated from the Vista U-Pump property migrated into the University Avenue right-of-way. Closed LUST site with Continuing Obligations. The levels of petroleum contamination in the groundwater and soil in the University Avenue right-of-way are above the state groundwater enforcement standards. DNR also reports that the released petroleum has been investigated and remediated, and the residual groundwater contaminant plume is stable or receding and will naturally degrade over time. **Soils:** The soil contamination maps included in the BRRTS closure report shows potential soil contamination around 8-10’ deep at the property line, so petroleum contamination may be encountered below 8 feet; recommend using the BRRTS lab reports to profile for landfill disposal, if necessary. Groundwater: Because this site is adjacent to Site 10, dewatered groundwater is likely to be contaminated with PCE in addition to petroleum.

Site 14. 158+94WB - 162+63WB left. Contaminated fill soils were identified from a geotechnical report completed prior to site redevelopment. Site is located north of railroad tracks and fill soils are not anticipated to be encountered by the project.

Site 16. 166+70EB - 168+06EB Right. Groundwater and soil contamination was previously identified at this site, caused by LUST(s) that previously occupied the site. The site was granted closure in 2000, with known residual contamination still on site. Agency records indicate that residual soil contamination remains on site.

Site 19. 139+50EB - 141+00EB Right. Former Service Station with three USTs identified on Sanborn Map 1950. City Directories identify this address as a service station in 1950, 1954, and 1966. Phase 2 Site investigation was not recommended because depth of construction will only be 4' adjacent to property and the deep storm sewer will be about 75' from the property.

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

Brynn Bemis
City of Madison Engineering
608.267.1986
bbemis@cityofmadison.com

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

Order traffic signal equipment as soon as possible to assure the equipment is procured in a timely fashion and therefore, installed, inspected and ready for turn-on at the required date.

15. Notice to Contractor – Monitoring of Railroad Structure.

The department has made no arrangements to conduct condition surveys or allow placement of survey targets on railroad property. Arrange and coordinate access with the railroad company for surveys and placement of targets prior to commencement of activities creating vibration. Pre-construction data may be collected and included in the Pre-Construction Condition Surveys. Do not place vibration monitoring instrumentation on railroad property without permission of the railroad.

During piling driving operations or sheet pile installation, the existing railroad tracks should be monitored for movement. If movement is recorded in excess of acceptable parameters, all pile driving operations or sheet pile installation must cease immediately and the engineer and railroad must be notified and methods to reduce vibration shall be proposed by the contractor for approval of the engineer and the railroad.

Monitoring is incidental to the bid item Settlement Monitoring.

16. Notice to Contractor – Rusty Patch Bumblebee.

To avoid impacting the Rusty Patch Bumblebee, disturbed grass median and green space areas will be cleared and grubbed before the growing season and continuously mowed until construction begins to prevent vegetation growth.

17. Coordination with Businesses and Residents.

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

stp-108-060 (20141107)

18. Public Convenience and Safety.

Revise standard spec 107.8(6) as follows:

Check for and comply with local ordinances governing the hours of operation of construction equipment. Do not operate motorized construction equipment from 7:00 PM until the following 7:00 AM, unless prior written approval is obtained from the engineer. Construction operations will only be allowed from 10:00 AM until 7:00 PM on Sundays.

stp-107-001 (20060512)

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

Both the department and City of Madison 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 Madison.

stp-105-001 (20140630)

20. Referenced Construction Specifications.

Construct the work enumerated below conforming to the City of Madison Standard Specifications. 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:

-Sanitary Sewer Items

-Water Main Items

stp-105-002 (20130615)

21. Preservation of Existing Trees.

Tree preservation is of great importance on the project. Take precautions during construction so as not to disfigure, scar, or impair the health of any tree on public or private property that is not marked for removal. Do not place, park, or store on the surface of any unpaved areas within the drip lines of trees any equipment, vehicles, or materials. Do not deposit any chemicals, rinsates, or petroleum products within the drip lines of trees. The drip line is defined as the outermost extent of the tree canopy, extended vertically to the ground surface. The engineer and the City Forestry Representative will review trees that are in close proximity to the grading limits of the project and will identify specific trees to be protected. Contact Brad Hoffman, City of Madison Forestry at (608) 267-4908 with questions regarding tree preservation.

Preconstruction Pruning

Trees larger than 10 inches Diameter Breast Height (DBH) will be pruned by City Forestry to an approximate height of 14 feet above the road wherever construction equipment is expected to invade the tree crown. Pruning will be done according to ANSI A300 tree pruning specifications. Occasionally a limb may have to remain at height less than 14 feet above the roadway. Note these instances during the ‘walk through’ and employ methods to protect the limb.

Excavations

Do not rip or pull roots out towards the trunk of a tree while excavating. The use of an excavator, backhoe, or loader to cut roots is not acceptable. Immediately cut damaged roots over 1/2-inch in diameter in back of the damaged section. Make cuts with an ax, lopping shears, chainsaw, stump grinder, or other means that will produce a clean cut. Cover any exposed roots as soon as excavation and installation are complete.

Underground Utility Excavation and Installation

Do not grade, excavate, or disturb the area within 5 feet of any tree measured from the outside edge of the tree at DBH along the length of the terrace, without permission from the City Forestry Representative.

The engineer and the City Forestry Representative will review laterals that are in close proximity to terrace trees on a case by case basis. The engineer may elect to terminate lateral or service installation prior to conflict with tree roots (i.e. at the curb line). For laterals that continue to the property line, use construction methods that minimize tree damage as directed by the engineer. The engineer may allow boring under or within the 5 feet protection zone.

Curb and Gutter Removal and Replacement

Provide extra care to root masses that grow very close to, up to or over the curb during excavation. The City Forestry will mark “NRC” (No Root Cutting) next to trees with roots that could be damaged in curb removal.

Sidewalk Removal and Replacement

Provide extra care to root masses that grow very close to the sidewalk during excavation. The City Forestry will mark “NRC” (No Root Cutting) next to trees with roots that could be damaged in sidewalk removal.

Terrace Restoration

Do not mechanically grade within 5 feet of any tree. If in the root protection zone, do grading with hand implements in a manner that will minimize damage to the root system.

Damages

Failure to follow the proper safeguards of this specification, or the Root Pruning Existing Tree Item will result in the following cost recovery charges and liquidated damages assessed against the contractor:

Where construction damage occurs causing or resulting in removal of the tree:

- The costs associated with removing the tree including wood disposal.
- The costs associated with removing the stump to a depth of at least 24 inches below the ground.
- The costs associated with replanting a replacement tree that is balled and burlapped and shall have a minimum caliper of 3 inches. The species and replanting location shall be determined by the City Forestry.
- The value of the existing tree which shall equal $125.00 per trunk diameter inch, measured at 4.5 feet above ground.

  For bark scraping and broken branches:

- The costs associated with pruning broken branches, including wood disposal.
- Loss of limb or broken branch larger than 3 inches in diameter: $150.00 for each occurrence. Breakage of limbs that are less than 14 feet above the roadway shall be reviewed on a case by case basis.
- Damage to trunk or bark larger than one square foot in area: $400.00 each area.

  For root cutting or excavation within the root protection zone:

- For mechanical excavation within 5 feet of a tree, along the length of the terrace or sidewalk of the tree, including ripping of roots back towards the trunk, without prior permission from City Forestry Representative: $150.00 for each occurrence.
- For mechanical excavation beyond 6 inches or 1 foot of the proposed curb installation, as determined by the size of the existing tree and terrace width, including ripping of roots back towards the trunk: $150.00 for each occurrence.

22. General Provisions for City of Madison Storm Sewer.

Contact Information:

Matt Allie
City Engineering – Stormwater Section
Phone : (608) 266-4058
E-mail : mallie@cityofmadison.com

Construct all round storm sewers in accordance with the pertinent provisions of sections 608 and 611 of the standard specifications as shown on the plans, and as follows..

Prior to ordering drainage pipes and structures, verify related drainage information in the plan with the engineer. This shall include all information obtained from the bid item "Utility Line Opening" (ULO).

Seal the joints for reinforced concrete pipe (circular) with either mastic or internal rubber gaskets as described in section 608.2 of the standard specifications. The use of mortar as a pipe joint method is prohibited.

Lay all round storm sewers on a 6-inch minimum thick bed of Base Aggregate Dense Graded 1 1/4-Inch in accordance with subsection 305.2.1 of the standard specifications or when water is encountered, No. 1 coarse concrete aggregate in accordance with subsection 501.2.7.3. Bedding for round pipe shall be incidental to the installation costs of the round pipe.

All filed poured storm structures shall be constructed rectangular in shape. However, if a precast structure is approved, the requirement for a rectangular structure is waived. Construct catch basins, manholes and inlets using only precast or cast in place concrete masonry options. All structures shall be reinforced concrete. Concrete brick and block options are prohibited.

Construct all structures (manholes and inlets) on a 12-inch minimum thick bed of Base Aggregate Dense Graded 1 1/4-Inch in accordance with subsection 305.2.1 of the standard specifications or when water is encountered, No. 1 coarse concrete aggregate in accordance with subsection 501.2.7.3, and as shown on the plans. Bedding for structures shall be incidental to the installation costs of the structure.

Bid all structures (manholes and inlets) as field poured, and construct all structures as field-poured unless the contractor receives approval of the City of Madison design engineer to precast the structures. This approval will not be given until it can be confirmed that the proposed design will fit existing conditions including possible utility conflicts. No precast approval shall be authorized for any structure until such time as all ULO's that could affect the structure/structures in question have been completed and the City of Madison design engineer has had a minimum of three working days to review all the relevant information.

Submit shop drawings for all precast structures to the City of Madison design engineer. The city design engineer shall have three days to approve or reject the shop drawings. Under no circumstance shall a precast structure be brought to or used on the construction site without a written approval of the shop drawing for that structure prior to its use on site.

Do not use station and offset for inlet structures, as given on the storm plans, for final layout of the structure. Determine the curb line in the area of the inlet prior to pouring the inlet structure to assure proper location of the inlet relative to the curb line.

The costs to connect storm sewer to existing structures or pipes and the costs to plug pipes for future use including tapping the hole, placing the pipe and sealing the joint, furnishing and installing a plugging device as specified above, will be included in the unit price bid for the pipe of the type, class and diameter used. The cost includes installing a concrete plug in the portion of the abandon pipe that remains in place after completion of storm sewer trench. All private storm connection to a new structure are incidental to the new structure. If a private connection is not shown on the plan, additional compensation shall be paid for as a private reconnection unless the structure is field poured.

Carefully remove and stockpile all existing inlet, manhole, and catch basin covers that are not being adjusted and reused on the project at a location on the right of way outside the construction limits for pickup by City of Madison personnel. Contact Chris Scharf to schedule pickup.

Remove from the right-of-way and dispose of all frames or grates and all other material that the city does not want.

23. General Provisions for City of Madison Sanitary Sewer.

Contact Information:

Madison Sewer Utility
Mark Moder
Phone: (608) 261-9250
Email: mmoder@cityofmadison.com

Utility Standard Specifications

Perform work according to these provisions and the State of Wisconsin, Department of Transportation, Standard Specifications for Highway and Structure Construction and the City of Madison Standard Specifications for Public Works Construction-Latest Edition, hereinafter referred to as the *City Standard Specifications*.

Work Sequence

Contact the identified person above 10 working days prior to starting work on the sanitary sewer and provide a schedule of operations. Construct sanitary sewer main and laterals in stages according to the traffic control plan and in proper coordination with construction for activities adjacent to the sanitary sewer main.

Provide bypass pumping of sanitary sewage to maintain sanitary sewer service when new sewer access structures are being constructed over the existing mains.

Shop Drawings and Samples

Submit shop drawings and samples to the engineer and City of Madison Engineering Department as required in these Special Provisions and for the following:

- Sanitary Sewer Pipe Material.
- Sanitary Sewer Access Structure Casting and Manhole Covers Type J (Madison logo lid).
- Sanitary Sewer Internal Chimney Seal.
- Sanitary Sewer Access Structure (size).
- Sewer Electronic Markers.
- Select Fill for Sanitary Sewer.

Contractor's responsibilities include:

- Review shop drawings and samples prior to submittal.
- Determine and verify field measurements, field construction criteria, catalog numbers and similar data, and conformance with specifications.
- Coordinate each submittal with requirements of work and of Special Provisions.

Notify City Engineer or City Engineer's Representative, in writing, at time of submittal of deviations in submittals from

NOTE: Do not begin any fabrication or work listed above as requiring shop drawings or samples until return of submittals with City Engineer's or City Engineer Representative's approval.

Provide shop drawings containing the following:

- Date of submittal and dates of previous submittals.
- Project title and number.
- Contract identification.
- Names of contractor, supplier, and manufacturer.
- Identification of product, with identification numbers, and drawing and specification section numbers.
- Field dimensions clearly identified.
- Identification of details required on drawings and in specifications.
- Manufacturer and model number (give dimensions and provide clearances).
- Relation to adjacent or critical features or work or materials.
- Applicable standards, such as ASTM, and identification of deviations from contract documents.
- Source of samples and material properties.
- Identification of revisions on re-submittals.
- Eight-inch and three-inch blank space for contractor and City Engineer stamps.
- Contractor's stamp, signed, certifying to review of submittal, verification of products, field measurement, field construction criteria, and coordination of information with submittal with requirements of work and special provisions.

If required by the City Engineer or City Engineer’s Representative, resubmit shop drawings that include the following:

- Corrections or changes from previous submittals as indicated by City Engineer or City Engineer’s Representative. Re-submittals are required until approved.

- Shop Drawings and Product Data: Review initial drawings or data and resubmit as specified for initial submittal. Indicate changes, which have been made other than those requested by City Engineer.

Testing and Acceptance

Submit materials production and field placement testing results as required by the City Standard Specifications or as required by the City Engineer or City Engineer's Representative. Final acceptance of sanitary sewer and related materials such as backfill, slurry, etc. will come from the City Engineer or City Engineer's Representative.

Allow the City of Madison to sample/test materials as requested. Provide complete copies of required submittals as follows:

Shop Drawings: Six copies.

Sampling/Testing Results: Three copies.

Deliver required copies of submittals and testing results to:

Mark Moder
City of Madison, Department of Public Works
City-County Building, Room 115, 210 Martin Luther King Jr. Boulevard
Madison, Wisconsin 53710.

The City Engineer or City Engineer's Representative will review and return shop drawings to the contractor within one week of date of receipt.

Transmittals by email to mmoder@cityofmadison.com will be accepted in lieu of paper copies.

Protection of Sewers

Take adequate measures to prevent impairment of operation of existing sanitary sewer and storm sewer systems. Prevent construction material, concrete, earth, or other debris from entering sewer or sewer structure.

Divert sewage flow interfering with construction to sanitary sewers leading away from construction area. Prior to commencing excavation and construction of work impacting existing city sewer, submit to City Engineer for review, detailed plans, including routing and connections, required to handle and dispose of sanitary wastes. By reviewing the plan, the City Engineer neither accepts responsibility for adequacy thereof nor for damages to public or private property resulting there from, such responsibilities remain with the contractor.

Sanitary sewer damaged or removed during construction, which is to remain in service, shall be restored or replaced to original material and workmanship used for original construction.

All City of Madison manhole castings removed from sewer access structures (removed, abandoned, or swapped out with a casting elevation adjustment) shall be delivered to City Engineering's Service Building,1600 Emil Street, Madison, WI 53713.

The costs to remove all abandoned utility pipes within the new sanitary sewer pipe trench or new sewer access structure excavation will be included in the unit price bid for the new pipe of the type, class and diameter used. The cost includes installing a concrete plug in the portion of the abandon pipe that remains in place after completion of sanitary sewer trench.

According to the City Standard Specifications, "Pipe to be removed that is in the same trench as a new pipe will not be compensated as remove pipe and will be considered to be incidental to the new pipe installation." Same trench will be considered to be any pipe located with 3 feet horizontally of the pipe being installed.

City of Madison (sanitary sewer) has underground facilities located within the project area. Relocation of the underground facilities shall be accomplished as part of contract 5992-11-32 by the contractor. Existing facilities and anticipated proposed relocations are as follows:

- University Ave- relocate from center of street to south side(proposed) of street (12 inch diameter): Hill Street intersection
- University Ave- relocate from center of street to south side(proposed (10 inch diameter): Hill Street intersection to Schmitt Place
- University Ave- relocate from center of street to south side(proposed (8 inch diameter): Schmitt Place to Sta 146+08

- University Ave- relocate from center of street to south side(proposed (8 inch diameter): STA 148+28 to Ridge Street
- University Ave- south side of street (12 inch diameter): Ridge Street to STA 157+28
- Hill Street-Center of Street (10-inch).
- Schmitt Place-Center of Street (8-inch).
- Ridge Street-Center of Street (10-inch).
- N. Franklin Ave.-Center of Street (12-inch).
- Farley Ave.-Center of Street (8-inch).

Sanitary sewer removals, replacements, and adjustments are included as part of the project as shown on the plans. Complete all work within the existing right-of-way. Coordinate operations with the City of Madison. Contact Mark Moder, (608) 261-9250.

24. General Provisions for Madison Metropolitan Sanitary District (MMSD).

Contact Information:

Engineer:

Madison Metropolitan Sewerage District
Eric Hjellen
Phone: (608) 347-3613
Email: erich@madsewer.org

Collection System Supervisor:

Madison Metropolitan Sewerage District
Ray Schneider
Phone: (608) 347-3628
Email: rays@madsewer.org

Utility Standard Specifications

Perform work according to these provisions and the State of Wisconsin, Department of Transportation, Standard Specifications for Highway and Structure Construction and the City of Madison Standard Specifications for Public Works Construction-Latest Edition, hereinafter referred to as the *City Standard Specifications*.

Work Sequence

Contact the identified persons above 10 working days prior to starting work on the sanitary sewer and provide a schedule of operations. Construct sanitary sewer main and manholes in stages according to the traffic control plan and in proper coordination with construction for activities adjacent to the sanitary sewer main.

Contact Collection System Supervisor 10 working days prior to application of Interceptor Manhole Lining System.

Shop Drawings and Samples

Submit shop drawings and samples to the MMSD Engineer as required in these Special Provisions and for the following:

- MMSD Sanitary Sewer Manhole and Interceptor Sewer Manhole.
- Interceptor Manhole Lining System.
- MMSD Manhole 02-048 Flat Top Replacement.
- Interceptor Sewer, 30-Inch and MMSD Sanitary Sewer, 36-Inch.
- Trenchless Casing Pipe, 48-Inch Steel.

Contractor's responsibilities include:

- Review shop drawings and samples prior to submittal.

- Determine and verify field measurements, field construction criteria, catalog numbers and similar data, and conformance with specifications.
- Coordinate each submittal with requirements of work and of Special Provisions.

Notify MMSD Engineer or MMSD Engineer Representative, in writing, at time of submittal of deviations in submittals from Special Provisions.

NOTE: Do not begin any fabrication or work listed above as requiring shop drawings or samples until return of submittals with MMSD Engineer's or MMSD Engineer Representative's approval.

Provide shop drawings containing the following:

- Date of submittal and dates of previous submittals.
- Project title and number.
- Contract identification.
- Names of contractor, supplier, and manufacturer.
- Identification of product, with identification numbers, and drawing and specification section numbers.
- Field dimensions clearly identified.
- Identification of details required on drawings and in specifications.
- Manufacturer and model number (give dimensions and provide clearances).
- Relation to adjacent or critical features or work or materials.
- Applicable standards, such as ASTM, and identification of deviations from contract documents.
- Source of samples and material properties.
- Identification of revisions on re-submittals.
- Eight-inch and three-inch blank space for contractor and City Engineer stamps.
- Contractor's stamp, signed, certifying to review of submittal, verification of products, field measurement, field construction criteria, and coordination of information with submittal with requirements of work and special provisions.

If required by the MMSD Engineer or MMSD Engineer’s Representative, resubmit shop drawings that include the following:

- Corrections or changes from previous submittals as indicated by City Engineer or City Engineer’s Representative. Re-submittals are required until approved.
- Shop Drawings and Product Data: Review initial drawings or data and resubmit as specified for initial submittal. Indicate changes, which have been made other than those requested by City Engineer.

Testing and Acceptance

Submit materials production and field placement testing results as required by these Special Provisions or the City Standard Specifications or as required by the MMSD Engineer or MMSD Engineer’s Representative. Final acceptance of interceptor sewer, sanitary sewer, manholes and related materials such as backfill, slurry, manhole lining system, etc. will come from the MMSD Engineer or MMSD Engineer’s Representative.

Allow MMSD to sample/test materials as requested. Provide complete copies of required submittals as follows:

Transmit by email to erich@madsewer.org

Protection of Sewers

Take adequate measures to prevent impairment of operation of existing sanitary sewer and storm sewer systems. Prevent construction material, concrete, earth, or other debris from entering sewer or sewer structure.

25. General Provisions for City of Madison Water Main.

Contact Information

Madison Water Utility
Kelly Miess
Phone: (608) 261-9640
E-mail: kmiess@madisonwater.org

Utility Standard Specifications

Perform work according to these provisions and the State of Wisconsin, Department of Transportation,Standard Specifications for Highway and Structure Construction and the City of Madison Standard Specifications for Public Works Construction-Latest Edition, hereinafter referred to as the *City Standard Specifications*. In the event of a conflict, the Wisconsin Department of Transportation Standard Specifications will take precedence.

Work Sequence

Contact the identified person above 10 working days prior to starting water main work and provide a schedule of operations. Construct water main and water service laterals in stages according to the traffic control plans and in proper coordination with construction activities adjacent to the water main. As construction staging and sequence allows, disinfect the new water mains. Madison Water Utility will flush and test all newly installed water mains. Coordinate as necessary with Madison Water Utility for these operations. After the water main has passed bacteriological and pressure testing, install replacement water services and make connections to the existing water system. Water main installation will consist of strategic abandonment of the existing water main. Abandon existing water main only after the new water main has passed all required testing, new main has been properly brought online into the system and all service laterals, except those called to be abandoned, have been relocated to the new main.

Keep valves at connection points between the new water main and the existing water main closed until the new water main has passed all testing. Where new valves need to be opened to fill the new water main for testing and flushing, sequencing shall be so arranged to preclude backflow of any water from the new water main to the existing water main.

Following the installation of replacement water services and the connection of replacement water main to the existing water main at locations noted on the plans, the existing water main shall be cut off; drained; open ends plugged or bulk-headed with concrete; and the pipe abandoned in place. This work is considered incidental to the new water main installation.

In addition to the general water main work sequence above, follow the specific sequencing below for the work to relocate the 16-inch University Bay Drive water main. This main tees off the existing main on University Avenue just west of University Bay Drive, crosses University Avenue and continues north on University Bay Drive. Note that the existing 6-inch/8-inch University Bay Drive main that feeds the Shorewood meter pit and the VA Hospital from the south is the sole feed to the pit and VA service lateral. Keep the 6-inch/8-inch main in service until the 16-inch University Bay Drive main relocation sequence described below is completed and the new connection from there to the VA Hospital and meter pit is ready to be installed. Alternatively, if the 6-inch/8-inch main cannot be kept in service before the 16-inch main has been relocated, negotiate a longer service outage with the Village of Shorewood Hills and the VA Hospital staff. See contacts in “Service Disruption Notifications and Limitations” below.

1. Provide required notifications to UW Hospital and UW Plumbing Shop staff; See “Service Disruption Notifications and Limitations” below.
2. Install the 16-inch valve and hydrant on the existing 16-inch main on University Bay Drive just south of Marshall Court. Note that this value will be the north isolation valve for the relocation of the 16-inch main crossing University Ave. The hydrant will be used to flush the proposed relocated main. Provide notice and work access to Madison Water Utility crews. See “Coordinated Work with Madison Water Utility Crews” below.
3. Install the16-inch valve just north of the tee off University Ave. Note that this value will be the south isolation valve for the relocation of the 16-inch main crossing University Ave.
4. Cut off the existing 16-inch University Bay Drive main at south end. Install a temporary 16-inch MJ cap and restrain the temporary dead end and the last joint per City of Madison detail 7.17. Alternate restraint methods must be approved in writing prior to installation. Maintain all isolation valves in the closed position until the main is reconnected at both ends.
5. Cut off the existing 16-inch main at north end. Install a temporary 16-inch MJ cap and restrain the temporary dead end and the last joint per City of Madison detail 7.17. Alternate restraint methods must be approved in writing prior to installation. Maintain all isolation valves in the closed position until the main is reconnected at both ends.
6. The main may be out of service for no more than three weeks.
7. Reconnect the 16-inch main per plan, disinfect, flush, test and put back into service.

8. Make the connection between 16-inch University Bay Drive main and 6-inch main that feeds the Shorewood meter pit and the VA Hospital. Provide notifications per "Service Disruption Notifications and Limitations" below.
9. Abandon the existing 6-inch/8-inch main feeding the Shorewood meter pit and the VA Hospital from the south on University Bay Drive.

Installations in and Adjacent to Contaminated Areas

There are areas within the project limits where groundwater testing revealed contaminant levels approaching or exceeding the NR 809 Safe Drinking Water Maximum Contaminant Levels (MCLs). All water main installed within the contaminated areas AND 50 feet from the limits of the contaminated areas is required by WDNR to meet specific criteria. Meet the following protective measures for all water main installations inside and within 50 feet of the contaminated areas:

Permanently plug the drain ports on hydrants or install hydrants without drain ports.

Furnish and install nitrile or fluorocarbon gaskets as directed in the plans.

Furnish and install clay trench plugs 50 feet from the furthest edges of the contaminated areas.

Coordinated Work with Madison Water Utility Crews

Madison Water Utility (MWU) crews will install a tracing wire on the existing University Bay Drive water main when exposed during the cut-in operation for the proposed hydrant and valve just south of Marshall Court. The work by MWU crews will require approximately one hour. Once the main is exposed, allow MWU crews access to complete the tracing wire installation. Provide a minimum of two-day notice to MWU Field Supervisor Don Russell at (608) 266-5985 (office) or (608) 575-7658 (mobile).

Service Disruption Notifications and Limitations

Follow City Standard Specifications for water service outage notification for all affected customers except as noted. For businesses, such as restaurants, that have sensitivity to water service disruptions, coordinate outages with owners and/or managers and accommodate their needs to the extent practicable. For all service disruptions to the following facilities, limit outages and notify as follows:

- Madison Water Utility Well 6 (2757 University Ave.)
  - Well 6 may be shut down for a maximum of three days between June 15 and September 15
  - Well 6 may be shut down for maximum of seven days before or after the June 15-September 15 timeframe
  - Well outages must be scheduled a minimum of one week ahead of shut-down
  - Contact for scheduling outages is Joe Demorett, Madison Water Utility Water Supply Manager: (608) 267-4902 (office) or (608) 577-4801 (mobile) and Madison Water Utility Construction Inspector (TBD).
- Village of Shorewood Water Meter Pit (University Bay Drive north of RR tracks)
  - Disruptions must be scheduled a minimum of one week ahead of shut-down
  - Contact Shorewood Public Works Crew Chief Mike Meier, 608-209-5024
  - Contact Madison Water Utility Field Service Analyst Steele Morton 608-206-1826
  - Contact Madison Water Utility Construction Inspector, TBD,
  - Contact Veterans' Hospital: Colin Janisch, 608-308-3457, colin.janisch@va.gov
- University Hospital: Service lateral located on University Bay Drive at Highland Ave

  The operation to cut-in the hydrant and valve on University Bay Drive just south of Marshall Court (Step 2 in the sequencing above) will require a service disruption to one of the three water feeds to University Hospital located on University Bay Drive at Highland Ave. Hospital and UW Plumbing Shop staff require advance notice to reconfigure internal valves to allow the hospital complex to be fed from the other two feeds. Contact the following staff before the service outage and again once service has been restored:
  - Provide the contacts below with approximately one month notice to shut-down

- Service disruption must be scheduled with the each of the four contacts a minimum of one week ahead of shut-down
- James Harrod, UW Hospital Director of Facilities – Engineering at (608) 263-5151 (office) or (608) 235-4216 (mobile)
- James Lambright, UW Hospital Manager - Maintenance & Engineering Business Operations, (608) 504-4271 (office) or (608) 575-0049 (mobile)
- Marcella Otter, UW Plumbing Shop Supervisor, (608) 265-3967 (office) or (608) 262-9633 (mobile)
- Pete Dahl, UW Plumbing Shop, (608) 263-3333 (office)

Hydrants

Determine the location of the curb line, sidewalk limits, and existing utilities in the area prior to hydrant installation to assure the proper location of the hydrant relative to the curb line. This work is considered incidental to the new water main installation. Where needed, use offsets and/or bends on the hydrant lead such that the hydrant is installed at a minimum bury depth of six feet and required clearances with storm sewer, sanitary sewer and other pipes are maintained. In no case may a hydrant be set at a depth greater than 9 feet from grade. Assess the need for hydrant extensions. All hydrant extensions and fittings on the lead are incidental to the installation of the hydrant. Either permanently abandon or securely bag any installed hydrant, either existing or new, that is not supplied by an in-service main overnight or for longer than 12 hours until the hydrant is permanently abandoned or back in service.

Temporary Flushing Hydrants

The installation of temporary flushing hydrants may be desired as part of the phasing and sequencing of water main installation, and is required for flushing in other locations. The furnishing, installation, use and abandonment of temporary flushing hydrants is incidental to water main installation.

Temporary Air Bleed

Where any installation of proposed water main does not have an adjacent hydrant or other means of bleeding air from the main, install a temporary 2-inch corporation stop at the high point of the main.

Remove the stop and plug the opening after successful completion of water main testing. Installation, use, maintenance, removal and plugging of corporation stops for use as air bleeding devices are incidental to the installation of water main.

Abandoned Facilities

Abandoned facilities exist within the project limits and utility companies will be abandoning some additional facilities in place after relocating facilities to avoid conflicts with the proposed work. Removal by the contractor of any abandoned facilities necessary to complete the proposed work, including plugging the remaining ends of the facility, is considered incidental to the contract. Contact each utility company individually to verify if any can be expected and to possibly obtain facility maps for approximate locations.

The costs to remove all abandoned utility pipes within the new water main trench or related excavation will be included in the unit price bid for the respective bid item. The cost includes installing a concrete plug in the portion of the abandoned pipe that remains in place after completion of the trench or excavation.

Location of Existing Water Service Laterals

The horizontal location and size of all water laterals indicated on the plans is taken from surveys, approximate measurements and available City's records. These records are not guaranteed to be accurate in all cases, and do not indicate at what depths these laterals are located. As such, determine the location and size of the existing laterals before making a tap into the new water main. Follow the plans to determine which services are to be abandoned, reconnected, extended, or replaced to the property line.

Location of Existing Water Facilities

The horizontal and vertical location and size of all existing water mains indicated on the plans is taken partially from surveys, approximate measurements, and available City's records. These records are not guaranteed to be accurate in all cases. Due to the unverified depth and location of existing pipelines, alteration of the lines and grades shown on the plans for new pipelines where connections are to be made to existing pipelines may be necessary. Notify the engineer of locations where alterations of the lines and grades shown are necessary so that an acceptable solution can be determined.

26. General Provisions for City Conduit Installation.

Supplement standard spec 652 as follows:

Use Schedule 80 conduit under all traffic areas.

Install all conduit at a minimum depth of 30 inches, unless otherwise approved by the engineer. Solvent weld all joints. Mark the location of each conduit, where conduit crosses traffic areas, by a permanent chiseled arrow or other appropriate permanent stamp in top of the curb head.

Install and connect all conduit to the concrete bases, manholes, handholes (pull boxes), existing conduit, or conduit elbows so as to provide a continuous network, unless otherwise indicated on the plan. All connections shall be watertight. Do not install drainage holes in conduit. Uncover the ends or mid-sections of all existing conduit that is being extended by or incorporated into this project work.

When connections are to be made to an existing conduit, first verify that the existing conduit is fully clear and useable for its entire cross-section and length. When the existing conduit is found to be defective, notify the engineer and do not proceed until the engineer so directs. If the contractor connects to an existing defective conduit without the express direction from the engineer, make any and all necessary repairs and replacements to all conduits, including conduit that was “existing” prior to the contractor starting work and to the satisfaction of the engineer. All costs of this work shall be at the expense of the contractor.

Turn up conduits terminating in a non-paved location and not in a structure, and end at terrace finish grade with a PVC cap securely attached, per duct termination detail. Where conduit runs parallel to curb and gutter, place the conduit within 12 inches of the back of the curb, except as directed by the engineer. The engineer will determine termination points not within pull boxes or concrete bases.

Unless the contract provides for installation of cable, cap the ends of each run of conduit with standard conduit caps or otherwise appropriately plug the ends to preclude infiltration of water and soil. Install a pull wire in each conduit, except those with only streetlight wire. A pull wire shall be approximately 4 feet longer than the conduit run, and shall be doubled back for at least 2 feet at each terminal. The pull wire shall be #10 AWG copper, stranded, with THHN insulation and green color coding. Install the pull wire within seven days of completing a conduit installation from structure-to-structure.

Use a 6-inch minimum sand padding below the conduit and a 6-inch minimum sand lift above the conduit. Do not backfill trench with any rocks larger than 4 inches in diameter or any foreign debris.

27. General Provisions for City Traffic Signals.

Perform all work on the lighting and conduit/pull box system in accordance to the Wisconsin Electrical Code, the applicable provisions of the standard specifications, and these special provisions and plans.

The City of Madison will remove and reinstall existing radar and video detection at traffic signals. Contact Michael Benzschawel at the City of Madison Traffic Engineering Shop, (608) 235-3649, to coordinate removal and reinstallation of detection.

Contractor shall be responsible for removing existing traffic signal and streetlight infrastructure identified for removal.

Each pedestrian push button installation shall include “Push Button for Walk Signal” signs. Single direction arrow signing shall also be used with all buttons except two direction arrow signing is needed for single buttons on median poles.

If existing conduits, handholes and bases designated as “save” cannot be saved, contact Jerry Schippa, (608) 267-1969, for further direction.

All new electric services shall be metered power, 100 amperes, 120 volt, CG-3 rate.

A minimum of 6 feet separation shall be maintained between any adjacent loop detectors.

28. General Provisions for City Electrical Systems.

A General Requirements

Perform this work in accordance to the Wisconsin Electrical Code, National Electrical Contractor's Association (NECA) electrical construction practices, OSHA and the standard specifications.

Perform all work on the lighting and conduit/pull box system in accordance to the Wisconsin Electrical Code, and applicable provisions of standard spec 659, and these special provisions and plans.

Carefully remove and salvage the steel frames and covers from all pull boxes and manholes to be removed or abandoned, and all street light poles, arms, transformer bases, fixtures, concrete handholes, and associated equipment. Material designated by the City to be saved shall be stored onsite and kept clean from debris and protected from damage until items can be returned to City Traffic Engineering, 1120 Sayle St., Madison. Contact Michael Benzschawel at the City of Madison Traffic Engineering Shop, (608) 235-3649, to coordinate removal of existing signals and installation of new signals.

Complete electrical work by a journey-worker electrician or be completed by an electrical apprentice under the supervision of a journey-worker electrician. Legal status or standing as a journey-worker and apprentice electricians shall be certified or otherwise documented to the engineer before beginning any electrical work. Electrical work is hereby defined as electrical and related construction required to be performed under the contract by the contractor, in accordance to the standard specifications, contract provisions, standard detail drawings and plan details applicable to electrical construction. At the pre-construction conference, supply the engineer with a list of names and qualifications of journey-workers and/or electrical apprentices who will or may be working on this contract.

Proof of qualification to do electrical journey-worker level work shall be the “Completion of Apprenticeship” certification card issued by an approved state agency, or a resume showing sufficient electrical education and a minimum of 14,000 hours of varied electrical work experience. All apprentices shall be indentured by an approved state agency.

The contractor is hereby advised that electrical apprentices must work under the terms of their indentures, which require an apprentice be under the direct supervision of a journey-worker with the exception of an apprentice in the final year as an apprentice. Any violation, or suspected violation, of these terms will be reported to the Bureau of Apprenticeship Standards.

On completion of the work, test the installation and ensure that it is entirely free of grounds and short circuits. This contract contemplates and intends a complete and operating installation of electrical work. Everything in the form of labor or material necessary for this result is in the intent of the contract.

It must be understood that electrical drawings and details are diagrammatic; they are not intended to be shop drawings. It is expected it may be necessary to move conduit, and/or equipment in some cases, to get a coordinated installation. Such changes are considered part of the contract obligation, without cost to the owner. Do not locate any equipment where its usefulness and/or operation may be affected by the work of other trades, door swing, counter, equipment, etc.

The contractor acknowledges his acquaintance with the plans and specifications and their respective requirements, and shall guarantee the electrical system has been installed strictly in accordance to the electrical plans and specifications, using only the best of materials available and installed in a substantial manner by experienced labor. The contractor agrees to replace and/or repair items failing from causes of faulty workmanship, material or design, without extra cost, at any time within one year from the date of final acceptance.

Furnish the City of Madison with service manuals for all items furnished under this contract. Service manuals shall be complete with drawings, diagrams, operation and installation instructions, and parts lists.

New streetlight wire in conduits shall consist of 3#4 and 1#8 green wire. The color coding for the #4 wire shall be one black, one red, and one white.

Ground wires shall have green insulation or be marked with green tape at all junction or pull boxes and at all terminations. Equipment and enclosures shall be grounded, ground connection surfaces shall be cleaned, and connections shall be made so it is impossible to move them.

All maintenance of existing street light facilities within the project limits shall be the contractor’s responsibility. Maintain the new street lights until project work is accepted. This work shall be considered incidental to installation of street light units, temporary lighting, structures and ducts, and no separate compensation will be paid.

Extend existing lighting circuits to feed the new and relocated lights as part of this project. Verify the existing loads of each lighting circuit before adding additional load to a lighting circuit. Loading on any circuit shall not exceed NEC requirements.

Submit one copy of as-built plans, including cable and conduit routing diagrams, wiring of fixtures and other pertinent details, to the engineer and the City of Madison.

Furnish equipment and appliances necessary to test the complete installation of electrical conductors. Test and demonstrate to the satisfaction of the engineer that the circuits are properly connected, continuous and free from short circuits and unspecified grounds, that the circuits are connected in accordance to the manufacturer's wiring layout, and that each circuit is operational. The lighting system shall not be deemed complete until the electrical work has been completed and the electrical systems are found to be in proper working order, including operation for ten consecutive nights without failure.

B Materials

All materials furnished by the contractor for lighting installation under this contract are subject to approval by the engineer.

Manufacturers shall be responsible for providing materials listed by UL or other approved agencies and all governing codes and ordinances. Materials must bear a UL and/or other approved labels, where possible. Items specified by catalog number of brand name and shop drawing approval will not relieve the manufacturer of this responsibility. All electrical material for which a standard has been established by the Underwriters Laboratories, Inc. shall be furnished and installed under this contract. Material shall have the UL label firmly attached and be listed by UL Listing signifies that the material has passed the established standard testing. All electrical materials shall conform to the latest requirements of the Wisconsin Electrical Code.

All materials, not specified herein, used in the work shall conform to the requirements specified on the plan or the contract special provisions.

Furnish and install incidental items, such as wire nuts, grommets, tape, connectors, and electrical varnish that are obviously necessary to make the proposed system complete from the source of supply to the most remote unit.

Touch up mars and scratches on painted equipment with two coats of synthetic resin enamel or as directed by the engineer.

Furnish a complete list and cut sheets/shop drawings of materials to be furnished and used for lighting. Include the names and addresses of manufacturers, together with catalog numbers, certificates of compliance, specifications, and other product information requested by the engineer. Submit the list and cut sheets/shop drawings within 20 calendar days of the award of the contract. Do not incorporate any materials into the lighting system prior to obtaining the written approval of the engineer. Approval does not change the intent of the specifications. Do not substitute any materials. The contractor is allowed up to two submittals of material for approval. If more than two submittals are required, the contractor will be charged on a time-and-material basis for additional review time with payment made before submittals will be reviewed.

C Splices

Splices shall comply with standard spec 659.3.2. All splices within a junction box, handhole, etc. shall be of the same type. No splices are allowed in underground pull boxes, except for grounding conductors.

D Circuit Identification

Accomplish color coding by using cable jackets of the proper color. Code all tails of all splices. Color-code secondary distribution circuits as shown on the plans; the ground conductor shall be green. Each accessible location of underground cable in junction boxes, pull boxes and pole bases shall have a permanent white nylon tag with black lettering, attached in a "flag" manner using a nylon tie, identifying the cabinet and conductor circuit number.

E Branch Circuit Tagouts

The contractor may at his option work on live circuits or he may disconnect and tag out circuits. Any branch circuit not disconnected and tagged out shall be considered live; restrict work force to those qualified to work on live circuits. Disconnection may be made by disconnecting branches at the overcurrent device. Make tagouts with contractor furnished manufactured electrical warning tags and endorse with the name of the contractor, the date, and the project. Clear all tagouts by the end of the workday.

F Threaded Fasteners

Liberally coat all threaded fasteners, i.e., screws, and bolts with an approved anti-seize compound. Excepting fasteners inside control cabinets, fasteners up to 1/2-inch in diameter shall be stainless steel.

Provide rust, corrosion and anti-seize protection at threaded assemblies by coating the mating surfaces with Markal (Hightemp E-Z Break), Never-Seez (marine grade), LPS 100, Lubriplate or approved equal.

G Bonding Wire

Install bonding wire in conduits for equipment grounding. Ground all equipment as required.

H Initial Failures

The contractor and the engineer shall agree on a time for test burning of completed installations, which is generally toward the end of the contract period. Replace failed lamps, along with any other non-functioning component, for no additional compensation. Only one test burn for the purpose of identifying initial failures will be required. Coordinate supply of replacement lamps with the city.

I Project Construction Staging

The construction of the new lighting system shall maintain the integrity of the existing lighting systems within and beyond the project limits at all times. Exceptions to this shall only be granted for just cause by the inspector.

J Items of the Same Classification

All items of the same classification shall be of the same manufacturer and series.

K Underground Installation

Ensure that the engineer has inspected all underground conduit and concrete base forms before backfilling any trench or pouring concrete. Any work completed without such inspection is subject to rejection as unacceptable work and shall be immediately removed and acceptably replaced or otherwise satisfactorily corrected by and at the expense of the contractor. It is the contractor's responsibility to arrange for inspections. There will not be any additional compensation to the contractor for delays and inconvenience associated with arranging and waiting for inspections.

29. Temporary Traffic Signal Timing Parameters – University Ave & Shorewood Blvd, University Ave & Marshall Ct, University Ave & University Bay Dr.

Make the following change: *Replace the entire article with the following:*

Temporary traffic signals at three (3) intersections as shown on the plans shall be fully operational, as shown in the "Sequence of Operations" diagrams. The temporary traffic signals shall be operated in accordance with traffic signal timing parameters provided by KL Engineering prior to construction. The permanent traffic signals shall be operated in accordance with traffic signal timing parameters provided by the City of Madison prior to construction.

All work required to install signal timing, perform test operations and make updates shall be considered incidental to the respective bid item "Temporary Traffic Signal (Location)" for the traffic signals listed. The number of deployments listed below should be considered approximate and may vary depending upon traffic conditions and construction staging. This work shall include performing signal timing updates as directed by the City of Madison throughout the duration of the project, and will be considered incidental to the "Temporary Signal" bid item regardless of the total number of signal timing deployments.

The following list includes anticipated traffic signal timing implementations throughout the project:

<u>University Ave & Shorewood Blvd – Temporary Signals (6 timing deployments)</u>

- Stage 1
- Stage 2
- Stage 3
- Stage 3A
- Stage 4
- Stage 5

University Ave & Marshall Ct – Temporary Signals (6 timing deployments)

- Stage 1
- Stage 2
- Stage 3
- Stage 3A
- Stage 4
- Stage 5

University Ave & University Bay Dr – Temporary Signals (6 timing deployments)

- Stage 1
- Stage 2
- Stage 3
- Stage 3A
- Stage 4
- Stage 5

30. Trenchless Installation of 96-Inch Storm Sewer Pipe

A General

Installation shall be completed with a methodology that maintains a stable or pressurized excavation face and minimizes soil loss. The pipe installation, when completed, shall provide a water tight pipe of the specified alignment, slope, and depth shown in the plan set.

The contractor shall be responsible for all aspects of the tunneling operations, including selection of appropriate tunneling equipment, proper construction of launching and receiving pits, ground stabilization, and pipe installation.

B Contractor and Personnel Experience

The contractor and all sub-contractors shall be prequalified per City of Madison procedures prior to letting. To become prequalified to perform tunneling operations the contractor and their staff shall document, to City Engineering, the qualifications defined in the following paragraphs:

B1 Project Superintendent

The Project Superintendent shall have completed a minimum of five tunnel installations, each with a minimum drive length of 700 linear feet of installed pipe between 60 inches and 96 inches diameter. One documented drive shall be equal to or greater than the longest drive length proposed for this project. The Project Superintendent shall be able to document experience with tunneling equipment similar to that proposed for this project. All documented experience shall have occurred within the past 8 years. At least one of the referenced projects shall include installation and use of an Intermediate Jacking Station, if an Intermediate Jacking Station is proposed for this project.

The Project Superintendent shall also have a minimum of five years experience installing pit shoring systems of similar type and equal complexity to the system proposed for this project. The Superintendent shall have completed a minimum of five successful installations of pit shoring systems that are of a similar type and equal complexity to the system proposed for this project.

B2 Tunnel Boring Machine (TBM) Operator

The TBM Operator shall have successfully completed a minimum of seven installation projects, each with a minimum drive of 700 linear feet of installed pipe between 60 inches and 96 inches diameter. The TBM Operator shall be able to document experience with tunneling equipment similar to that proposed for this project. All documented experience shall have occurred within the past 10 years. Additionally, the TBM Operator shall have experience installing the same pipe material and size as proposed for this project, and shall have successfully completed one drive length equal to or greater than the longest drive length proposed for this project. The TBM Operator shall have successfully completed a project in similar

subsurface ground conditions. If an Intermediary Jacking Station is proposed, the TBM Operator shall document applicable experience.

B3 Professional Engineer

The contractor or tunneling sub-contractor shall employ a professional engineer licensed by the State of Wisconsin, with a documented experience record demonstrating qualifications for the designs and calculations to be performed. The PE responsible for tunneling design shall submit an experience record that includes the five most recent tunneling projects, including the name of project, contracting agency for the project, name of general contractor, and project specifics.

The PE responsible for the design of the pit shoring system shall submit an experience record that documents a minimum of five years experience in the design of the proposed pit shoring system to be used on this project. The PE shall have designed a minimum of five successful pit shoring systems for projects of equal type, size, and complexity as the proposed project.

B4 Registered Land Surveyor

The contractor or tunneling sub-contractor shall employ a registered land surveyor licensed by the State of Wisconsin with a documented experience record demonstrating underground surveying experience, including the transfer of points and line from surface to below surface. The submitted experience record shall include the five most recent tunneling projects, including the name of project, design tolerance, results of record survey, contracting agency for the project, and name of general contractor.

B5 TBM Rebuilder

If the contractor proposes using rebuilt tunneling equipment, the contractor shall supply a written letter from the original machine manufacturer certifying the Machine Rebuilder is authorized to refurbish and recondition the TBM.

B6 Pit Shoring System Installer

The contractor shall employ or contract personnel with not less than three years experience in the installation of similar systems of equal complexity as the proposed system. The shoring system installer shall have documented experience with a minimum of three successful installations of shoring systems of similar type and equal complexity to the proposed system.

C Submittals

With the exception of the prequalification submittals (which shall be approved prior to bid opening), or unless otherwise specified, the contractor shall produce all submittals a minimum of 15 working days prior to the start of construction. The City Engineer will review the submittals and provide a written approval or request for clarification within five working days of receipt.

C1 Methodology and Procedures

General

The contractor shall submit a detailed plan describing the construction methodology and sequence of operations, including proposed tunneling equipment, proposed pit shoring systems, set-up within pits, general work site plan, method of muck removal and disposal, disposal locations, methods of protection and maintenance of the project site, and surface water and groundwater control methods. The contractor shall also submit a detailed site safety plan.

Launching and Receiving Pits

The contractor shall submit a plan showing the overall layout of launching and receiving pits, including general site layout at each pit location, locations of control cabin, back up plant, material storage areas, stockpile areas, muck containment area, and location of all ancillary equipment. Within each pit, the contractor shall show locations of the laser guidance equipment, jacking equipment, tunneling equipment, pumps, pipes, cables, and entrance/egress locations.

The contractor shall submit a detailed plan of the pit shoring system that is stamped and signed by a Professional Engineer who meets the requirements defined in section 520 of the standard specifications. The pit shoring system plan shall define the proposed system, including, location, layout, depth, extent of different types of support relative to existing features or proposed structures, and methods and sequence of installation. List all equipment anticipated for pit and pit shoring system installation. The contractor shall state the minimum safe lateral distance from the shoring system for vehicles, equipment, and stockpiles.

If the contractor proposes the use of a tieback system, the plan shall include tieback installation procedures and criteria for acceptance of tiebacks based on performance and proof tests.

The contractor shall submit a detailed plan for groundwater control and storm water management at each pit location.

The contractor shall include a detailed plan showing thrust block design, including calculations. If soil augmentation or keying the thrust block is necessary, these details shall be included in the plan. The contractor shall be fully responsible for ensuring thrust block design produces uniform deflection, will not impart excessive force on the shaft, and will not damage the jacking frame.

Plan review by the City will be for informative purposes only. The contractor retains full responsibility for the design and installation of the pit shoring system, thrust block, and pit dewatering.

The contractor shall submit a monitoring plan and schedule that will monitor both ground vibration and ground deformation adjacent to the excavations. The monitoring plan shall include procedures and locations for vibration monitoring equipment, deformation monitoring points and inclinometers, and observation wells/piezometers if necessary.

Pipe Installation

The contractor shall submit an extensive and detailed plan of tunneling operations. Plan review by the City will be for informative purposes only. The contractor shall retain full responsibility for adequate design and successful installation of the 96-inch storm pipe. The plan shall explain the following items:

1. Launch Procedure, including modifications to the shoring through the first pipe in ground, any soil augmentation required, and a detailed plan of the entrance seal

2. Ventilation System Details, proving it is adequate and that air exchange within the tunnel is capable of controlling air quality, temperature, and maintaining proper function between the laser and target

3. Electrical System Details, including lighting details and power generation or supply details

4. Grade and Alignment Control System Details, including mounting details, monitoring plan, and the method of grade and alignment adjustments.

5. Jacking System Details, including estimated jacking force, intermediate jacking stations and their proposed spacing if applicable, method of operation, thrust capacity, and sleeve details. The contractor shall also submit a plan detailing the method of control to prevent exceeding the maximum allowable jacking force.

6. Lubrication and Contact Grout Procedure, including the mix and equipment to be used for lubricating the pipe during jacking operations, and grouting the pipe post installation. This submittal shall also include:

- All Material Safety Data Sheets (MSDS)
- Volume estimation that considers annular space and anticipated soils
- Grout and lubricant port locations
- Estimated pressures
- Details demonstrating that the lubrication system shall have sufficient pressure and volume for lubrication to perform as intended
- Proposed methodology for preventing inadvertent returns as well as damage to pipe
- Sample lubrication and grout log sheet including time, date, sampler, pit location, pipe number, slurry additives type, quantity added, soil type, viscosity, specific gravity, water added, and system operating pressures and volumes.

7. Groundwater Management Plan, including a detailed plan describing groundwater control provisions for the tunneling equipment.

8. Retrieval Procedure, detailing the process required for readying the pit and tunneling equipment when the TBM is within 10 feet of the receiving pit or earlier. The plan shall include descriptions of any required shoring modifications necessary for receiving the TBM and when these modifications are to be in place. The plan shall detail the exit seal and the methods for guiding TBM into the seal.

C2 Equipment

It is anticipated that an Earth Pressure Balance Tunnel Boring Machine is the most suitable equipment for this operation. However, the contractor may propose alternative tunneling technologies, provided that the excavation face can be maintained at all times based on the anticipated soil conditions.

Tunnel Boring Machine

The contractor shall submit documentation stating the type and size of the proposed TBM, including documentation from the TBM manufacturer proving that the selected machine is capable of performing adequately within the anticipated soil conditions as described in the contract documents. For used equipment, the contractor shall provide certification in writing from the machine rebuilder proving the equipment has been refurbished or reconditioned to meet the requirements for project conditions, including live traffic loads. The contractor shall submit descriptions of four similar projects on which a similar system by the same manufacturer has been used. Documentation proving adequacy shall include, but not be limited to, motors, jacks, hydraulics, mechanical components, bearings, seals, and electrical equipment. Include qualifications of machine rebuilder, if applicable.

Jacking System

The contractor shall submit documentation on the proposed jacking equipment, including manufacturer's literature and proof that the proposed system is capable of generating the necessary forces, and applying them uniformly to the pipe.

Spoils Handling

The contractor shall submit information detailing the spoils handling equipment that will be used on site. This shall include details and manufacturer's literature on conveyance systems and slurry separation systems (if necessary).

Survey and Guidance System

The contractor shall submit information detailing the proposed survey and guidance systems.

C3 Materials

The contractor shall provide detailed information for all materials brought to the site. The documentation shall include, where applicable, MSDSs, manufacturer's literature, testing documentation, and information detailing proper storage and handling. The contractor shall provide to the Construction Engineer adequate documentation showing that materials meet the standards defined in section 608 of the standard specifications.

C4 Construction

The contractor shall submit a daily log of the jacking operations at intervals of not more than one pipe length. The log shall contain the following information:

- Position of tunneling machine in relation to the design line and grade
- Jacking forces exerted on pipe at each jacking station
- Date, starting time, and finish time of the jacking operation
- Inclination
- Cutter head torque
- Slurry flow rates in both the supply (charge) and return (discharge) lines (if applicable)
- Slurry chamber pressure (if applicable)
- Spoils generated vs. anticipated spoils
- Position of steering jacks
- Amount of lubricant used (in gallons), its viscosity and pumping pressure
- Volume of spoil removed from the site
- Number of pipes installed or distance tunneled
- Important observations, e.g. settlement

The contractor shall also submit a log of ground vibration and deformation monitoring data, including horizontal and vertical movements of geotechnical instruments and ground water readings.

C5 Contingency Plan

The contractor shall submit a contingency plan that provides detailed plans should the following occur:

- Damage to pipe structural integrity and repair
- Obstructions
- Steering corrections
- Loss of ground
- Inflows at the shafts
- Slurry migration to the ground surface
- Excessive thrust wall deflection
- Excessive settlement or heave

D Materials

The contractor shall be responsible for transporting and storing all project materials in accordance with manufacturer's or supplier's recommendations. All materials shall be stored within the project limits as defined on the plan set.

Any materials found to be defective shall be immediately marked, "DEFECTIVE – NOT FOR USE". The markings shall be clear from any point of view and shall be permanent. The contractor shall transport defective material off-site for disposal.

D1 Steel

All steel used in the construction of proposed storm sewer structures shall be in accordance with Section 301.3 of the City of Madison Standard Specifications for Public Works Construction.

Steel used in the pit shoring system shall meet the following standards:

- Structural steel used in soldier piles, wales, rakers, struts, wedges, plates, waterstop, and other accessory steel shapes shall meet ASTM A36.
- Steel sheet piling shall comply with ASTM A572 for continuous interlocking piling.
- Tieback tendons, if used, shall be high strength steel wire strand cables that meet ASTM A416, or bars that meet or exceed ASTM A722. Splicing of ties shall not be permitted.
- Raker Ties shall meet or exceed ASTM A615 Grade 60.

D2 Pipe

The contractor may select either Centrifugally Cast Fiberglass Reinforced Polymer Mortar Pipe or Reinforced Concrete Pipe.

Centrifugally Cast Reinforced Polymer Mortar Pipe for jacking shall be supplied by Hobas Pipe USA Inc, and shall meet ASTM D3262. The pipe shall be manufactured with flush bell-spigot joints that conform to ASTM D4161 with elastomeric gaskets that meet ASTM F477. Pipe ends shall be square to the pipe axis with a maximum tolerance of 1/16".

Centrifugally Cast Reinforced Polymer Mortar Pipe shall be designed to withstand jacking loads as determined by the contractor and based on the means and methods of construction. The pipe shall be designed with a minimum factor of safety of 2.5 against jacking loads based on a straight alignment. The pipe shall have a minimum class of SN 72 psi with 0 psi internal pressure to withstand earth dead loads. The minimum pipe stiffness, when tested in accordance with ASTM D2412 shall normally be 140 psi.

Reinforced Concrete Pipe shall be constructed by County Materials Corporation and in accordance with ASTM C76. The pipe shall be a minimum Class III, shall be designed to withstand the jacking loads as determined by the contractor based on the means and methods of construction, and shall be manufactured with 6000 psi concrete. The pipe shall be designed with a minimum factor of safety of 2.3. Pipe shall be manufactured with a tongue and groove joint, which shall be fitted with an O-ring gasket meeting ASTM C361.

D3 Lubricant

The contractor shall be responsible for selecting a lubricant appropriate for the tunneling operations and soil conditions.

D4 Grout

The contractor shall be responsible for selecting a grout appropriate for the tunneling operations and soil conditions.

D5 Concrete

With the exception of reinforced concrete jacking pipe, all concrete used on in the storm installation shall have a minimum compressive strength at 28 days of 4000 psi. All other concrete parameters and installation methodology shall comply with Part III of the City of Madison Standard Specifications for Public Works Construction, or as shown on the plan set.

D6 Backfill

Backfill placed in the launching and receiving pits shall conform to Article 202 of the Standard Specifications. Backfill material shall be free of boulders, masonry, organic matter, or other unsuitable fill material. Backfill shall be compacted in accordance with Article 202.3(c) Special Compaction to 90 percent of maximum density.

If the contractor chooses, or if compacting equipment cannot access all surfaces, slurry backfill shall be used. Type B Slurry, as defined in Article 301.9 of the Standard Specifications shall be used.

In areas where pipe is exposed, the contractor shall bed and backfill the pipe with Select Fill as defined in Article 202.2(b) of the Standard Specifications. Select Backfill shall be placed in accordance with Article 502 of the Standard Specifications and Standard Design Drawings 5.2.1 and 5.2.2.

E Equipment

E1 Tunneling Equipment

The contractor shall select tunneling technology that is appropriate for the soil conditions and installation. The tunneling equipment shall be specifically designed for excavating, transporting, and separating materials encountered along the sewer alignment as described in the soil data attached to these Special Provisions. Proposed tunneling equipment shall be designed to operate in conjunction with a pipe jacking system. All pipe shall be installed by tunneling equipment.

It is assumed that an Earth Pressure Balance Tunnel Boring Machine is the most appropriate tunneling system for this project. However, the contractor may propose alternative tunneling technology, provided it can be shown that the alternative technology is equal or superior for project conditions.

The proposed tunneling equipment shall meet the following requirements:

- Tunneling equipment shall be capable of maintaining tunnel face under wet, dry, and adverse soil conditions. Tunneling equipment shall provide satisfactory support of excavated face at all times, including temporary shutdowns during operations. Tunneling equipment shall be operated in closed mode, unless the contractor can prove that their proposed system provides equal face support.
- Tunneling equipment shall be capable of advancement through heterogeneous soil conditions, including large cobbles and boulders.
- Tunneling equipment shall have articulated steering capabilities, or be capable of steering in both the vertical and horizontal directions in order to maintain alignment within materials at tunnel level as described in the attached Soils Data.
- An appropriate seal shall be used between the lead jacking pipe and the TBM.
- The tunneling system shall be capable of synchronizing excavated material volume with the advancement rate of the TBM, to prevent excess ground loss and/or heave during operation.
- The tunneling system shall be equipped to efficiently move spoils or slurry from the excavation face to the launching pit.
- The tunneling system shall be capable of injecting lubricant around the exterior of the pipe being jacked.

- The tunneling system shall be capable of controlling heave and settlement by proper operation to acceptable tolerances as indicated.

The parameters listed above shall be logged in real time either manually or by a computer system. Data shall be provided to the Construction Engineer after each drive has been completed.

The contractor shall be responsible for selecting the appropriate cutter head that is most suitable for ground conditions, as defined in the Soils Data.

The contractor shall design the boring size such that steering capabilities are maintained throughout the pipe installation. Additionally, the overcut size shall prevent or minimize subsidence, water movement, jacking loads outside of the design range, and pipe failure. Overcut shall be no less than 0.25 inches and no more than 1.6 inches.

E2 Pipe Jacking Equipment

The contractor shall provide a pipe jacking system with the following features:

- The main hydraulic cylinders shall be mounted in a jacking frame, located in the launching pit.
- The jacking system shall have sufficient jacking capacity to push the TBM and pipe segments between the pit locations, as shown on the plan set.
- The hydraulic cylinder extension rates shall be capable of being synchronized with the excavation rate of the tunneling equipment.
- The jacking system shall be configured such that jacking forces are uniformly distributed on pipe ends by the use of a thrust ring and packers.
- Hydraulic pressure and cylinder extension shall be capable of being monitored.

E3 Control System

The contractor shall provide a control system that allows the operator to monitor, in real-time, the position of the cutterhead or shield in relation to a design reference together with other information such as pitch, roll, yaw, complete guidance details, valve positions, thrust force, cutterhead torque, cutterhead RPM, rate of advance, and installed length. The control system shall also be able to provide real-time data on any deviation from the design line and grade by reference to the laser guidance system.

If a slurry system is used, the control system shall be able to provide real-time information on the volume of slurry flow in both the supply and return sides of the slurry loop, the slurry bypass valve position, and the pressure in the slurry chamber.

The control system shall be capable of integrating and monitoring excavation and spoil removal with simultaneous pipe installation. As each pipe segment is jacked forward, the control system shall synchronize all operational functions of the system.

If a microtunneling system is to be used, the control system shall be fully remote and shall be capable of providing all information detailed above without the need for personnel to enter the tunnel.

E4 Active Directional Control

The contractor shall provide an active direction control system to be used during the tunneling process that has the following features:

- The tunnel line and grade shall be controlled by a guidance system.
- The guidance system shall be equipped with a high-intensity laser (maximum legal limit). The laser shall be securely mounted and protected from disturbance by personnel working within the launching pit.
- The guidance system shall be capable of maintaining the line and grade to the tolerances specified.
- The guidance system shall provide active steering information that is monitored and transmitted to the tunneling operator. At a minimum, this information shall include location of the laser beam on the target and the location of the cutterhead.
- The guidance system shall provide real-time positioning and operation information to the operator.

- The guidance system shall have a reference laser, or other submitted device, that indicates visually in the launching pit that the directional control laser has not been moved.
- The contractor shall provide adequate ventilation in order to maintain temperature control within the tunnel to minimize laser projection disturbance onto target.

E5 Lubrication System

The lubrication system shall be equipped with a pressure gauge, volumetric gauge, and a shut-off valve on the pump or at the point of injection. The lubrication system shall be capable of preventing over pressurization, which may cause damage to the pipe, heave, or inadvertent returns.

E6 Grout System

The contractor shall provide and operate an annular space grout system suitable for any required grouting operations. Grouting operations shall not damage adjacent utilities or other properties. Grout shall not be injected at a pressure that will result in damage to the jacking pipe, pit shoring, and any existing structure or utilities. The contractor shall take necessary precautions to prevent inadvertent returns.

The grout system shall be equipped with a pressure gauge, volumetric gauge, and shut-off valve at the point of injection. The grout system shall be capable of preventing over pressurization, which may cause damage to the pipe, heave, or inadvertent returns.

Should the Engineer determine that additional grouting locations are required, the contractor shall provide equipment and materials to perform this work.

E7 Power Generation

The contractor shall be responsible for providing adequate power generation equipment or arranging a power supply to the site. If the contractor proposes tunneling operations beyond the standard work hours of 7:00 am to 7:00 pm, the contractor shall have electricity supplied to the site and shall not use generators.

The contractor may contact Mark Bohm of Madison Gas and Electric (MG&E) at (608) 252-4730 to discuss available electrical facilities. Payment for arranging power supply to the site shall be included with Bid Item SPV.0090.12.

F Installation

The contractor shall install 96-inch diameter storm sewer pipe in the configuration shown on the plan set, via trenchless methods.

F1 Work Area

The contractor shall be responsible for maintaining a safe and orderly work site for the duration of the project. The City Engineer and their representatives shall have access to the site, equipment, materials, and construction data at all times. The City Engineer and their representatives shall not be prohibited from recording any information at the site, including real-time tunneling data.

The contractor shall maintain clean working conditions by removing muck, debris, equipment, and other materials that are not required for operations. Pipe and other materials shall be stored within the construction limits indicated on the plan set. Streets shall be kept clean at all times.

The contractor shall provide suitable oil and gas containment basins to ensure no release of oil to the environment. All equipment shall be maintained and kept in proper repair. All oil, hydraulic fluid, or fuel leaks shall be repaired immediately. Any spill shall be cleaned up immediately and disposed of properly. If necessary, the contractor shall be responsible for filing a Spills Report with the Wisconsin Department of Natural Resources. Lost time due to the cleanup of fuel, oil, or hydraulic fluid releases shall not be compensated by the City.

If damage to road surfaces, sidewalks, curb and gutter, private property, or other features occurs within the lay-down area or along the haul routes used in the project, the contractor shall repair this damage at no additional cost to the City.

F2 Site Safety

All work shall be performed in accordance with state and federal safety regulations. The contractor shall have a safety representative on site at all times.

At all times, the site shall be adequately secured to prevent vandalism or potential injury to passersby. The construction site shall be clearly marked as hazardous and closed to the public. All pits shall be fenced, barricaded, and clearly marked as dangerous and a fall hazard.

When working in contaminated soil and in pits where contamination is present, the contractor shall provide vapor testing equipment, and if necessary, ventilation equipment to assure a safe working environment.

If non-intrinsically safe equipment or pumps are required to run at locations where flammable vapors or materials are present, the contractor shall provide a fire watch during non-working hours.

F3 Noise Abatement

Work associated with this contract will be occurring in a residential area; some work will occur immediately adjacent to apartment buildings. Therefore, the contractor shall implement measures necessary to mitigate noise impacts caused by construction equipment and activities. The contractor shall provide equipment with enclosures, or construct portable sound barriers to minimize sound impact. If the contractor is using generators, they shall be equipped with a “residential” silencer and acoustic enclosure. All equipment shall have mufflers, and the contractor shall arrange equipment in a manner that minimizes noise impact.

F4 Ground Water and Surface Water Control

The contractor shall be responsible for managing both groundwater and surface water throughout the construction site. This shall include management of disrupted storm water conveyance systems. The existing 96-inch storm sewer, upstream of the proposed installation, is not currently on-line, and therefore is not receiving water.

The contractor shall manage storm water and groundwater in accordance with WDNR permits and regulations. If high-capacity dewatering, or Type II Dewatering, is deemed necessary, the contractor shall be responsible for obtaining the necessary DNR permits. Payment for work, equipment, materials, and incidentals necessary to manage groundwater and surface water at each pit location shall be included in the individual pit bid items.

The contractor shall expect to encounter contaminated groundwater near the Shorewood Blvd. receiving pit. Documentation of the contamination is included in these Special Provisions.

Non-contaminated groundwater and storm water may be discharged to the storm sewer system, provided appropriate sediment removal has taken place.

Groundwater from the Shorewood Blvd. pit shall be discharged to the sanitary sewer system after appropriate sediment removal has taken place. If storm water from the Shorewood Blvd. pit exhibits a sheen or any other signs of contamination, it shall be discharged to the sanitary sewer system. If storm water from this location does not exhibit signs of contamination, it may be discharged in a manner similar to other storm water throughout the project.

Prior to the disposal of contaminated water in the sanitary sewer system, the contractor shall obtain the necessary City of Madison permits.

Work will be performed immediately adjacent to several utilities. Where marked on the plan set, the contractor will be responsible for the protection and/or relocation of these utilities.

The contractor shall perform Utility Line Openings as defined in the plan set. Utility Line Openings shall determine the horizontal and vertical extents of existing utilities. The contractor shall retain full responsibility for locating and protecting all utilities within the project area. The contractor may arrange and perform utility locations prior to May 9, 2022, provided any necessary street opening permits have been obtained, or the contractor has received permission from the Construction Engineer to do so.

F6 Alignment and Tolerances

Pit Installation

The allowable vertical and lateral movements shall not exceed one inch of movement at any location behind the pit shoring system.

Ground monitoring shall follow a procedure for reading and recording geotechnical instrumentation data that compares the current reading to the last reading collected to eliminate false readings.

The observed ground deformation shall be plotted over time. The plots shall be annotated with construction loading and excavation events that impact readings. The plots shall be evaluated by means of secondary rate-of-change plots to provide early warning of accelerating ground movements.

Tunneling

The contractor shall be responsible for monitoring and maintaining adherence to the designed pipe alignment. The contractor shall retain a licensed surveyor to check baseline and benchmarks prior to any tunneling work. The surveyor shall be responsible for reporting any errors or discrepancies to the Construction Engineer prior to construction.

The contractor shall use the alignment and benchmarks shown on the plan set to furnish and maintain reference and control lines and grades for sewer pipe construction.

The pipe installation shall not vary more than 2.0 feet horizontally, or 0.1 feet vertically from any point along the alignment. The installed pipe shall be free draining along the entire pipe length.

The contractor shall record the exact position of tunneling equipment at 10-foot intervals, or a minimum of three times per shift to ensure alignment is within specified tolerances. The contractor shall be prepared to immediately correct any misalignment before allowable tolerances are exceeded. The tunnel guidance system may be allowed to measure and record tunnel advancement; however, the contractor shall measure and record information after the air temperatures have stabilized throughout the entire length of the pipe to ensure accurate readings.

If the pipe installation is found to be off line or grade, the contractor shall immediately notify the Engineer and shall develop a plan to return the installation to the design location over the remaining portion of the drive at a rate of not more than 1 inch per 25 feet. If allowable tolerances are exceeded, the contractor shall pay all costs for correction, including redesign and reinstallation if necessary.

The contractor shall perform a verification survey with a total station of the installed pipe from the launching pit to the receiving pit. The contractor shall document measured conformance to the design line and grade of the installation and note locations of deviation, both direction and distance, of any non-conforming locations.

Ground deformation from tunneling activities shall not exceed 0.5 inches.

F7 Launching and Receiving Pits

The pits shall be designed and constructed in a manner, and to a size that is appropriate to each pit location. The pit design shall include groundwater and surface water control measures or procedures.

If pit installation results in ground vibration, the contractor shall monitor adjacent structures for excessive vibration with seismic monitoring equipment. The contractor shall perform a Crack and Damage Survey on adjacent structures prior to pit installation and again after the pit has been backfilled. The contractor shall be responsible for repairing any damage to adjacent structures that was caused by pit excavation, pipe installation, or pit backfilling.

The contractor shall not begin excavation on any pit until the related earth excavation and dewatering submittals have been approved by the engineer.

Pit Shoring Systems

The pit shoring system shall be installed in accordance with the approved plan.

The pit shoring system and installation procedures shall be designed by a Professional Engineer with a current registration in the State of Wisconsin. The shoring shall be designed and installed in a manner that maintains lateral support, prevents loss of ground, limits soil movements to acceptable limits, and protects adjacent utilities and structures from damage.

The contractor shall be fully responsible for pit design, installation, maintenance, and restoration. The contractor shall be responsible for correcting any failure, damages, subsidence, upheaval, or cave-ins as a result of improper installation, maintenance, or design of the excavation support system. Pay for all claims, costs, and damages that arise as a result of the work performed shall be responsibility of the contractor.

Securing Excavation

Pits shall be secured with fence and concrete barriers. The fence shall be 9-gauge, galvanized, welded, chain-link material and shall have no gaps greater than 3 inches. The fence shall be a minimum of 8 feet high. Appropriate warning signs shall be placed on the fence including No Trespassing and fall warnings. The pit shall be protected from traffic by temporary, concrete barriers. The barriers shall be designed, placed, and anchored in accordance with WDOT 2013 Standard Specifications Section 603, CMM 1-45, and FDM 11-50-35.

Support System Removal

The pit shoring system shall be removed in a manner that does not endanger constructed or adjacent structures, utilities, or property. All voids shall be immediately backfilled in accordance with section 520 of the standard specifications.

If tiebacks are used, the tieback tension shall be released as the excavation is backfilled. The contractor shall not leave tensioned tiebacks in place at completion of the work.

No portion of the shoring systems shall be left in place in Highland Avenue or Walnut Street. In these locations all portions of the shoring support systems shall be fully removed.

The contractor may request to leave portions of the shoring system in place on Campus Drive. If approve by the City, the contractor shall provide survey documentation of the horizontal and vertical extents of remaining items. The contractor shall provide the Construction Engineer with a written description of what components were left in place, including the material, gauge, size, etc. Any portion of the shoring system left in place shall be cut off a minimum of two feet below the bottom of the most proximal foundation, or a minimum of five feet below finished grade.

F8 Tunneling

The contractor shall be fully responsible for the complete installation of the 96-inch storm sewer pipe. The contractor shall make themselves aware of the existing soil conditions as described in the geotechnical reports that can be obtained by contacting Jim Wolfe at City of Madison Engineering (608) 206-4099 and understand that the existence of bed rock is expected. The contractor shall make the geotechnical reports available to the tunneling operator.

The contractor shall conduct microtunneling operations in accordance with all applicable safety rules and regulations and use methods that include due regard for safety of workers and the public, and protection for adjacent structures and utilities.

The contractor shall perform all launching and retrieval operations in accordance with submitted documents and work plans. The contractor shall notify the Engineer immediately upon implementation of any contingency plan.

No tunneling shall commence until the receiving pit is completed for retrieval of tunneling equipment.

The contractor shall maintain the tunnel excavation within the rights-of-way, easements, and construction limits as defined in the plan set. The contractor shall maintain alignment and grade within the specified tolerances.

The contractor shall operate the tunneling system in accordance with the manufacturer's operating parameters, parameters established in the specifications, and the parameters defined it the submittals. The rate of tunnel advancement shall be synchronized with the rate of muck removal to prevent excess ground loss or heave. Fluid jetting in advance of the pipe is prohibited.

The tunnel excavation shall be the minimum sufficient size to permit pipe installation via jacking, with allowance for injection of lubricant. The contractor shall maintain an envelope of lubricant around the exterior of the pipe during the entire jacking and excavation operation in order to minimize potential surface settlements from soil entering into the annular space and to reduce the exterior friction acting against the pipe, creating the possibility of pipe seizure.

If the pipe seizes in place, a rescue pit may be permitted with the location and operations subject to review by the Engineer. The contractor shall obtain written approval from the Engineer prior to construction of this pit. Any rescue pit shall take into consideration impact to private property and public inconvenience. Rescue operations for seized tunneling equipment and pipe shall be the full responsibility of the contractor, including repairs to private property and reparations to property owners.

The contractor shall be responsible for any soil modification procedures that may be necessary to maintain a stable excavation face, both during launching procedures and throughout the entire tunneling process. Soil stabilization procedures shall be approved by the Engineer prior to implementation.

In the event a section of pipe is damaged during jacking operations, or in the event of joint failure as evidenced by visible ground water inflow or other observations, the contractor shall use one of the following procedures to correct the damage at no additional cost to the City. The proposed method of repair shall be approved by the Engineer prior to implementation.

- If the pipe is only minimally damaged, passes a leakage test, and maintains barrel and joint structural integrity, it may be repaired in place by a method approved by the pipe manufacturer and Engineer.

- If the pipe is severely damaged, or the pipe shows evidence of joint failure, it shall be removed from the excavation by jacking it through the length of the tunnel and removing it at a receiving pit. If at that time the removed pipe is found to be without defect, it may be placed back into the pipe string and jacked a second time.

The contractor shall fill all annular space with contact grout in a manner that controls settlement and heave.

The contractor shall assume heterogeneous, glacial soil conditions, including boulders. Payment for tunneling through obstructions two feet in diameter or smaller shall be considered incidental to Bid Item 90030. Obstructions greater than two feet in diameter shall be paid separately, under Bid Item 90039, for each individual obstruction encountered and managed.

F9 Spoils Management

Management, removal, and disposal of clean spoils produced during pit excavation and tunneling shall be the full responsibility of the contractor.

If a slurry TBM system is used, the contractor shall provide a slurry separation system that is capable of the following:

- The selected system shall provide adequate separation of much from slurry, such that slurry has a sediment content within the limits defined in the approved submittals, and can be returned to the cutting face for reuse.
- The slurry separation system shall use a mechanical separation plant, including scalping screens, shaker screens, desanding and desilting cones, and a centrifuge if deemed necessary. The separation system shall contain all muck on-site prior to disposal at an approved location.
- The slurry separation system and operating plant shall be appropriately sized for the size of the tunnel, soil conditions, and workspace available.
- The contractor shall diligently monitor the composition of the slurry to maintain slurry weight, gel strength, and viscosity limits as defined in the approved submittals.

Payment for the management, removal, and disposal of clean spoils generated during pit excavations shall be included with the bid items for each pit. Payment for the management, removal, and disposal of clean fill generated during pipe installation shall be included with Bid Item 90030.

Contaminated material shall be expected to be generated during the excavation of the Shorewood Blvd. receiving pit and tunneling operations near the Campus Drive pit. The soil is contaminated with petroleum products. While proceeding in this area, the contractor shall be vigilant for signs of contamination, including smell and visual observations. If contaminated soil is encountered, the contractor shall immediately notify the Construction Engineer.

When contaminated soil is encountered, it shall be segregated from the clean spoils. Contaminated material shall be brought to the Dane County Landfill, located at 7102 U.S. HWY 12, Madison, WI 53718. No testing requirements are necessary for the contaminated material. The contractor shall be responsible for the excavation and segregation of contaminated material. Transport of contaminated material shall be paid under Bid Item 90043. The contractor shall haul contaminated materials in accordance with state and federal regulations, including the use of covered trucks. Tipping fees associated with the disposal of contaminated material will be the responsibility of the City.

G Inspection and Testing

Work under this section provides for the trenchless installation of 96-inch diameter storm sewer pipe. Installation shall be completed with an Earth Pressure Balance (EPB) Tunnel Boring Machine (TBM). Installation of the pipe, when completed, shall provide a water tight pipe of the specified alignment, slope, and depth specified in the plan set.

31. Removing Street Light Assembly, Item 204.9060.S.001; Removing Traffic Signal, Item 204.9060.S.002.

A Description

This special provision describes removing and salvaging a base mounted light pole and traffic signal pole, direct bury light pole, transformer base, arm, signal head and luminaire.

B (Vacant)

C Construction

Contact Electrical Operations Lead Worker, (608) 266-9031, at least seven (7) days prior to removing any street lights on the City of Madison lighting system or traffic signals maintained by the City of Madison. Arrange a meeting to document the existing condition of all street lighting materials that will be affected by construction activities.

The City of Madison will provide the following information.

1. Identify all items to be salvaged or disposed.
2. Identify existing feed-point locations and circuit breaks.

When removing existing street lights and traffic signals, carefully remove and stockpile all equipment at a location approved by the engineer. Place all equipment on blocks so as not to be in direct contact with the ground. Protect luminaires and signal heads from moisture. Either reinstall lights as the plans show or make available for City of Madison to pick up and salvage. Properly dispose of any equipment that the city does not salvage.

Replace any equipment damaged in the removal process with equipment that is of greater or equal quality than the damaged piece.

D Measurement

The department will measure Removing Street Light Assembly and Removing Traffic Signal 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
204.9060.S.001	Removing Street Light Assembly	Each
204.9060.S.002	Removing Traffic Signal	Each

Payment is full compensation for removals, salvaging and disposal as required above.

32. Removing Railing, Item 204.9090.S.001.

A Description

This special provision describes removing railing conforming to standard spec 204.

B (Vacant)

C (Vacant)

D Measurement

The department will measure Removing Railing in linear feet, acceptably completed.

E Payment

Add the following to standard spec 204.5:

ITEM NUMBER	DESCRIPTION	UNIT
204.9090.S.001	Removing Railing	LF

stp-204-025 (20150630)

33. General Requirements for Blasting Rock.

Add the following to standard spec 205.3.7:

Perform all blasting in compliance with the Wisconsin Administrative Code Department of Safety and Professional Services SPS 307.43.

Blasting Plan Submittal

Not less than two weeks before commencing blasting operations, or at any time when changes to the drilling and blasting methods are proposed, submit a Blasting Plan to the engineer for review. The blasting plan shall contain full details of the drilling and blasting patterns and controls proposed for both the controlled and production blasting. Include the following minimum information in the blasting plan:

1. Station limits of proposed shot.
2. Plan and section views of proposed drill pattern including free face, burden, blasthole spacing, blasthole diameters, blasthole angles, lift height, and subdrill depth.
3. Loading diagram showing type and amount of explosives, primers, initiators, and location and depth of stemming.
4. Initiation sequence of blastholes including delay times and delay system.
5. Manufacturer's data sheets for all explosives, primers, and initiators to be employed.

The blasting plan submittal is for quality control and record keeping purposes. Review of the blasting plan by the engineer does not relieve the contractor of responsibility for the accuracy and adequacy of the plan when implemented in the field.

Safety

Immediately notify the engineer of any incidents of fly rock, damage to any personal property, or existing roadway that is open to traffic, and any violations of the Wisconsin Administrative Code Department of Safety and Professional Services SPS 307.43. Failure to do so shall be considered a safety violation under standard spec 107 and all work on the project may be stopped under standard spec 105.1(1).

Notify the engineer of the station, location, and 'size' of all blasts at least one hour before the blast.

Observe the entire blast area for a minimum of five minutes following a blast to guard against rock or debris fall before commencing work in the area.

The engineer has the authority to prohibit or halt the contractor's blasting operations if it is apparent that through the methods being employed, the required slopes are not being obtained in a stable condition, the safety and convenience of the traveling public is being jeopardized, or vibration levels above the allowable levels occur.

Condition Surveys

Conduct and document pre-blast and post-blast surveys of any nearby buildings or structures as required by the scaled-distance equation specified in the Wisconsin Administrative Code Department of Safety and Professional Services SPS 307.43. Make right of entry arrangements with the property owners for these condition surveys. Before any blasting, make the pre-blast survey records available to the engineer for review. After completion of blasting operations, perform a post-blast survey and make these records available to the engineer for review. The contractor shall be responsible for any damage resulting from blasting.

These condition surveys shall consist of visually inspecting and recording all existing defects in the structures before and after blasting operations. Photographs and/or videotape may be used to assist in documentation. Submit a written report to the department detailing the visual and photographic investigation of potentially affected structures. This report will include copies of the pre-blast and post-blast surveys and discuss any discrepancies and findings of these surveys.

If at any time during the progress of the work, the methods of drilling and blasting do not produce the desired result of a uniform slope and shear face, within the tolerances specified, drill, blast, and excavate in short sections, not exceeding 100 feet in length, until a technique is arrived at that will produce the desired results. Extra cost resulting from this requirement shall be borne by the contractor.

Vibration Control and Monitoring

All vibration control and monitoring shall comply with Wisconsin Administrative Code Department of Safety and Professional Services SPS 307.43, Instrumentation and SPS 307.44, Control of Adverse Effects.

Whenever there is a potential for vibration damage to adjacent buildings, structures, or utilities, monitor each blast with an approved seismograph located, as approved, between the blast area and the closest structure subject to blast damage, and as close as practical to the subject structure. Peak particle velocity shall not be allowed to exceed the safe limits of the nearest structure subject to vibration damage.

A vibration specialist, approved by the engineer, shall perform vibration monitoring. The vibration specialist shall monitor vibration levels according to the Wisconsin Administrative Code Department of Safety and Professional Services SPS 307.43 and interpret the seismograph records to ensure that the seismograph data shall be effectively utilized in the control of the blasting operations with respect to the existing structures and utilities.

According to the Wisconsin Administrative Code Department of Safety and Professional Services SPS 307.43 consult with the owner of any structure or utility not listed in SPS 307.43 to establish maximum allowable limits on ground vibrations. In no case shall these vibration limits exceed the following criteria:

Structure Type	Maximum Peak Particle Velocity (inches/second)
Reinforced Concrete, Structures, Unoccupied	4.0
Steel Structures, Unoccupied	4.0
Buried Utilities	2.0
Wells and Aquifers	2.0
Green Concrete (Less than 7 days)	1.0

Furnish data recorded for each shot to the engineer before the next blast; the data shall include the following:

1. Identification of vibration monitoring instrument used.
2. Name of qualified observer and interpreter.
3. Distance and direction of recording station from blast area.
4. Type of ground at recording station and material on which the instrument is sitting.
5. Peak particle velocity and principal frequency in each component.
6. A dated and signed copy of records of seismograph readings.
7. A comparison of measured seismograph readings to maximum allowable readings identified in the Wisconsin Administrative Code Department of Safety and Professional Services SPS 307.43 or as specified in this special provision.

If the recorded vibration data exceeds the allowable levels established in the Wisconsin Administrative Code Department of Safety and Professional Services SPS 307.43 or as specified in this special provision, immediately halt blasting operations. Submit a revised blasting plan to the engineer and do not resume blasting operations until the engineer approves the revised plan.

All costs associated with the work described herein shall be considered included in the bid item Excavation Rock.

stp-205-050 (20141107)

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

A Description

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

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

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

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

This special provision applies to Base Aggregate Dense 1 1/4-Inch material placed: above at least 16 inches of subgrade improvement, 12 inches of subgrade improvement and geogrid or QMP subgrade provisions, between shoulder hinge points and lower than mainline pavement. Unless otherwise specified by the contract, all Base Aggregate Dense 1 1/4-Inch material placed on side roads, private and public entrances, individual ramps less than 1500 feet, passing lanes less than 1500 feet, tapers, turn lanes,

and other undefined locations are exempt from the compaction and density requirement modifications and testing contained within this special provision.

B (Vacant)

C Construction

C.1 General

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

Add the following to standard spec 305.3.2.2:

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

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

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

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

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

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

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

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

Field density tests on materials using contractor elected target density methods 3 or 4 will not be considered for lot acceptance on the basis of compaction under the requirements of this provision until the moisture content of the in-place material is less than 2.0 percentage points above the maximum wet density optimum moisture or 2.0 percentage points of the average moisture content of the 10 density tests representing a control strip, respectively. Determine moisture content using AASHTO T255 as modified in CMM chapter 8 or a nuclear density gauge. If conducting AASHTO T255, sample materials after watering but before compaction.

C.2 Quality Management Program

C.2.1 Quality Control Plan

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

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

1. An organizational chart with names, telephone numbers, current certifications and/or titles, and roles and responsibilities of QC personnel.

2. The process used to disseminate QC information and corrective action efforts to the appropriate persons. Include a list of recipients, the communication process that will be used, and action time frames.
3. A list of source locations, section and quarter descriptions, for all aggregate materials requiring QC testing.
4. Descriptions of stockpiling and hauling methods.
5. An outline for resolving a process control problem. Include responsible personnel, required documentation, and appropriate communication steps.
6. Location of the QC laboratory, retained sample storage, and other documentation.
7. Lot layout and random test location plan.
8. A description of placement methods and operations. Including, but not limited to: staging, construction of an initial working platform, lift thicknesses, and equipment.

C.2.1 Pre-Placement Meeting

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

C.2.2 Personnel

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

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

C.2.3 Equipment

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

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

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

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

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

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

C.2.5 Contractor Testing

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

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

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

C.2.5.1 Contractor Required Quality Control (QC) Testing

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

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

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

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

C.2.5.1.1 Target Density Determination

C.2.4.1.1.1 Maximum Wet and/or Dry Density Methods

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

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

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

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

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

Split each non-Proctor contractor QC sample and identify it according to CMM 8-30. Retain the split for 7 calendar days in a dry, protected location. If requested for department comparison testing, deliver the split to the engineer within one business day.

C.2.5.1.1.2 Density Control Strip Method

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

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

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

Construct additional control strips, at a minimum, when:

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

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

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

After each subsequent pass of compaction equipment over the entirety of the control strip, take wet density measurements at the 3 marked locations. Continue compacting and testing until the increase in wet density measurements are less than 2.0 lb/ft3, or the density measurements begin to decrease.

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

C.2.6 Department Testing

C.2.6.1 General

The department will conduct verification testing to validate the quality of the product and independent assurance testing to evaluate the sampling and testing. The department will provide the contractor with a listing of names and telephone numbers of all QV and IA personnel for the project and provide test results to the contractor within two business days after the department obtains the sample.

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

C.2.6.2 Quality Verification (QV) Testing

The department will have an HTCP technician, or ACT working under a certified technician, perform QV sampling and testing. Department verification testing personnel must meet the same certification level requirements specified in C.2.3 for contractor testing personnel for each test result being verified. The department will notify the contractor before sampling so the contractor can observe QV sampling.

The department will conduct QV tests at the minimum frequency of 20% of the required gradation, density and Proctor contractor tests.

The department will utilize contractor’s QC Proctor results for determination of the material target density. The department will verify QC Proctor values by testing QC Proctor split sample. The department will use

QC Proctor value as a target density if the QC and QV Proctor test results meet the tolerance requirements specified in section C.2.6.2(7).

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

The department will conduct QV tests in a separate laboratory and with separate equipment from the contractor's QC tests. The department will use the same methods specified for QC testing.

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

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

C.2.6.3 Independent Assurance (IA)

Independent assurance is unbiased testing the department performs to evaluate the department's QV and the contractor's QC sampling and testing, including personnel qualifications, procedures, and equipment. The department will perform an IA review according to the department's independent assurance program. That review may include one or more of the following:

1. Split sample testing.
2. Proficiency sample testing.
3. Witnessing sampling and testing.
4. Test equipment calibration checks.
5. Requesting that testing personnel perform additional sampling and testing.

If the department identifies a deficiency, and after further investigation confirms it, correct that deficiency. If the contractor does not correct or fails to cooperate in resolving identified deficiencies, the engineer may suspend placement until action is taken. Resolve disputes as specified in C.2.6.4.

C.2.6.4 Dispute Resolution

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

Production test results, and results from other process control testing, may be considered when resolving a dispute.

If project personnel cannot resolve a dispute, and the dispute affects payment or could result in incorporating non-conforming product or work, the department will use third party testing to resolve the dispute. The department's central office laboratory, or a mutually agreed on independent testing laboratory, will provide this testing. The engineer and contractor will abide by the results of the third party tests. The party in error will pay service charges incurred for testing by an independent laboratory. The department may use third party test results to evaluate the quality of questionable materials and determine the appropriate payment. The department may reject material or otherwise determine the final disposition of nonconforming material as specified in standard spec 106.5.

C.2.7 Corrective Action

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

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

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

Lots with moisture contents within 2.0 percentage points of optimum moisture for target density methods 1, 2 and 3 in section C.1, or within 2.0 percentage points of the target moisture content for target density method 4 in section C.1, and exhibiting no signs of deflection when subjected to loading by the heaviest roller used in the placement and compaction operations, shall be compacted a minimum of one more pass using equipment and methods representative of the operations used to place and compact the Base Aggregate Dense 1 1/4–Inch, and density tested at the same location (station and offset) as the failing QC and/or QV density tests. If the change in density exceeds 2.0 lb/ft3 continue subsequent compactive efforts and density testing on that lot, at no additional cost to the department. If the change in density is less than or equal to 2.0 lb/ft3, the lot is accepted as satisfying the compaction requirements of this provision.

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

1. If, after an additional pass, the change in density at the same location (station and offset) as the failing QC and/or QV density tests exceeds 2.0 lb/ft3 in a lot continue subsequent compactive efforts and density testing on that lot. If the change in density at the same location (station and offset) as the failing QC and/or QV density tests is less than or equal to 2.0 lb/ft3, and subgrade improvement methods are not requested by the engineer, the lot is accepted as satisfying the compaction requirements of this provision.
2. If subgrade improvement methods are requested by the engineer, upon completion, including compaction of the restored base material, conduct a density test within the improved subgrade limits. This density test result will replace the prior field density value. If the lot field density equals or exceeds the minimum density requirement defined in section C.1, the lot is accepted as satisfying the compaction requirements of this provision. If the lot field density fails to achieve the minimum density requirement defined in section C.1, compact the lot a minimum of one more pass using equipment and methods representative of the operations used to place and compact the base aggregate dense; and density test at the same location (station and offset) as the failing QC and/or QV density tests. If the change in density exceeds 2.0 lb/ft3 continue subsequent compactive efforts and density testing on that lot, at no additional cost to the department. If the change in density is less than or equal to 2.0 lb/ft3, the lot is accepted as satisfying the compaction requirements of this provision.

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

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

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

D Measurement

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

E Payment

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

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

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

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

stp-370-010 (20210113)

35. Stamping Colored Concrete, Item 405.1000.

This special provision describes stamping and coloring concrete Natural Bark for work constructed under other contract bid items. Conform to standard spec 405 as modified in this special provision.

Replace standard spec 405.2.1.1(1) with the following:

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

- For Natural Bark match the concrete color in reasonably close conformance with BASF MC5002 color.

Replace standard spec 405.2.1.1(3) with the following:

(3) The department will accept the color and pattern based on comparison to color and pattern samples available for viewing at City of Madison Engineering Department.

Replace the entire contents of standard spec 405.2.2 with the following:

(1) Furnish Natural Bark full-depth colored concrete conforming to standard spec 405.2.1

(2) Provide a brick style pattern in accordance with the City of Madison standard pattern.

Replace the entire contents of standard spec 405.3.2 with the following:

(1) Color concrete full-depth conforming to standard spec 405.3.1

(2) Coordinate stamping with the engineer to verify stamping pattern orientation prior to starting stamping work. Apply imprinting tools to the surface and press into the concrete to create the desired impression. Finish all surfaces uniformly. Ensure that the textured surface is free of laitance; sandblasting is not permitted.

stp-405-100 (20190618)

36. Expansion Device, Item 502.3101.

A Description

This special provision describes furnishing and installing an expansion device as the plans show conforming to standard spec 502 as modified in this special provision.

B Materials

Furnish components for the Expansion Device System from an approved fabricator selected from the department's approved product list of Fabricated Bridge Components – Expansion Devices.

To be eligible for this project, expansion devices from other manufacturers must be pre-approved before the bid closing date. Applications for pre-approval may be submitted at any time. Prepare the application according to the department requirements. If needed, obtain information and assistance with the pre-approval process from the Structures Maintenance Section in the Bureau of Structures, by sending an email to the following address: DOTDLStructuresFabrication@dot.wi.gov

Expansion device strip seal gland size requirement of 4-inches, 5-inches, and 6-inches shall be as the plans show.

The minimum thickness of the polychloroprene strip seal shall be 1/4 inch for non-reinforced elastomeric glands and 1/8 inch for reinforced glands. Furnish the strip seal gland in lengths suitable for a continuous one-piece installation at each individual expansion joint location. Provide preformed polychloroprene strip seals that conform to the requirements ASTM D3542, and have the following physical properties:

Property Requirements	Value	Test Method
Tensile Strength, min.	2000 psi	ASTM D412
Elongation @ Break, min	250%	ASTM D412
Hardness, Type A, Durometer	55 ± 5 pts.	ASTM D2240
Compression Set, 70 hours @212˚F, max.	35%	D395 Method B Modified
Ozone Resistance, after 70 hrs. at 100˚F under 20% Strain with 100 pphm ozone	No Cracks	ASTM D1149 Method A
Mass Change in Oil 3 after 70 hr. 212˚F Mass Change, max.	45%	ASTM D471

Install the elastomeric strip seal gland with tools and a lubricant adhesive recommended by the manufacturer.

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

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

Manufacturer's certifications for adhesive and steel shall attest that the materials meet the specification requirements.

stp-502-020 (20210113)

37. Precast Concrete Box Culvert, 12 FT x 4 FT, Item 504.2000.S.01; 12 FT x 6 FT, Item 504.2000.S.02.

A Description

This special provision describes furnishing and installing precast concrete box culverts of the size and length the plans show.

B Materials

Provide materials and fabricate Precast Concrete Box Culvert according to ASTM C1577, except that the concrete mixture shall contain not less than 565 pounds of Portland cement, blended cement or Portland cement plus pozzolanic admixture per cubic yard. Slab thickness, areas of reinforcement, and other details shall be as the plans show.

C (Vacant)

D Measurement

The department will measure Precast Concrete Box Culvert (size), completed according to the contract and accepted, in length by the linear foot in place. The box culvert will be measured on the centerline of the box along the flow line.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
504.2000.S.01	Precast Concrete Box Culvert, 12 FT x 4 FT	LF
504.2000.S.02	Precast Concrete Box Culvert, 12 FT x 6 FT	LF

Payment is full compensation for furnishing, hauling and placing the box, including joint ties, and mastic.

stp-504-015 (20160607)

38. Prefabricated Steel Truss Pedestrian Bridge B-13-891 LRFD, Item 506.8006.S.001.

A Description

This special provision describes providing a fully engineered, fabricated steel truss pedestrian bridge structure, including bearings the plans show. Conforming to standard spec part 5 as modified in this special provision. Regard these specifications as minimum standards for design and construction

B Materials

B.1 Approved Manufacturers

The bridge shall be designed and manufactured by an approved designer and supplier selected from the department's approved products list.

To be eligible for this project, pre-fabricated bridges from other manufacturers must be pre-approved before the bid opening date. Applications for pre-approval may be submitted at any time. Prepare the application according to the department requirements. If needed, obtain information and assistance with the pre-approval process from the Structures Maintenance Section in the Bureau of Structures, by sending an email to the following address: DOTDLStructuresFabrication@dot.wi.gov

B.2 Design Requirements

Structural design of the pedestrian bridge shall be by a professional engineer registered in the State of Wisconsin.

Design the bridge according to the most recent edition of the AASHTO LRFD Bridge Design Specifications, all current interims, and the AASHTO LRFD Guide Specifications for Design of Pedestrian Bridges, except as modified herein.

Design welded tubular connections according to the Structural Welding Code-Steel ANSI/AWS D1.1. The fracture critical requirements of ANSI/AWS D1.5 do not apply, and Charpy V-notch impact testing will not be required. Loading shall be as stated in Section 3 of the AASHTO LRFD Guide Specifications for Design of Pedestrian Bridges. The bridge shall be a half-through truss with profile as the plans show with one diagonal per panel. Chords, diagonals, verticals, bracing, and floor beams may be tube steel. Tube steel shall have a minimum thickness of 1/4 inch, angles shall have a minimum thickness of 1/4-inch, C-shaped side dams shall have a minimum web thickness of 3/16-inch, and W-shapes shall have a minimum web thickness of 1/4-inch if painted or coated and 5/16-inch if not painted or coated. All other steel shapes shall have a minimum thickness of 5/16 inch unless contract plans allow a minimum thickness of less than 5/16 inch for other steel shapes. Field splices shall be bolted with ASTM F3125 Grade A325 high `strength bolts according to the "Specifications for Structural Joints Using High Strength Bolts". Type 3 bolts are required for weathering steel. For top and bottom chord field splices, splice plates are required on both the inside and outside surface of all four sides of the spliced tubing so that each bolt will be acting in double shear. Nuts may be welded to the splice plates to hold them in place during installation. When the collection of water inside a structural tube is a possibility, either during construction or during service, provide the tube with a drain hole at its lowest point.

If the profile grade line is on a crest vertical curve, camber the bridge to match the profile grade line the plans show plus the calculated dead load deflection. For a single span bridge, if the profile grade line has a constant slope (no vertical curve), camber the bridge to offset the calculated dead load deflection plus an amount equal to 1% of the bridge length. For a bridge with two or more spans, if the profile grade line has a constant slope (no vertical curve), camber the bridge to offset the calculated dead load deflection only. Concrete bridge decks shall be continuous over the floor beams. Concrete bridge decks may be supported by stay in place corrugated galvanized steel deck forms unless the contract plans specify removable deck forms only. The maximum depth of the stay in place corrugated steel deck forms shall be 2 inches. The steel area of the stay in place corrugated steel deck forms shall not be considered for the design of the concrete deck. Design of the stay in place corrugated steel deck forms shall be included with the truss design. The minimum slab thickness shall be 5.5 inches for removable deck forms and 6 inches for stay in place corrugated steel deck forms. For stay in place corrugated steel deck forms the 6 inch minimum is measured from the bottom of the deck form. Design the longitudinal reinforcing steel in the slab based on a wheel load located 1 foot from the face of the curb or toe plate, or a pedestrian live load of 90 psf, whichever controls.

Concrete strength (f'_c) shall be 4,000 psi and F_y of bar steel shall be 60,000 psi. A concrete mix with a unit weight of 120 pcf or 150 pcf may be used at the option of the manufacturer/contractor. Use a design dead load of 120 pcf or 150 pcf to match the concrete mix selected. Use load factors of 1.25 for dead load and 1.75 for live load for the design of the concrete slab and floor beams. Minimum concrete cover shall be 2 inches for top reinforcement and 1 inch for bottom reinforcement. Design the bridge for expansion and

contraction with a temperature range of -30º F to 120º F. Utilize Teflon slip pads or other approved material on the sliding surface of the expansion bearing assembly.

Install protective screening, when required, as the plans show. Use protective screening that is 9 gauge chain link fence with 2 inch mesh, coated as the plans show.

B.3 Plan Requirements and Submittals

Submit shop drawings and calculations to the engineer conforming to standard spec 105.2 with electronic submittal to the fabrication library under standard spec 105.2.2. Department review does not relieve the contractor from responsibility for errors or omissions on shop drawings.

Make the submittal no later than 12 weeks after date of notice of contract approval. Allow the following time period in the construction schedule: 20 calendar days after the first receipt of plans by the StructuresDesign Section for a complete initial review of the design and plans submittal, and an additional 20 calendar days for any necessary revisions and/or corrections.

In the submittal, include the following:

1. Basic design criteria shown on the design plans.
2. Complete detailed drawings of all structural steel connections, sizes of members, span lengths between bearing points, skews, walkway widths, height of handrails and safety rails, bearing assembly details, anchor bolt locations, concrete deck reinforcement, design data, materials data, and dead and live load bearing reactions.
3. Engineer's certification. The plans shall be sealed, signed, and dated by a professional engineer registered in the State of Wisconsin.
4. One set of design calculations with independent checks.

The department will return shop drawings from this submittal, and any subsequent submittals, to the fabrication library, either indicating acceptance or marked with required revisions and/or corrections.

B.4 Weld Testing

An independent agency shall perform nondestructive weld testing; the manufacturer shall pay for this testing. All welds are to be visually inspected except as noted below.

Ten percent of all fillet welds shall be magnetic particle tested.

All full penetration welds of chords shall be ultrasonically or radiographically tested.

Bottom chord welded tube splices for tube thicknesses less than 3/8 inches thick shall be radiographically tested or covered with fillet welded splice plates with non-intersecting welds which develop 75% of the spliced member strength.

Submit electronically a written testing report upon completion.

C Construction

C.1 Delivery and Erection

Deliver the bridge by truck to the location that is nearest to the site and accessible by road. The contractor is responsible for unloading the bridge from the trucks at the time of arrival.

The manufacturer shall notify the contractor in advance of the expected arrival time. Information regarding delays after the trucks depart the plant such as inclement weather, delays in permits, rerouting by public agencies, or other circumstances shall be passed on to the contractor as soon as possible.

The manufacturer shall provide an erection procedure to the contractor and shall advise the contractor of the actual lifting weights, attachment points, and all other information needed to install the bridge. Unloading, splicing, bolting, and providing proper lifting equipment as well as all tools, equipment, labor, and miscellaneous items required to complete the work is the responsibility of the contractor. The procedure for bolting field splices shall be given to the contractor by the manufacturer.

C.2 Finishes

When unpainted steel is specified on the plans, all fabrications shall be produced from high strength, low alloy, atmospheric corrosion resistant ASTM A847 cold-formed welded square and rectangular tubing, ASTM A606 sheet, and/or ASTM A588, ASTM A242, or ASTM A709 Grade 50W plate and structural steel shapes (F_y=50,000 psi) with a minimum corrosion index of 5.8 per ASTM G101.

Blast-clean all exposed surfaces of weathering steel according to Steel Structures Painting Council Surface Preparation Specifications No. 7 Brush-Off Blast Cleaning (SSPC-SP7), latest edition. Exposed

surfaces of weathering steel shall be defined as those surfaces seen from the deck and from outside the structure. Stringers, floor beams, lower brace diagonals and the inside face of the truss below the deck, and bottom of the bottom chord do not need to be blasted.

When the plans specify painted steel, paint the bridge with a three-coat epoxy system from the department's approved products list as specified in standard spec 517.

D Measurement

The department will measure Prefabricated Steel Truss Pedestrian Bridge B-13-891 LRFD as a single unit of work for each structure bridge, 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
506.8006.S.001	Prefabricated Steel Truss Pedestrian Bridge B-13-891 LRFD	EACH

Payment is full compensation for designing, manufacturing, transporting and erecting the pedestrian bridge; furnishing bearing plates, pads, bolts, anchors bolts, and grout. The department will pay separately for painting under the Painting Epoxy System Steel Truss (structure) bid item.

stp-506-085 (20210708)

39. Concrete Staining B-13-891, Item 517.1010.S.01; Concrete Staining R-13-360, Item 517.1010.S.02; Concrete Staining R-13-361, Item 517.1010.S.03.

A Description

This special provision describes providing a two coat concrete stain on the exposed concrete surfaces of structures as the plans show.

B Materials

B.1 Mortar

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

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

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

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

B.2 Concrete Stain

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

Tri-Sheen Concrete Surfacer, Smooth by TK Products

Tri-Sheen Acrylic by TK Products

TK-1450 Natural Look Urethane Anti-Graffiti Primers by TK Products

Safe-Cure & Seal EPX by Chem Masters

H&C Concrete Stain Solid Color Water Based by Sherwin-Williams

C Construction

C.1 General

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

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

C.2 Preparation of Concrete Surfaces

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

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

C.3 Staining Concrete Surfaces

Apply the concrete stain according to the manufacturer's recommendations.

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

The color of the stain shall be as given on the plan. Tint the base coat to match the finish coat; the two coats shall be compatible with each other.

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

C.4 Test Areas

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

C.5 Surfaces to be Coated.

Apply concrete stain to the surfaces according to the plan.

D Measurement

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

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
517.1010.S.01	Concrete Staining B-13-891	SF
517.1010.S.02	Concrete Staining R-13-360	SF
517.1010.S.03	Concrete Staining R-13-361	SF

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

stp-517-110 (20140630)

40. Concrete Staining Multi-Color B-13-891, Item 517.1015.S.001; Concrete Staining Multi-Color R-13-360, Item 517.1015.S.002; Concrete Staining Multi-Color R-13-361, Item 517.1015.S.003.

A Description

This special provision describes providing a multi-color concrete stain on the exposed concrete surfaces of the structure as the plan details show.

B Materials

B.1 Mortar

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

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

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

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

B.2 Concrete Stain

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

Tri-Sheen Concrete Surfacer, Smooth by TK Products

Tri-Sheen Acrylic by TK Products

TK-1450 Natural Look Urethane Anti-Graffiti Primers by TK Products

Safe-Cure & Seal EPX by Chem Masters

H&C Concrete Stain Solid Color Water Based by Sherwin-Williams

C Construction

C.1 General

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

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

C.2 Preparation of Concrete Surfaces

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

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

C.3 Staining Concrete Surfaces

Apply the concrete stain according to the manufacturer's recommendations.

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

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

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

C.4 Test Areas

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

C.5 Surfaces to be Coated.

Apply concrete stain to the surfaces according to the plan.

D Measurement

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

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
517.1015.S.001	Concrete Staining Multi-Color B-13-891	SF
517.1015.S.002	Concrete Staining Multi-Color R-13-360	SF
517.1015.S.003	Concrete Staining Multi-Color R-13-361	SF

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

stp-517-115 (20140630)

41. Architectural Surface Treatment B-13-891, Item 517.1050.S.001; Architectural Surface Treatment R-13-360, Item 517.1050.S.002; Architectural Surface Treatment R-13-361, Item 517.1050.S.003.

A Description

This special provision describes providing a concrete masonry architectural surface treatment on the exposed concrete surfaces of structures as the plan details show.

B Materials

Use form liners that attach easily to the forming system, and do not compress more than 1/4 inch when poured at a rate of 10 vertical feet/hour.

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

Wall ties shall have set "break-backs" at a minimum of 3/4 inches from the finished concrete surface.

C Construction

C.1 Equipment

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

C.2 Form Liner Preparation

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

Apply form release per manufacturer's recommendations.

C.3 Form Liner Attachment

Place adjacent liners less than 1/4 inch from each other, attach liner securely to forms according to the manufacturer's recommendations, and coordinate wall ties with form liner and form manufacturer, e.g., diameter, size, and frequency.

C.4 Surface Finishing

Ensure that the textured surface is free of laitance; sandblasting is not permitted.

Grind or fill pouring blemishes.

D Measurement

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

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
517.1050.S.001	Architectural Surface Treatment B-13-891	SF
517.1050.S.002	Architectural Surface Treatment R-13-360	SF
517.1050.S.003	Architectural Surface Treatment R-13-361	SF

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

stp-517-150 (20110615)

42. Adjusting Manhole Covers, Item 611.8110.

This special provision describes adjusting manhole covers conforming to standard spec 611 as modified in this special provision.

Adjust manhole covers located in pavement areas in two separate operations. Initially, remove designated manhole covers along with sufficient pavement to permit installation of temporary cover plate over the opening. Fill the excavated area with asphaltic pavement mixture, which shall remain in place until contract milling and paving operations permit setting the manhole frames to grade. During the second phase, remove the asphaltic pavement mixture surrounding the manhole plus the temporary cover plate, and set the manhole cover to final grade. The department will measure and pay for the items of asphaltic pavement mixture, temporary cover plate, milling, and paving separately.

Supplement standard spec 611.3.7 with the following:

Set the manhole frames so that they comply with the surface requirements of standard spec 450.3.2.9. At the completion of the paving, a 6-foot straightedge shall be placed over the centerline of each manhole frame parallel to the direction of traffic. A measurement shall be made at each side of the frame. The two measurements shall be averaged. If this average is greater than 5/8 inches, reset the manhole frame to the correct plane and elevation. If this average is 5/8 inches or less but greater than 3/8 inches, the manhole frame shall be allowed to remain in place but shall be paid for at 50 percent of the contract unit price.

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

stp-611-005 (20200629)

43. Cover Plates Temporary, Item 611.8120.S.

A Description

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

B Materials

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

C (Vacant)

D Measurement

The department will measure Cover Plates Temporary as 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
611.8120.S	Cover Plates Temporary	EACH

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

The steel plates shall become the property of the contractor when no longer needed in the contract work.

stp-611-006 (20151210)

44. 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)

45. Removing Signs.

Add the following to standard spec 638.3.4:

Separate and stockpile all folding stop signs, street name signs and any signs for pick up by the City of Madison and Village of Shorewood Hills. Contact each municipality a minimum of 3 calendar days in advance to coordinate stockpile location and pick up.

46. Field Facilities.

Replace standard spec 642.2.1 (4) with the following:

Provide and maintain suitable interior sanitary facilities conforming to State and local health requirements, in clean and good working condition, provide a weekly cleaning service, and stock with sanitary supplies for the duration of the contract.

Supplement standard spec 642.2.2.1 (2) with the following:

Provide CAT 5 services with a minimum of six CAT 5 receptacles.

Replace standard spec 642.2.2.1 (3) with the following:

Provide and maintain a plan-paper photocopier with scanner with the following characteristics:

- Uses toner, not ink.
- Has auto-feed capability.
- Can copy and scan both 8 1/2" x 11” and 11” x 17” paper.
- Can output a PDF of a copied or scanned document.

Replenish paper, toner cartridges, and other supplies before fully expended.

Add standard spec 642.2.2.1 (5) as follows:

Provide a field office having an adjacent hard surface parking facility with a minimum capacity of 16 passenger vehicles.

Replace standard spec 642.2.2.4 with the following:

Under bid item Field Office Type D, furnish a facility with a minimum interior space of 1,500 square feet including a meeting room that is at least 20 feet by 20 feet; furnish indoor sanitary facilities that are housed within, or directly adjacent to, the filed office; clean, maintain, and supply the field office and sanitary facilitates weekly; and equip with the following:

- Ten suitable office desks with drawers and locks.
- Ten ergonomically correct office chair in working condition according to standard spec 642.2.2.1 (4).
- Two four-drawer file cabinets.
- Two four-shelf bookcases.
- Four 2.5 x 5 foot (minimum) tables.
- Four 4 x 8 foot (minimum) tables for the meeting room.
- Twenty, or more folding chairs.

Add standard spec 642.5 (4) as follows:

(4) Payment of the field office if full compensation for providing a weekly cleaning service for the field office and sanitary facilities, for providing sanitary supplies as necessary, for replenishing paper, toner cartridges, and other supplies before fully expended, for maintaining the photocopier/scanner in working order at all times and for providing and supporting CAT 5 services.

47. Seismograph Project 5992-11-31, Item 999.1001.S.

A Description

This special provision describes furnishing seismographs and employing trained operators to monitor construction-induced vibrations on buildings/structures, and submittal of all required documentation.

B Materials

Use seismographs conforming to Wisconsin Department of Safety and Professional Services (SPS) 307.43, Wisconsin Administrative Code that are continuous data recorders supplied with all the accessories necessary for making vibration and noise monitoring observations.

C Construction

Conduct monitoring procedures conforming to SPS 307.44 and as follows: Take seismograph readings before construction activities to establish an ambient or background index.

During construction, place seismographs to monitor all vibration-inducing construction activities or as the engineer directs. At a minimum utilize one seismograph. If more than one major construction activity per day is taking place, multiple seismographs may be required. Place seismographs on a stable surface within 3 feet of the building/structure nearest to the construction operation. Provide data recorded for each vibration occurrence to the engineer which includes the following:

1. Identification of vibration monitoring instrument used.
2. Description of equipment used by the contractor.
3. Name of qualified observer and interpreter.
4. Distance and direction of recording station from the vibration area.
5. Type of ground at recording station and material on which the instrument is sitting.
6. Peak particle velocity and principal frequency in each component.
7. A dated and signed copy of records of seismograph readings.
8. A comparison of measured seismograph readings to maximum allowable readings identified in SPS 307.43 or as specified in this special provision.

If construction activities generate ground vibration in excess of the peak particle velocity limits as shown in SPS 307.44, stop the construction operation in progress and implement alternate construction methods to produce results within the allowable peak particle velocity limits.

D Measurement

The department will measure Seismograph as a single unit of work for each project, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
999.1001.S	Seismograph Project ID 5992-11-31	EACH

Payment is full compensation for furnishing and operating seismographs, operators, and for producing documentation reports

stp-999-005 (20210708)

48. 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:

700 University Bay Drive

2715 Marshall Court

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 a single unit for each location, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
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)

49. Abandon Sanitary Sewer–Slurry, Item SPV.0035.001.

A Description

This work consists of abandoning sanitary sewer pipe with slurry as shown in the plans and as hereinafter provided.

B Materials

Provide slurry conforming to Type B Slurry Mix as specified in Article 301.9 of the City Standard Specifications.

C Construction

Abandoning sewer pipe with slurry includes plugging one end of the pipe paid separately under the bid item Abandon Sanitary Sewer–Pipe Plug, and requires the entire pipe be filled with slurry. Vent holes may be required by the engineer to verify there are no voids left in the pipe. Saw cutting and removal of the existing pipe at the limits of abandonment is included in this item. Abandon sewer pipe by plugging the end(s) of the pipe. Maintain service in the existing sewers until the replacement sewers or appropriate bypasses approved by the engineer have been installed, at such time bulkheads or plugs may be placed. Contact and coordinate with other utilities so that they may plug their own facilities.

D Measurement

The department will measure Abandoning Sanitary Sewer - Slurry by the cubic yard, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0035.001	Abandon Sanitary Sewer - Slurry	CY

Payment is full compensation for all work in abandoning sanitary sewer with slurry as specified herein.

50. Rock Excavation for Sanitary Sewer, Item SPV.0035.002.

A Description

This special provision describes Rock Excavation in accordance to article 502.1(b) of the City of Madison Standard Specification for Public Works Construction- Latest Edition.

B (Vacant)

C Construction

Complete rock excavation in accordance to article 502.1(b) of the City of Madison Standard Specifications for Public Works Construction – Latest Edition.

Excavate the rock to a depth 6 inches below the outside of the sanitary sewer or water main, and to a width limited to the outside diameter of the pipe plus 2 feet. Excavate rock to a depth of 8 inches below the outside of sanitary sewer access structures or appurtenances for water main, up to 10 feet deep, and 12 inches below the outside of sanitary sewer access structures, or appurtenances for water main, over 10 feet deep. The horizontal limit for rock excavation shall be the outside dimension of sanitary sewer access structures, or appurtenances for water main, plus 2 feet.

D Measurement

The department will measure Rock Excavation for Sanitary Sewer in volume by the cubic yard, 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.0035.002	Rock Excavation for Sanitary Sewer	CY

Payment is full compensation for furnishing all work, materials, labor, equipment, tools, and incidentals necessary to complete the contract work.

51. Rock Excavation for Water Main, Item SPV.0035.003.

A Description

Rock excavation for Water Main applies to the removal of hard solid rock in ledges, bedded deposits, unstratified masses, conglomerate deposits or any other material so firmly cemented as to present characteristics of solid rock.

If determined by the Engineer that such material is so hard or so firmly cemented that it is not practical to excavate and remove such material with a power shovel, it shall be thoroughly and continuously drilled and blasted prior to removal.

Power shovels, as referred to above:

1. A modern track mounted power shovel or backhoe.
2. Not less than 3/4-cubic yard manufacturer's rated capacity.
3. Have adequate power and good running condition.
4. Used by an experienced operator

Rock Excavation for Water Main also applies to all stone/rock necessary to be removed having a volume of 2 cubic yards or more. Removal of plain or asphalt-bound bases or surface courses of macadam, gravel, or broken stone are not considered rock excavation.

B Materials

Refer to Sections 702 and 704.22 of the City Standard Specifications.

C Construction

Perform all work according to this section and Section 703 and 704.22.3 of the City Standard Specifications

Remove enough rock to provide clearance below and on each side of all pipe, valves and fittings. Clearance requirements:

- At least 6-inches for nominal pipe sizes 24-inches or smaller
- At least 9-inches for nominal pipe sizes 30-inches or larger.

The width of rock excavation is limited to the outside diameter of the pipe plus 2-feet.

Upon completion of the rock excavation, refill that portion of the trench with select fill and mechanically compact the fill material prior to laying the pipe. The pipe is required to have uniform bearing along its entire length and never shall be laid directly on rock.

D Measurement

The department will field measure and compute Rock Excavation for Water Main in cubic yards (neat-line volumes) 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.0035.003	Rock Excavation for Water Main	CY

Payment is full compensation for furnishing all work, materials, labor, equipment, tools, and incidentals necessary to complete the contract work.

52. Settlement Monitoring, Item SPV.0060.001.

A Description

A.1 General

This special provision describes installing settlement plates and collecting data for the purpose of monitoring ground movement at the railroad during filling, excavation, subgrade preparation and pile driving operations.

A.2 Submittals

Submit the following specific information for information only, at least 30 days prior to installation:

- Drawing that indicates the locations of control points and benchmarks associated with surveys for monitoring settlement.
- Description of methods for installing and protecting all markers.
- Schedule of marker installation related to significant activities or milestones in the overall project.
- Plans for markers to be installed at contractor's option.

A.3 Quality Assurance

A.3.1 General

Notify the engineer at least 24 hours prior to all plate installation operations so that the engineer may monitor the installation work.

A.3.2 Control Points

Survey for monitoring settlement shall be referenced to the same control points and benchmarks established for setting out the work. Control points shall be tied to benchmarks and other monuments outside of the zone of ground movements that might result from underground excavations.

B Materials

Furnish ¾-inch steel threaded rod (5-foot sections) mounted on 24-inch x 24-inch base plate.

C Construction

C.1 On-site Geotechnical Engineer

An on-site geotechnical engineer is required to monitor, collect, review, interpret data regarding settlement during all filling, excavation, subgrade preparation, shoring installation and removal, and pile driving operations.

C.2 Pre-Construction and Post-Construction Condition Surveys (PCCS's)

Conduct a PCCS of the railroad corridor within 200 feet of potentially vibration producing activities which includes, but is not limited to, the existing railroad track. PCCS's shall include visually inspecting and recording all ground surface conditions. Photographs and videotape shall be used to assist in documentation.

The PCCS shall include a topographic survey of the project limits. The survey shall provide elevations to a minimum of accuracy of 1/10 tenth of a foot.

Submit a written report to the engineer for each PCCS, detailing the visual and photographic investigation of the structures and topography. This report shall include copies of the photographs, videotape and topographic surveys and discuss any discrepancies and findings.

At a minimum, PCCS's shall be conducted prior to the start of construction activities and upon completion of construction activities.

C.3 Control Plan

A settlement control plan is to be created by the contractor and presented to the engineer a minimum of 30 days prior to any construction. The control plan shall discuss the following items:

1. Summary of the PCCS with established vibration limits.
2. A description of the proposed equipment
3. A description and understanding of the soil profile impacted by the construction upon the completion of driving pile for each abutment and pier.
4. A settlement monitoring procedure including:
    a. Methods to taking settlement readings
    b. Proposed times for taking settlement readings.
    c. Locations of each settlement plate to be monitored.

d. Anticipated settlement time frame.

e. Monitoring duration for baseline and daily settlement monitoring.

f. Mitigation plan to reduce potentially excessive settlement to acceptable limits.

5. A description of when and how reports will be generated.

6. Obtain the engineer's acceptance seven calendar days before any filling operations.

C.4 Settlement Monitoring

Elevations of the existing railroad embankment must be monitored for settlement throughout the construction process. The embankment must be monitored by a grid spacing of 50 foot intervals (grid node) for all areas within 100 feet of activities described in the Wisconsin Administrative Code Department of Safety and Professional Services SPS 307.43. Survey targets are also required to monitor the settlement of the railroad within 100 feet of vibration producing activities. A minimum of 4 high contrast survey targets are to be installed on the railroad surface. The x, y and z coordinates of each grid node and survey target is to be recorded. During demolition, shoring, and pile driving operations the grid nodes and survey targets are to be monitored on a daily basis. A report describing the location of the grid nodes and survey targets is to be created and submitted to the engineer during the following times:

1. Prior to any work being performed (baseline readings).

2. At the end of each day for demolition and pile driving operations.

3. Upon the completion of diving pile for each abutment.

4. Upon the completion of the bridge demolition.

5. Upon the completion of backfilling the embankment.

6. Upon removal of temporary shoring.

A maximum value for ground accelerations are limited to 0.07 g for granular fill and 0.1 g for breaker run, for the railroad embankment slope only. Any damage to other existing structures is the responsibility of the contractor.

The railroad structure has a parameter of ¼ inch displacement. Any displacements greater than ¼ inch will require pile driving operations to cease until the railroad can be contacted to determine if the displacement warrants track adjustments.

Note: If construction and monitoring are planned over winter months, the settlement plates shall be set below frost penetration depths.

D Measurement

The department will measure Settlement Monitoring as a single 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.0060.001	Settlement Monitoring	Each

Payment is full compensation for providing submittals, furnishing all materials; for installing all settlement plates; for monitoring all existing and proposed elements for movement; for furnishing all survey required to monitor and all other incidentals necessary to complete the required work.

53. Locate and Reference Property Corners, Item SPV.0060.002.

A Description

This work consists of locating and referencing existing property corners within or adjacent to temporary limited easements. Locate and provide adequate reference ties for existing property corners which may be disturbed during construction such that the landmark may be re-established upon completion of construction

B (Vacant)

C Construction

Approve the methods of with the engineer prior to beginning the work. Use a degree of accuracy for the survey work consistent with third order, Class II.

D Measurement

The department will measure Locate and Reference Property Corners as each individual locate, 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.0060.002	Locate and Reference Property Corners	Each

Payment is full compensation for furnishing all survey work necessary to locate and reference the landmark, and for resetting damaged monumentation.

All survey notes and computations used in referencing property corners shall be given to the engineer within 21 days of completing work under the above item and must be received before final payment for the work will be made.

54. Reset Property Corners, Item SPV.0060.003.

A Description

This work consists of the setting of property corners that have been damaged or destroyed during construction operations which were unavoidable. Note that this item does not apply to items damaged due to negligence or relieve the contractor of other responsibilities as outlined in standard spec 107.11.

B Materials

Match the original monumentation requirements for Reset Property Corners to meet the minimum requirements below.

(1) Block corners of recorded subdivisions shall be monumented according to Section 236.15 (1), Wisconsin Statutes, which states: "…monuments of concrete, containing a ferrous rod one-fourth inch (6.4 mm) in diameter or greater imbedded its full length, not less than 30 inches (760 mm) in length, not less than 4 inches (100 mm) square or 5 inches (130 mm) in diameter, and marked on the top with a cross, brass plug, iron rod, or durable material securely embedded; or by iron rods or pipes at least 30 inches (760 mm) long and 2 inches (50 mm) in diameter weighing not less than 3.65 pounds per linear foot (5.43 kg/m). Solid round or square iron bars of equal or greater length or weight per meter may be used in lieu of pipes wherever pipes are specified in this section."

(2) Exterior corners of a certified survey map and lot corners shall be monumented according to Section 236.15 (1), Wisconsin Statutes, which states: "…iron pipes at least 24 inches (610 mm) long and one inch (25 mm) in diameter, weighing not less than 1.13 pounds per linear foot (1.68 kg/m), or by round or square iron bars at least 24 inches (610 mm) long and weighing not less than 1.13 pounds per linear foot (1.68 kg/m)."

C Construction

When drive-in monuments are to be used, drive them into the ground with the top flush with the surface. In unstable soils the increase the depth as directed by the engineer to obtain a suitable foundation for the monument. No additional compensation will be made for the increased depth of monument.

D Measurement

The department will measure Reset Property Corners as each individual corner reset, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.003	Reset Property Corners	Each

Payment is full compensation for furnishing, placing, and adjusting property corners.

55. Precast Sign Post Base, Item SPV.0060.004.

A Description

This special provision describes constructing and installing precast sign post bases at locations shown on the plans and as hereinafter provided.

B Materials

All materials furnished for the work shall meet the requirements for the class of materials named.

Specific reference is made to the following sections of the standard specifications:

Concrete Masonry	standard spec 501
Steel Reinforcement	standard spec 505

Concrete Masonry shall be of a 3,200-psi minimum strength in 28 days. The 2-inch x 24-inch +1/3-inch insert shall be an ASTMA Designation 120 A53 Fed Spec P404, Schedule 40 untreated black pipe 2-inch diameter, with a galvanized rigid conduit coupling installed.

C Construction

Form the 24-inch x 11-inch precast base according to the details in the plan. Weld the coupling and pipe over 50 percent of the circumference. Center the insert in the base and plumb with the vertical axis of the base, and place so that the coupling is flush 1/8 inch with the top of the troweled surface of the base. The bottom of the insert extends a minimum of 1/8-inch below the base and shall remain open to permit drainage. Weld 3/8-inch by 8-inch reinforcing bar to the insert 8 inches from the top of the base and 8 inches from the bottom of the base to prevent the insert from rotating within the concrete base.

Set the signpost bases at the locations shown on the plans. The center of the finished installation shall be 5'0" + inches from the face of the adjacent curb or from the edge of paved shoulder.

Upon request and reasonable notice from the contractor, the engineer will establish and stake the location for the sign post bases. The City of Madison Traffic Engineering Division Staff will verify all signpost base locations.

Coat the threads of the pipe and coupling in the base with graphite grease prior to assembly. Install the base and pipe as a unit, level with the finished grade of the surrounding surface with the pipe plumb. Tamp the material used for backfilling around the base in 6-inch layers to ensure the installation will remain plumb. Provide a one- year warranty that the signpost base installation shall remain plumb.

Remove and dispose of all excess excavation, surplus material and debris resulting from operations and satisfactorily repair and restore other work damaged by operations.

D Measurement

The department will measure Precast Sign Post Base as each individual unit, installed and accepted in place.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.004	Precast Sign Post Base	Each

Payment is full compensation for furnishing all materials; for the manufacture of the sign post base; for hauling, handling and installing the sign post base, including backfill.

56. Sign Post Base for Concrete Installation, Item SPV.0060.005.

A Description

This special provision describes constructing and installing the sign post bases in concrete sidewalk or pavement at locations shown on the plans and as hereinafter provided.

B Materials

The 2-inch x 16-inch sign post base shall be an ASTMA Designation 120 A53 Fed Spec P404, Schedule 40 untreated black pipe 2-inch diameter, with a galvanized rigid conduit coupling installed.

Waterproof anchoring cement for concrete shall be Unitex, Thorogrip 29/64 or equivalent.

C Construction

The sign post base shall consist of a 2-inch x 16-inch schedule 40 pipe with attached 2” rigid conduit galvanized coupling according to the details in the plan. Weld the coupling and pipe over 100 percent of the circumference.

Set the signpost bases at the locations shown on the plans. The center of the finished installation shall be 5'0" (2’6” for Advanced Street Name Sign Special installations) from the face of the adjacent curb or from the edge of paved shoulder. Upon request and reasonable notice from the contractor, the engineer will establish and stake the location for the sign post bases. The City of Madison Traffic Engineering Division Staff will verify all signpost base locations.

Box out all installations in hard surfaced areas (concrete) with a round PVC pipe with a minimum diameter of 3-inches or installed by drilling or coredrilling a 3-inch hole all the way through the concrete to the base material. If drilling in architectural concrete pavement, cover the surface prior to drilling to protect the surface from drilling slurry. Coordinate all box out locations. With a temporary pipe 4 to 5 feet long, hand-tighten it into the insert. Drive the insert into the base material at a level/plumb position until the insert is flush with the top of the concrete. Shim insert to a level/plumb position with lag bolts or p.k. nails. All shims must be set below the concrete/insert. Remove temporary pipe, replace with permanent pipe, and tighten into insert with large pipe wrench until insert turns. Reset shims or add shims until pipe no longer turns. Retighten pipe and recheck level/plumb/top of concrete with insert. Patch concrete with a waterproof anchoring cement for concrete. Mix patch to a liquid consistency, not a paste. Pour patch until it is flush with the top of the insert. Recheck level/plumb/top of concrete with insert immediately due to fast setting time of cement. Additional cement may be required as it settles. Completed installation shall be level/plumb, solid, and able to support required sign post and signs. Patch shall be flush with adjacent concrete without exposed shims.

Coat the threads of the pipe and coupling in the base with graphite grease prior to assembly. Install the base such that the installed sign post will be plumb. Provide a one- year warranty that the signpost base installation shall remain plumb.

Remove and dispose of all excess excavation, surplus material and debris resulting from operations and satisfactorily repair and restore other work damaged by operations.

D Measurement

The department will measure Sign Post Base for Concrete Installation by each individual unit, installed and accepted in place.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.005	Sign Post Base for Concrete	Each

Payment is full compensation for furnishing all materials; for the manufacture of the sign post base; for hauling, handling and installing the sign post base, including drilling holes in concrete; and for anchoring cement.

57. Project Dewatering, Item SPV.0060.006.

A Description

This section describes dewatering the site during construction or working with the water on-site in a manner that allows the project to be constructed in accordance with the plans and specifications. This item includes removal of any water entering a trench or excavation including but not limited to groundwater, surface water runoff and/or trench dewatering, both clean and potentially contaminated.

Groundwater is expected to be encountered during excavation for the deep storm sewer, and possibly other excavation. Provide and maintain ample means and devices with which to promptly remove all

water entering excavations, trenches, and other parts of the work and keep said excavations dry until the structures to be built therein are completed.

Installation of concrete or masonry structures will not be acceptable if placed in water or if water is allowed to rise over masonry or concrete and there is danger of flotation or of setting up unequal pressures in the concrete until the concrete has set at least 24 hours and any danger of flotation has been removed.

The contractor is responsible for all work, materials and equipment required to comply with permit conditions to dewater the site. At a minimum, pump water into a settling tank, or alternate method approved by the engineer, to settle solids prior to discharge into the storm sewer for clean water and into the designated sanitary sewer for potentially contaminated water.

Potentially contaminated zones of groundwater are marked on the construction plan set. Conform with the requirements of Section 205 of the Standard Specifications, pertinent parts of the Wisconsin Administrative Code (Department of Natural Resources Environmental Investigation and Remediation of Environmental Contamination, Chapters NR 700-736), as shown on the construction plan set, and as supplemented herein. Comply with all permit requirements and applicable regulations and monitor the discharge volume of potentially contaminated water generated as necessary to meet the permit requirements. This bid item is intended for all sub-surface utility work for which dewatering may be necessary including sanitary sewer, water main, storm sewer, electrical and traffic signal construction.

B General

Discharge clean water (of any type or from any source) to the storm sewer system. For the purposes of this project suspended solids will not be considered a type of contamination.

Provide all equipment and personnel necessary to conduct dewatering operations as required for the proper completion of the work. Prepare a dewatering plan and submit it to the engineer for review and approval prior to starting dewatering operations. The plan shall include a description of the proposed dewatering methods and maps or drawings indicating the location of the dewatering facilities and points of surface discharge of the water.

The contractor is solely responsible for choosing a method of water control that is compatible with the constraints defined. The contractor is responsible for the adequacy of the water control system and will take all necessary measures to insure that the water control operation will not endanger or damage any existing adjacent utility or structure.

Design, install and operate the method or methods of water control in such a manner as to provide satisfactory working conditions and to maintain the progress of work. Design the methods and systems so as to avoid settlement or damage to adjacent property in accordance with the applicable legislative statutes and judicial decisions of the State of Wisconsin. All required pumping, drainage and disposal of water will be done without damage to adjacent property or structures, or to the operations of other contractors and without interference with the access rights of public or private parties.

Review and approval of the dewatering plan does not relieve the contractor of the dewatering requirements stated in these specifications. The engineer assumes no liability for the performance or safety of the dewatering system.

Comply with all local ordinances and state statutes for the disposal of water from dewatering operations. Further, it is the contractor's responsibility to contact the Wisconsin Department of Natural Resources Private Water Supply Section prior to construction for dewatering discharge requirements and permits and to comply with all conditions of the Department of Natural Resources. In accordance with Paragraph 144.025(2)(e), Wisconsin Statutes, permits are required for all groundwater control wells that singly or in aggregate produce 70 or more gallons per minute. All wells shall be drilled and sealed in accordance with requirements of the WDNR for installing and abandoning wells. The contact for obtaining well permits is:

Wisconsin Department of Natural Resources
Private Water Supply Section
Box 7921
Madison, Wisconsin 53707
608.261.6421
http://dnr.wi.gov/topic/Wells/dewatering.html

File a copy of the permit with the owner 48 hours prior to commencement of any dewatering.

Discharge potentially contaminated water from the zones as indicated on the construction plan set or as directed by the Engineer to the sanitary sewer. These sites include Site 10 and Site 13. For the purposes

of this project suspended solids shall not be considered a type of contamination. Do not discharge contaminated groundwater without prior approval from the Environmental Consultant.

Obtain a *City of Madison Permit to Discharge to the Sanitary Sewer* compliant with all local ordinances and state statutes. The permit will require that the contractor monitor the volume of total water discharged into the sanitary sewer and will determine the necessary reporting frequency. The contact for obtaining this permit is:

Megan Eberhardt
City of Madison Engineering
608-266-6432
meberhardt@cityofmadison.com

The City's Environmental Consultant will be responsible for obtaining the necessary approvals from the Madison Metropolitan Sewerage District (MMSD) for disposal of potentially contaminated groundwater. This approval will be issued at the same time as the *Permit to Discharge to the Sanitary Sewer.* Submit a dewatering plan to the City of Madison for approval with the application for *Permit to Discharge to the Sanitary Sewer.*

The contact for the City's Environmental Consultant is:

Brynn Bemis
City of Madison Engineering
608-267-1986
bbemis@cityofmadison.com

C Construction

Subsection 205.3 of the standard specifications is supplemented with the following:

Water shall not be allowed in trenches while pipe is being laid.

No masonry shall be installed in water nor shall water be allowed to rise over masonry or concrete if there is danger of flotation or of setting up unequal pressures in the concrete until the concrete has set at least 24 hours and any danger of flotation has been removed.

Dewater in such a manner that assures safe working conditions and provides stable trench side slopes and trench bottom for adequate support of the pipe and appurtenances. Dewater sufficiently to minimize or eliminate groundwater pressures below the proposed trench bottom which otherwise may tend to cause boiling or a "quick" condition at the trench bottom. Where silty sands or other impervious soils are encountered at and/or below the pipe zone, the dewatering equipment must be adequate to relieve the groundwater pressure below the impervious soil layer and accomplish sufficient drainage of the impervious soils to provide a stable trench bottom.

Pump water from the dewatering operations directly to a minimum 1,500 gallon holding tank, or alternate method approved by the engineer, to allow for settlement of large solids. Periodically pump clean water from the top of the settling tank into the storm sewer system. Periodically pump potentially contaminated water from the top of the settling tank into the approved sanitary sewer. Provide a meter to measure the volume of potentially contaminated water discharged to the sanitary sewer system.

If free phase petroleum product, such as gasoline floating on the water, is observed during dewatering activities, terminate dewatering activities and notify the Engineer and the Environmental Consultant.

Notify the Engineer at least three (3) days in advance of any proposed changes to the dewatering plan.

Any flooding or erosion damage caused by dewatering operations is the responsibility of the contractor. If flooding or erosion damage occurs, take immediate steps to eliminate those conditions and to correct any damage. The control of all surface and subsurface water, ice, and snow are considered part of the dewatering. Erosion control shall be exercised at all times, including the placement of silt fences, sedimentation basins and any other devices necessary for proper control.

Dispose of all water removed so as not to endanger public health, private and public property or completed work. Use only electrically driven pumps for dewatering operations. Comply with local requirements for noise control for all equipment utilized as part of the dewatering system (Madison General Ordinance 24.08). Provide sufficient mufflers or other noise reduction devices necessary to minimize the noise of the equipment. If ordered by the engineer, reduce noise to an acceptable level (as determined by the engineer) or supply an alternate system capable of meeting the noise requirements. This applies to any equipment utilized as part of the dewatering system.

Provide stand-by equipment to maintain continuous dewatering in the event of mechanical breakdown to part of the system.

The contractor is responsible for removal and/or abandonment of dewatering wells. Removal and/or abandonment shall conform to all state and local regulations.

D Measurement

The department will measure Project Dewatering once for the contract acceptably completed.

Measure dewatering of potentially contaminated water and provide this information to the engineer at the frequency determined by the *Permit to Discharge to the Sanitary Sewer.* This information will not be used as a basis of payment.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.006	Project Dewatering	EACH

Payment is considered full compensation for furnishing all work necessary for pumping, measuring of potentially contaminated water, settling and discharging water, both clean and potentially contaminated; for paying permit fees required; for eliminating and correcting all flooding or erosion damage caused by dewatering operations.

No disposal fees are required by the City of Madison for discharge to the storm sewer system. The City of Madison will pay for any disposal fees required by MMSD for the discharge of water to the sanitary sewer system.

58. Wastewater Control, Item SPV.0060.007; Wastewater Control MMSD, Item SPV.0060.015.

A Description

Work under this item includes controlling or diverting sanitary sewer flows during reconstruction of the sanitary sewer.

B (Vacant)

C Construction

Provide a pump with a capacity of 200 gallons per minute (City of Madison) and 12,000 gallons per minutes (MMSD) and all associated equipment required to maintain a functioning sanitary sewer system during construction. It is not acceptable, at any time, to disrupt normal flow of wastewater in sanitary sewer service laterals without prior approval from the City of Madison. This condition also holds at the time of connection of an existing lateral to the new sewer main.

If the contractor elects to use bypass pumping as a means of wastewater control, the methods, equipment, type of hose, etc. are subject to approval by the engineer. Ramp any hoses crossing streets, driveways, parking areas, etc., to prevent damage to hoses. Contain spillage of wastewater to be within the utility trench and dispose of spillage into existing sewer downstream to previously

installed sewer piping. Spillage of wastewater to adjacent streets, lawns, etc. will not be tolerated. Should spillage occur, cease all construction operations immediately and begin cleanup operations. Clean site thoroughly prior to the resumption of any construction operations.

D Measurement

The department will measure Wastewater Control and Wastewater Control MMSD once for the contract acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.007	Wastewater Control	EACH
SPV.0060.015	Wastewater Control MMSD	EACH

Payment is full compensation for controlling or diverting all sanitary sewer flows during construction of sanitary sewer.

59. Construction Staking Sanitary Sewer, Item SPV.0060.008.

A Description

Perform work according to the applicable provisions of standard spec 650.

B (Vacant)

C Construction

Set and maintain construction stakes or marks as necessary to achieve the required accuracy and to support the method of operations. Set and maintain a minimum of two construction stakes to establish location and grade of sanitary sewer structures according to the plans and details for sanitary sewer structures. Set and maintain construction stakes to establish location and grade of sanitary sewer main. Provide stakes that establish the horizontal and grade elevation of sanitary main at intervals of 25 feet for a minimum of 100 feet from each structure and at intervals of 50 feet thereafter. Determine offsets in conjunction with contractor requirements. Verify the invert elevations of existing structures which are to remain and be connected into. Locate all stakes included in this bid item to within 0.02 feet horizontally and establish the grade elevation to within 0.01 feet vertically.

Place additional intermittent stakes as necessary to provide staking information at critical areas such as utility, driveway, roadway, and structure crossings.

D Measurement

The department will measure Construction Staking Sanitary Sewer once for the contract acceptably completed

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.008	Construction Staking Sanitary Sewer	EACH

Payment is full compensation for locating and setting all construction stakes; and for relocating and resetting damaged or missing construction stakes.

60. Construction Staking Water Main, Item SPV.0060.009.

A Description

Perform the work according to the applicable provisions of standard spec 650.3.2 and 650.3.6.

B (Vacant)

C Construction

Set and maintain construction stakes and marks as necessary to achieve the required accuracy and to support the method of operations. Set and maintain construction stakes to establish location of water main. Provide stakes at 25-foot intervals to 100 feet from valves, the 50-foot intervals at any bends that are to be constructed. Locate all stakes include in this bid item to within 0.02 feet horizontally to 0.01 feet vertically.

Place additional intermittent stakes as necessary to provide staking information at critical areas such as utility, driveway, roadway, and structure crossing.

D Measurement

The department will measure Construction Staking Water Main once for the contract 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	Construction Staking Water Main	EACH

Payment is full compensation for locating and setting all construction stakes; and for relocating and resetting damaged or missing construction stakes.

61. Inlet Cover Type H Special, Item SPV.0060.010; Inlet Cover Type H-S Special, Item SPV.0060.011.

A Description

This special provision describes installing inlet covers in accordance with the pertinent requirements of section 611 of the standard specifications and the construction details shown in the plans.

B Materials

The inlet covers shall be in accordance with the pertinent materials of section 611 of the standard specifications.

C Construction

Perform work in accordance with section 611 of the standard specifications.

D Measurement

The department will measure Inlet Cover Type (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.0060.010	Inlet Cover Type H Special	Each
SPV.0060.011	Inlet Cover Type H-S Special	Each

Payment shall be in accordance with section 611.5.4 of the standard specifications, including the removal of the cover.

62. Manhole Cover Type J Special, Item SPV.0060.012.

A Description

This special provision describes installing manhole castings in accordance with the pertinent requirements of section 611 of the standard specifications and the construction details shown in the plans.

B Materials

Provide castings according to standard spec 611 and Article 507 of the City Standard Specifications and as shown on the plans. Provide lids with logo per City Standard Specifications Standard Detail Drawing 5.7.16.

C Construction

Perform work in accordance with section 611 of the standard specifications.

D Measurement

The department will measure Manhole Cover Type J 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.0060.012	Manhole Cover Type J Special	Each

Payment shall be in accordance with section 611.5.4 of the standard specifications, including the removal of the cover.

63. Temporary Inlet Cover, Item SPV.0060.013.

A Description

This special provision describes installing and removing temporary inlet covers in accordance with the pertinent requirements of section 611 of the standard specifications and the construction details shown in the plans.

B Materials

Furnish a Neenah casting R-1879-B7G or approved equal.

C Construction

Perform work in accordance with section 611 of the standard specifications.

D Measurement

The department will measure Temporary Inlet Covers by each individual unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.013	Temporary Inlet Cover	Each

Payment shall be in accordance with section 611.5.4 of the standard specifications, including the removal of the cover.

64. Storm Sewer Pipe 96-Inch Bend, Item SPV.0060.014.

A Description

This special provision describes installing storm sewer bends in accordance with the pertinent requirements of section 608 of the standard specifications and the construction details shown in the plans.

B Materials

The storm sewer bends shall be in accordance with the pertinent materials of section 608 of the standard specifications.

C Construction

Perform work in accordance with section 608 of the standard specifications.

D Measurement

The department will measure Storm Sewer Pipe 96-Inch Bend 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.0060.014	Storm Sewer Bend 96-Inch Bend	Each

Payment is full compensation for providing and installing the storm sewer bends; and for excavating, bedding and backfilling.

65. Inlet 2x3-FT Special, Item SPV.0060.016.

A Description

This item shall be in accordance with the pertinent requirements of section 611 of the standard specifications and shall conform to the construction details shown in the plans.

B Materials

The inlets shall be in accordance with the pertinent materials of section 611 of the standard specifications.

C Construction

Perform work in accordance with section 611 of the standard specifications.

D Measurement

The department will measure Inlet 2x3-FT Special 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.0060.016	Inlet 2x3-FT Special	Each

Payment shall be in accordance with section 611.5.2 of the standard specifications.

66. Manhole Special, Item SPV.0060.017.

A Description

This item shall be in accordance with the pertinent requirements of section 611 of the standard specifications and shall conform to the construction details shown in the plans.

B Materials

The manholes shall be in accordance with the pertinent materials of section 611 of the standard specifications.

C Construction

Perform work in accordance with section 611 of the standard specifications.

D Measurement

The department will measure Manhole Special 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.0060.017	Manhole Special	Each

Payment shall be in accordance with section 611.5.2 of the standard specifications.

67. Storm Sewer Tap, Item SPV.0060.018.

A Description

This special provision describes connecting storm sewer to an existing structure or pipe and the construction details shown in the plans.

B Materials

Furnish joint sealing materials conforming to the following:

- Concrete conforming to standard spec 501.
- Mortar conforming to standard spec 519.2.3.
- External rubber gaskets, mastic, and protective film conforming to ASTM C877.

C Construction

Core a hole through the storm sewer structure or pipe with a minimal size to fit and seal the receiving sewer pipe joint according to standard spec 611.3.2.

D Measurement

The department will measure Storm Sewer Tap 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.0060.018	Storm Sewer Tap	Each

Payment is full compensation for coring and providing all materials and labor, tools and incidentals necessary to complete the work.

68. MMSD Sanitary Sewer Bypassing, Item SPV.0060.019.

A Description

This section describes sanitary sewer bypassing required for relocation of MMSD sanitary sewer pipe in University Bay Drive. Sanitary sewer bypass system shall be capable of bypassing an average flow of 2,600 gpm and a maximum flow of 8,300 gpm.

Note that the only nearby conveyances under the railroad tracks that MMSD is aware of is the MMSD sanitary sewer that is being relocated and a storm sewer between storm MH200 (21+12.3BD 20.8 RT) and storm MH 500 (20+64.1BD 11.0 RT). The nearest downstream MMSD manhole that could be used for discharge of the sanitary sewer bypassing is on the opposite side of the railroad tracks from the relocation work being performed.

MMSD system maps can be viewed at the following link:
https://madsewer.maps.arcgis.com/apps/webappviewer/index.html?id=88b097d42ba24851b3d102660d904c18

B Materials

All pumping discharge pipe shall be tested and demonstrated to be leak-free. All discharge pipe shall be hydrostatically tested to 60 psi prior to being placed into service. Protection shall be provided for pipes crossing traffic lanes, driveways, bike lanes, sidewalks, parking areas, etc. Selection of pumping equipment, pipe size, pipe support, and appurtenances shall be the responsibility of the contractor. Subject to approval by MMSD.

Bypass pipe shall be fused HDPE or HDPE with Bauer fittings.

Bypass pumps shall be sized to handle the required average and peak flows given in part A. Redundant back-up pumps are required for all bypass pumping set ups to maintain required capacity should one pump fail.

Pumps shall be continuous self-priming and capable of running dry unattended.

At each suction location, provide a float operated high water alarm at an elevation approved by MMSD. In no case shall the high water elevation be set higher than 1 foot above the top of the pipe at the suction location. High water float shall trip audio, visual, and telephone alarms. Telephone alarm shall call at least one phone number that will be answered 24 hours a day by a responsible person.

Special discharge plans or materials such as tapping sleeves, flow through plugs, use of storm sewers (if allowed by Owner of storm sewer), shall be approved by MMSD.

C Construction

Contractor shall provide for the continuous flow of sewage around the sections of sewer to be relocated.

Submit bypass pumping plan, including: list of equipment, primary and backup pump models and sizes, estimated length of time required for bypassing, planned pump suction and discharge locations, any special suction or discharge connections, pipe sizes and lengths and estimated friction losses, methods of protection of pipe in traffic areas, number of tanker or pumper trucks used including model and capacity of each and time required to fill and empty, routes to be used by tanker trucks, hydrostatic pressure test results, ramp details, and other information that may be required to convey a complete by-pass pumping plan.

No spillage of wastewater to adjacent streets, lawns, etc., shall be tolerated. If any such spillage should occur, all construction operations shall cease and cleanup shall commence immediately and be completed to the satisfaction of MMSD prior to the resumption of any construction operations.

Establish a continuously staffed pump watch during all hours of bypass operation. At each suction location, establish a stable measuring point at a known elevation tied to OWNER's vertical datum. Measure down from this point to the waste water surface and record the waste water surface elevation at least once each hour. Record any other notable events such as pump maintenance, rainfall, etc.

Bypassing will not be permitted in the event of current or predicted wet weather. MMSD reserves the right to determine when bypassing will or will not be allowable in wet weather

Contractor shall familiarize himself with the sanitary sewerage facilities and develop an adequate bypassing plan. A written plan shall be submitted to MMSD for approval prior to the start of work.

All pumps shall be started at least once per day to provide proper operation and reliability. Any pump that does not start or is found to be inoperable shall be serviced or replaced immediately.

D Measurement

The department will measure MMSD Sanitary Sewer Bypassing once for the MMSD relocation 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.0060.019	MMSD Sanitary Sewer Bypassing	Each

Payment is full compensation for all work herein specified and required to bypass sanitary sewage to completely relocate MMSD sanitary sewer pipe in and near University Bay Drive, including multiple set ups and relocation of suction and discharge locations, if required.

69. Close Storm Sewer Connection, Item SPV.0060.020.

A Description

This special provision describes plugging the existing pipe connections in accordance with the pertinent requirements of section 204 of the standard specifications and the construction details shown in the plans.

B Materials

The pipe connection plugging shall be in accordance with the pertinent materials of section 204 of the standard specifications.

C Construction

Perform work in accordance with section 204 of the standard specifications.

D Measurement

The department will measure Close Storm Sewer Connection 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.0060.020	Close Storm Sewer Connection	Each

Payment shall be in accordance with section 204.5.1 of the standard specifications.

70. Construction Staking Project 5992-11-31, Item SPV.0060.021; Construction Staking Project 5992-11-33, Item SPV.0060.022.

A Description

This special provision describes providing all construction staking in accordance with section 650 of the standard specification including storm sewer, subgrade, base, curb & gutter, structure layout, electrical installations, supplement control, slope stakes and curb ramps.

B (Vacant)

C Construction

Perform construction staling in accordance with section 650.3 of the standard specifications.

D Measurement

The department will measure Construction Staking (project) once for the contract 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.0060.021	Construction Staking Project 5992-11-31	EACH
SPV.0060.022	Construction Staking Project 5992-11-33	EACH

Payment is full compensation for performing all survey work required to layout and construct all work under this contract.

71. Implement Tree Protection Plan, Item SPV.0060.023.

A Description

This special provision describes Implement Tree Protection Plan according to the plan created by Tree Health Management.

B (Vacant)

C Construction

A tree protection plan was created by Tree Health Management and is included in the project manual. Contractor shall hire a certified arborist, Tree Health Management, or equal, to implement the tree protection plan. If contractor makes a good faith effort to follow and implement the tree protection plan, contractor will not be responsible for trees that do not survive as a result of contractor's construction efforts.

D Measurement

The department will measure Implement Tree Protection Plan by Implement Tree Protection Plan, completed in accordance to the contract and accepted, as a single complete unit of work.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.023	Implement Tree Protection Plan	EACH

Payment is full compensation for all work herein specified.

72. Furnish and Install Fluorocarbon Gaskets, 6-Inch, Item SPV.0060.024; Furnish and Install Fluorocarbon Gaskets, 8-Inch, Item SPV.0060.025; Furnish and Install Fluorocarbon Gaskets, 12-Inch, Item SPV.0060.026; Furnish and Install Fluorocarbon Gaskets, 16-Inch, Item SPV.0060.027.

A Description

Furnish and install fluorocarbon gaskets on all water main joints, both push-on and mechanical, where water main is located within contaminated areas as designated in the plans or discovered in the field.

B Materials

Furnish fluorocarbon gaskets for push-on and mechanical joints manufactured for ductile iron water main in accordance with Section 702.3 of the City Standard Specifications.

C Construction

Furnish, store, care for and install gaskets per manufacturer's recommendations and per Section 704.3.3 of the City Standard Specifications.

D Measurement

The department will measure Furnish & Install Fluorocarbon Gaskets (Size) by each gasket acceptably installed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.024	Furnish and Install Fluorocarbon Gaskets, 6-Inch	EACH
SPV.0060.025	Furnish and Install Fluorocarbon Gaskets, 8-Inch	EACH
SPV.0060.026	Furnish and Install Fluorocarbon Gaskets, 12-Inch	EACH
SPV.0060.027	Furnish and Install Fluorocarbon Gaskets, 16-Inch	EACH

Payment is full compensation for all work herein specified.

73. MMSD Sanitary Sewer Manhole (6-Foot Diameter), Item SPV.0060.028; MMSD Sanitary Sewer Manhole (7-Foot Diameter), Item SPV.0060.029; Interceptor Sewer Manhole, (6-Foot Diameter), Item SPV.0060.057.

A Description

This section describes constructing an interceptor sewer manhole consisting of precast reinforced concrete, adjusting rings, watertight joints, precast concrete base, precast tops, metal frames, covers, including excavating and backfilling.

B Materials

Unless otherwise specified or shown on the Drawings for special manholes, all manholes shall be reinforced concrete precast manholes. Reinforced concrete manhole base sections, riser sections, cones, and flat slabs shall conform to the requirements of ASTM C478. Solid precast manhole bottoms shall be provided except where shown on the Drawings.

Manhole top sections shall be precast reinforced flat slabs. Flat slabs shall have opening offset unless otherwise required or shown. Flat slabs shall be designed for HS20 loadings.

Unless otherwise specified or shown on the Drawings, all underground utility structures shall be precast, reinforced concrete. Reinforced concrete base sections, riser sections, and flat slabs shall conform to the requirements of ASTM C858. Flat slabs shall be designed for HS20 loadings. Solid precast bottoms shall be provided unless otherwise shown on the Drawings.

Manhole Chimney Adjusting Rings: Provide HDPE manhole adjusting rings. HDPE adjustment rings shall be Ladtech, or equal and shall meet AASHTO HS25 specifications. Joints shall be sealed with approved silicone or butyl sealant in accordance with manufacturer's recommendations.

Lengths of manhole riser (barrel) shall be furnished in such combinations as to conveniently make up the depth of the manhole. A maximum of two handling holes per length of riser will be permitted.

The interior bottom of Interceptor Sewer manholes shall be constructed of concrete benches which shall be precast or poured in place in the field. Benches shall extend 24-inches above the invert elevation. Flow lines shall be made smooth with uniform curves to promote flow through the manhole.

All joints between manhole pipe sections and top shall be tongue and groove conforming to ASTM C443. Manhole joints shall be sealed with circular O ring or preformed flexible joint sealant that shall be Ram-nek, Kent-Seal, Mas-stik, or equal.

Manhole connections for interceptor sewer mains shall be made using flexible, watertight connections, PSX Press Seal, Kor N Seal, or equal, for sewers up through 18 inch diameter. All other sanitary sewer manhole connections shall be made with A Lok, PSX Press Seal, Kor N Seal, or equal. The joint shall provide a flexible, watertight connection between pipe and manhole.

Manhole bottoms for interceptor sewer shall be monolithically precast with the bottom section for manholes up through 6 foot diameter. Bottoms for larger diameter manholes shall be precast but need not

be monolithically cast with the bottom section. All other manhole bottoms shall be either poured in place or precast concrete.

Manholes shall be furnished large enough to provide a minimum distance, between adjacent pipe, measured tangentially along the inside face of the manhole, equal to one half the outside diameter of the intersecting sewer pipe. In any event, manholes shall be furnished in the diameter necessary to accommodate intersecting sewer pipe and the pipe to manhole connection as proposed for use.

Precast reinforced concrete manhole risers and tops shall be tested in accordance with ASTM C497. Precast reinforced concrete manhole risers and tops meeting the strength requirements will be considered acceptable and shall be stamped with an appropriate monogram. When requested, copies of test reports shall be submitted to engineer before the manhole sections are installed. Final acceptance will be made after field inspection upon delivery to the jobsite.

Precast reinforced concrete manhole sections shall be subject to rejection for failure to conform to any of the requirements of the Standard Specifications. In addition, individual sections of manhole risers and tops may be rejected because of any of the following reasons:

a. Fracture or cracks passing through the wall, except for a single end crack that does not exceed the depth of the joint.

b. Defects that indicated imperfect proportioning, mixing, and molding.

c. Surface defects indicating honey-combed or open texture.

d. Damaged ends, where such damage would prevent making a satisfactory joint.

e. Noticeable infiltration into manhole.

f. Variation in diameter of the manhole section of more than 1% from the nominal diameter.

g. Any continuous crack having a surface width of .01 inch or more and extending for a length of 12 inches or more regardless of position in the section wall.

Each precast reinforced concrete manhole riser and top section shall be clearly marked with the name or trademark of the manufacturer and the date of manufacture. This marking shall be indented into the manhole section or shall be painted thereon with waterproof paint.

Manhole Casting:

All manhole castings shall be gray iron and meet the requirements of ASTM A48. Standard manhole castings shall be Neenah R-1550 with machined frame, Type B solid lid, concealed pick holes and self-sealing gaskets. Covers shall be lettered “MADISON METROPOLITAN SEWERAGE DISTRICT.” The frame for all manhole castings shall have the non-rocking feature built in unless otherwise shown on the plans.

C Construction

Manholes shall be installed in accordance with the plans. For interceptor sewers, openings shall be located over the bench and not the sewer flow line itself.

All manholes shall be made watertight and shall show no visible signs of leakage at the time of final review and within the correction period. Any leakage shall be sealed from the exterior of the manhole.

In drop manholes, the upper pipe of the drop shall be stubbed into the manhole 8 inches horizontally. The end of the upper pipe shall be cut off at an approximately 30 degree angle so the resulting opening is facing up towards the manhole casting.

All manhole adjusting rings shall be sealed with preformed flexible joint sealant. Final rim elevation and manhole adjustment shall be determined in the field. Metal adjusting rings and metal paving rings on the castings shall not be used.

D Measurement

The department will measure Interceptor Sewer Manhole, (6-Foot Diameter) and MMSD Sanitary Sewer Manhole (size) as each manhole acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.028	MMSD Sanitary Sewer Manhole (6-Foot Diameter)	Each
SPV.0060.029	MMSD Sanitary Sewer Manhole (7-Foot Diameter)	Each
SPV.0060.057	Interceptor Sewer Manhole, (6-Foot Diameter)	Each

Payment is full compensation for all work herein specified and including but not limited to excavation, necessary pipe materials and fittings, bedding and cover materials, disposal of material, and notifications necessary to complete the work in compliance with these specifications.

The department will pay separately for dewatering.

74. Utility Line Opening (ULO), Item SPV.0060.030.

A Description

This special provision describes excavating to uncover utilities for the purpose of determining elevation and potential conflicts as shown in the plans or as directed by the engineer.

B (Vacant)

C Construction

Perform the excavation in such a manner that the utility in question is not damaged and the safety of the workers is not compromised.

Perform the utility line openings as soon as possible and at least 10 days in advance of proposed utility construction to allow any conflicts to be resolved with minimal disruption. Where utilities are within 6 feet of each other at a potential conflict location, only one utility line opening is called for. In these cases, a single utility line opening will be considered full payment to locate multiple utilities. Utility line openings include a trench up to 10 feet long as measured at the trench bottom, and of any depth required to locate the intended utility.

Utility line openings within RR ROW shall be by vacuum excavation only. Contractor to coordinate required ULO work with WisDOT and the Wisconsin and Southern Railroad Company. Contractor to obtain a Temporary Authorization Permit (TAP) to perform ULO work.

Approve and coordinate all utility line openings with the engineer. Notify the utility engineers or their agents of this work a minimum of 3 days prior to the work so they may be present when the work is completed.

D Measurement

The department will measure Utility Line Opening 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.0060.030	Utility Line Opening	Each

Payment is full compensation for the excavation required to expose the utility line; backfilling with existing material removed from the excavation; compacting the backfill material; restoring the site; and for cleanup.

Existing pavement, concrete curb, gutter, and sidewalk removals necessary to facilitate utility line openings shall not be considered part of our paid for under Utility Line Openings, but shall be considered separate and measured and paid for separately as removal items. Temporary pavement, concrete curb, gutter, and sidewalk items shall also be considered separate from Utility Line Openings and will be measured and paid for separately.

75. Sewer Electronic Markers, Item SPV.0060.031.

A Description

Work under this item includes installing Sewer Electronic Markers according to Article 503.2 of the City Standard Specifications. These sewer electronic markers will be installed where called for on the plan set above sanitary sewer.

B Materials

All materials are described in Article 503.2(f) of the City Standard Specifications. Markers will be provided by the City of Madison.

C Construction

Install Sewer Electronic Markers (sanitary) according to Article 503.2(f) of the City Standard Specifications.

Notify the engineer when marker balls are installed. Each marker ball will be tested by the city before completion of final pavement surface to confirm that it is installed and functioning properly. If it is not installed or functioning, excavate to expose the existing marker ball or lateral and place a new marker ball. No additional compensation will be provided for this work.

D Measurement

The department will measure Sewer Electronic Markers as each individual sewer electronic marker, 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.0060.031	Sewer Electronic Markers	Each

Payment for Sewer Electronic Markers is full compensation for furnishing all work required to complete the installation and all associated work to provide a complete functioning system. The department will not pay for replacing those marker balls that are non-functional. Marker balls will be provided by the City of Madison.

76. Sanitary Lateral Reconnect, Item SPV.0060.032.

A Description

This special provision describes sanitary sewer lateral connections encountered during the course of this project that connect to the sanitary sewer main.

B Material

Furnish sanitary sewer pipe and fittings that are solid-wall Poly Vinyl Chloride (PVC) and that conform to the requirements of the Specification for PVC Sewer Pipe and Fittings, ASTM D 3034.

Provide sanitary sewer pipe and fittings having a standard dimension ratio of 26 or 35 depending on the depth of the pipe. Sewer lateral pipe and fittings deeper than 12 feet will have ASTM D3034 SDR 26 pipe.

Furnish elastomeric or solvent cement joints made as recommended by the manufacturer.

C Construction

Install risers, where necessary, according to Standard Detail Drawing 5.3.1 of the City Standard Specifications. Risers five feet in length are included in the bid item Sanitary Lateral Reconnect. Backfill and compaction according to Article 202.3(b) of the City Standard Specifications using select fill.

D Measurement

The department will measure Sanitary Lateral Reconnect as each individual sanitary sewer reconnect, acceptably completed.

Sanitary sewer lateral pipe exceeding 5 feet in length will be paid under bid item Sanitary Sewer Lateral.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.032	Sanitary Lateral Reconnect	Each

Payment is full compensation for furnishing all materials, including fill material; plugging the ends of all existing sewer laterals; excavation; trimming and chipping; cutting, protecting or removing reinforcing steel; disposal of surplus materials from the structure or excavation; excavation and compaction of the backfill material; restoring the site.

77. Sanitary Sewer Tap, Item SPV.0060.033.

A Description

Work under this item includes the connection of a new lateral or main to an existing structure and the connection of an existing lateral or main to a new structure.

B Materials

Provide Kor-n-Seal, or approved equal, in the tapped hole, according to Standard Detail Drawing 5.7.31 of the City Standard Specifications.

C Construction

C.1 New Pipe to Existing Structure

Use a portable coring drill to produce a pipe opening that is round, clean and free of any pitting of the concrete.

Make a watertight connection of the pipe to the sewer access structure with a Kor-n-Seal or approved equal, according to Standard Detail Drawing 5.7.31 of the City Standard Specifications.

C.2 Existing Pipe to New Structure

Provide a flexible connector to connect the existing pipe to any new pipe which is required to make the connection to the structure.

Provide PVC (SDR-26, SDR-35) that matches the existing pipe's diameter, or the next larger diameter, to reconnect the existing sewer main or lateral.

The pouring and construction of concrete benches and flowlines in new sewer access structures for the inlet or outlet pipes is not included in this bid item and is considered incidental to the bid item Sanitary Sewer Access Structure (size).

The downstream pipe connection to a Sanitary Sewer Access Structure (size) is considered incidental to the Sanitary Sewer Access Structure (size).

D Measurement

The department will measure Sanitary Sewer Tap as each individual sanitary sewer tap, 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.0060.033	Sanitary Sewer Tap	Each

Payment is full compensation for providing all connectors and for coring.

78. Sanitary Sewer Access Structure (4-Foot Diameter), Item SPV.0060.034; Sanitary Sewer Access Structure (5-Foot Diameter), Item SPV.0060.035.

A Description

Work under this item includes installing Sewer Access Structures at the depths and locations shown on the plan.

B Materials

Provide precast concrete Sanitary Sewer Access Structure (Size) meeting the requirements of Standard Detail Drawing 5.7.2, 5.7.15, and Article 507.3 of the City Standard Specifications.

Furnishing and installing Sewer Access Structure Frames and Covers, according to Standard Detail Drawing 5.7.16 of the City Standard Specifications, will be paid for separately under the Manhole Covers Type J, bid item.

C Construction

Install Sanitary Sewer Access Structure (Size) according to Article 507.3 of the City Standard Specifications. Maintain the normal flow of wastewater at all times during installation of the new sanitary sewer access structure and when connecting pipes to the new structure. All bypass pumping, temporary piping, and/or temporary connections, which are required to maintain the normal flow of wastewater throughout construction, is incidental to this bid item.

Construct concrete benches and flow lines as directed by the engineer.

D Measurement

The department will measure Sanitary Sewer Access Structure (Size) as each individual sanitary sewer access structure, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.034	Sanitary Sewer Access Structure (4-Foot Diameter)	Each
SPV.0060.035	Sanitary Sewer Access Structure (5-Foot Diameter)	Each

Payment is full compensation for installing sanitary sewer access structures, constructing benches and flow lines; for furnishing and installing all bypass or temporary piping and connections.

79. Sanitary Sewer Internal Chimney Seal, Item SPV.0060.036.

A Description

Furnish and install an internal chimney seal on all sanitary sewer access structures located within 100 feet of a street low point, in greenways, and where indicated on the plan.

B Materials

Provide an internal chimney seal consisting of a low-density polyethylene insert conforming to the Standard Detail Drawing 5.7.17–SAS Internal Chimney Seal of the City Standard Specifications or other equivalent chimney seal products as approved by the engineer.

C Construction

Install internal chimney seals according to the manufacturer’s instructions.

D Measurement

The department will measure Sanitary Sewer Internal Chimney Seal as each individual sanitary sewer internal chimney seal, 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.0060.036	Sanitary Sewer Internal Chimney Seal	Each

Payment is full compensation for the installation of the sanitary internal chimney seal.

80. Remove Sanitary Sewer Access Structure, Item SPV.0060.037.

A Description

This special provision describes removing sanitary sewer access structures as shown on the plans. The work includes salvaging and disposing of the resulting materials and backfilling the trenches with select fill.

B Materials

Provide select fill meeting the requirements of Article 202.2 of the City Standard Specifications; furnishing and placing select fill in the void created by the structure removal is included with this bid item.

C Construction

Remove sanitary sewer access structures according to Article 203.2(a) of the City Standard Specifications. Plugging of sewer mains and laterals that are connected to a removed Sanitary Sewer Access Structure with a concrete plug are incidental to this item. Payment for Concrete Slurrying of an entire sewer main will be paid for separately under Abandon Sanitary Sewer–Slurry.

D Measurement

The department will measure Remove Sanitary Sewer Access Structure as each individual remove sanitary sewer structure, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.037	Remove Sanitary Sewer Access Structure	Each

Payment is full compensation for furnishing all materials, including fill material; for disposal of surplus materials; excavation and compaction of select fill material; restoring the site.

81. Abandon Sanitary Sewer Access Structure, Item SPV.0060.039.

A Description

This work consists of abandoning sanitary sewer access structure as shown in the plans and hereinafter provided.

B Materials

Provide select fill meeting the requirements of Article 203.2(e) of the City Standard Specifications; furnishing and placing select fill in the void created by the structure abandonment is included with this bid item.

C Construction

Abandon the sanitary sewer access structures according to Article 203.2(c) of the City Standard Specifications. Plug sewer mains that are connected to an abandoned sanitary sewer access structure with a concrete plug paid for by separately under Abandon Sanitary Sewer–Pipe Plug. Concrete slurring of an entire sewer main will be paid for separately under Abandon Sanitary Sewer–Slurry.

D Measurement

The department will measure Abandon Sanitary Sewer Access Structure as each individual abandon sanitary sewer access structure, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.039	Abandon Sanitary Sewer Access Structure	Each

Payment is full compensation for furnishing all materials, including fill material; for disposal of surplus materials; excavation and compaction of select fill material; restoring the site.

82. Abandon Sanitary Sewer–Pipe Plug, Item SPV.0060.040.

A Description

This work consists of plugging pipes as shown in the plans and hereinafter provided.

B Material

Provide concrete conforming to Article 301 of the City Standard Specifications.

C Construction

Abandon sanitary sewer pipe with a plug according to Article 203 of the City Standard Specifications. Provide replacement sanitary sewers and laterals or appropriate bypass pumping prior to abandoning sanitary sewer pipe.

Saw cut end of existing pipe and clean interior of pipe to create a good bonding surface. Form and pour a minimum 1-foot deep concrete plug completely filling the opening of the pipe.

Where structures are called out for removal or abandonment, plug pipes at the structure will be considered incidental to removal or abandonment of the manhole

Any plugs required to abandon the existing sanitary main where laterals are being extended will be considered incidental to sanitary sewer lateral bid item. Concrete Slurrying of an entire sewer main will be paid for separately under Abandon Sanitary Sewer–Slurry.

D Measurement

The department will measure Abandon Sanitary Sewer– Pipe Plug as each individual pipe plug, 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.0060.040	Abandon Sanitary Sewer – Pipe Plug	Each

Payment is full compensation for all work in abandoning sanitary sewer-pipe plug as specified herein.

83. Furnish & Install 6-Inch Water Valve, 6-Inch, Item SPV 0060.041; Furnish & Install 8-Inch Water Valve, 8-Inch; Item SPV.0060.042; Furnish & Install 12-Inch Water Valve, 12-Inch, Item SPV.0060.043; Furnish & Install 16-Inch Water Valve, 16-Inch, Item SPV.0060.044.

A Description

This work consists of furnishing and installing all water valves as identified on the plan and as required to complete the installation of the proposed water main according to section 704.6 of the City Standard

Specifications and as hereinafter provided. Proposed valves associated with pressure taps, are not included in these items.

B Materials

Furnish materials according to sections 702 and 704.6.2 of the City Standard Specifications.

C Construction

Install valves according to sections 703 and 704.6.3 of the City Standard Specifications. These items include furnishing all materials and fittings; bedding the valves; excavating, dewatering and compacting the trenches; installing valves, valve boxes and any necessary extensions; adjustments of valve boxes; installing and removing sheeting and bracing; restraint, polyethylene encasement, thrust restraint and any other appurtenances required to furnish and install valves as required. Furnish and install valve box extensions where needed. All valve box extensions are incidental to the installation of the valve.

D Measurement

The department will measure Furnish & Install (Size) Water Valve as each individual water valve, 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.0060.041	Furnish & install 6-Inch Water Valve	Each
SPV.0060.042	Furnish & install 8-Inch Water Valve	Each
SPV.0060.043	Furnish & install 12-Inch Water Valve	Each
SPV.0060.044	Furnish & install 16-Inch Water Valve	Each

Payment is full compensation for furnishing all materials; for disposal of surplus materials; excavation and compaction of select fill material; restoring the site.

The department will pay separately for dewatering.

84. Furnish and Install Hydrant / Salvage Existing Hydrant, Item SPV.0060.045.

A Description

This work shall consist of furnishing and installing new fire hydrants and abandoning and salvaging existing hydrants as shown on the plans according to section 704.7 of the City Standard Specifications.

B Materials

Furnish materials according to sections 702 and 704.7.2 of the City Standard Specifications.

Furnish hydrants with permanently plugged drain ports or hydrants without drain ports where identified on the plans.

C Construction

Install all hydrants according to Hydrant Detail and Sections 703 and 704.7.3 of the City Standard Specifications, unless otherwise shown or specified. Install hydrants with permanently plugged drain ports or hydrants without drain ports in areas where contamination is present and/or where identified on the plans. Abandon and salvage existing hydrants per Section 704.7.3 of the City Standard Specifications.

D Measurement

The department will measure Furnish and Install Hydrant by each new hydrant that is acceptably completed. Abandoning and salvaging hydrants is incidental to this 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.0060.045	Furnish & Install Hydrant / Salvage Existing Hydrant	Each

Payment is full compensation for furnishing all materials; for disposal of surplus materials; excavation and compaction of select fill material; restoring the site.

85. Reconnect Water Service Lateral, 1-inch, Item SPV.0060.046; Reconnect Water Service Lateral, 2-inch, Item SPV.0060.048.

A Description

This work consists of connect-to and extend existing water service laterals otherwise cut off and shorten, existing copper water service laterals and connect the lateral to the new water main. Restore any disturbed terrace areas, as necessary.

B Materials

Provide materials according to Sections 702 and 704.11 of the City Standard Specifications.

C Construction

Complete all associated work according to Section 703, 704.9, and 704.11 of the City Standard Specifications. This work includes but is not necessarily limited to; all excavation including hand digging necessary to expose the existing piping, reconnecting the existing service, backfilling the excavation,

compacting the backfill material, maintaining the ditches and all other work incidental to restoring and maintaining the site.

D Measurement

The department will measure Reconnect Water Service Lateral (size) as each reconnect water service lateral, 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.0060.046	Reconnect Water Service Lateral, 1-Inch	Each
SPV.0060.048	Reconnect Water Service Lateral, 2-Inch	Each

Payment is full compensation for furnishing all materials; for disposal of surplus materials; excavation and compaction of select fill material; restoring the site.

86. Cut-In or Connect-To Existing Water System, Item SPV.0060.049.

A Description

Cut-In or Connect To Existing Water System consists of all means and methods, equipment, tools, labor, and incidentals necessary for making a plug-removal connection or a cut-in connection to existing water mains, including thrust restrain against and water-tight capping of existing water mains associated with the work.

B Materials

Refer to section 702 of the City Standard Specifications.

C Construction

Conform all work to Sections 703 and 704.12.3 of the City Standard Specifications. For any location where the existing main is cut and capped, either permanently or temporarily, the location of the cap shall be such that no more than one foot of dead end main is created unless shown or called out as such on the plans or approved by the engineer or Water Utility inspector.

D Measurement

The department will measure Cut-In or Connect-To Existing Water System as each connection acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.049	Cut-In or Connect-To Existing Water System	Each

Payment is full compensation for furnishing all materials; for disposal of surplus materials; excavation and compaction of select fill material; restoring the site.

87. Abandon Water Valve Box, Item SPV.0060.051.

A Description

Abandon Water Valve Box consists of abandoning all water valve boxes within the project limits that serve valves no longer in service, indicated in the plans, or directed by the engineer according to Section 704.15 of the City Standard Specifications. This item includes placing the valve in the closed position prior to abandoning the box and completely removing the valve box whenever possible.

B Materials

Refer to section 702 of the City Standard Specifications.

C Construction

Conform all associated work to the requirements of Section 703 and 704.15.3 of the City Standard Specifications. Perform work after the existing water main has been abandoned. Remove the top casting to a point three feet below the existing elevation, then backfill the opening with select fill and compact.

D Measurement

The department will measure Abandon Water Valve Box as each abandon water valve box, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.051	Abandon Water Valve Box	Each

Payment is full compensation for furnishing all materials; for disposal of surplus materials; excavation and compaction of select fill material; restoring the site.

88. Abandon Water Valve Access Structure, Item SPV.0060.052.

A Description

Abandon Water Valve Access Structure consists of abandoning all water valve access structures within the project limits that serve valves no longer in service, as indicated in the plans, or directed by the engineer according to Section 704.16 of the City Standard Specifications. This item includes placing the valve in the closed position prior to abandoning the access structure.

B Materials

Refer to section 702 of the City Standard Specifications.

C Construction

Conform all associated work to the requirements of Section 703 and 704.16.3 of the City Standard Specifications. Perform work after the existing water main has been abandoned.

D Measurement

The department will measure Abandon Water Valve Access Structure as each abandon water valve access structure, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.052	Abandon Water Valve Access Structure	Each

Payment is full compensation for furnishing all materials; for disposal of surplus materials; excavation and compaction of select fill material; restoring the site.

89. Furnish and Install Insulation, Item SPV.0060.053.

A Description

Furnish and Install Insulation consists of installing rigid foam board or tubular insulation to insulate water mains and/or water service laterals where 1) the top of water main or service lateral has 5-feet of cover or less 2) the water main or service lateral crosses below storm sewer pipe 24 inches or greater in diameter, or 3) when otherwise specified on the drawings or as directed by the Engineer.

B Materials

Refer to Section 702 and 704.17.2 of the City Standard Specifications.

C Construction

Conform all associated work to the requirements of Section 702 and 704.17.3 of the City Standard Specifications.

D Measurement

The department will measure Furnish and Install Insulation as each 4-foot by 8-foot sheet of insulation effectively installed, or per 8-foor length unit of tubular service insulation 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.0060.053	Furnish and Install Insulation	Each

Payment is full compensation for furnishing all materials; for disposal of surplus materials; excavation and compaction of select fill material; restoring the site.

90. Adjust Water Valve Box Sections, Item SPV.0060.054.

A Description

Work under Adjust Water Valve Box Sections may include a combination of the following:

(1) Adjust existing water valve boxes to 1/2-inch below finished grade.

(2) In addition to the work described in (1), furnish and install a new water valve box top casting and lid where the Engineer determines existing valve box top section is damaged or non-functioning.

(3) In addition to the work described in (1) and (2), furnish and install a new lower valve box section(s) where the Engineer determines existing lower valve box sections to be damaged or non-functioning.

(4) If full replacement of existing valve box is required, perform the replacement installation in accordance with bid item Furnish & Install Water Valve. Adjustment of new valve boxes is incidental to water main construction and will not be paid under this item.

B Materials

Provide all materials according to Section 702 of the City Standard Specifications.

C Construction

Perform all work according to Section 703 and 704.20.3 of the City Standard Specifications.

D Measurement

The department will measure Adjust Water Valve Box Sections as each individual adjust water valve box section 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.0060.054	Adjust Water Valve Box Sections	Each

Payment is full compensation for furnishing all materials; for disposal of surplus materials; excavation and compaction of select fill material; restoring the site.

91. Furnish and Install Anode, Item SPV.0060.055.

A Description

Furnish and install galvanic anodes for added corrosion protection where new water mains connect to dissimilar existing main materials. The contractor shall install galvanic anodes in accordance with these specifications, or as otherwise directed by the Engineer.

B Materials

Anodes: Anodes shall be prepackaged magnesium style high potential anodes weighing at least seventeen (17) pounds. Anodes shall be packaged in a cotton bag prepacked with low resistive backfill consisting of seventy-five percent (75%) gypsum, twenty percent (20%) bentonite, and five percent (5%) sodium sulfate.

Pipe Connection Lead Wire: Anodes shall be provided with at least 10-feet of #12 AWG copper, single-conductor lead wire. Lead wire cable shall be designed for direct burial applications.

Thermite Welding Equipment: The lead wire to the new water main pipe shall be field-welded CADWELD thermite weld caps, or approved equal.

C Construction

Perform all work according to Section 703 and this section.

Anode Installation:

1) Anodes are required at all locations where new ductile iron water main is attaching to existing, dissimilar water main material, including existing unwrapped ductile iron. Anode placement at connections to wrapped ductile iron water main will be required when required by the Engineer or are specified on the plans.
2) Anodes are not required at service lateral connections, including large-diameter services.
3) Anodes shall be installed between one and three feet from the side wall of the pipe, to a centerline depth in-line with the approximate horizontal plane of the pipe.

Connect the copper lead wire to the new ductile iron pipe within one-foot of the water main connection with field-welded CADWELD bond. Protect and repair bond connection and any associated coating repairs per City Standard Specification Section 702.3.1 – 'Electrical Conductivity.'

Extreme care shall be taken not to damage the anodes or direct buried lead wires during backfill operations.

D Measurement

The department will measure Furnish and Install Anode as each individual anode 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.0060.055	Furnish and Install Anode	Each

Payment is full compensation for furnishing all materials; for disposal of surplus materials; excavation and compaction of select fill material; restoring the site.

92. Clay Trench Plug, Item SPV.0060.056.

A Description

This work consists of furnishing and installing clay trench plugs as specified below and as shown in the plans.

B Materials

Use select clay fill classified as CL or CH according to the Unified Soil Classification System. Allow a maximum clump size of 6 inches capable of being broken down with normal construction equipment to a size of 2 to 3 inches prior to compaction. Fifty percent or more of the soil particles by weight must pass the Number 200 sieve. Remove rocks, stones, sticks, and other foreign objects greater than 2 inches prior to placement.

C Construction

Maintain proper moisture content to achieve specified compaction. Make water available on site for clay conditioning. Provide select clay fill in lift thicknesses as required to obtain the specified levels of compaction. Do not exceed maximum lift thicknesses of 4 to 6 inches after compaction. Compact select clay fill using penetrating foot -type compaction equipment having protrusions greater in length than the lift thickness of clay being compacted. Use compaction equipment of sufficient weight to compact clay with reasonable amount of effort in order to achieve the specified levels of compaction. Place overburden material as soon as practical after completion of select clay fill placement to avoid drying and desiccation of select clay fill. Provide each layer of fill to the degree that no further appreciable consolidation is evidence under the action of the compaction equipment. Engineer may require that the compaction of the material be to a dry density of 90 percent of the maximum dry density as determined by the Modified

Proctor test, or 95 percent of the Standard Proctor maximum dry density. Attain the required compaction for each layer before placing any material for the succeeding layer.

D Measurement

The department will measure Clay Trench Plug as each clay trench plug 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.0060.056	Clay Trench Plug	Each

Payment is full compensation for furnishing all materials; for disposal of surplus materials; excavation and compaction of select fill material; restoring the site.

93. Interceptor Manhole Lining System, Item SPV.0060.058.

A Description

This section describes preparation and application of interceptor manhole lining system on walls and ceilings in manholes as noted on drawings.

B Materials

B1 APPROVED MANUFACTURERS

Raven Lining Systems, 1024 North Lansing Avenue, Tulsa, Oklahoma 45106, (800) 324-2810, (918) 584-2810, fax (918) 582-4311, www.ravenlining.com.

Sauereisen, 160 Gamma Drive, Pittsburg, Pennsylvania 15238-2989, fax (412) 963-7620, www.sauereisen.com

Tnemec Company, Inc., 6800 Corporate Drive, Kansas City, Missouri 64120-1372, (800) TNEMEC1 [(800) 863-6321], www.tnemec.com.

VersaFlex Incorporated.

Sherwin Williams Inc.

CCI Spectrum Inc.

OBIC, LLC.

Zebron.

B2 APPROVED SYSTEMS

Raven Lining Systems:

1. Strong Seal High Performance Calcium Aluminate mortar.
2. Raven 405 Ultra High-Build epoxy coating.

Sauereisen:

1. Filler Compound No. 209.
2. SewerGard No. 210S.

Tnemec Company, Inc.

1. Series 218 Mortarclad resurfacer.
2. Series 435 Perma-Glaze.

VersaFlex System.

1. Versa Grout 200
2. VF15 Primer.
3. FSS 50DM (Polyurea).

Sherwin Williams System.

1. Duraplate 2300.
2. Duraplate 5900.

CCI Spectrum Inc. (Spectrashield Liner System–total 500 mils thickness).

1. Moisture Barrier (modified polymer).
2. Surfacer (polyurethane foam).
3. Final Corrosion Barrier (silicone modified polyurea).

OBIC Liner System.

1. Polurea Adhesion Coating.
2. Polymer Surface Layer–OBIC Guard 1306.
3. Final Polyurea Armor Layer–OBIC Armor 1000.

Zebron: 386 Coating System.

B3 Quality Assurance

Manufacturer: Company specializing in the manufacture of industrial-grade coatings with a minimum of 15 years of documentable satisfactory experience.

Applicator: Product manufacturer shall provide written certification that applicator has been trained in the application of the product. Applicator shall have a minimum of 5 years of satisfactory documented experience in the business of similar coating applications and project size.

Single Source: Except as noted, furnish field primers, pretreatments, and thinners by the same manufacturer as finish coats.

Prepare and finish sample surfaces for observation by ENGINEER to establish acceptable standards for the work.

Warranty Correction Period: 5 years.

C Construction

C1 General

Contractor shall convene a meeting with ENGINEER, applicator, and material supplier to discuss approved application products, finishes, and curing methods.

Do not apply coating unless surface and surrounding air temperatures are above 50°F.Concrete surface temperature must be decreasing during time of application.

Do not apply product in cold, foggy, damp, or rainy weather.

Application of linings in manholes shall take place in the field after installation of manhole structures is completed. Precast manholes shall not be delivered to the site after being coated.

Provide dry heat and ventilation as needed to obtain the recommended drying conditions.

Starting of work shall be construed as acceptance of surfaces and conditions by the applicator.

Do not apply product to improperly prepared, wet, or damp surfaces.

Material shall not be applied when surfaces are subjected to direct sunlight or when air and surface temperatures are rising.

Correct deficiencies in the total film by applying additional coats and in accordance with manufacturer recommendations.

C2 Field Quality Control

Provide high-low thermometers to verify temperatures and any other instrumentation needed to verify that ambient surface and material conditions are within the recommended application parameters.

Thickness: During application, a wet film thickness gauge meeting ASTM D4414–Standard Practice for Measurement of Wet Film Thickness of Organic Coating by Notched Gauges, shall be used to provide a monolithic coating and uniform thickness during application. Compute gallons required to each coat prior to application based on the square footage to be coated.

C3 Surface Preparation

General: Examine all surfaces to be coated and the conditions affecting proper performance. Correct unsatisfactory conditions. Perform preparation and cleaning procedures in accordance with manufacturer instructions to obtain a clean and dry surface.

Concrete Surfaces: Formed, Trowel Finish, or Flatwork:

1. Allow concrete to cure a minimum of 28 days: Verify dryness by performing ASTM D4263 “Plastic Film Tape-Down Test.” Surfaces where the opposite side is exposed to earth shall be tested by performing ASTM F1869 “Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride.” Moisture shall not exceed 3 pounds per 1,000 square feet in a 24-hour period.
2. pH Testing: Check pH of the concrete surface to verify it is between 10.0 and 13.0. Check pH a minimum of once for every 1,000 square feet of surface area, with no two tests closer than 50 feet apart.
3. Moisture Testing: Verify dryness by testing for moisture with an ASTM D 4263 “plastic film tape-down test.” Verify dryness a minimum of once for each of each structure.
4. Moisture Vapor Transmission Testing: Verify the moisture vapor transmission is less than 3 pounds per 1,000 square feet in a 24-hour period by the ASTM F1869 “Standard test Method for Measuring Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride.”
5. Prepare surfaces by abrasive blasting according to SSPC-SP 13. Walls shall have large burrs, fins, and form irregularities ground uniformly prior to other preparation. Abrasive-blast horizontal surfaces to remove laitance, curing compounds, sealers, or other contaminants. The surface shall expose the fine aggregate resembling 60-grit coarse sandpaper. Abrasive-blast vertical surfaces to open bug holes and remove laitance, form release agents, curing compounds, or other contaminants. The surface shall expose the fine aggregate resembling coarse sandpaper.
6. Allow concrete to cure a minimum of 28 days. Verify dryness by performing ASTM D4263 “Plastic Film Tape-Down Test.” Surfaces where the opposite side is exposed to earth shall be tested by performing ASTM F1869 “Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride.” Moisture shall not exceed three pounds per 1,000 square feet in a 24-hour period.

C4 Application

No application shall be performed until all substrate preparation and testing is complete for the structure being coated. Spray apply the first coat only to areas that can be final coated within the manufacturer’s recoat window. If the recoat window is exceeded, the surface shall be prepared according to the manufacturer’s recommendations and recoated. Contact the manufacturers for information and times in addition to that provided in their literature. Finish coats shall be applied at a minimum 30 square feet per gallon (50 mils) each coat. Spray apply the first coat only to areas that can be final coated within the manufacturer’s recoat window. If the recoat window is exceeded, the surface shall be prepared according to the manufacturer’s recommendations and recoated. Contact the manufacturers for information and times in addition to that provided in their literature.

1. Raven system: Fill bug holes and irregularities with Strong Seal. Raven does not recommend using a primer. Thoroughly wash the surfaces prior to application of the first coat and thoroughly wash the first coat surfaces prior to application of the second coat. Spray apply two coats of 405 at a minimum 100 mils total to concrete fillet, walls, and ceilings. Raven typically has a maximum 24-hour recoat window at 75°F.
2. Sauereisen system: Fill bug holes and irregularities with 209. Sauereisen does not recommend a primer with 210S. Spray apply one or two coats of 210S at a minimum 100 mils total to concrete fillet, walls and ceilings. Comply with all manufacturer’s temperature requirements for material and substrate.
3. Tnemec system: Fill bugholes and irregularities with 218. Spray apply one or two coats of 435 at a minimum 100 mils to concrete fillet, walls, and ceilings.
4. VersaFlex system: Fill bug holes and irregularities with Versa Grout 200. Provide VF15 primer at 10 mils. Spray apply one coat of FSS 50MD at 80 to 100 mils.
5. Sherwin Williams system: Fill bug holes and irregularities with Duraplate 2300. Spray apply one or two coats of Duraplate 5900 Plus at 100 mils.

6. CCI Spectrum System: Apply moisture barrier at manufacturer recommended rate. Apply surfacer foam at manufacturer recommended rate. Apply final corrosion barrier at manufacturer recommended rate.
7. OBIC System: Apply polyurea adhesion coat at manufacturer's recommended rate. Apply polymer surface layer at manufacturer's recommended rate. Apply final polyurea armor layer at manufacturer's recommended rate. Total system shall have a minimum 1/2-IN (500 mils) thickness.
8. Zebron: Fill bug holes with Zebron Rapid Set Mortar. Apply 3 mils Zebron primer. Apply 125 mils Zebron 100% Solids Polyurethane."

Protect adjacent surfaces including floors, equipment, or refinished materials by covering with drop cloths or other acceptable means.

Maintain safe conditions at all times. Remove solvent-soaked rags and other flammables daily from the area or keep in airtight metal containers.

Immediately repair improperly prepared surfaces, misapplied materials, or unacceptable Work.

Touch up or reapply product to surfaces which have been damaged.

Clean all splattered surfaces by methods which will not scratch, mar, or otherwise cause damage to finishes.

C5 Testing

Holiday Testing: After the protective coating has set hard to the touch, it shall be tested with high-voltage holiday detection equipment. Surfaces shall first be dried, an induced holiday shall then be made on to the coated concrete surface and shall serve to determine the minimum/maximum voltage to be used to test the coating for holidays at that particular area. The spark tester shall be initially set at 100 volts per 1 mil of film thickness applied but may be adjusted as necessary to detect the induced holiday (refer to NACE RPO188-99). All detected holidays shall be marked and repaired by abrading the coating surface with grit disk paper marked or other hand tooling method. After abrading and cleaning, additional protective coating material can be hand applied to the repair area. All touchup/repair procedures shall follow the protective coating manufacturer's recommendations.

MMSD will perform the Holiday Testing. Contractor to communicate with MMSD when the manholes are ready for testing.

Costs for any retesting due to defective workmanship or materials shall be paid by contractor.

D Measurement

The department will measure Interceptor Manhole Lining System as each interceptor manhole lining system acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.058	Interceptor Manhole Lining System	Each

Payment is full compensation for all work herein specified and including but not limited to materials and disposal of material necessary to complete the work in compliance with these specifications.

94. Adjust MMSD Special, Item SPV.0060.059.

A Description

This special provision describes adjusting Sanitary Sewer Access Structure (Rim) castings as shown on the plans to the final proposed grades or directed by the City of Madison according to Article 702 and 703 of the City of Madison Standard Specifications - Latest Edition. This bid item is required for vertical casting adjustments greater than 9 inches or to replace a chimney seal in poor condition, as indicated by the City of Madison.

B (Vacant)

C Construction

Please call Jen Hurlebaus (MMSD) at 608-222-1201 three days prior to the adjustment.

Remove existing adjustment rings and concrete barrel section(s) as necessary to install new adjustment rings and/or barrel sections needed to reach the final proposed grade as shown on the plans or as directed by the City of Madison.

Rotate the existing cone section as shown on the plans.

Install an offset cone section and casting as shown on the plans. Adjustment ring heights exceeding 9 inches will not be allowed.

D Measurement

The department will measure Adjust MMSD Special as each individual adjustment, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.059	Adjust MMSD Special	Each

Payment is full compensation for excavating, exposing, backfilling, disposing of surplus material, and restoring the site; for necessary structure reconstruction or adjustment; offset cone and offset cone rotation and/or installation; and for furnishing and installing all materials, and select fill.

Manhole adjustments less than 9 inches will be paid for separately under bid item Adjusting Manhole Covers.

95. MMSD Manhole 02-048 Flat Top Replacement, Item SPV.0060.060.

A Description

Excavate and remove existing corroded flat top on MMSD manhole 02-048. Replace flat top and complete miscellaneous associated work with manhole. Manhole to remain in-service and flows uninterrupted.

B Materials

Top Deck: Manhole flat top shall be reinforced precast concrete flat slab conforming to ASTM C913 and designed for AASHTO HS20 loading. Dimensions shall be per drawing. The contractor shall submit Shop Drawings showing replacement top deck dimensions and thickness for review and approval. Shop drawings shall confirm that top deck reinforcement meets ASTM C913 and AASHTO HS20 loading. Concrete shall be air entrained with minimum compressive strength of 4,000 psi at 28 days. Access opening shall be in same location as existing.

Pickholes shall under no circumstances penetrate thru concrete. Earhole style pickholes or superficial lifting hooks should be used instead.

Precast reinforced concrete manhole flat top shall be subject to rejection for failure to conform to any of the requirements of the Standard Specifications and in addition, may be rejected because of any of the following reasons:

a. Fracture or cracks passing through the section, except for a single end crack that does not exceed the depth of the joint.

b. Defects that indicated imperfect proportioning, mixing, and molding.

c. Surface defects indicating honey-combed or open texture.

e. Noticeable infiltration into manhole.

g. Any continuous crack having a surface width of .01 inch or more and extending for a length of 12 inches or more regardless of position in the section.

The flat top shall be clearly marked with the name or trademark of the manufacturer and the date of manufacture. This marking shall be indented into the manhole section or shall be painted thereon with waterproof paint.

The contractor shall submit product data sheet for review and approval on all following manhole items:

Epoxy Coating for Exposed Rebar: Provide epoxy coating on existing manhole exposed sawcut rebar.

Joint Sealant & Exterior Protection: Provide non-hardening butyl rubber sealant minimum thickness 3/4", Mastik or approved equal. Provide exterior joint protection, Macwrap or approved equal to a minimum width of 9". Non-banded products must completely adhere to surface and will be rejected if cannot fully adhere to concrete surface.

Chimney Adjusting Rings: Provide HDPE manhole adjusting rings. HDPE adjustment rings shall be Ladtech, or equal and shall meet loading requirements. Joints shall be sealed with approved silicone or butyl sealant in accordance with manufacturer's recommendations.

Steps: Provide new steps M.A. Industries or equal, 16" on center.

Casting: Reuse existing manhole casting, clean and prep as necessary to receive new rings. If new lid and casting is required it shall be supplied by MMSD.

C Construction

Flat top removal and replacement shall be installed in accordance with the plans.

Excavate to expose top of manhole and to allow sawcut at top of manhole walls. Sawcut complete circumference of manhole through manhole walls and remove existing top deck. Existing manhole walls are believed to be 12" thick. Excavate and remove existing 12" thick corroded flat top, sawcut as needed, records indicate it was poured-in-place. Wall-to-Wall dimensions of 6'x6' have been confirmed twice but variations may exist due to poured-in-place craftmanship. The contractor is responsible for modifying new top deck as needed to securely fit.

Remove and salvage four existing temporary jack posts supports currently inside manhole. Return to MMSD, notify two days prior to removal.

Contractor shall ensure even bearing between the top deck and the cut off walls. If necessary, create even bearing by grouting between the structure and the top deck or other method as approved by the engineer.

Remove existing corroded ladder. Replace with new steps, shall be placed 16" on center and installed per manufacturer's recommendations. Top step shall be installed 36" from deck underside.

Clean out manhole of existing concrete debris. All concrete or ladder debris from work shall be entirely removed from manhole.

Prior to placing deck, coat top of manhole walls with epoxy to protect exposed reinforcement steel. Install non-hardening butyl rubber sealant minimum thickness 3/4".

Install new precast concrete top deck.

Install Macwrap or approved equal to a minimum width of 9".

Reinstall existing MMSD 9" high casting frame and cover.

Remove existing adjusting rings. Provide new HDPE adjusting rings to finish grade. Do not install an interior or exterior seal. Broken or cracked adjusting rings are not permitted and will be rejected.

Work shall be made watertight and shall show no visible signs of leakage at the time of final review and within the correction period. Any leakage shall be sealed from the exterior of the manhole.

All pickholes shall be mortared prior to backfilling, note they shall not penetrate thru concrete.

All manhole adjusting rings shall be sealed with preformed flexible joint sealant. Final rim elevation and manhole adjustment shall be determined in the field. Metal adjusting rings and metal paving rings on the castings shall not be used.

Backfill and restore adjacent road per project standards. Slopes and pavement markings shall be restored to existing unless otherwise noted.

D Measurement

The department will measure MMSD Manhole 02-048 Flat top Replacement by each replacement, 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.0060.060	MMSD Manhole 02-048 Flat top Replacement	EACH

Payment is full compensation for all work herein specified and including but not limited to excavation, bedding and cover materials, disposal of material, and notifications necessary to complete the work in compliance with these specifications.

The department will pay separately for dewatering.

96. Rock Excavation for Concrete Bases, Item SPV.0060.061.

A Description

This special provision describes providing rock excavation according to standard spec 205 and as detailed herein.

B (Vacant)

C Construction

Classify rock excavation for concrete bases according to standard spec 205.2.3, except include rock boulders with a volume of a 1/2 cubic yard or more.

If rock is encountered, excavate the rock to provide full depth concrete bases according to the plans. Remove rock and any loose materials to a minimum of 2 inches below the required concrete base depth.

Excavate rock using methods and equipment so that the resulting excavation conforms to the general dimensions of the concrete base and as noted above. Avoid substantial displacement of material outside the general dimensions of the concrete base.

Keep the rock excavation dewatered until the concrete base has sufficiently cured. Dispose of the surplus excavation.

D Measurement

The department will measure Rock Excavation for Concrete Bases as each individual rock excavation for concrete bases, acceptably completed, where rock excavation is required for installing a concrete base, regardless of the vertical depth from the top of the rock to the bottom of the excavated rock.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.061	Rock Excavation for Concrete Bases	Each

Payment is full compensation for furnishing all rock excavation, and for disposing of surplus material.

The department will pay separately for dewatering.

97. Electrical Pull Box, Type I, Item SPV.0060.062; Electrical Pull Box, Type III, Item SPV.0060.063; Electrical Pull Box, Type V, Item SPV.0060.064; Electrical Pull Box, Type VII, Item SPV.0060.065.

A Description

Furnish and install electrical pull boxes in accordance to section 653 of the standard specifications, the plan details, and as hereinafter provided.

B Materials

Electrical Pull Box, Type I shall be gray-colored polymer-concrete construction. Box dimensions for Type I shall be 19” wide X 32” long X 24” deep. The Type I box and cover shall be rated to withstand 15,000 lbs over a 10” square with a minimum test load of 22,568 lbs.

Electrical Pull Box, Type III shall be high-density polyethylene box and concrete polymer lid or concrete polymer construction for box and lid. Box dimensions for Type III shall be 12” wide X 12” long X 12” deep. The Type III box and polymer cover shall be rated to withstand 20,000 lbs.

Electrical Pull Box, Type V shall be high-density polyethylene box and concrete polymer lid or concrete polymer construction for box and lid. Box dimensions for Type V shall be 24” wide X 36” long X 24” deep. The Type V box and polymer cover shall be rated to withstand 20,000 lbs.

Electrical Pull Box, Type VII shall be high-density polyethylene box and concrete polymer lid or concrete polymer construction for box and lid. Box dimensions for Type VII shall be 30” wide X 50” long X 36” deep. The Type VII box and polymer cover shall be rated to withstand 20,000 lbs.

Each cover shall have the logo “TRAFFIC SIGNAL” imprinted from the manufacturer.

C Construction

Install Electrical Pull Box (Type) in accordance to the pertinent provisions of section 653.3 of the standard specifications and the plan details.

D Measurement

The department will measure Electrical Pull Box (Type), completed in accordance to the contract and accepted, as a unit for each Pull Box.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.062	Electrical Pull Box Type I	Each
SPV.0060.063	Electrical Pull Box Type III	Each
SPV.0060.064	Electrical Pull Box Type V	Each
SPV.0060.065	Electrical Pull Box Type VII	Each

Payment is full compensation for furnishing and installing all materials, including crushed aggregate; for excavation, backfill, and disposal of surplus materials.

98. Concrete Base Type G, Item SPV.0060.066; Concrete Base Type LB-3, Item SPV.0060.067; Concrete Base Type LB-8, Item SPV.0060.068; Concrete Base Type P, Item SPV.0060.069.

A Description

Construct concrete foundations, including furnishing and installing necessary hardware, as shown on the plans, according to the pertinent provisions of standard spec 654, and as hereinafter provided.

B Materials

Furnish Grade A, A-WR, A-FA, or A-IP concrete masonry conforming to the requirements of standard spec 501. Conduit cast within the bases shall be Schedule 40 polyvinyl chloride (PVC) electrical conduit and shall conform to the requirements of standard spec 652.

Furnish anchor bolts for Type G bases made from high-strength steel (50 ksi minimum yield strength), ASTM A36, and fit each with two hard washers and two heavy hex nuts. Each bolt shall have approximately 3 inches or more of thread at the top end. The bolts, washers and nuts shall be galvanized

Furnish anchor bolts for LB-2, LB-3, LB-8 and Offset bases made from high-strength steel (50 ksi minimum yield strength), ASTM A36, and fit each with two hard washers and two heavy hex nuts. Each bolt shall have approximately 6 inches or more of thread at the top end. The bolts, washers, and nuts shall be galvanized.

Furnish 3/4-Inch x 19-Inch bolts for the LB-2 bases. Furnish 1 1/4-inch x 48-inch bolts for the LB-8 bases, including a 4-inch L-bend at the bottom. Furnish 1-inch x 40-inch bolts for the LB-3 bases, including a 4-Inch L-bend at the bottom. Furnish 3/4 inch x 19 inch bolts for the Type G bases.

Include a concrete maintenance platform on the Type P bases. Generally construct the Type P bases according to the standard detail drawing Concrete Control Cabinet Bases. Confirm the location of the conduits in the base with the City of Madison. Anchor bolts, nuts, and washers for Concrete Controller

Base, Type P, will be provided and installed by the City of Madison when installing signal control cabinets. Conform bar steel reinforcement to the requirements of standard spec 505.

C Construction

Place the bases with one side parallel to the centerline of the street.

Forms shall be of sufficient depth to provide a minimum of 12 inches of formed base below the finished grade on the low side of the base. The top surface of the base shall be level with a 3/4-inch bevel on the edges and shall be given a rubbed finish.

Cast anchor bolts into the base as shown on the plans. Verify the bolt circle diameters before constructing the bases.

Furnish and install manufactured elbows in all bases, except as noted on the details. Install elbows to permit installation of conduit in as nearly straight-line runs as possible without unnecessary bends. Bases not installed to this standard will not be accepted.

Extend existing conduit into the bases. Elbows shall conform to the requirements of the type of conduit entering the base. Install an extra elbow in each base at the end of a run as directed by the engineer. Install extra elbows in any base as directed by the engineer.

Do not erect poles on the concrete bases until the bases have cured for at least seven days. All concrete bases require a rubbed finish down to finished grade.

D Measurement

The department will measure Concrete Base (Type) by each unit, completed according to the contract and accepted.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.066	Concrete Base Type G	Each
SPV.0060.067	Concrete Base Type LB-3	Each
SPV.0060.068	Concrete Base Type LB-8	Each
SPV.0060.069	Concrete Base Type P	Each

Payment is full compensation for furnishing and installing all materials including conduit, bushings, caps and/or plugs, ground rod, anchor bolts, cadwelding, copper grounding wire; bar steel reinforcement, and concrete masonry; for providing openings through existing pavement where required; for excavation, including hand-digging as required, backfill, and disposal of surplus materials.

99. Concrete Bases Type G Spread Footing, Item SPV.0060.070.

A Description

This special provision describes construction of concrete street light bases and traffic signal bases, including necessary hardware, according to the pertinent provisions of standard spec 654 and as hereinafter provided

B Materials

Provide Grade A, A-WR, A-FA, or A-IP concrete masonry conforming to the requirements of standard spec 501. Provide Schedule 40 polyvinyl chloride (PVC) electrical conduit that conforms to the requirements of standard spec 652 to be cast within the bases. Provide anchor bolts made from high strength steel (50 KSI minimum yield strength), ASTM A36, with each being fitted with two hard washers and two heavy hex nuts. Provide 6 inches or more of thread on each bolt at the top end. Galvanize the bolts, washers, and nuts. Provide bar steel reinforcement that conforms to the requirements of standard spec 505.

C Construction

Locate proposed street light and/or traffic signal bases as shown in the plans according to the Construction Staking Electrical Systems bid item. Where potential underground conflicts exist, locate the existing utility. Hand excavation may be required. MG&E gas requires an inspector to be present when excavating near MG&E gas facilities in accordance whether to adjust the base location laterally to avoid

the conflict or require the use of an Offset Base. Install rock shield between the main and street light base and/or traffic signal base as directed by MG&E personnel. MG&E will supply the rock shield.

Provide forms of sufficient depth to provide a minimum of 12 inches of formed base below the finished grade on the low side of the base. Construct the top surface of the base to be level with a 3/4 inch bevel on the edges and shall be given a rubbed finish.

Cast anchor bolts into the base as shown on the plans. Verify bolt circle diameters before constructing the bases.

Furnish and install manufactured elbows in all bases by the contractor, except as noted on the details. Install elbows to permit conduit to be installed in as nearly straight-line runs as possible, without unnecessary bends. Bases not installed to this standard will not be accepted.

Extend existing conduit into the bases. Construct elbows to conform to the requirements of the type of conduit entering the base. Provide and install an extra elbow at each base at the end of a run as directed by the engineer.

Install extra elbows in any base as directed by the engineer. Do not erect poles on the concrete bases until the bases have cured for at least seven days.

Provide a rubbed finish down to finished grade on all concrete bases.

D Measurement

The department will measure Concrete Bases Type G Spread Footing as each individual unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.070	Concrete Bases Type G Spread Footing	Each

Payment is full compensation furnishing and installing transformer bases, streetlight pole wire, mechanical grounding connector and related hardware; for leveling shims when required.

100. Transformer Base 16-Inch Steel, Item SPV.0060.071.

A Description

This special provision describes furnishing and installing steel transformer bases as shown on the plans and as follows.

B Materials

Provide hot-dipped galvanized steel transformer bases according to ASTM designation A123. Provide bases with slotted bolt openings. Furnish steel connecting bolts, size 1.00 inches by 4 inches, hold down lugs for 1.00 or 1.25 inch bolts and nuts and washers. Verify the bolt diameter projection and bolt circle dimension required for each application. Ensure the concrete bases and pole bases are compatible with the transformer bases and bolts. Hot-dip galvanize all material and verify they are of sufficient size and strength to exceed the capacity of the bases. Construct 16-Inch bases to conform to the detail in the plan.

Furnish to the engineer at the time of delivery of the bases, a manufacturer’s certificate of compliance that the base and hardware as furnished meets the above requirements.

C Construction

Install transformer bases according to the manufacturer’s instructions, and as shown on the plans.

D Measurement

The department will measure Transformer Base 16-Inch Steel 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.0060.071	Transformer Base 16-Inch Steel	Each

Payment is full compensation for furnishing and installing transformer bases, streetlight pole wire, mechanical grounding connector and related hardware; for leveling shims when required.

101. Pole 20-Foot 7 Gauge, Item SPV.0060.072; Pole 30-Foot, 7 Gauge Single Mount, Item SPV.0060.073; Pole 30-Foot, 7 Gauge Twin Mount, Item SPV.0060.074; Pole 30-Foot, 11 Gauge Single Mount, Item SPV.0060.075; Pole 30-Foot, 11 Gauge Twin Mount, Item SPV.0060.076.

A Description

This special provision describes furnishing and installing poles and arms according to standard spec 657, the details shown on the plans, and these special provisions.

B Materials

Provide round poles, with a base plate welded to the bottom end of the pole. All 30 foot poles are to be a single section, with an eight-inch diameter shaft at the base and 0.14 inches per foot taper.

Provide base plates that have a slotted opening for anchor bolts.

Certify that all 30-foot poles have been designated to withstand a 90 mile per hour sustained wind velocity and 117 mile per hour gust velocity with the bracket arm and luminaires in place.

Use 20-Foot 7 gauge poles for supporting aluminum trombone arms holding signs and/or signal heads.

Provide a 4” x 6 1/2” galvanized handhole with contoured or flat cover plate joined to the reinforced handhole frame with two bolts. Locate the handhole at 90 degrees clockwise from the bracket arm side of poles as viewed when looking down from the top of the pole. The center of the handhole should be 14 inches from the bottom of the pole. Provide a solid metal bracket, with a drilled and tapped hole for securing cover plate bolts. Clips for holding these bolts are not acceptable. The machine bolts shall be a slotted hex-head style.

Fabricate the pole shaft from the herein specified manufacturer’s best grade, hot rolled basic option hearth, or basic oxygen process steel. Provide a shaft with only one longitudinal, electrically welded joint, with the strength rated at not less than 100 percent of the yield strength of the steel and shall have no intermediate horizontal joints or welds. Only one length of steel shall be used, and form it into a continuously tapered shaft, having a taper of approximately 0.14 inches per foot. Provide smooth welds allowing the specified taper to be constant. Provide a pole that is within 1/4” in 10 feet of being straight and centered on its longitudinal axis.

Provide a grounding nut or nut holder for accommodating a 1/2 inch x 13 UNC threaded bolt or stud on the inside of the shaft immediately opposite the center of the handhole. Make the nut completely free of any metal residue that would prevent a bolt from easily screwing entirely into the nut.

Provide all poles holding LED fixtures with mounting and wire raceway holes placed before being hot-dipped galvanized. Coordinate mounting needs with the LED luminaires selected for the project prior to ordering poles.

Furnish and install a pole-top cover and four nut covers for each pole. Adjust the size of the pole top cover to account for poles cut to shorter lengths.

Provide each steel pole with a permanent imprinted metal label attached with rivets midway between the base plate and the handhole. State the overall pole height, shaft gauge, and year of manufacture on the label. Provide a label that will conform to the curvature of the pole and not have any sharp edges or corners. Install rivets so they are smooth inside and outside of the pole.

Thoroughly clean the exterior surface of the pole, arm, and hardware to make them free of all loose rust, mill scale, dirt, oil, grease, and other foreign substances after all welding has been completed. Hot-dip galvanized the poles and arms according to the requirements of ASTM Designation A123. Hot-dip galvanize the hardware according to ASTM designation A153. Provide a bright, shiny, and uniform galvanized finish. Matted or dull pole sections will not be accepted.

Furnish non-shrink commercial grout from approval products list.

C Construction

Set and plumb metal poles with the use of leveling nuts furnished with the anchor bolts. Level luminaires after erecting and leveling the metal standards with bracket arms. The proper leveling method may be obtained from the manufacturer's instruction manual. Torque nuts on anchor and transformer bolts to 175-200 foot pounds or as directed by the engineer. Provide rust, corrosion, and snit-seize protection at all threaded assemblies by coating and mating surfaces with Markal (hightemp – E-Z Break), Never-Seez (Marine Grade), LPS 100, Lubriplate, or approved equal.

Attach the stranded copper ground wire that is installed as a part of the base construction with an approved connector (Fargo GC 202 or approved equal) to a ground nut locate inside the pole opposite the handhole.

When transformer bases are not installed, trowel grout between the pole and concrete base and finished at an angle from the edge of the pole base to the outer edge of the foundation. Leave a ½ inch slot for drainage through the grouting on the street side at the top of the concrete base.

Cut the poles to modified lengths at the plan locations to meet OSHA clearance requirements at overhead transmission lines.

D Measurement

The department will measure Pole (description) 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.0060.072	Pole 20-Foot, 7 Gauge	Each
SPV.0060.073	Pole 30-Foot, 7 Gauge Single Mount	Each
SPV.0060.074	Pole 30-Foot, 7 Gauge Twin Mount	Each
SPV.0060.075	Pole 30-Foot, 11 Gauge Single Mount	Each
SPV.0060.076	Pole 30-Foot, 11 Gauge Twin Mount	Each

Payment is full compensation according to standard spec 657.5. and for cutting poles to lengths less than 30 feet.

102. Monotube Pole, Type 9, Item SPV.0060.077; Monotube Arm, 25-Foot, Item SPV.0060.080; Monotube Arm, 30-Foot, Item SPV.0060.081.

A Description

This section describes furnishing and installing poles and monotube arms for traffic signals.

B Materials

Design support structures, consisting of poles and arms, conforming to the completed maximum loading configurations and to AASHTO design and fabrication standards for structural supports for highway signs, luminaires, and traffic signals. Use a design life of 50 years. Design to withstand a 3 second gust wind speed of 90 mph. Do not use the method of appendix C of those AASHTO standards.

Design support structures to the AASHTO fatigue category criteria III.

Along with the material list, submit a certificate of compliance certifying that poles as furnished, conform to the above structural performance requirements. Ensure that the certificate of compliance is on the manufacturer's letterhead, signed by an authorized company officer, and notarized. Send a copy of the certificate and a copy of the pole shop drawings to the engineer. Furnish poles from an approved manufacturer.

Furnish shop drawings as specified in standard spec 506.3.2, except submit five copies with the material list. Ensure the drawings contain sufficient detail to allow satisfactory review and show the outside diameter of the pole at the butt, top, and splice locations the plans show. Show the width, depth, length, and thickness of all material, and list all pertinent ASTM specification designations and metal allow designations together with the tensile strength of all metallic members.

After completing the manufacturing process, ensure that all shafts a nominal 40 feet or less in length for lighting poles only, are round, of one-piece construction, and of the specified length.

Construct poles of materials having sufficient rigidity that, with all material installed and in place as the plans show, the centerline of the shaft is vertical. Include dampers for poles as needed. If the engineer determines that vibration is a problem after a pole has been installed, install dampeners as the engineer directs.

Thoroughly clean all exterior surfaces of the pole, arm, and hardware to free them of all loose rust, mill scale, dirt, oil, grease, and other foreign substances after all welding has been completed. Hot-dip galvanize the poles and arms according to the requirements of ASTM Designation A123. Hot-dip galvanize the hardware according to ASTM Designation A153. Provide poles with a bright, shiny, and uniform galvanized finish. Matted or dull pole sections will not be accepted.

For monotube pole, provide anchor rods, nuts and washers for the contract base (Type 10).

Provide a reinforced hand hole measuring 5 inches by 8 inches. Locate the hand hole approximately 18 inches from the bottom of the pole base plate to the center of the door. For the hand hole, include an access cover mounted to the pole by two 1/4” -20 x 3/4” hex-head stainless steel bolts.

Provide a grounding lug complete with mounting hardware as required, inside the pole, 180-degrees from the handhole side of the pole.

Provide access to the grounding L-clip from the hand hole. Before galvanizing the pole, weld the grounding L-clip directly opposite the hand hole on the inside wall of the pole. Equip the top of the pole shaft with a removable, ventilated cap held securely in place by at least one 1/4” -20 x 3/4” hex-head stainless steel set screw.

Ensure that all castings are clean, smooth, and with all details well defined and true to pattern.

Attach base plates firmly to the pole shaft by welding or other approved method. Provide and install a permanent imprinted metal label attached with rivets midway between the base plate and the handhole on each steel pole. State the shaft length, manufacturer’s name, and year of manufacture on each label. Conform the label to the curvature of the pole and so that it will not have any sharp edges or corners. Make all rivets smooth inside and outside of the pole.

Provide monotube arms with the following:

1. A mounting device welded to the pole end of the monotube arm that allows the attachment of the arm to a pole.

2. Stiffeners or gussets if required between the arm tube and the arm mounting device to provide adequate strength to resist side loads.

3. A wiring raceway.

C Construction

Under each bid item, furnish and install poles, ventilated pole caps, arms, and all necessary miscellaneous hardware needed to complete the installation of the poles and arms.

Install dampeners as the plans show and for poles and arms used in configurations susceptible to vibration. If the engineer determines that vibration is a problem after a pole and arm has been installed, install dampeners as the engineer directs.

After completing erection using normal pole shaft raking techniques, ensure that the centerline of the shaft is vertical.

D Measurement

The department will measure Monotube Pole, Type 9, and Monotube Arm (25-FT and 30-FT) 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.0060.077	Monotube Pole Type 9	EACH
SPV.0060.080	Monotube Arm 25-FT	EACH
SPV.0060.081	Monotube Arm 30-FT	EACH

Payment is full compensation for furnishing and installing all materials.

Payment for Monotube Pole, Type 9 also includes anchor rods, nuts and washers for the concrete base Type 10; and installing all materials including all hardware, fittings, mounting clamps, shims and attachments necessary to completely install the mast arms.

103. LED Luminaire and Mounting Bracket Type V, Item SPV.0060.079; LED Luminaire and Mounting Bracket Type I, Item SPV.0060.082; LED Luminaire and Mounting Bracket Type II, Item SPV.0060.083; LED Luminaire and Mounting Bracket Type III, Item SPV.0060.084; LED Luminaire and Mounting Bracket Type IV, Item SPV.0060.085.

A Description

This item number includes furnishing and installing Cooper fixture luminaires.

B Materials

B.1 Material Qualifications

Provide an integral LED lighting unit. All parts not specifically mentioned, which are necessary and are regularly furnished in order to provide a complete unit, shall be furnished by the successful bidder at the bid price and shall conform in quality of material and workmanship to that usually provided by the engineering practice indicated in this specification.

Furnish luminaires of the “cutoff” type conforming to all general aspects for luminaires as specified under standard spec 659 except as modified herein. All equipment to be furnished shall be new, unused, and the latest model being produced. The LED Luminaire Type 1 shall be a Cooper Lighting grey LED Talon luminaire (part number “TLM-E05-LED-E1-SL3-8030-AP.” The LED Luminaire Type 2 shall be a Cooper Lighting grey LED Talon luminaire (part number “TLM-E04-LED-E1-SL2-8030-AP”). The LED Luminaire Type 3 shall be a Cooper Lighting grey LED Talon luminaire (part number “TLM-E04-LED-E1-SL3-8030-AP”). The LED Luminaire Type 4 shall be a Cooper Lighting grey LED Talon luminaire (part number “TLM-E03-LED-E1-SL2-AP-8030).

The LED Luminaire and Mounting Bracket Type 5 shall consist of WisDOT standard bid item 657.0806 “Luminaire Arms Steel 6-FT” and 659.1120 “Luminaires Utility LED B” as described in the standard specs, standard details, and as found on the qualified products list.

B.2 Manufacturer’s Warranty

The manufacturer shall warrant that goods provided for this project will conform to applicable specifications, drawings, designs, samples, descriptions and will be free from defects in material and workmanship and will be fit for the particular purpose intended by the city.

This warranty shall remain in effect for one year. The warranty period commences on the date the luminaires are installed.

Under this warranty, the manufacturer agrees to replace within a reasonable time, any part, feature or product found to be defective during the warranty period at no cost to the City of Madison.

New lighting units will not be accepted before luminaires and lamps have operated without failure for a period of at least ten consecutive nights.

C Construction

Install LED Luminaires and Mounting Bracket (Type) in accordance to the pertinent provisions of standard spec 659 and as the manufacturer directs.

D Measurement

The department will measure LED Luminaires and Mounting Bracket (Type) 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.0060.079	LED Luminaire and Mounting Bracket Type V	EACH
SPV.0060.082	LED Luminaire and Mounting Bracket Type I	EACH
SPV.0060.083	LED Luminaire and Mounting Bracket Type II	EACH
SPV.0060.084	LED Luminaire and Mounting Bracket Type III	EACH
SPV.0060.085	LED Luminaire and Mounting Bracket Type IV	EACH

Payment is full compensation for furnishing all materials, including all luminaires and side of pole mounting hardware.

104. Traffic Signal Trombone Arm Aluminum 12-Foot, Item SPV.0060.086; Traffic Signal Trombone Arm Aluminum 15-Foot, Item SPV.0060.087; Traffic Signal Trombone Arm Aluminum 18-Foot, Item SPV.0060.088; Traffic Signal Trombone Arm Aluminum 20-Foot, Item SPV.0060.089; Traffic Signal Trombone Arm Aluminum 22-Foot, Item SPV.0060.090.

A Description

This special provision describes furnishing and installing trombone mast arms and all necessary miscellaneous hardware needed to complete the installation of the trombone mast arm as shown on the plans, in the standard specifications, and as hereinafter provided.

B Materials

Furnish traffic signal trombone arms designed to withstand loadings resulting from a 12" 3-section aluminum signal with backplate and an 18” x 90” aluminum street name sign mounted on the arm as shown on the drawing. Design factors in accordance to the AASHTO Specifications for the Design and Construction of Structural Supports for Traffic Signals, Signs, and Highway Lighting, together with a wind pressure resulting from a wind velocity of 80 miles per hour plus gust factor, shall be applied to these arms, with the above signals attached.

Furnish certification of compliance with these stated AASHTO performance requirements with submission of the material list.

Submit shop drawings that include dimensions of width, depth, length and thickness of all members and ASTM designation and alloy designation of aluminum members.

Construct trombone arms of aluminum consisting of round or oval upper and lower members joined by one or more tubular vertical struts welded to them. Construct the pole end of the mast arm with a mounting clamp welded to it which will permit the attachment of the mast arm to a round pole of varying diameter. Construct the lower clamp to be 5-7/8" I.D. and the upper clamp to be 5-l/2" I.D. Design the clamps to accommodate some variation in pole diameter while still attaining full contact between the clamp and the pole. The surface area of the clamp contacting the pole shall be sufficiently large and designed to prevent horizontal rotation in windy conditions. Provide bolts connecting the arm bracket to the back bracket from galvanized steel; stainless steel bolts are not acceptable. Design the vertical strut, which has provision for mounting the signal head, to provide for horizontal adjustability along the main mast arm members so that signal heads of various lengths with backplates, up to and including 5-section 12" heads, can be accommodated within the confines of the mast arm. Design the cross tees for signal heads to have two slots on the threaded hubs that face each other.

Provide the wiring raceway entrance to be through the lower mounting bracket.

Provide the mast arm with a uniform natural aluminum finish and clean. No painting or other corrosion preventive maintenance will be required.

Construct the portion of the main members of the arm to which the arm attachment bands are welded as one piece of seamless tapered aluminum tubes.

Attach the main arm member to the pole using extruded aluminum clamps fastened with continuously threaded stainless steel bolts with nuts and washers meeting the requirements of ASTM Designation A-320. List the strength and/or grade specification ratings on the shop drawings. Provide stiffeners or

gussets at the joints between the main arm tubes and arm clamps to provide adequate strength to resist side loads.

Provide shims made of an aluminum alloy.

Provide a permanent imprint of the "Type" and "Year of Manufacture" on the underside of the lower member of each arm.

C (Vacant)

D Measurement

The department will measure Traffic Signal Trombone Arm Aluminum (length) 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.0060.086	Traffic Signal Trombone Arm Aluminum 12-Foot	Each
SPV.0060.087	Traffic Signal Trombone Arm Aluminum 15-Foot	Each
SPV.0060.088	Traffic Signal Trombone Arm Aluminum 18-Foot	Each
SPV.0060.089	Traffic Signal Trombone Arm Aluminum 20-Foot	Each
SPV.0060.090	Traffic Signal Trombone Arm Aluminum 22-Foot	Each

Payment is full compensation furnishing and installing all materials including all hardware, fittings, mounting clamps, shims and attachments necessary to completely install the mast arms.

105. Traffic Signal Heads 12-Inch, 3-Section Vertical, Item SPV.0060.091; Traffic Signal Heads 12-Inch, 4-Section Vertical, Item SPV.0060.092; Traffic Signal Heads 12-Inch, 5-Section Vertical, Item SPV.0060.093; Traffic Signal Heads 16-Inch Pedestrian with Countdown, Item SPV.0060.094.

A Description

This special provision describes furnishing and installing vehicle and pedestrian signals with LED indications according to the standard specifications and these special provisions.

B Materials

Furnish circular and arrow LED modules from the department’s approved product list and conforming to ITE VTCSH-LED.

Furnish state approved 16-Inch Pedestrian LED Full Hand/Full Man Overlay Module with Countdown conforming to ITE VTCSH-LED.

Provide all pedestrian signals with tunnel visors in place of z-grate specified by the department.

Provide all vehicle signals with cutaway visors.

Provide snow-shedding shield on each signal indication on all signals mounted on monotube arms or trombone arms. The shield shall be impact resistant polycarbonate, designed and installed specifically to reduce snow accumulation, while not allowing water to enter or reside in the signal unit. If there are not any far side signals on monotube arms or trombone arms, then install snow-shedding shields on each signal indication of the far right signal.

Pedestrian countdown timers shall have a control wire so that when 120V AC current is applied, the timer will immediately go dark. This control wire shall be wired back to the signal control cabinet.

Make all vehicle and pedestrian signal heads with polycarbonate material, UV stabilized, with color impregnated in the material. All features and performance shall meet the requirements outlined in the latest revision of the Institute of Transportation Engineers’ publication, “Adjustable Face Vehicular Traffic Control Signal Heads” The front face and all visors (inside and outside) shall be flat or semi-gloss black. All other exterior parts shall be Federal Highway yellow. Use only exterior hardware made of stainless steel.

C Construction

Construct according to standard spec 658.

D Measurement

The department will measure Traffic Signal Heads (Description) 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.0060.091	Traffic Signal Heads 12-Inch, 3-Section Vertical	Each
SPV.0060.092	Traffic Signal Heads 12-Inch, 4-Section Vertical	Each
SPV.0060.093	Traffic Signal Heads 12-Inch, 5-Section Vertical	Each
SPV.0060.094	Traffic Signal Heads 16-Inch, Pedestrian with Countdown	Each

Payment is full compensation for furnishing and installing all materials.

106. Backplates Signal Face, 3-Section 12-Inch, Item SPV.0060.095; Backplates Signal Face, 4-Section 12-Inch, Item SPV.0060.096; Backplates Signal Face, 5-Section 12-Inch, Item SPV.0060.097.

A Description

This special provision describes furnishing and installing backplates for signal faces.

B Materials

Furnish Backplates Signal Face (Size) that are according to the pertinent requirements of standard spec 658 and these special provisions.

Provide a 5” wide black band around the signal head backplates for 12” signal heads. Make the backplates with an approved black rigid material, such as vacuum formed ABS plastic. Match the backplates to the signal heads being furnished under this bid, equipped with all necessary holes, mounting devices. Use only stainless steel mounting hardware.

C Construction

Install the backplates according to standard spec 658.3, the manufacturer’s instructions, and as shown on the plans.

D Measurement

The department will measure Backplates Signal Face (Description) 12-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.0060.095	Backplates Signal Face 3-Section 12-Inch	Each
SPV.0060.096	Backplates Signal Face 4-Section 12-Inch	Each
SPV.0060.097	Backplates Signal Face 5-Section 12-Inch	Each

Payment is full compensation for furnishing and installing all materials.

107. NEMA TS2 Type 1 Traffic Signal Control Cabinet, Item SPV.0060.098.

A Description

This specification describes furnishing a fully configured and equipped, sixteen channel (minimum), NEMA TS2 Type 1 traffic signal control cabinet with 8-Wire Railroad Interconnection capability and integrated BBS/UPS compartment, for testing by the City and subsequent installation. The traffic signal control cabinet provided shall be capable of operating the intersections as shown in the plans.

Furnish and install equipment and assemble the hybrid cabinet conforming to the latest revision of NEMA Standards Publication TS Version 2.06 (R2008), 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).

Provide a traffic signal control cabinet designed for TS2 Type 1 operation. Pre-wire cabinet for a minimum of sixteen phases as specified herein. Provide a second harness ready for communication between the traffic signal control cabinet itself and a NEMA TS2 Type 2 Traffic Signal Controller. TS2 Type 2 harness should be easily connected without having to drop the back panel or modify the wiring on the power panel.

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.

The City of Madison will install this item as part of the construction of this project.

B Materials

B.1 Cabinet Design

Furnish a door-in-door ground mounted (without anchor bolts) aluminum hybrid cabinet of clean-cut design and appearance. Provide a joint traffic signal control cabinet / BBS/UPS compartment of minimum size 58 inches wide, minimum 26 inches deep and minimum 52 inches to maximum 60 inches high. The size of the cabinet and BBS/UPS enclosure shall provide ample space for housing the controller, all of the associated devices which are to be furnished with the controller, the UPS, the batteries, all other auxiliary devices herein specified, and any equipment to be furnished and installed by others.

The BBS/UPS compartment shall be located on the right side of the traffic signal control cabinet. The roof over the traffic signal control cabinet and BBS/UPS compartment shall incorporate a 1-inch slope toward the back of the hybrid cabinet to prevent rain accumulation. Incorporate a rain channel into the design of the main door and BBS/UPS compartment door opening to prevent liquids from entering either enclosure.

The hybrid 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 hybrid 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.

Include an exhaust plenum with a vent screen into the roof of the traffic signal control cabinet. Perforations in the vent screen shall not exceed 0.125 inches in diameter. Insulate the remaining area of the roof of the traffic signal control 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 traffic signal control 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.

The BBS/UPS compartment shall be approved by the manufacturer of the UPS system and not void the UPS system standard warranty.

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

B.2 Doors

Traffic Signal Control Cabinet

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. Provide two No. 2 keys. Equip the police door-in-door with a standard police lock and provide one key.

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.

BBS/UPS Enclosure

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 X length 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.

The door shall close against a weatherproof and dust-proof, closed-cell neoprene gasket seal. The gasket material shall be a minimum of 0.188 inches thick by 1.00 inch wide. Permanently bond the gasket to the cabinet.

The door hinge shall be a one-piece, continuous 14 gauge piano hinge with a minimum 0.12 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.

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 an aluminum floor welded to the bottom of the BBS/UPS enclosure to allow for mounting to concrete traffic signal cabinet base of standard dimensions.

B.3 Shelves and Mountings

Traffic Signal Control Cabinet

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.

BBS/UPS Compartment

Mount a minimum of two 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 two vertical "C" channels or two slotted rails on the interior back wall of the cabinet. All mounting channels and rails shall be of sufficient strength to rigidly hold specified shelves and equipment.

Provide installed a minimum of three full width and 12 inch depth, aluminum shelves sufficient to hold all equipment furnished with this specification. 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 six 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 180 pounds. The shelves shall be mounted with a gap between them and the back of the compartment to allow room behind them for wiring.

B.4 Auxiliary Cabinet Equipment

Traffic Signal Control Cabinet

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 (2) 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 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. 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.

BBS/UPS Compartment

Provide and install a power distribution terminal block for wire connections, wire size up to #8AWG, from the traffic signal control cabinet.

Mount a NEMA 3R-rated enclosure within the compartment, but opening to the outside of the compartment and secured with a brass Corbin tumbler lock No. 2 with a swing away dust cap. Within this enclosure, furnish and install a generator connection outlet. The outlet shall be a Marinco 125/250 V 50A

turn and pull or equivalent, back wired, surface mounted, twist lock receptacle with a watertight cover and meter seal tabs, or equal.

Ventilate the compartment 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.

B.5 Terminal Facility

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 two 16-channel, 8-position, TS2 detector racks, each with an integrally mounted BIU mounting. Rack shall be addressable. Power each detector rack by the cabinet power supply. Fasten the loop detector racks towards the left side of the top shelf.

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

For the terminal facility, contain all field wires within one or two rows of horizontally-mounted 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.6 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. One panel shall allow for 4 EVP channel inputs. 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 racks 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.7 Lighting Control Panel

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.8 Auxiliary Surge Suppressor

Provide and mount within the cabinet an auxiliary surge suppressor unit conforming to the following minimum requirements:

- 6-NEMA 5-15R receptacles
- 2700 joule rating

Surge suppressor should be wired off a circuit breaker that is separate from the cabinet equipment such that if this circuit is faulted, the cabinet/controller and all associated equipment will still function.

B.9 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 enough SDLC RS-485 Port 1 communication cables to allow full capabilities of that cabinet. Each communication cable connector shall be a 15-pin metal shell D subminiature type. The cable shall be a shielded cable suitable for RS-485 communications. Secure all connecting cables and wire runs by mechanical clamps. Stick-on type clamps are not acceptable.

Pre-wire the terminal facility for a Type 16 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.10 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.11 Power Panel

B.11.1 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.

B.11.2 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.11.3 Circuit Breakers

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

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

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

B.11.4 Power receptacle

Mount a two-position, 120 VAC 20 amp**,** NEMA 5-20R GFCl 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.

B.12 Auxiliary Devices

B.12.1 Flashers

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

B.12.2 Flash Transfer Relays

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

B.12.3 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.12.4 Load Switches

Provide sixteen solid state load switches conforming to the requirements of Section 6.2 of the NEMA TS2 Standard.

B.12.5 Bus Interface Units (BIU)

Provide four BIUs conforming to the requirements of section 8 of the NEMA TS2 Standard. Provide two BIUs with the main panel and one BIU with each of the detector racks.

B.12.6 Inductive Loop Detector Amplifier Card

Provide sixteen, two-channel, type C, rack mounted, inductive loop detector amplifier cards conforming to section 6.5, Inductive Loop Detector Units, of the NEMA TS2 Standard.

Install inductive loop detector amplifier cards in the rack in traffic signal control cabinet. Program the signal controller to make the inductive loop detector and signal cabinet fully operational per plan.

B.12.7 Time Clock

Furnish a Tork EWZ210C astronomical time clock with an 8-year lithium battery time backup,

-40° F to 120° F operating range, 40-year program schedule retention, LCD type, daylight saving time, and leap year correction. Program as required by the City of Madison.

B.13 Railroad Preempt Interface Panel

Provide a railroad preempt interconnect panel built to meet state-standard and railroad requirements for the intersection where the railroad preempt is being installed. The interconnect panel shall be capable of providing at a minimum a full 8-wire interconnect with advance, simultaneous and gate-down preempt sequences. The interface panel shall also be capable of operating with a minimum 2-wire interconnect, single sequence advance (or simultaneous) preempt. Use relays with an indicator light that illuminates when the relay for a specific circuit is energized.

Mount the interface panel on the left inside wall of the traffic signal control cabinet. Furnish and install any cabling necessary for interconnection with the devices in the signal cabinet with which the interface panel is intended to communicate. Make the interface panel fully operational.

B.14 NEMA TS2 Type 2 Traffic Signal Controller with Special Programming Functions

B.14.1 General Requirements

Provide a shelf-mounted NEMA TS2 Type 2 traffic signal controller programmed and ready for operation within the associated traffic signal control cabinet. The controller unit shall be fully actuated, solid state, digital microprocessor based capable of providing the number and sequence of phases, overlaps, and any special logic as described herein. The controller unit and engine board shall comply with or exceed the industry's latest Advanced Traffic Controller (ATC) standard 5.2b and proposed standard 6.10. The controller unit shall also conform to NEMA TS2 Standard, Section 3, specifications for the Type 1 Actuated configuration in the areas where the ATC standard is silent.

The traffic signal controller shall have the capability to be programmed for MUTCD allowed signal sequences and non-standard operations using inputs on the front panel without requiring revisions to the operating system and the controller application software. Controller unit shall have a Linux-based operating system.

Provide intersection controller units with up to 16-phase operation plus 16 programmable overlaps regardless of whether or not preemption, coordination, or other special programming is used.

Provide a four-ring, programmable both for single and dual entry concurrent timing, nine-phase frame or equivalent. Provide volume density timing for eight phases and pedestrian timing for all phases. Provide MUTCD flash capability. All controls shall be in accordance with the NEMA TS2 Standard.

All controller timing parameters shall be fully programmable from the front panel keyboard inputs, and memory storage features shall be non-volatile under power-off conditions for at least thirty days. The locking, non-locking detection mode and per phase recall shall also be accessible on the front panel. The controller shall have the option for a security code entry before any timing parameters can be changed.

Provide a data key port and/or a USB port on the controller to load and store intersection programming.

Internally buffer all logic circuit inputs to withstand transients and noise, such as might result from normal usage, without damage to any mechanism components.

The controller shall provide a method for programming special user created logic functions. User created logic functions shall include, but not be limited to: nonstandard overlaps, special detector logic based on user selected parameters, coordination plan selection, and phase and pedestrian omits. Programming these special functions shall be accomplished through the use of the controller front panel keyboard. The need for special programming applications will not be considered acceptable; however it is acceptable to provide the programming functionality as part of a computer based controller programming application. Special user created logic functions shall be stored as intersection programming and be capable of being transferred from controller to controller through the use of a data-key or computer based controller programming application.

B.14.2 Front Panel Display

Provide a display panel on the front panel consisting of a backlit alphanumeric LCD display. The face of the display shall be scratch, chemical, and solvent resistant. The operator shall access the controller through a menu system. By selecting various menu options, real time operational status or stored parameter tables shall be presented to the operator.

Show on the LCD display, in addition to information required elsewhere:

a. The status of each signal phase on

b. The interval status

c. Phase termination information

d. The presence of vehicular and pedestrian calls for each phase

B.14.3 Timing

The passage timer shall time concurrently with the minimum green timer, such that the duration of the minimum green time is directly adjustable and is independent of the passage time setting.

In the dual-ring application, no more than two phases shall be permitted to time concurrently, and no more than one phase per ring. Provide barrier protection against concurrent timing of two conflicting phases; no phases assigned to one side of the barrier shall be permitted to time concurrently, if a conflict will occur. Service calls on a single entry basis. Both rings shall cross the barrier simultaneously in accordance with the following logic:

a. Phases timing concurrently shall terminate simultaneously if both have a gap-out due to excessive time between actuations.

b. Phases timing concurrently shall terminate simultaneously if both have a maximum timeout.

c. Phases timing concurrently shall terminate simultaneously if one has a gap-out and the other has a maximum time-out.

d. In the event that one phase has not achieved a gap-out or maximum time-out, the other gapped-out phase shall be permitted to leave the gapped-out condition and retime an extension when an actuation is received.

Controllers shall not accept any operator input or stored timing parameters that would result in intervals shorter than the following:

- yellow clearance - 3.0 seconds
- standard minimum walk - 4.0 seconds
- preemption minimum walk = 0.0 seconds
- minimum pedestrian clearance - 6.0 seconds

At the beginning of each of the above intervals, the controller shall check the previously stored data against these minimums. If an operator attempts to load an incorrect timing parameter the controller unit shall output a unique error code on the front panel display. As an alternate to minimum timing control a coded keyboard entry security feature may be provided.

B.14.4 Manual (Police) Control

If manual control is used, actuation of the manual control shall permit manual advance of the Walk, Pedestrian Clearance, and Green interval terminations only. Manual termination of Yellow or All-Red clearance intervals shall not be permitted.

B.14.5 Coordination

The controller shall be capable of operation in progressive coordination systems and mutual coordination and shall contain, but not be limited to, the following external inputs, with all functions brought out:

- Vehicle/Pedestrian Detectors (per phase)
- Pedestrian Omit (per phase)
- Phase Omit (per phase)
- Hold (per phase)
- Omit Red Clearance (per ring)
- Internal Maximum Inhibit (per ring)
- Maximum II (per ring)
- Red Rest (per ring)

- Stop Timing (per ring)
- Force-Off (per ring)
- Select Minimum Recall (per controller)
- Manual Control (per controller)
- Semi-Modes (per controller)
- External Start (per controller)

B.14.6 Diagnostic Program

Provide a diagnostic program prepared by the manufacturer of the controller unit which will demonstrate the proper operation of all of the inputs, outputs, controls and indicators in the controller, and have visual confirmation on the front panel. The diagnostic program shall be resident in each controller. The controller shall continuously run a diagnostic routine in the background to assure unit integrity.

B.14.7 Message Logging

Provide user programmable, data logging of local events or alarm events including, but not limited to: Conflict Flash, Remote Flash, Local Flash, Controller Voltage Monitor, Detector Failure, On Line and Data Change. The time and date shall be recorded as a part of the message logged. The logging function shall be resident in the controller unit. The logging function shall be viewed from the front panel LCD display. If the logging function cannot be viewed from the front panel LCD display, it shall be performed by supplemental auxiliary equipment supplied with this specification.

B.14.8 Closed Loop Operation

The controller shall be able to be used in a closed loop system using twisted pair copper, single mode fiber, multimode fiber, cellular modem, or wireless radio to connect to compatible equipment.

B.14.9 Firmware/Software

Provide installed in the controller current, fully operational, NTCIP compliant and active controller firmware and software sufficient for the controller to perform all functions shown on the plans, sequence of operation plan sheet, specifications, and signal timing plan for the local intersection. Provide all software licenses.

The firmware and software shall be compatible with and able to fully communicate with:

- All phase sequences used by the City, including flashing yellow for both left and right turns
- Closed loop, adaptive, Performance Measure application, and on-street control software currently utilized by the City including Centracs and Centracs Adaptive
- Both the controller and the MMU2
- City PC laptop and desktop computers with Windows 7 operating systems
- Backwards compatibility with older traffic signal controllers and software produced by the controller manufacturer and installed at City traffic signal installations since 2010
- Capable of SPaT ouput for Connected Vehicle operations

B.14.10 Controller Programming

Provide a controller that has been programmed to operate the associated intersection based upon the signal plan and sequence of operations sheet or as provided by the City.

B.15 Malfunction Management Unit (MMU)

Furnish equipment conforming to NEMA TS2 Standard, including NEMA Amendment #4-2012 for Flashing Yellow Arrow (MMU2), except where modified in this specification. Provide one shelf-mountable, 16 channel, solid-state MMU2 complete with programmed card and with Ethernet capability. The MMU2 shall meet the requirements of Section 4 of the NEMA TS2 Standard as well as Amendment #4-2012 for Flashing Yellow Arrow. The MMU2 shall be provided with Ethernet active and available for use without any further modification. The MMU2 shall come with a card that has been programmed per the sequence of operations.

The MMU2 shall be capable of the following:

- Detecting simultaneously active inputs of Green (Walk), Yellow, or Red (Don't Walk) on the same channel.
- Determining if the field signal input states detected as active or inactive by the MMU2 correspond with the data provided by the Controller Unit.
- Monitoring an optional external watchdog output from a Controller Unit or other external cabinet device.
- Monitoring an intersection with up to four approaches using the Flashing Yellow Arrow (for protected/permissive left and right turn movements).
- Event logging for the following; AC Line log, Prior/Previous Faults log, and Monitor Reset Log. All log entries shall include a date and time stamp.
- All monitor functions shall be capable of being programmed through the front panel, without the need for computers or special program cards.
- A built-in Diagnostic Wizard shall be provided that displays detailed diagnostic information regarding the fault being analyzed. This mode shall provide a concise view of the signal states involved in the fault, pinpoint faulty signal inputs, and provide guidance on how the technician should isolate the cause of the malfunction.

The MMU2 shall have an LCD display that allows for viewing of log files and field indications, as well as the viewing and setting of date and time and configuration parameters.

Furnish test results for the MMU2 showing that it has been tested within the past 3 months. The testing should include all standard NEMA TS2 required and optional tests – including flashing yellow arrow testing for the mode appropriate for the cabinet for which it is to be installed.

B.16 Battery Backup System

B.16.1 UPS Features

The UPS shall be an inverter/charger complying with UL 1778.

When utilizing battery power, the BBS output voltage shall be between 110 VAC and 125 VAC, pure sine wave output with THD < 3% at 60 Hz +/- 3 Hz.

Provide buck and boost capability to provide constant output voltage without battery input.

The range of operating temperatures for the inverter/charger shall be -34° C to +74° C.

The UPS shall be programmable and controllable using the UPS touch pad. The UPS shall also be fully programmable and controllable using a standard personal computer USB interface with Windows 7 operating system.

Provide a backlit LCD display to indicate current battery charge status, input/output voltages, power output, battery temperature, faults, alarms, date, time, and settings of the various relays.

UPS shall be fully SNMP Ethernet ready, including a RJ-45 (also known as an 8P8C) Ethernet connector port, for future activation. A SNMP card is not required with this specification.

Provide on the UPS a resettable inverter event counter and a cumulative inverter timer.

All controls and external connections shall be on the front panel. The UPS unit shall sit horizontally on a shelf. All controls and labels shall be oriented to read horizontally.

Provide lightning/ surge protection complying with ANSI/IEEE C.62.41 and C.62.45 Cat A & B and UL 1449.

Equip the UPS with an event log for at minimum the last 100 events. The events shall be time and date stamped. The event log shall be retrievable via the USB port and the last event in the log shall be viewable from the LCD screen.

The UPS shall be capable of performing a SELF-TEST of the BBS. The duration of the SELF-TEST shall be programmable in 1-minute increments from one minute to four hours.

The operation of the flash mode shall be field programmable to activate at various times, battery capacities, or alarm conditions.

Provide password protection for certain maintenance controls such as Battery Test, BBS inverter ON/OFF, viewing the Event log, and changing default settings. Furnish the UPS with a default password and the ability for the user to change the password.

Use the following LED lights conditions to indicate current status:

- Red LED Flashing for ALARM
- Red LED steady ON for FAULT
- Green LED Flashing for battery back-up mode
- Green LED steady ON for normal line mode operation

Provide on the UPS at least four sets of NO / NC panel-mounted and potential free contact relays rated 1 Amp, 120 VAC, and labeled 1 through 4. Each relay's setting shall be either preset or programmable to activate under any number of conditions. The available settings for the relays shall be:

- ON BATTERY – relay activates when BBS switches to battery power
- LOW BATTERY – relay activates when batteries have reached a certain level of remaining useful capacity while on battery power. This number is adjustable by battery voltage.
- TIMER – relay activates after being on battery power for a given amount of time. This number is adjustable from 0 to 8 hours.
- UPS FAILURE – relay activates in the event of UPS inverter/charger failure to be able to run according to these specifications

B.16.2 Specifications

Battery String Voltage 48 Vdc

Input Specifications

Nominal Input Voltage	120 VAC, Single Phase
Input Voltage Range	120 VAC +/- 25%
Input Frequency	60 Hz +/- 5%

Output Specifications

Nominal Output Voltage	120 VAC, Single Phase
Power Rating	1100 VA minimum at 25° C (1500 Watts at 74° C)
Output Frequency	60 Hz (+/- 3%)
Voltage Wave Form	Pure Sine Wave, THD < 3.0%
Efficiency (nominal)	Minimum 85% at 100% load

B.16.3 Switches

The three switches listed in this section may be in separate units or may be integrated into one or more units.

The range of operating temperatures for all switches shall be -34° C to +74° C.

B.16.3.1 Automatic Bypass Transfer Switch

Furnish and install an automatic/manual bypass switch to transfer the critical load to the utility line if there is a fault on the BBS/UPS, if there is battery failure, and upon complete battery discharge. The transfer from battery power to utility power shall not interfere with the normal operations of the traffic controller, conflict monitor, or any other peripheral devices within the traffic control system.

Input / Output Specifications

Nominal Voltage	120 VAC, Single Phase
Voltage Range	92 to 135 VAC
Input Frequency	60 Hz +/- 5%
Current	30 A

B.16.3.2 Manual Bypass Switch

Furnish and install a manual bypass switch to provide a mechanical bypass of the BBS/UPS without any interruption of power to the intersection.

Input / Output Specifications	
Nominal Voltage	120 VAC, Single Phase
Voltage Range	92 to 135 VAC
Input Frequency	60 Hz +/- 5%
Current	20 A minimum

B.16.3.3 Generator Transfer Switch

Furnish and install a generator transfer switch to automatically transfer the input to the BBS/UPS from the utility line to a portable AC generator. The switch shall break both line and neutral to the utility, and prevent back-feeding the utility lines. This switch shall be mounted within the same enclosure as the generator plug.

Input / Output Specifications	
Nominal Voltage	120 VAC, Single Phase
Voltage Range	92 to 135 VAC
Input Frequency	60 Hz +/- 5%
Current	20 A minimum

B.16.4 Other Equipment

Furnish all equipment, mounting hardware, wire, cable, fasteners, and connectors not otherwise specified to provide a complete and operational BBS/UPS, including but not limited to, the cable connections to the batteries.

B.16.4.1 Battery Monitor System

A remote battery monitor system (RBMS) shall be permanently installed into the BBS/UPS compartment to monitor the four 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.16.4.2 Battery Heater Mats

Provide installed and operational heating mats for the batteries. Heating mats shall be 120 volt. Provide a temperature sensor bonded to the pad, electrical power cord, and a thermal fuse in each power cord.

B.16.5 Operation

B.16.5.1 Loss / Restoration of Utility Power

The BBS/UPS shall transfer the load to battery power when the utility line voltage is outside the High and Low Limits. Set the default high and low limits as 130 & 100 VAC, respectively. Operate in the Buck and Boost modes for partial line voltage correction.

For the low line voltage condition, the BBS/UPS shall return to line mode when the utility power has been restored to above 105 VAC for the specified line qualification time. This line qualification time shall be user adjustable from 3 to 30 seconds.

For the high line voltage condition, the BBS/UPS shall return to line mode when the utility power has been restored to below 125 VAC for the specified line qualification time. This line qualification time shall be user adjustable from 3 to 30 seconds. In cases where the nominal voltage is between 125 and 130 VAC, the BBS/UPS shall return to line mode when the utility power is back to nominal.

The maximum transfer time allowed, from disruption of normal utility line voltage to stabilized inverter line voltage from batteries, shall be 65 milliseconds. The same maximum allowable transfer time shall also apply when switching from inverter line voltage to utility line voltage.

B.16.5.2 Battery Operation

In the event of UPS failure, battery failure, or complete battery discharge, the automatic power transfer switch shall revert to the NC (and de-energized) state, where utility power is supplying the cabinet.

Provide a temperature compensated battery charging system. The charging system shall compensate over a wide range of 2.5 to 4 mV / °C / Cell. The charger shall be rated 10 amps at 48 VDC. Batteries shall not be charged when battery temperature exceeds manufacturer's recommendations for the specific batteries being used. The charging system shall fully recharge the batteries within 20 hours.

B.16.6 Compatibility

The BBS/UPS shall be compatible with all of the following for full phase operation mode, flash operation mode, or a combination of both full and flash mode operation:

- NEMA TS1 controllers and cabinet components
- NEMA TS2 controllers and cabinet components

B.16.7 Electrical Protections

The BBS/UPS shall be equipped to prevent a malfunction feedback to the cabinet or from feeding back to the utility service per UL 1778, Section 48 "Back-feed Protection Test". The upstream back-feed voltage from the BBS/UPS system shall be less than 1 volt AC.

B.16.8 Equipment Installation

Furnish and install the BBS/UPS system according to manufacturer's requirements.

1. Furnish and install from the electrical service to the BBS cabinet and back to the signal cabinet, the larger of #10 AWG, 600 volt, electric wire,
2. the wire size recommended by the UPS manufacturer,
3. the largest size wire used in the signal cabinet for the power connections, or
4. the wire size required by WSEC.

Install the wire through a hole drilled between the traffic signal control cabinets and the BBS/UPS compartment. Install two bushings in the hole.

Provide grounding, suppressors and lightning arrestors according to the WSEC requirements.

Program and/or enter configuration settings for the equipment and make the equipment fully operational.

B.16.9 BBS/UPS System 100aH Batteries

Furnish four (4) 100aH batteries. Batteries shall be newly built and fully charged when delivered. Batteries shall be fully compatible with the associated BBS/UPS system.

The batteries shall be comprised of extreme temperature, float cycle, GEL VRLA (Valve Regulated Lead Acid). Batteries shall be certified to operate at extreme temperatures from –40°C to +71°C.

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 shall be configured for a 48 VDC battery buss system.

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

An integral lifting handle shall be provided on each battery for ease of removal/installation.

B.16.10 Maintenance

The individual BBS/UPS parts shall be easily replaced and installed (complete turnkey system with all necessary hardware). The BBS/UPS shall not require any special tools for removal or installation.

The BBS/UPS shall provide voltmeter standard probe input-jacks (+) and (-) to read the exact battery voltage drop at the inverter input.

The BBS/UPS 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/UPS shall identify a weak battery or multiple batteries in the string that have reached a weak state and notify maintenance by initiating an alarm.

B.17 Documentation

B.17.1 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, one set of .dwg CAD files and one .pdf file 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 and two sets of printed cabinet intersection wiring diagrams, one set of .dwg CAD files and one .pdf file reflecting any field changes.

B.17.2 BBS/UPS Wiring Diagrams

Submit detailed equipment layout drawings and inter-equipment wiring diagrams furnished under this specification to the Department for approval. Two sets of approved equipment layout drawings and inter-equipment wiring diagrams shall be contained in a heavy-duty clear plastic envelope mounted on the inside of the front door.

B.17.3 Manuals

Traffic Signal Control Cabinets

At the time of the cabinet delivery, furnish the City an electronic copy of installation, operations, and maintenance manuals including each type of standard equipment in the cabinet. The manuals shall as a minimum include the following information:

a. table of contents,
b. operating procedure,
c. step-by-step maintenance and trouble-shooting information for the entire assembly,
d. schematic diagrams,
e. pictorial diagrams of parts locations,
f. itemized parts lists with parts numbers,
g. theory of operation, and
h. maintenance checklists.

UPS/BBS Compartment

For the installed equipment, at the time of the delivery, furnish two printed sets, and one .pdf file on a CD-ROM or flash drive, of equipment installation, operations, and maintenance manuals per cabinet and an itemized price list for each type of equipment, their sub-assemblies, and their replacement parts. The manuals shall as a minimum include the following information for each piece of equipment:

a. table of contents,
b. startup procedure,
c. operating procedure,
d. step by step maintenance and trouble-shooting information for the entire assembly,
e. circuit wiring diagrams,
f. pictorial diagrams of parts locations,
g. part numbers,
h. theory of operation, and
i. maintenance checklists.

The instructional manuals shall include an itemized parts list. The itemized parts list shall include the manufacturer's name and part numbers for all components (such as IC's, diodes, switches, relays, etc.) used in each piece of equipment. The list shall include cross-references to part numbers of other manufacturers who make the same replacement parts. Also provide the .dgn CAD files for the equipment layout drawings and inter-equipment wiring diagrams.

B.18 Cabinet Delivery

Deliver the fully wired, equipped and configured cabinet with required documentation to the City of Madison, Traffic Engineering Electrical Shop located at 1120 Sayle Street, Madison, WI, 53704. Delivery

shall be on a business day between 8:00 AM and 3:00 PM. Contact the City of Madison, Traffic Engineering Electrical Shop (Ed Smith at 608-266-9034) a minimum of two business days ahead of the desired delivery time to schedule and confirm the staff availability for delivery.

B.19 Warranty

The contractor shall warrant the performance and construction of the fully-configured cabinet to meet the requirements of the plan, this specification, and shall warrant all wiring parts, components, and appurtenances against defects in design, material and workmanship for a period of one year from the date of installation. In the event defects and failures become apparent during this time, the contractor shall repair and/or replace all defective parts or appurtenances at no additional expense to the City. This specification is to construe that any part, or parts, that fail to function properly shall be replaced at no charge to the City.

C (Vacant)

D Measurement

The department will measure NEMA TS2 Type 1 Traffic Signal Control Cabinet by each unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.098	NEMA TS2 Type 1 Traffic Signal Controller Cabinet	Each

Payment is full compensation for furnishing and delivering all materials to the City of Madison, 1120 Sayle Street.

108. Traffic Signal Controller, Item SPV.0060.099.

A Description

This special provision describes furnishing a traffic signal controller with auxiliary equipment to the City of Madison.

The City of Madison will install this item as part of the construction of this project.

B Materials

Furnish an Econolite Cobalt Type 2 controller with current release of firmware, HTR, data key, and Ethernet port.

C (Vacant)

D Measurement

The department will measure Traffic Signal Controller by each unit, acceptably completed and delivered to the City of Madison.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.099	Traffic Signal Controller	Each

Payment is full compensation for furnishing and delivering the signal controller, and all auxiliary equipment, to the City of Madison, 1120 Sayle Street.

109. Optical Signal Preempt, Item SPV.0060.100.

A Description

This special provision describes furnishing and installing optical signal preempt equipment at signalized intersections at the location and the quantity as shown on the plan

B Materials

Furnish the following:

1. GTT Opticom Model 764 Multimode Phase Selector
2. GTT Opticom Model 711 Single Channel Optical Detector(s)

Furnish and install preemption detector cable, jumpers and any auxiliary equipment as necessary for a complete operating system.

C Construction

Install detectors on the top horizontal member of monotube arms, between the first and second traffic signal head, and as otherwise shown on the plan or as directed by Madison Traffic Engineering.

The detectors will generally be on the far side of the intersection, and aimed at approaching traffic, or as further directed by Madison Traffic Engineering staff. Install detector cable from the detector to the control cabinet at each intersection, using the shortest conduit path and leaving 5-ft slack at each handhole.

All installation methods to be consistent with the manufacturer's instructions. Card rack and discriminator installation, as well as cabinet connections, will be made by City of Madison Traffic Engineering staff.

D Measurement

The department will measure Optical Signal Preempt as a single lump sum unit of work for optical signal preempt, 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.0060.100	Optical Signal Preempt System	Each

Payment is full compensation for furnishing and installing detectors and cable; for furnishing and delivering discriminators, card racks, cables and miscellaneous materials to the city Traffic Engineering Field Office, 1120 Sayle Street.

110. Traffic Signal Ethernet Switch, Item SPV.0060.101.

A Description

This special provision describes furnishing and installing an ethernet switch in an existing traffic signal cabinet, as specified in standard specs 651, 655, 670, 674, and 675, as shown on the plans, and as provided hereinafter.

B Materials

Furnish Cisco IE-4000-8T4G-E Ethernet switches with IP services license as called for in the plans. Provide all necessary cables between the ethernet switch and device or devices also as called for in the plans.

C Construction

Install the traffic signal ethernet switch in an existing traffic signal cabinet. Connect it to devices as shown on the plans, according to the manufacturer's recommendation, and as directed by the engineer.

Label the switch with the proper authentication code for the IP services licensing. Label shall be white with black text and be legible.

Contact Mike Benzschawel at the City of Madison Traffic Engineering shop at (608) 235-3649 a minimum of 7 working days in advance to coordinate installing equipment in existing traffic signal cabinet.

D Measurement

The department will measure Traffic Signal Ethernet Switch as each individual traffic signal ethernet switch, 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.0060.101	Traffic Signal Ethernet Switch	Each

Payment is full compensation for furnishing and installing an ethernet switch, all necessary incidental wiring and hardware, making all necessary connections.

111. Malfunction Management Unit (MMU), Item SPV.0060.102.

A Description

This special provision describes furnishing a shelf-mountable, 16-Channel, solid-state MMU with Ethernet capability to the City of Madison.

The City of Madison will install this item as part of the construction of this project.

B Materials

Provide one shelf-mountable RENO MMU2-1600E, 16 channel, solid-state MMU with Ethernet capability. The MMU shall meet the requirements of Section 4 of the NEMA TS2 Standard. The MMU shall be capable of the following:

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

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

C (Vacant)

D Measurement

The department will measure Malfunction Management Unit (MMU) by each unit, acceptably completed and delivered to the City of Madison.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.102	Malfunction Management Unit (MMU)	Each

Payment is full compensation for furnishing and delivering the Malfunction Management Unit to the City of Madison, 1120 Sayle Street.

112. Lighting Control Cabinet, Item SPV.0060.103.

A Description

This special provision describes furnishing and installing a lighting control cabinet with all electrical components and wiring assembled.

B Materials

B.1 Contactors

Furnish 8-pole, 30-amp, 600-V electrically held contactors with 120-V control coil in NEMA 1 enclosure as required for the proposed circuits. Engrave “ALL NIGHT” or “MIDNIGHT” identification on cover of respective enclosures.

B.2 Photocell

Furnish a button type photocell and install as shown on the detail. Apply silicone caulk to maintain the watertight integrity of the enclosure. The photocell shall be rated for 120V, 1500W with 30-60 second delay between “on-off” operations.

B.3 Panel

Furnish a 120/240-volt, 100A main circuit breaker, single-phase, 20-circuit panel board in a NEMA 1 enclosure. Provide copper ground and split neutral bus bars in addition to copper bus bars. Provide bolt-on, thermal-magnetic circuit breakers that clearly indicate ON, OFF, or TRIPPED position in the panel. Provide double pole breakers as required for all multiwire branch circuits.

B.4 Time Clock

Furnish a Tork EWZ210C astronomical time clock with an 8-year lithium battery time backup, -40° F to 120° F operating range, 40-year program schedule retention, LCD type, daylight saving time, and leap year correction. Program as required by the City of Madison.

B.5 Selector Switches

Furnish “Hand-Off-Auto” switches to control each circuit separately. Provide a “Hand-Off-Auto” legend plate for each switch. Engrave “ALL NIGHT” and “MIDNIGHT” above each appropriate operator. Mount the switches in a horizontal manner in a NEMA 1 enclosure.

B.6 Cabinet Enclosure

Provide a NEMA 4X enclosure made from .125-inch Type 5052-H32 aluminum. The doorframe shall be double flanged and all exterior seams shall be ground smooth. Door handle shall be 3/4-inch diameter stainless steel with three point latching system and hasp. Main door shall be sealed with a closed-cell neoprene gasket. Main door hinge shall be continuous 0.075-inch thick stainless steel with a 0.25-inch stainless steel hinge pin. Provide an aluminum-mounting panel at back (interior) of enclosure. Provide a weatherproof pad lock with 2-3/8-inch wide body, repinnable/replacable cylinder, and five keys. There shall be no louvers or Corbin main door lock. Applicable code working clearances shall be maintained between equipment mounted within the enclosure.

B.7 Surge Arrester

Furnish a surge suppressor to protect the panel board. The surge suppressor shall provide 6 modes of surge protection, meet UL1449 Second Edition with 32Ka per phase and 48KA system peak surge current, contain LED line indicators, and approximate dimensions of 4.54-inch X 2.58-inch X 0.22-inch. Connect the surge suppressor to the branch circuit breaker as indicated on the plans.

B.8 Field Wiring Termination Blocks

All connections from the field wiring to equipment in the lighting control cabinet shall be made through termination blocks. Provide quantity of channel mount, NEMA type single terminal blocks as indicated on plans that are capable of holding #12 to #1/0 wire with solderless box lugs, for power, neutral and grounding connections. Mount the terminal blocks on a mounting channel of appropriate length with end anchors and an end barrier. Each terminal block shall have a label indicating the appropriate circuit number, neutral (‘N’) or ground (‘G’) wire connected to block; handwritten numbers and letters are not acceptable means of identification. Make connections from the underground field wiring to the equipment in the lighting control cabinet through distribution blocks.

B.9 Convenience GFI Receptacle and Cabinet Light Fixture

Furnish a 20 ampere, 120 commercial grade GFI duplex receptacle within a galvanized steel outlet box with cover. 150 watt, 250 volt commercial grade lamp holder with galvanized steel box and 60 watt incandescent bulb. Furnish switch to turn on cabinet light by opening the cabinet door.

B.10 Incidental Materials

Secure all wiring using screw attachment type straps; adhesive type shall not be allowed.

C Construction

Assemble the control cabinet as shown on the plans. Pretest the cabinet prior to shipment to the site. Mount all equipment to panel in enclosure. Train the cables in straight horizontal and vertical directions and be parallel next to and adjacent to other cables whenever possible. Mount the cabinet to the concrete base per the manufacturer's requirements. The work under this bid item includes connection and termination to the feeder system wiring.

D Measurement

The department will measure Lighting Control Cabinet as each individual unit, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.103	Lighting Control Cabinet	Each

Payment is full compensation for furnishing and installing photo control, contactors, panel, distribution blocks, surge arrestor, enclosure, grounding, wiring and electrical components; mounting to the concrete base.

113. Vehicular Detection System Programming Unit, Item SPV.0060.104.

A Description

This work shall consist of furnishing the Vehicular Detection System Programming Unit to Traffic Engineering staff at the City of Madison and providing field training and instruction relating to the operation, maintenance, programming, and installation of the Vehicular Detection System Programming Unit.

B Materials

Furnish to the City, a Vehicular Detection System Programming Unit with preinstalled software for programming the Vehicular Detection System. The semi-rugged laptop computer shall be capable of operating outdoors in all seasons.

B.1 Software

The Vehicular Detection System Programming Unit shall be capable of being programmed with a supported, 64-bit operating system compatible with most Vehicular Detection software. The software required to program the Vehicular Detection System (Accuscan 1000 radar detection) shall be pre-installed. All software manuals, documentation, CD's, etc. shall be provided to the City.

B.2 Storage and Memory

The Vehicular Detection System Programming Unit shall have a minimum 16 GB SDRAM (2.6 GHz) and minimum 500 GB solid state drive.

B.3 Display

The Vehicular Detection System Programming Unit shall have a minimum 15-inch high definition (minimum 720p) LED 1600 x 900 monitor. The display shall have antiglare screen treatment.

B.4 Keyboard and Input

The Vehicular Detection System Programming Unit shall have an oversized electrostatic touchpad with multi touch support.

B.5 Expansion Slots

The Vehicular Detection System Programming Unit shall have a minimum of one (1) each of the following expansion slots:

- PC card type II
- SD card (SDXC)

B.6 Interface

The Vehicular Detection System Programming Unit shall have the following interfaces:

- HDMI: Type A
- Headphones/speaker: Mini-jack stereo
- Microphone/line in: Mini-jack stereo
- USB 3.0 (x1), USB 2.0 (x2)
- IEEE 1394a (FireWire): 4-pin
- 10/100/1000 Ethernet: RJ-45
- 10/100 2nd LAN Ethernet: RJ-45

B.7 Wireless

The Vehicular Detection System Programming Unit shall have the following wireless capabilities:

- 802.11a/b/g/n
- Security
- Authentication: LEAP, WPA, 802.1x, EAP-TLS, EAP-FAST, PEAP
- Encryption: CKIP, TKIP, 128-bit and 64-bit WEP, Hardware AES
- Bluetooth enabled

B.8 Power Supply

The Vehicular Detection System Programming Unit shall have a minimum battery life of 7-hours under normal operating conditions.

B.9 Accessories

The Vehicular Detection System Programming Unit shall have the following accessories:

- A 100V-240V 50/60Hz auto sensing/switching worldwide power supply 3-prong AC adapter.
- A large capacity protective carrying case.
- A 3-meter section of pre-terminated CAT-5E Ethernet cable.
- All cables required to connect the programming unit to the VVDS.

B.10 Warranty

The supplier shall provide a minimum 1-year warranty on the Vehicular Detection System Programming Unit from the date of installation.

C Construction

Provide items indicated to the City of Madison Lead Electrician (608-235-3649) along with operations and maintenance manuals. Electronic operation and maintenance manuals are sufficient.

D Measurement

The department will measure Vehicular Detection System Programming Unit 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.0060.104	Vehicular Detection System Programming Unit	Each

Payment is full compensation for furnishing and delivering the Vehicular Detection System Programming Unit to the City of Madison, 1120 Sayle Street.

114. No Right Turn Blank Out Sign, Item SPV.0060.105.

A Description

This special provision describes furnishing and installing No Right Turn blank out electrical signs in accordance with the plans and this special provision.

B Materials

Provide for each quantity one 24” by 24” blank out electrical sign capable of displaying MUTCD compliant R3-1 display. Housing shall be black, aluminum with housing and door thickness of 0.125 inches. Minimum of 30 degree viewing angel centered optical axis.

Provide stainless steel fasteners and hardware for each sign.

Power supply for sign shall be 120V – 60hz.

Sign shall be fully compatible with NEMA controllers/conflict monitors and capable of being completely blank when de-energized.

C Construction

Install signs on poles and/or signal arms per plans.

D Measurement

The department will measure No Right Turn Blank Out Signs by each individual unit, acceptably complete and installed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.105	No Right Turn Blank Out Sign	Each

Payment is full compensation for furnishing and installing all materials.

115. Temporary Traffic Signals (Hill), Item SPV.0060.106; Temporary Traffic Signals (Ridge), Item SPV.0060.107; Temporary Traffic Signals (Farley), Item SPV.0060.108.

A Description

This special provision describes installing temporary traffic signals for intersections, using overhead electrical wiring to temporary traffic signal poles and temporary supports, and providing non-intrusive vehicle detection according to standard spec 661 and as amended herein. This special covers temporary lighting at the intersection including overhead conductors, arms, luminaires, supplying wood poles, maintaining wood poles, and removing wood poles.

B Materials

Furnish and use materials that are according to standard spec 661.2 and as amended herein.

B.1 Signal Poles and Signal Faces

Furnish new or used poles and traffic signal standards for use in temporary signals conforming to the pertinent requirements of standard spec 657 and 661. Furnish signal faces according to standard spec 661.2.2.2.

B.2 Signal Cabinet

Furnish new or equivalent to new materials as specified in standard spec 661.2 and as follows:

B.2.1 Controller

Furnish a new or equivalent to new Econolite Cobalt TS2 Type-1 controller with Telemetry Module. The controller shall be compatible with the City of Madison closed loop system (CLS).

B.2.2 Conflict Monitor

Furnish a new or equivalent to new NEMA+ 12-Channel Signal Conflict Monitor, with LCD display, and an Ejector Tab card release on side of card.

Provide keys to the temporary signal control cabinet to the City of Madison in addition to other required keys according to standard spec 661.2.1.

B.3 Luminaires

Furnish luminaire arms and luminaries conforming to the pertinent requirements of standard spec 657 and 659. The luminaries shall be 160-watt, full cutoff, LED and shall be furnished with photo electric cells to turn the luminaire on and off.

B.4 Emergency Vehicle Pre-emption Hardware, Cable, and Equipment

Furnish and install Optical signal preempt for the temporary signals that is compatible with the City's EVP systems. All approach directions each need to be detected and brought back individually to the signal control cabinet.

B.5 Railroad Pre-emption

Railroad pre-emption shall be included with the temporary traffic signals at University & Ridge, and University & Farley.

B.6 Vehicle Detection Hardware, Cable and Equipment

The contractor, with prior approval of the engineer and the City of Madison, shall select the vehicle detection technology best suited for the site conditions and the anticipated construction work zones and activities. The engineer reserves the right to request a demonstration of any or all temporary vehicle detection technologies prior to said approval. Vehicle detection technologies considered shall include; but are not limited to, temporary inductive loops, microwave detection, or video detection. Detection technology shall provide for true presence detection.

Damage to new pavement for temporary detection loops will not be allowed. Any pavement damaged during installation shall be replaced at the contractor's expense.

C Construction

C.1 General

Revise standard spec 661.3.1(2) as follows.

Request a signal inspection of the complete temporary traffic signal installation. Make this request to the engineer at least 5 working days before the requested inspection. The City of Madison traffic signal personnel will perform the traffic signal inspection.

Arrange for monthly inspections with the engineer to review the height of the span wire above the roadways to ensure that the bottom of the traffic signal heads remain within the minimum and maximum heights allowed above the roadway as provided in the plans. Make all height adjustments within 24-hours of an inspection. Notify the engineer in writing upon completion of all necessary adjustments. Maintain a written log to properly document the date of each monthly inspection, the heights above the roadway, the roadway clearance after adjustments have been made and acceptance by the engineer.

Inspections can be more frequent than monthly as directed by the engineer.

The City of Madison will load the timing programs into the controller. Do not use new permanent signal conduit for temporary signal wiring. Provide horizontal and vertical clearance between sidewalks and guy wires.

Arrange for all required electrical service modifications with the utility. Pay all utility company installation costs for modifications required to maintain the Temporary Traffic Signal.

Locate and avoid all underground and aboveground utilities and structures. Install temporary supports as required to avoid conflicts with proposed curb and gutter, sidewalk, and traffic signal poles. The engineer will approve the final location of wood poles prior to installation.

Use of self-supporting poles will likely be required due to limited right-of-way limitations and depending on contractor operations.

Maintain temporary signals throughout the construction of the project, until such time that the new signals are operational and have been accepted by, and turned over to the city.

This item includes multiple configurations and re-installations of the temporary traffic signal. Allow for additional equipment on site to maintain temporary signal operations at all times during construction.

C.2 Signal Heads

Install signal heads for the same vehicle travel direction at a minimum of 11 feet from each other. Move signal heads as necessary or as directed by the engineer.

C.3 Cabinet

Require a representative from the cabinet supplier on-site at the time of the turn on. Install equipment in the cabinet as follows:

C.3.1 Controller

Install the controller and ensure that it is operational as part of the City of Madison closed loop system.

C.4 Luminaires

Install luminaire arms and luminaries conforming to the pertinent requirements of standard spec 657 and 659.

C.5 Pre-emption Hardware, Cable, and Equipment

Install detector cards, sensors, cables, and all required ancillary equipment, appurtenances and mounting hardware at the temporary signals to provide a fully functioning pre-emption system. Arrange testing of the pre-emption system with Electrical Operations Lead Worker, (608) 266-9031, before turn-on of the temporary signal.

C.6 Railroad Pre-emption

Provide a railroad preempt interconnect panel built to meet City of Madison and railroad requirements for the intersection where the railroad preempt is being installed. Contact Michael Benzschawel at the City of Madison Traffic Engineering Shop, (608) 235-3649 to request the requirements. The interconnect panel shall be capable of providing a full 8-wire interconnect with both advance and gate-down preempt sequences. The interface panel shall also be capable of operating with a minimum 2-wire interconnect, single sequence preempt.

Install the interface panel on the left inside wall of the signal cabinet. Furnish and install any cabling necessary for interconnection with the devices in the signal cabinet with which the interface panel is intended to communicate. Make the interface panel fully operational.

Contact Michael Benzschawel at the City of Madison Traffic Engineering Shop, (608) 235-3649 to request a review and approval of the traffic signal controller programming for the railroad preemption operation. City of Madison personnel shall be present at the time of final traffic signal turn on. Contact Michael Benzschawel at least two weeks prior to final traffic signal turn on to make arrangements.

The railroad pre-emption for the temporary traffic signals shall be operated in accordance with parameters provided by the City of Madison prior to construction.

C.7 Vehicle Detection Hardware, Cable and Equipment

Install detector cards, sensors, cables and all required ancillary equipment, appurtenances and mounting hardware at the temporary signals to provide a fully functioning vehicle detection system for all approaches. The desired vehicle detection zones and temporary signal phasing are shown on the plans.

Arrange testing of the temporary detection system with Electrical Operations Lead Worker, (608) 266-9031, before turn-on of the temporary signal.

Adjust, relocate, add, or remove temporary vehicle detection equipment for each traffic control stage or sub stage as shown in the plans, requested by the engineer, or as modified by the contractor's operations to maintain the required traffic and complete the proposed work. Damage to new pavement for temporary detection loops will not be allowed. Any pavement damaged during installation shall be replaced at the contractor's expense.

C.8 Maintenance

When a signal installation or signal head is not in operation, hood, turn, or take down the signal head(s) to clearly indicate that the signal is not in operation. (See MUTCD 4D-1).

Provide immediate response, 24-hour/7-days per week, to maintain any aspect of the temporary vehicle detection that is defective, completing repairs or adjustment the same day as notification.

C.9 Contractor Qualifications

Demonstrate the ability to operate all required traffic signal equipment listed in this special provision for the engineer and the City of Madison prior to starting work. Provide proof of the ability to obtain all required traffic signal equipment listed in this special provision to the engineer and the City of Madison prior to starting work.

D Measurement

The department will measure Temporary Traffic Signals (Location), completed according to the contract and accepted, as each unit of work, and according to standard spec 661.4.

If repairs or adjustments to restore vehicle detection to full function are not made the same day as notification, the associated pay item shall be reduced by the following amounts:

a) First instance: No deduct if repaired within 24 hours

b) Each subsequent instance: 5% deduct for each day or partial day of non-compliance.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.106	Temporary Traffic Signal (Hill)	EACH
SPV.0060.107	Temporary Traffic Signal (Ridge)	EACH
SPV.0060.108	Temporary Traffic Signal (Farley)	EACH

Payment is full compensation according to standard spec 661.5.

116. Temporary Street Lighting System Maintenance and Operations, Item SPV.0060.109.

A Description

This special provision describes maintaining the existing lighting system operations during construction; furnishing and installing lighting materials and operating a temporary lighting system during construction; and providing for temporary operations of the existing and temporary lighting systems during construction in accordance to the pertinent standard specifications noted within this special provision.

B Materials

Existing street lighting equipment shall remain in use for as long as possible. The department must approve the use of any existing street lighting equipment beyond the time the equipment is noted to be removed; or if it is to be used at other locations on the project. Removal of the existing lighting equipment shall be paid under separate bid items in this contract.

C Construction

C.1 General

Maintain temporary lighting throughout the project per plan, and as generally outlined: install wood poles with conductors and lighting along the north side of University Avenue during stage 2. Install wood poles with lighting along south side and median during stage 4. Remove temporary lighting during stage 6 after permanent lighting has been installed, accepted and operational.

City of Madison crews shall be permitted to use temporary lighting and signal wood poles for maintaining backbone fiber along University Avenue. Coordinate work with Electrical Operations Lead Worker, (608) 266-9031 giving 7 days notification prior to installing or removing wood poles.

Maintain the existing and temporary lighting systems within the construction limits for the duration of the project. Maintenance includes, but is not limited to:

- Coordinating utility service modifications
- Rerouting existing conduit and wiring
- Installing temporary conduit and wiring
- Adjusting or relocating existing street lights
- Installing temporary street lights

- Replacement of burned out lamps
- Replacement of knocked down poles
- Maintaining continuous lighting for the duration of the project

Supply an off-hours contact(s) for repair purposes. Respond within 1 hour to the project site for knockdowns or other work that must be completed in a timely manner. Provide the name, address, and telephone number(s) of the persons qualified and assigned to maintaining the temporary lighting to the engineer and local police. Ensure the persons are available 24 hours a day, 7 days a week, from the start of the project through completion. Ensure that emergency calls are received by an individual and not by an answering machine. Complete all other maintenance needs within 6 hours of notification.

Continuously monitor the existing and temporary lighting systems until construction is complete.

Coordinate work with Electrical Operations Lead Worker, (608) 266-9031 at least 7 days prior to starting any work that will modify elements of the existing City of Madison street lighting system including, but not limited to: removing existing lights, installing temporary lights, making underground conduit connections and electrical service modifications.

C.2 Existing Lighting Equipment

Use existing street lighting equipment as required to maintain illumination over the active travel lanes. Obtain approval from the engineer to modify any existing lighting equipment. Modifications include, but are not limited to; drilling holes, attaching aerial wiring, and attaching conduit risers. Do not damage any existing equipment in a manner which renders it useless unless the item has been scheduled for disposal after the completion of the project Removal of the existing lighting equipment shall be paid under separate bid items in this contract.

C.3 Electrical Services

Assume all maintenance obligations for the existing street lighting services as well as any temporary street lighting services during the project construction. The City of Madison will pay all energy charges to the utility for existing and temporary lighting systems.

All street lighting changes need to be tracked continuously for energy billing purposes. Maintain a weekly record of lighting changes for the entire duration of the project. Note the date of any installation or removal of a light fixture. Also note the type and wattage of the light fixture being removed or installed. Use the record of lighting changes to determine accurate energy charges. Provide all documentation of lighting changes to the City of Madison throughout the project.

D Measurement

The department will measure Temporary Street Lighting System Maintenance and Operations, completed according to the contract and accepted, as each unit of work.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.109	Temporary Street Lighting System Maintenance and Operations	Each

Payment is full compensation for providing, operating, maintaining, and repairing the complete temporary installation. Payment also includes furnishing and installing all replacement equipment; as well as all utility installation fees through completion of the project.

117. Temporary Wood Poles, Item SPV.0060.110.

A Description

This special provision describes furnishing and installing wood poles for temporary lighting and fiber optic routing during construction.

B Materials

Furnish wood poles as needed to provide temporary supports for luminaires and overhead wiring. Furnish poles conforming to the requirements in standard spec 661.2.1.1. All poles shall be a minimum of 40-feet in length.

C Construction

Install poles conforming to the requirements in standard spec 661.3. The engineer will determine final pole positions after marking the utilities in the field.

D Measurement

The department will measure Temporary Wood Poles by each individual unit, acceptably complete and installed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.110	Temporary Wood Poles	Each

Payment is full compensation for furnishing and installing all materials.

118. Temporary Lighting Arms, Item SPV.0060.111.

A Description

This special provision describes furnishing and installing lighting arms for a temporary lighting system during construction.

B Materials

Furnish 15-foot luminaire arms as needed to provide temporary supports for luminaires. Furnish arms conforming to the requirements in standard spec 657.2.2.3.

C Construction

Install arms conforming to all requirements under standard spec 657.3. Orient arms to be 90 degrees to the adjacent roadway unless shown otherwise on the plan.

D Measurement

The department will measure Temporary Lighting Arms by each individual unit, acceptably complete and installed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.111	Temporary Lighting Arms	Each

Payment is full compensation for furnishing and installing all materials.

119. Temporary Luminaires Utility, Item SPV.0060.112.

A Description

This special provision describes furnishing and installing luminaires for a temporary lighting system during construction.

B Materials

Furnish luminaires as needed to maintain temporary illumination. Furnish luminaires conforming to the requirements under standard spec 659.2. All luminaires shall be equivalent to a WisDOT LED B. Luminaries shall operate by photo cell.

C Construction

Install luminaires conforming to all requirements under standard spec 659.3.

D Measurement

The department will measure Temporary Luminaires Utility by each individual unit, acceptably complete and installed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.112	Temporary Luminaires Utility	Each

Payment is full compensation for furnishing and installing all materials.

120. Reconstruct Bench and Flowlines, Item SPV.0060.113.

A Description

Work under this item includes the removal and replacement of the existing sewer access structure bench and flowline(s) as indicated in the drawings, or as required by the City of Madison, to restore the bench and flow line after completion of a tap connection as described under Sanitary Sewer Tap bid item.

B Materials

Furnish concrete materials according to the applicable provisions of standard spec 611.

C Construction

Notify the city of Madison of any potential restoration work and provide a minimum of three working days for completion of a field assessment of the structure in question.

Unless shown on the drawings, do not reconstruct bench and flowlines unless directed by the City of Madison.

Complete all work associated with this item according to section 503 of the City of Madison Standard Specifications. Provide a smooth trowel finish to all completed flowlines. Brushed flowlines will not be accepted.

D Measurement

The department will measure Reconstruct Bench and Flowlines as each individual reconstruct bench and flowline, 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.0060.113	Reconstruct Bench and Flowlines	Each

Payment is full compensation for furnishing all labor, tools, equipment, materials, and incidentals necessary to complete the contract work; and disposing of surplus materials.

121. Salvage Hydrant, Item SPV.0060.115.

A Description

This special provision describes removing and salvaging existing hydrants according to section 704.7 of the City of Madison Standard Specifications.

B Materials

Furnish associated materials according to Article 702.4 of the City of Madison Standard Specifications.

C Construction

Salvage hydrants according to section 704.7.3 (19) of the City of Madison Standard Specifications, unless otherwise shown or specified.

D Measurement

The department will measure Salvage Hydrant by each individual unit, acceptably complete and installed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.115	Salvage Hydrant	Each

Payment is full compensation for excavating, backfilling, and for removing and salvaging existing hydrants.

122. Concrete Curb and Gutter 24-Inch Type D Special, Item SPV.0090.001; Concrete Curb 24-Inch Type D Special, Item SPV.0090.002 Concrete Curb and Gutter 24-Inch Type A Special, Item SPV.0090.007.

A Description

This special provision describes construction concrete curb and curb and gutter in accordance with the pertinent requirements of section 601 of the standard specifications and the construction details shown in the plans.

B Materials

The curb and gutter shall be in accordance with the pertinent materials of section 601 of the standard specifications.

C Construction

Perform work in accordance with section 601 of the standard specifications.

D Measurement

The department will measure Concrete Curb and Gutter 24-Inch (Type) Special by 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.0090.001	Concrete Curb and Gutter 24-Inch Type D Special	LF
SPV.0090.002	Concrete Curb 24-Inch Type D Special	LF
SPV.0090.007	Concrete Curb and Gutter 24-Inch Type A Special	LF

Payment shall be in accordance with section 601.5 of the standard specifications.

123. Pedestrian Railing, Item SPV.0090.003.

A Description

This special provision describes fabricating, galvanizing, coating and installing railing according to standard spec 506, 513 and 517 and the plan details, as directed by the engineer, and as hereinafter provided.

B Materials

All materials for railing shall be new stock, free from defects impairing strength, durability and appearance. Galvanize and coat railing assemblies with a two-coat system. Bubbles, blisters and flaking in the coating will be a basis for rejection.

B1 Coating System

B1.1 Galvanizing

Fabricate railings to meet the requirements of ASTM A385. After fabrication, blast clean steel railing assemblies per SSPC-SP6 and galvanize according to ASTM A123. Drill vent holes in members as required to facilitate galvanizing and drainage. Show location and size of vent holes on the shop drawings. Remove all burrs at component edges, corners and at holes and chamfer sharp edges before galvanizing. Condition any thermal cut edges before blast cleaning by shallow grinding or other cleaning to remove any hardened surface layer. Remove all evident steel defects exposed according to AASHTO

M 160 prior to blast cleaning. Lumps, projections, globules, or heavy deposits of galvanizing, which will provide surface conditions that when coated will produce unacceptable aesthetic and/or visual qualities, will not be permitted. Water quenching and chromate or other passivating treatments will not be permitted.

B1.2 Two Coat System

After galvanizing, coat all exterior surfaces of steel railing assemblies and inside of rail elements at field erection and expansion joints with a two coat system as hereinafter provided.

Clean all galvanized surfaces to be coated per SSPC-SP1 to remove chlorides, sulfates, zinc salts, oil, dirt, organic matter and other contaminants. Brush blast clean the cleaned surface per SSPC-SP16 to create a slight angular surface profile per manufacturer's recommendation (1 mil minimum, 1.5 mils maximum) for adhesion of the tie coat. Remove wet storage stains prior to blasting per SSPC-SP16. Perform brush blasting at an angle of 30 to 60 degrees to the surface using air pressure no greater than 50 psi, and a soft abrasive such as Garnet. Steel shot and angular iron blasting grit will not be permitted. Brush blast the surface to produce a matte silver appearance. When brush blasting do not fracture the galvanized finish or remove any dry film thickness. Prior to application of the tie-coat, remove visible deposits of oil, grease and other contaminates from the surface per SSPC-SP1, and clean the brush blasted surface of dust, dirt and loose residue according to standard spec 517.

After cleaning and within 8 hours of blasting, apply a tie coat from an approved coating system that is specifically intended to be used on a galvanized surface, per manufacturer's recommendations. The tie coat shall etch the galvanized rail and prepare the surface for the top coat. Apply a top coat per manufacturer's recommendations, matching the specified color shown on the plans. Use an approved top coat that is resistant to the effects of the sun and is suitable for a marine environment. The tie and top coats should be of contrasting colors, and come from the same manufacturer.

Ensure that the coating manufacturer reviews the process to be used for surface preparation and application of the coating system with the coating applier. The review shall include a visit to the facility performing the work if requested by the coating manufacturer. Provide written confirmation, from the coating manufacturer to the engineer, that the review has taken place and that issues raised have been addressed before beginning coating work under the contract.

Use one of the qualified coating manufacturers and products given below. An equivalent system may be used with the written approval of the engineer.

Manufactuer	Coat	Products	Dry Film Minimum Thickness (mils)	Min. Time[1] Between Coats (hours)
Sherwin Williams 1051 Perimeter Drive Suite 710 Schaumburg, IL 60173 847-330-1562	Tie Tie Top	Recoatable Epoxy Primer B67-5 Series / B67V5 Macropoxy 646 **Acrolon 218 HS** Polyurethane, B65-650	2.0 to 4.0 2.0 to 4.0	6 NA
Carboline 350 Hanley Industrial St. Louis, MO 63144 314-644-1000	Tie Tie Tie Top	Rustbond Penetrating Sealer FC Carboguard 60 Carboguard 635 Carbothane 133 LH(satin)	1 4.0 to 6.0 4.0 to 6.0 4	36 10 1 NA
Wasser Corporation 4118 B Place NW Suite B Auburn, WA 98001 253-850-2967	Tie Top	MC-Ferrox B 100 MC-Luster 100	3.0 to 5.0 2.0 to 4.0	8 NA
PPG Protective and Marine Coatings P.O. Box 192610 Little Rock, AR 72219-2610 414-339-5084	Tie Top	Amercoat 399 Amercoat 450H	3.0 to 5.0 2.0 to 4.0	3 NA

[1] Time is dependent on temperature and humidity. Contact manufacturer for more specific information.

B2 Shop Drawings

Submit shop drawings showing the details of railing construction to the project leader. Show the railing height post spacing, rail location, weld sizes and locations and all dimensions necessary for the construction of the railing. Show location of shop rail splices, field erection joints and expansion joints. State the name of the coating manufacturer and the product name of the tie coat and top coat used along with the color. State the size and material type used for all components. Also show the size and location of any vent or drainage holes provided.

C Construction

C1 Delivery, Storage and Handling

Deliver material to the site in an undamaged condition. Upon receipt at the job site, thoroughly inspect all materials to ensure that no damage occurred during shipping or handling and conditions of materials is in conformance with these specifications. Handle coated railing according to standard spec 517. If coating is damaged, repair or replace railing assemblies to the approval of the engineer at no additional cost to the owner. Carefully store the material off the ground to ensure proper ventilation and drainage. Exercise care so as not to damage the coated surface during railing installation. No field welding, field cutting or drilling will be permitted without the approval of the engineer.

C2 Touch-up and Repair

For minor damage caused by shipping, handling or installation to coated surfaces, touch-up the surface in conformance with the manufacturer's recommendations and conforming to ASTM A780. If damage is excessive, replace the railing assembly at no additional cost to the owner. Provide the engineer with a copy of the manufacturer's recommended repair procedure and materials before repairing damaged coatings.

D Measurement

The department will measure Pedestrian Railing 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.0090.003	Pedestrian Railing	LF

Payment is full compensation for providing, fabricating, transporting, and erecting the railing; for galvanizing and painting steel railing; for metal shims under the bases; and for providing and placing the anchor bolts.

124. Sign Post, Item SPV.0090.004; Reflective Sign Post, Item SPV.0090.005.

A Description

This special provision describes furnishing and installing new sign posts, reflective sign posts, and or powder coated sign posts for signs. All signposts shall be round tubular steel and installed as shown in the plans.

B Materials

All materials shall conform to the standard specifications for hot rolled carbon sheet steel, commercial quality, ASTM A-570-GR-33 for zinc coated tubing to resist corrosion. The tube shall be 2-inch, schedule-40 and shall include end cap. Reflective sign post shall have two sheets of engineer grade yellow sheeting completely around pipe as shown in the plans.

C Construction

Install the signposts at the locations shown on the plans and approved by the engineer. If the finished grade cannot be determined, ask the engineer to identify the final grade. Install all signs in a true vertical position conforming to the latest edition of the Manual on Uniform Traffic Control Devices. Also, locate all

underground utilities prior to placing sign posts. Cut off excess length of post in the field to provide the desired sign clearance.

D Measurement

The department will measure (Type) Sign Post by the linear foot of above-ground length, 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.0090.004	Sign Post	LF
SPV.0090.005	Reflective Sign Post	LF

Payment is full compensation for furnishing and installing all necessary posts, reflective sheeting, finials, hardware and anchors. All materials damaged during construction shall be replaced with new items at no cost to the department.

125. Loop Detector Lead-In Cable Special, Item, SPV.0090.006.

A Description

This special provision describes furnishing and installing loop detector lead in cable according to standard spec 655.

B Materials

Furnish 0.25 inch diameter, 4-conductor, #18 AWG, waterproof, shielded, polypropylene insulation cable, with HDPE outer jacket. Meeting IMSA specifications. Provide loop detector lead in cable to be smooth on the outside without any ripples or ribbing from cable wires.

C Construction

Furnish and install one cable for every two loops from each loop handhole to the intersection control cabinet via the most direct route, without intermediate splicing. Most of the loops will be new and are shown on the plan. Install cable for some existing loops. Verify cable needs with the City of Madison Traffic Engineering staff before completing intersection wiring.

D Measurement

The department will measure Loop Detector Lead In Cable by the linear foot, acceptably completed, measured from the splice with the loop lead in wire along the centerline of the conduit to its connection with terminals in the control cabinet.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.006	Loop Detector Lead-In Cable Special	LF

Payment is full compensation for furnishing and installing all materials, and for furnishing all equipment and incidentals necessary to complete the work.

126. Temporary Asphaltic Curb, Item SPV.0090.008.

A Description

This special provision describes constructing and removing asphaltic curb in accordance with the pertinent requirements of section 465, 601 of the standard specifications and the construction details shown in the plans.

B Materials

The curb shall be in accordance with the pertinent materials of section 465 of the standard specifications.

C Construction

Perform work in accordance with section 465 and 601 of the standard specifications.

D Measurement

The department will measure Temporary Asphaltic Curb by 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.0090.008	Temporary Asphaltic Curb	LF

Payment is full compensation for providing asphaltic material, compacting the mixture, forming and placing the curb, and for removing the curb.

127. Storm Sewer Pipe Reinforced Concrete Class IV 96-Inch, Item SPV.0090.011.

A Description

This special provision describes installing storm sewer in accordance with the pertinent requirements of section 608 of the standard specifications and the construction details shown in the plans.

B Materials

The storm sewer shall be in accordance with the pertinent materials of section 608 of the standard specifications.

C Construction

Perform work in accordance with section 608 of the standard specifications.

D Measurement

The department will measure Storm Sewer Pipe Reinforced Concrete Class IV 96-Inch by 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.0090.011	Storm Sewer Pipe Reinforced Concrete Class IV 96-Inch	LF

Payment is full compensation for providing and installing the storm sewer; for excavating, bedding and backfilling.

128. Storm Sewer Pipe Reinforced Concrete Class IV 96-Inch Rock Cut, Item SPV.0090.012.

A Description

This special provision describes installing storm sewer through rock in accordance with the pertinent requirements of section 608 of the standard specifications and the construction details shown in the plans.

B Materials

The storm sewer shall be in accordance with the pertinent materials of section 608 of the standard specifications.

C Construction

Place storm sewer through rock by either open cut or trenchless installation. If performing open cut trenching installation, construct in accordance with section 608 of the standard specifications. If performing trenchless installation, construct in accordance with the Trenchless Installation of 96-Inch Storm Sewer Pipe specification in these special provisions.

D Measurement

The department will measure Storm Sewer Pipe Reinforced Concrete Class IV 96-Inch Rock Cut by 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.0090.012	Storm Sewer Pipe Reinforced Concrete Class IV 96-Inch Rock Cut	LF

Payment is full compensation for providing and installing the storm sewer; for excavating, bedding and backfilling; for rock excavation; for providing and removing any needed temporary shoring; and for trenchless installation.

129. Remove Pipe Sanitary, Item SPV.0090.019.

A Description

Remove sanitary sewer pipe as called for on the plan set according to section 203 of the City of Madison Standard Specifications.

B (Vacant)

C Construction

Sawcut the pipe ends at the pipe removal limits if the pipe as a whole is not called for removal. Dispose of all pipe removed, backfill all trenches, holes and pits resulting from the removal or abandoning of pipe and other miscellaneous structures with satisfactory soil or select fill, placed in layers not more than 12 inches in thickness. Select backfill will be required for any structure or pipe within the roadway that will not be filled with another structure or pipe. All fill material required will be considered incidental to the removal or abandonment. Each layer will be thoroughly compacted by means of approved tampers, rollers or vibrators. Water will not be used to expedite settlement of backfill except with the approval of the engineer; this provision shall not be construed to require an excavation to be dewatered before placing backfill, if backfilling can be performed in such manner as to displace the water or prevent its entrapment in the backfill.

Pipe to be removed that is in the same trench as a new pipe will not be compensated as remove pipe and will be considered to be incidental to the new pipe installation. The same trench will be considered to be any pipe located with 3’ horizontally of the pipe being installed. This includes unidentified pipe that is smaller than 10 inches in diameter. If the pipe to be removed ends along a pipe run, as opposed to ending at a structure, the contractor will end the removal with a saw cut of the existing pipe and plug the remaining end as directed by the engineer. Plugging the structure or pipe to which the pipe being removed was connected will be compensated for under a separate bid item (Abandon Sanitary Sewer - Pipe Plug, Item SPV.0060.040). If the contractor, for their convenience, decides to remove a section of pipe to a full section, the additional removal will not be given consideration for additional compensation.

D Measurement

The department will measure Remove Pipe Sanitary by the linear foot, acceptably complete, measured along the centerline of the sanitary pipe 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.0090.019	Remove Pipe Sanitary	Each

Payment is full compensation for furnishing all materials, labor, tools, equipment and incidentals necessary to complete this item of work. Payment will include the select fill material required to backfill the trench created by pipe being removed.

130. Sanitary Sewer Lateral, Item SPV.0090.020.

A Description

This work consists of excavating required trenches, connecting the lateral to the mainline pipe, placing bedding material, connecting the new lateral to the existing lateral, all required fittings, couplings, and bends, backfilling and compacting the trenches and restoring the work site as provided by the

plans,specifications and contract. This work also consists of locating, identifying, and abandoning “inactive” laterals.

B Materials

Furnish sanitary sewer pipe and fittings that are solid-wall Poly Vinyl Chloride (PVC) and that conform to the requirements of the Specification for PVC Sewer Pipe and Fittings, ASTM D 3034.

Provide sanitary sewer pipe and fittings having a standard dimension ratio of 26 or 35.

Furnish elastomeric or solvent cement joints made as recommended by the manufacturer.

Sewer laterals deeper than 12 feet will be required to be ASTM D3034 SDR-26.

Install compression coupling connections to the existing sewer laterals in conformance to Standard Detail Drawing 5.3.3, Coupling detail, from the City Standard Specifications.

C Construction

Install laterals according to Article 503.3 of the City Standard Specifications.

The use of 45-degree bends is not permitted except with connecting to a wye at the sanitary sewer main. Bends of 22.5 degrees or less may be used, provided they are separated by at least two feet of straight pipe. Provide new lateral pipe having a minimum diameter of six inches that is also greater than or equal to the diameter of the adjoining lateral. Connecting a new lateral pipe to an existing lateral having a smaller diameter than the existing lateral is not permitted.

Per the City of Madison Standard Specifications for sanitary sewer lateral construction on street reconstruction projects, contractors are encouraged to begin installation of sanitary lateral pipe at the proposed sewer main. If contractor starts excavation for the lateral at the property line, it will be at the contractor’s risk. If tree conflicts are encountered during the sanitary lateral replacement process, contractors are instructed to follow the new policy set in the City Standard Specifications. No Utility Line Openings (ULOs) will be granted for the inability to locate the sanitary lateral at the property line. Any extra sidewalk removal will not be compensated to the contractor looking for an existing sanitary lateral at the property line.

Contractors will be required to have a locator device on-site if they intend to start laying lateral pipe at the property line to minimize the amount of extra sidewalk removal. Each sanitary lateral will have a maximum of 4 sidewalk squares removed and replaced. No additional compensation will be awarded beyond this amount for the replacement of a sewer lateral. If laterals called for reinstatement on the plans are to be plugged under the direction of the engineer, contractors are required to use a sonde device to confirm that the laterals that are called abandonment are not active, Couple the junction of a new latera l pipe to an existing lateral pipe as required in the field by the engineer. Saw cut the existing main to accommodate a clean joint for the installation of the compression couplings. Placed the coupling as directed by the City of Madison and per Standard Detail Drawing 5.3.3, Coupling Details, from the City Standard Specifications.

D Measurement

The department will measure Sanitary Sewer Lateral, by the linear foot, acceptably completed. The quantity to be paid will be measured from the connection of the mainline sewer pipe to the connection of the existing sanitary lateral 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.0090.020	Sanitary Sewer Lateral	LF

Payment is full compensation for determining whether laterals are “active”, “inactive”, or abandoned, and the exact location and size of “active” lateral reconnections.

Connection of lateral to the proposed sewer main and the first 5 feet of lateral pipe associated with the connection is paid under bid item Sanitary Lateral Reconnect.

Select fill for sanitary sewer lateral is paid under bid item Select Fill For Sanitary Sewer. The quantity for this item may be increased or decreased beyond the limits set forth in section 104 of the City Standard Specifications.

131. Sanitary Sewer Pipe PVC, 8-Inch, Item SPV.0090.021; Sanitary Sewer Pipe PVC, 10-Inch, Item SPV.0090.022; Sanitary Sewer Pipe PVC, 12-Inch, Item SPV.0090.023.

A Description

This special provision describes installing Sanitary Sewer Pipe PVC (Size) at the alignment and grades shown on the plan. All sections of the sewer mainline are required to pass a low pressure air test, mandrel test, and a visual inspection via televising as specified in section 501.3(b) of the City Standard Specifications. Testing of the gravity main is included in this item.

Maintain the normal flow of wastewater at all times during replacement of the existing sanitary sewer main with the new sanitary sewer main. Payment for furnishing all bypass pumping, temporary piping, and/or temporary connections, which are required to maintain the normal flow of wastewater throughout the sewer construction, is under the bid item for Wastewater Control.

B Materials

Provide solid-wall Poly (Vinyl Chloride) (PVC) sanitary sewer pipe and fittings meeting the requirements for Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings, ASTM D 3034.

Provide pipe and fittings having a standard dimension ratio of 26 or 35 as called out on the plan set. Furnish elastomeric or solvent cement joints as recommended by the manufacturer.

The assembled joint will be required to pass the performance tests as required in ASTM D3212. Sewer mains deeper than 12 feet will be required to meet the standards or ASTM D3034 SDR-26.

C Construction

Install the sanitary sewer pipe according to all applicable provisions of the City Standard Specifications.

Remove all abandoned or existing material located within 3 feet of the new sanitary sewer alignment. Removal of material (including existing sanitary sewer/water main/etc.) is incidental to this bid item.

Use manufactured wye fittings to install new laterals to the new main as called for on the plans; provide and place according to standard spec 503 for City Standard Specifications. Do not install saddle type wyes without prior approval from the City of Madison.

Complete testing and televising of new sewer lines according to Article 501 of the City Standard Specifications.

D Measurement

The department will measure Sanitary Sewer Pipe PVC, (Size) in length by the linear foot, acceptably completed.

Sanitary Sewer Pipe PVC, (Size) will be measured through sanitary sewer structures, from the center of sanitary sewer casting to center of sanitary sewer casting. Sanitary Sewer Pipe PVC (Size) not terminating at a sanitary sewer structure will be measured to the end of pipe. Deductions from the measure length will not be made for wye installations.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.021	Sanitary Sewer Pipe PVC, 8-Inch	LF
SPV.0090.022	Sanitary Sewer Pipe PVC, 10-Inch	LF
SPV.0090.023	Sanitary Sewer Pipe PVC, 12-Inch	LF

Payment is full compensation for excavation of the trench, except tunneling and jacking; installation and removal of sheeting and bracing; removal of water from the trench; disposal of surplus material from the trench; backfilling the trench and compaction of the backfill material; embankment over the sewer using surplus material from the excavation of the trench; bedding the pipe; laying the pipe and installing the fittings and accessories; jointing and sealing of joints in pipe, fittings and accessories; encasement, where specified; connections to existing structures; cleaning out the sewer; and restoring the site.

132. Select Fill for Sanitary Sewer, Item SPV.0090.024.

A Description

This special provision describes furnishing and placing select fill over the sanitary sewer main and laterals along the entire length of the pipe.

B Materials

Provide select fill meeting the requirements of Article 202.2(b) of the City Standard Specifications for select fill for sanitary sewer mains and laterals.

C Construction

Install select fill for sanitary sewer according to all applicable provisions of Article 502.1(e) of the City Standard Specifications.

D Measurement

The department will measure Select Fill for Sanitary Sewer in length by the linear foot, acceptably completed. Measurement will be completed along the centerline of the installed sanitary sewer pipe and includes the length through Sewer Access Structures.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.024	Select Fill for Sanitary Sewer	LF

Payment is full compensation for furnishing and placing select fill for sanitary sewer.

133. Furnish and Install Watermain Pipe & Fittings, 6-Inch, Item SPV.0090.025; Furnish and Install Watermain Pipe & Fittings, 8-Inch, Item SPV.0090.026; Furnish and Install Watermain Pipe & Fittings, 12-Inch, Item SPV.0090.027; Furnish and Install Watermain Pipe & Fittings, 16-Inch, Item SPV.0090.028; Furnish and Install Watermain Pipe & Fittings, 10-Inch, Item SPV.0090.029.

A Description

Furnish and install watermain pipe and fittings of the size and type specified in the plans, these specifications and according to section 704.3 of the City Standard Specifications.

B Materials

Furnish restrained joint ductile iron pipe manufactured according to the requirements of ANSI/AWWA C151/A21.51. Push-on joints for such pipe must be according to ANSI/AWWA C111/A21.11 “Rubber-Gasket Joints for Ductile-Iron Pipe and Fittings.” Pipe must be designed according to ANSI/AWWA C150/A21.50 “Thickness Design of Ductile-Iron Pressure Pipe.” Use thickness class 52 pipe. Cement mortar lining and seal coating for pipe and fittings, where applicable, must be according to ANSI/AWWA C104/A21.4. Asphaltic outside coating shall be according to ANSI/AWWA C151/A21.51 for pipe and ANSI/AWWA C110/A21.10 or ANSI/AWWA C153/A21.53 for fittings. Restrained push-on joints for pipe must be designed for a working pressure of 350 psi. Furnish mechanical joint ductile iron pipe fittings according to section 702 of the City Standard Specifications. Furnish nitrile and/or fluorocarbon gaskets in place of rubber gaskets where shown on the plans or as required in areas of contamination discovered in the field. Fluorocarbon gaskets will be paid for under a separate item.

C Construction

Install water main pipe and fittings according to manufacturer’s recommendations and section 703 of the City Standard Specifications. Maintain all required clearances with other facilities.

Install nitrile and/or fluorocarbon gaskets in place of rubber gaskets where shown on the plans.

D Measurement

The department will measure Furnish & Install Watermain Pipe & Fittings (Size) by the linear foot, acceptably completed. All fittings and gaskets, excluding fluorocarbon gaskets, shown on the plan set and those required on hydrant leads per the General Provisions for City of Madison Water Main are included in the linear foot price for Watermain Pipe and Fittings.

E Payment

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

SPV.0090.025	Furnish & Install Watermain Pipe & Fittings, 6-Inch	LF
SPV.0090.026	Furnish & Install Watermain Pipe & Fittings, 8-Inch	LF
SPV.0090.027	Furnish & Install Watermain Pipe & Fittings, 12-Inch	LF
SPV.0090.028	Furnish & Install Watermain Pipe & Fittings, 16-Inch	LF
SPV.0090.029	Furnish & Install Watermain Pipe & Fittings, 10-Inch	LF

Payment is full compensation for excavation of the trench, except tunneling and jacking; installation and removal of sheeting and bracing; removal of water from the trench; disposal of surplus material from the trench; backfilling the trench and compaction of the backfill material; embankment over the main using surplus material from the excavation of the trench; bedding the pipe; laying the pipe and installing the fittings and accessories; jointing and sealing of joints in pipe, fittings and accessories; encasement, where specified; connections to existing structures; testing and cleaning out the main; and restoring the site.

134. Select Fill for Water Main, Item SPV.0090.030.

A Description

This special provision describes furnishing and placing select fill backfill over the water main along the entire length of the pipeline according to Section 703 of the City Standard Specifications.

B Materials

Provide Select Fill for Water Main meeting the requirements of section 202.2 (b) and section 702 of the City Standard Specifications.

C Construction

Place Select Fill for Water Main according to section 703 of the City Standard Specifications.

D Measurement

The department will measure Select Fill for 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.0090.030	Select Fill for Water Main	LF

Payment is full compensation for furnishing and placing select fill for water main.

135. Interceptor Sewer, 30-Inch, Item SPV.0090.031; MMSD Sanitary Sewer, 36-Inch, Item SPV.0090.037.

A Description

This work consists of excavating required trenches or tunnels, placing bedding and cover materials, laying therein the interceptor sewer pipe of the size and type specified, tees, wyes, risers and all required fittings; all sheeting and shoring, backfilling and compacting the trenches, testing, and restoring the work site.

B Materials

PVC pipe is not allowed upstream of MH 08 308. At other locations: Contractor shall select from the following pipe material options: Fiberglass Reinforced Polymer Mortar Pipe, Coated Ductile Iron Pipe, PVC AWWA C900 DR 25 Pipe. PVC pipe is only allowed within railroad right-of-way areas when a steel casing pipe is also installed.

B1 Fiberglass Reinforced Polymer Mortar Pipe. Fiberglass reinforced polymer mortar pipe (FRPMP) shall be manufactured and tested in accordance with ASTM D3262 using a filament winding or centrifugal casting process that results in a dense, nonporous, corrosion-resistant, consistent composite structure. The interior of the pipe shall provide an abrasion and crack resistant surface. The exterior shall provide UV protection. Acceptable manufacturers shall be Hobas, Thompson Pipe Group, or equal.

A pipe design shall be submitted by contractor meeting manufacturer's requirements verifying the proposed design satisfies the construction requirements as shown on the Drawings and as required herein. In no case shall the minimum pipe stiffness for direct buried pipe and pipe used as carrier pipe inside a casing pipe be less than 46 psi. The minimum pipe stiffness and wall thickness shall be increased by contractor as necessary for the installation method to be used.

The manufacturer shall use only polyester or vinyl ester resin systems with a proven history of performance in direct bury applications. The reinforcing glass fibers used to manufacture the components shall be of highest quality commercial grade E-glass or ECR-glass filaments with binder and sizing compatible with impregnating resins. Sand shall be minimum 98% silica with a maximum moisture content of 0.2%. Resin additives, such as curing agents, pigments, dyes, fillers, and thixotropic agents, when used, shall not detrimentally affect the performance of the product.

Joints shall meet the performance and testing requirements of ASTM D4161. The joint for direct burial shall be field connected with fiberglass sleeve couplings that utilize elastomeric sealing gaskets as the sole means to maintain joint watertightness. The joints must meet the performance requirements of ASTM D4161. Joints at tie-ins, when needed, may utilize fiberglass, gasket-sealed closure couplings. Gaskets shall meet ASTM F477 and be supplied by qualified gasket manufacturers and be suitable for the service intended.

Flanges, elbows, reducers, tees, wyes, laterals, and other fittings shall be capable of withstanding all operating and load conditions when installed. They may be contact molded or manufactured from mitered sections of pipe joined by glass-fiber-reinforced overlays. Ductile iron, stainless steel, or fusion-bonded epoxy-coated steel of compatible diameter may also be used.

Pipe shall be constructed with a controlled outside diameter to promote joint sealing and watertight integrity. The actual outside diameter and minimum wall thickness (18 inches to 60 inches) of the pipes shall be in accordance with ASTM D3262 for DIPS. Other diameters and wall thicknesses shall be according to manufacturer's literature.

Pipe shall be supplied in nominal lengths of 10 to 20 feet. Short lengths of pipe shall be provided as needed to accommodate distances between manholes, structures, and fittings.

Pipe ends shall be square to the pipe axis with a maximum tolerance of 1/8 inch for direct bury pipe and pipe installed inside casing pipe.

Maximum allowable 30-day deflection shall be 4% of the initial diameter. Deflection testing shall be conducted in accordance with requirements for plastic pipe.

Measurement and Payment: Sanitary sewer lengths listed on project drawings and bid quantities are shown as center of manhole structure to center of manhole structure. The length of pipe considered for payment in the field will be measured from center of manhole structure to center of manhole structure.

B2 Coated Ductile Iron Thickness Class 52.

Ductile iron interceptor sewer shall be lined with Protecto 401 ceramic epoxy as manufactured by U.S. Pipe.

1. Within 8 hours following surface preparation, the interior of the pipe and fittings shall receive 40 mils nominal dry film thickness of Protecto 401.

2. Due to the tolerances involved, the gasket area and surface within 6 inches of the spigot end must be coated with 6 mils nominal, 10 mils maximum using Protecto joint compound. The joint compound shall be applied by brush to provide coverage. Care shall be taken that the joint compound is smooth without excess buildup in the gasket seat or on the spigot end. Coating of the gasket seat and spigot end shall be done after the application of the lining.

3. Protecto joint compound shall be used for touch-up or repair (including sealing all cut ends) in accordance with manufacturer's recommendations.

The exterior surfaces of pipes and fittings shall be coated with a minimum of 1 mil of bituminous paint per AWWA C151.

Other requirements of the materials of ductile iron interceptor sewer shall conform as follows:

Iron pipe shall be ductile iron conforming to AWWA C151. Fittings shall be ductile or cast iron conforming to the standards herein. Iron pipe and fittings shall be American, Clow, Griffin, Tyler, U.S. Pipe, or equal.

Ductile iron pipe shall consist of pipe centrifugally cast in metal or sand-lined molds. Pipe wall shall be homogeneous from inside to outside and shall be completely free of laminations, blisters, or other imperfections. Defects may be removed at the factory only.

Each pipe and fitting shall have the weight, class or nominal thickness, country where cast, casting period, manufacturers mark, the year in which the pipe was produced, and the letters DI or DUCTILE cast or stamped thereon. Improper or incomplete marking will be cause for rejection of the pipe or fitting.

Contractor shall furnish certification data representing each class of pipe or fitting furnished. The certification report shall clearly state that all pipe and fittings furnished meet the appropriate AWWA specification.

Ductile iron pipe shall be provided with mechanical joints or push-on joints where buried. Provide flanged joints inside manholes, wet wells or other such structures, and elsewhere exterior as shown on the Drawings or as specified.

Unless otherwise shown on the Drawings, buried pipe shall be minimum Special Thickness Class 52 with a water hammer allowance of 100 psi. Additional pipe wall thickness shall be furnished as required by AWWA C150 for the depth of cover as shown on the Drawings.

Buried pipe and pipe in manholes, wet wells, and other structures shall be cement-mortar lined and asphaltic coated inside and asphaltic coated outside. Inside lining and coating shall comply with AWWA C104. Outside coating shall comply with AWWA C151. Lining and coatings shall be suitable for use with potable water systems. The asphaltic coating shall be applied over the cement lining on the inside of the pipe and directly on the outside of the pipe. The coatings shall be smooth and impervious to water without any tendency to scale off.

Polyethylene Encasement: Where required on the Drawings or specified in the SPECIAL PROVISIONS, contractor shall provide polyethylene encasement conforming to AWWA C105. Film shall be Class C–Carbon Black, with a minimum thickness of 0.008 inches (8 mils). Tape for securing the film shall be a thermoplastic material with a pressure sensitive adhesive face capable of bonding to metal, asphaltic coating, and polyethylene. Tape shall have a minimum thickness of 8 mils and a minimum width of 1 inch.

The polyethylene film envelope shall be as free as is commercially possible of gels, streaks, pinholes, particles of foreign matter, and undispersed raw materials. There shall be no other visible defect such as holes, tears, blisters, or thinning out at folds.

Joints, fittings, and gaskets shall have the same rated working pressure of the pipe in which they are installed but no less than a minimum rated working pressure of 150 psi. Fittings shall be cement-mortar lined and asphaltic coated inside and shall be shop primed or asphaltic coated outside as specified above for the piping in which they are being installed.

Joints, fittings, and gaskets for buried piping shall be mechanical joint or push-on joint conforming to AWWA C110 and AWWA C111, as well as AWWA C153 (compact), with vulcanized styrene butadiene rubber gaskets conforming to AWWA C111.

Bolts on mechanical joints shall be high-strength low-alloy steel (Corten, or equal) conforming to AWWA C111; a certificate to that effect shall be provided.

Gaskets shall be furnished in sufficient number for all joints. Sufficient joint lubricant shall be furnished by the manufacturer with the gaskets.

B3 PVC (AWWA C900 DR25).

AWWA PVC pressure rated pipe shall conform to the requirements of AWWA C900. Pipe shall be furnished with integral elastomeric bell and spigot joints.

Outside diameter shall conform to ductile iron pipe sizes (DIPS). The pipe dimension ratio shall not be greater than 25.

Markings on the pipe shall include the following: Nominal pipe size, type of plastic pipe material, DR number, AWWA Designation with which the pipe complies, manufacturer’s name, and the seal or mark of the laboratory making the evaluation of the suitability of the pipe for the transport of potable water.

PVC pipe is not allowed upstream of MH 08 308. At other locations: PVC pipe is only allowed within railroad right-of-way areas when a steel casing pipe is also installed.

B4 Bedding and Cover.

Provide bedding material made by crushing sound limestone or dolomite ledge rock, or crushed gravel aggregate. Provide the material that is hard and durable meeting the following gradation specifications.

BEDDING STONE GRADATION

Sieve Size	Percentage by Weight Passing		
	Gradation No. 1	Gradation No. 2	Gradation No. 3
1 inch	100	--	--
3/4 inch	90 to 100	--	--
1/2 inch	--	100	100
3/8 inch	20 to 55	90 to 100	--
No. 4	0 to 10	--	75 to 100
No. 8	0 to 5	0 to 15	--
No. 30	--	0 to 3	--
No. 100	--	--	10 to 25

Material native to the trench cannot be used for bedding material.

Provide the engineer with a sieve analysis of the bedding material for review prior to starting construction.

Material which is to be placed from the bedding material to 12 inches above the top of the pipe will be termed cover material. Backfill all trenches by hand to 12 inches above the top of the pipe with cover material. Deposit cover material in the trench for its full width on each side of the pipe, fittings and appurtenances simultaneously in 1-inch layers and compact using hand tamping bars and/or mechanical tampers. Use special care in placing cover material so as to avoid injury to the pipe. Provide cover material consisting of durable granular particles ranging in size from fine to a maximum size of 3/4-inch. Unwashed bank run sand and crushed bank run gravel will be considered generally acceptable cover material. Provide cover material conforming to the following gradation specifications:

COVER MATERIAL GRADATION

Sieve Size	Percentage by Weight Passing
1 inch	100
3/4 inch	85 to 100
3/8 inch	50 to 80
No. 4	35 to 65
No. 40	15 to 30
No. 200	5 to 15

Bedding material may be substituted for cover material when requested by the contractor and approved by the engineer, except where polyethylene encasement is used.

Bed all interceptor sewer pipe and related appurtenances using Class "B" bedding as shown on the plans conforming to Gradation No. 1.

C Construction

C1 Alignment and Grade – General. Lay and install utility lines to the lines and grades specified with valves, fittings, manholes, and other appurtenances at the specified locations; spigots centered in bells; and all manholes and riser pipes plumb. Unless otherwise noted, service lines shown on the plans are approximate.

C2 Deviations Occasioned by Existing Improvements. Wherever significant obstructions not shown on the plans are encountered during the progress of the work and interfere to such an extent that an alteration in the plan may be necessary, the engineer will have the authority to change and request a deviation from the line and grade or arrange with the owners of the structure for the removal, relocation or reconstruction of the obstructions. Existing items unnecessarily damaged during the performance of this contract shall be repaired and replaced at the expense of the contractor.

C3 Caution in Excavation. Proceed with caution in the excavation and preparation of the trench so that the exact location of underground structures may be determined. The contractor will be held responsible for the repair of such structures when broken or otherwise damaged because of carelessness on the part of the contractor.

C4 Excavation and Preparation Of Trench – General. Dig the trench so that the pipe can be laid to the alignment and depth specified. Unless otherwise allowed by the engineer, trenches shall not be excavated more than 100 feet in advance of pipe laying.

C5 Excavation to Grade. Finish the trench to the depth necessary to provide a uniform and continuous bearing and support for the pipe on the bedding material provided at every point between bell holes. Any part of the bottom of trench excavated below the specified grade shall be corrected with bedding material, thoroughly compacted in place. Shape and finish the bedding with hand tools to fit the bottom quadrant to the pipe.

Pile all excavated material in a manner that will not endanger the work. Conduct the work in such a manner that pedestrian and motor traffic is not unnecessarily disrupted. Fire hydrants, valve boxes and manholes shall be left unobstructed. Gutters shall be kept clear or other satisfactory provisions made for street drainage, and natural water courses shall not be obstructed.

Remove excavated material designated by the engineer as being undesirable for backfilling immediately as excavation progresses. All undesirable and surplus material must be disposed of in accordance with Subsection 205.3.11 of the standard specs.

C6 Width of Trench. The contractor shall be responsible for determining and providing the minimum width necessary to provide a safe trench in accordance with current OSHA standards and all other applicable standards. Pay items related to maximum trench widths shall not limit the contractor's responsibility to provide safe trench conditions.

The width of trench below the outside top of the pipe shall be as shown in the following table for the sizes listed. A minimum clearance of 8 inches between the outside of the pipe barrel and the trench wall at the pipe spring line shall be maintained. If sheeting is used, the trench width will be measured as the clear distance between inside faces of the sheeting.

C7 Width of Trench – Thermoplastic Pipe. The trench width for flexible pipe shall be the greater of twice the pipe outside diameter or the maximum trench width specified for rigid pipe, whichever is greater.

C8 Braced and Sheeted Trenches. Sheet and brace open-cut trenches as required by any governing state laws and municipal ordinances and as may be necessary to protect life, property, improvements or the work. Protect underground or aboveground improvements to be left in place and, if damaged, repair or replace at the expense of the contractor.

Sheeting and bracing which is to be left in place must be removed for a distance of 4 feet below the established street grade or existing surface of the street, whichever is lower. Trench bracing, except that which is left in place, may be removed after backfilling has been completed or has been brought up to such an elevation as to permit its safe removal.

C9 Pipe Installation – General. Prior to commencing pipe laying, notify the engineer of the intended date for starting work. The engineer may request the removal and relaying of pipe installed prior to notification of the engineer at the contractor's expense.

Provide and use proper implements, tools, and facilities for the safe and convenient prosecution of the work. Carefully lower all pipe, fittings, and appurtenances into the trench, piece by piece, with a crane, rope or other suitable tools or equipment, in such manner as to prevent damage to materials. Under no circumstance shall pipe be dropped or rolled into the trench.

Provide materials as shown on the plans or as specified herein.

C10 Material Inspection. Inspect the pipe, fittings, and appurtenances for defects when delivered to the job site and prior to lowering into the trench. Remove defective material from the job site. Provide material that is clean and free of deleterious substances prior to use in the work.

C11 Bedding and Cover. Immediately prior to placing the pipe, shape the trench bottom by hand to fit the entire bottom quadrant of the pipe. If pipe is of the bell and spigot type, provide bell holes to prevent the bell from supporting the backfill load. Bell holes shall be large enough to permit proper making of the joint but not larger than necessary to make the joint. All adjustments to line and grade must be done by scraping away or filling in bedding material under the body of the pipe. Any fill used must be bedding material. If necessary to obtain uniform contact of the pipe with the subgrade, a template shall be used to shape the bedding material. All pipe shall be bedded in bedding material to the thickness shown on the drawings. Compact bedding with walk behind, hand operated, vibratory compactor prior to laying pipe. Compact bedding up to pipe springline with walk behind, hand operated, vibratory compactor. Perform all necessary excavation and furnish all necessary material to provide this bedding.

C12 Pipe Laying. Lay all pipe accurately to the line and grade as designated. Preparatory to making pipe joints, all surfaces of the portions of the pipe to be joined or of the factory made jointing material shall be clean and dry. Use lubricants, primers, adhesives, and other joint material and install as recommended by the pipe or joint manufacturer's specifications. The jointing materials or factory fabricated joints shall then be placed, fitted, joined, and adjusted in such a workmanlike manner as to obtain the degree of water tightness specified. Furnish pertinent specifications from the joint and pipe manufacturer that outline procedures to be followed in making the joint to the engineer.

At times when pipe laying is not in progress, close the open ends of pipe with plugs to prevent the entry of foreign material. Remove all foreign material from the pipe prior to acceptance.

After placing a length of pipe in the trench, center the spigot end in the bell and force the pipe home and bring to correct line and grade. Secure the pipe in place with specified backfill material tamped around it except at the bells. Keep trenches water-free during bedding, laying, and jointing and for as long a period as necessary to permit proper execution of the work.

Pipe shall be brought home by using a cross member and levers or jacks. It will not be permissible to push pipe home with motor-powered excavation equipment.

Install interceptor sewer to an elevation tolerance of plus or minus 0.03 feet of the plan elevation or elevation provided on the grade sheet at any point along the main.

Install wyes, tees, and special as called for on the plans or as requested by the engineer. In general, joint wyes, tees, and specials with the same type of joint as used in the main.

In joining two dissimilar types of pipe, use manufactured adaptors and fittings.

Do not exceed joint deflection limits established by the pipe manufacturer for the pipe and joint being used.

C13 Portable Trench Box. Whenever a portable trench box or shield is used, take special precautions so as not to pull already jointed pipe apart or leave voids around the pipe wall. Whenever possible keep the bottom edge of the box at a level approximately even with the top of pipe. Place cover material to at least the top of pipe before moving the box ahead.

C14 Backfilling. Backfill material shall be that material placed between the top of cover material to the subgrade for placement of restoration materials.

When the type of backfill material is not otherwise specified, the contractor may backfill with the excavated material, provided that such material consists of loam clay, sand, gravel or other materials that, in the opinion of the engineer, are suitable for backfilling.

All backfill material must exceed 35°F and be free from frost cinders, ashes, refuse, vegetable or organic matter, boulders, rocks, or stone, frozen lumps or other material which in the opinion of the engineer is unsuitable. From 12 inches above the top of the pipe to the trench subgrade, well-graded material containing stones up to 8-inch in their greatest dimension may be used, unless otherwise specified.

C15 Granular Backfill. When called for on the plans or requested by the engineer, provide granular backfill material consisting of durable particles ranging in size from fine to coarse in a substantially uniform combination. Sufficient fine material must be present to fill all the voids in the coarse material. No stones over 3-inch or clay lumps will be allowed. Granular backfill is intended to be used as backfill within roadway areas when existing soil is unsuitable. Native backfill will be used in roadway areas when it is suitable and in all non-roadway areas.

C16 Placement. Backfill all trenches using specified material so that excessive lengths of trench are not left open. In general the backfilling operation shall proceed so that no more than 100 feet of trench is open behind the pipe laying operation.

Leave backfill below the original surface to allow for placement of restoration materials including pavement, base course, concrete, topsoil, or sod. When settlement occurs, restore the surface improvements at contractor's expense, so as to maintain the finished surface.

C17 Backfill Consolidation. Consolidate all trenches as specified in this Section for the entire depth and width of the trench.

Consolidate by use of smooth surface vibratory compactors or backhoe-operated hydraulic compactors for granular materials and rotating segment pad mechanisms for loam/clay soils. The lift height shall not exceed 8 inches for walk-behind hand-operated vibratory compactors and segmented pad. Lift height shall not exceed 24 inches for self-propelled vibratory drum or backhoe-operated hydraulic compactors. Provide smaller lift heights as necessary to achieve the degree of compaction specified.

Backfill material beneath paved areas or future paved areas and within 5 feet of paved areas or future paved areas shall be consolidated as follows: Within 3 feet of the subgrade 95% of maximum dry density, below 3 feet from the subgrade to 1 foot above the pipe 90% of maximum dry density, as determined by the modified Proctor Test (ASTM D1557).

Unless otherwise specified, compact backfill material placed in other areas to the point where no additional consolidation can be observed from the compaction equipment being used.

Recompact backfill material not meeting the compaction specification at no cost to the Department. Cost for additional testing on recompacted material will be at the contractor's expense.

C18 Dewatering

Contractor shall, at its own expense, keep the excavation clear of water while structures and appurtenances are being built, utilities are being installed, and fill and backfill is being compacted. Contractor shall at all times have on hand sufficient pumping equipment and machinery in good working condition for all ordinary emergencies, including power outages, and shall have available at all times competent workers for the operation of the pumping equipment. The dewatering systems shall not be shut down between shifts, on holidays or weekends, or during work stoppages.

All dewatering shall be done in accordance with applicable federal, state, and local code requirements.

Under no conditions shall the work be laid in or under water. No water shall flow over the work until the joints are complete or the concrete has set. Wherever necessary, contractor shall excavate in advance of the completed work, lead the water into sumps or pump wells, and provide erosion control measures to prevent water or sediment damage.

The expense for making all extra excavations necessary to prevent water from interfering with the proper construction of the work and for forming of all dams, digging sumps or pump wells, bailing and pumping, and erosion control shall be borne by contractor. Any permits necessary for the dewatering operations shall be obtained and paid for by contractor. No extra payment will be made for dewatering of the trench whether accomplished by the use of sumps and pumps, well point systems, or deep wells.

Contractor's dewatering system shall ensure that soils within the trench will not be destabilized by hydrostatic uplift pressures from adjacent groundwater. If conditions warrant, contractor shall furnish and install well point systems or deep wells. Spacing and depth of well points or wells shall be adequate to lower the piezometric level to at least 2 feet below the bottom of the excavation. Additional lowering shall be provided as necessary to create a stable subgrade. The control of groundwater shall be such that softening or heaving of the bottom of excavations or formation of quick conditions or boils shall be prevented. Dewatering systems shall be designed and operated to prevent the migration or removal of soils. In areas where rock is encountered, the water level shall be kept at or below top of rock but at least 6 inches below bottom of concrete. Additional rock shall be removed as needed to provide clearances.

Contractor shall take all necessary precautions during the dewatering operation to protect adjacent structures against subsidence, flooding, or other damage. The dewatering system shall be installed and operated so that the groundwater level outside the excavation is not reduced to the extent that would damage or endanger adjacent structures or property. Any such facilities and structures damaged shall be repaired or replaced to the satisfaction of their owner.

In areas where continuous operation of dewatering pumps is necessary, contractor shall avoid noise disturbance to nearby residences and businesses to the greatest extent possible by using electric driven pumps, intake and exhaust silencers, or housing to minimize noise.

The release of groundwater to its static level shall be performed in such a manner as to maintain the undisturbed state of the natural foundation soils, prevent disturbance of compacted fill or backfill, and prevent floatation or movement of all structures and pipelines.

C19 Testing.

Contractor shall provide deflection testing, leakage testing, and televised inspection for all new interceptor sewers installed as part of the project. Results of all testing shall be delivered to OWNER.

All PVC pipe used for interceptor sewer shall be tested for vertical deflection. Maximum deflection after completion of backfilling shall be 5% of the inside pipe diameter. Testing shall not be started until trench backfill has been in place for 30 days. Contractor shall keep a record of all tests performed. These records shall show the individual lengths of main tested and test results. Deflection shall be measured by pulling a mandrel with a vertical diameter equal to 95% of the pipe inside diameter through the line, after thoroughly flushing the lines to be tested. The testing device shall be controlled using cables at both the upstream and downstream manholes. The testing device must pass freely through the sewer without the use of unreasonable force on the control cables. Any line that will not pass the test cylinder will not be accepted until the faulty sections have been removed and replaced and the line retested.

All FRP pipe used for interceptor sewer shall be tested for vertical deflection as described above except that maximum deflection after backfill has been in place for 30 days is 4% of the inside pipe diameter.

In lieu of pulling mandrel through the pipe to determine deflection, contractor may choose to test deflection internally at 12-foot intervals through the use of a telescopic micrometer or other gauge approved by OWNER.

All interceptor sewer gravity mains shall be tested for leakage after installation of laterals and placement of backfill. Contractor shall keep a record of all tests performed. These records shall show the individual lengths of main tested and test results.

Sewers 18 inches and larger may be tested for leakage by infiltration or exfiltration in lieu of vacuum testing. If groundwater is 2 feet or more above the sewer, measurements will be taken to determine the rate of infiltration into the sewer. If groundwater is below 2 feet above the sewer, the stretch of sewer shall be plugged at its downstream end and water shall be placed inside the sewer to provide a minimum of 4 feet of head above the upstream end.

Measurements will then be taken to determine the rate of leakage out of the sewer. Contractor shall furnish all labor and materials necessary for making the tests. The allowable leakage shall be as indicated below for final acceptance.

At the conclusion of construction and before final acceptance of the Work, the downstream end of all interceptor sewer will be measured for infiltration. Allowable infiltration shall not exceed 100 gallons/inch of pipe diameter/mile/day for that portion of the Work under groundwater. If infiltration is exceeded, the leak or leaks shall be located and repaired.

Contractor shall prepare all pipeline for testing and shall furnish all equipment, materials, tools, and labor necessary for performance of the tests.

A color televised survey of installed interceptor sewer shall be provided after air testing to confirm branch locations, verify cleanliness of sewer, and confirm presence or absence of sags or deviations in sewer alignment. Sewers shall be cleaned immediately prior to the survey. The survey shall conform to NASCO PACP standards.

D Measurement

The department will measure Interceptor Sewer, 30-Inch in length by the linear foot acceptably completed.

Where utility pipes are connected by structures, the length of the pipe considered for payment will be measured from center of structure to center of structure.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.031	Interceptor Sewer, 30-Inch	LF
SPV.0090.037	MMSD Sanitary Sewer, 36-Inch	LF

Payment is full compensation for all work herein specified and including but not limited to excavation, necessary pipe materials or fittings such as mainline wyes or tees, bedding and cover materials, , disposal of material, testing, and notifications necessary to complete the work in compliance with these specifications.

The department will pay separately for dewatering.

136. Trenchless Casing Pipe, 48-Inch Steel Minimum, Item SPV.0090.032.

A Description

This section describes preparation and installation of an interceptor sewer casing pipe.

B Materials

Steel Casing Pipe: Conform to ASTM A36 and ASTM A139, Grade B.

Yield Strength: 36,000 psi minimum.

Wall Thickness: 0.781 in. minimum.

Diameter: Minimum as noted on Drawing, and at least 4 inches greater than greatest outside diameter or carrier pipe.

Designed to withstand all jacking, impact and soil loadings.

C Construction

Where Where shown on the drawings or specified in these Special Provisions, the sewer, water main, or force main (carrier pipe) shall be placed inside a casing pipe that is installed by tunneling, jacking, boring, or jacking and boring or other acceptable methods not using open-cut construction techniques. Installation shall be accomplished in accordance with Federal and State Laws and municipal ordinances. Installation shall also conform to any permit requirements obtained by Owner or contractor from railroads; local, county, state or federal agencies; or any other such entity requiring a permit to allow the Work to proceed. Should there be a conflict between permit requirements and those herein, the stricter requirement shall control.

Contractor's means and methods of construction shall be capable of controlling water and soil infiltration at the excavated face, along the alignment and at shaft excavations to properly conduct the Work, to maintain a stable excavation, and to prevent collapse of the ground. Contractor shall obtain any dewatering permits required. If contractor's means and methods are not effective in controlling such infiltration, contractor shall select other means and methods and demonstrate to owner that water and soil infiltration can be excluded, all at no additional cost to owner. Shafts and open cut excavations shall be excavated by methods determined by contractor to be capable of and suitable for coping with the surface and subsurface conditions. Contractor shall have a representative on site at all times who is experienced in the tunneling technique being used.

Contractor to bulkhead the north end of the casing pipe as shown on the drawings. No voids are allowed beyond the end of the casing. Bulkhead design at both ends of casing pipe to be engineered to withstand railroad E 80 live loads. Bulkhead design calculations prepared and stamped by a P.E. registered in the State of Wisconsin shall be submitted to WisDOT for approval.

Installation of casing and carrier pipe shall proceed in such a manner as to minimize disruption of traffic and to avoid damage to adjacent roadways, railroad tracks, and other structures. No equipment shall operate off the pavement or tracks or the shoulder of the roadway or tracks being crossed during the course of construction. Signs, barricades, flag men, and lighting shall be provided to strictly comply with the Traffic Control section of the Standard Specifications as may be modified by any permit requirements and as needed to complete the Work–the more stringent requirement controlling.

Casing pipe used shall be of adequate diameter and thickness to support all jacking, earth, live, and other loads imposed and to permit installation of the carrier pipe to plan line and grade.

Casing pipe shall be installed using equipment and material that cases the hole as earth is removed to eliminate cavities at the lead end of the casing pipe. Grouting between casing pipe and soil opening shall be performed when needed to secure casing pipe, to prevent soil collapse, and to fill voids between the casing pipe and native soil. The front of the casing pipe shall be provided with a mechanical arrangement or device that positively prevents the auger from leading the pipe so that no unsupported excavation is ahead of the pipe. The auguring process shall be set such that it permits a balance between jacking pressures and the ratio of carrier pipe advancement to the quantity of soil excavated to eliminate voids in the soil. This is especially critical in the event granular, loose, or unstable soils are encountered at the face of the casing pipe. Contractor shall maintain a record of soil removed against carrier pipe volume as a check against formation of voids.

The carrier pipe shall be placed inside the casing pipe using stainless steel casing spacers. Cascade Waterworks Mfg., Advance Products and Systems, Inc., or equal, which are shaped to fit both the casing

pipe and carrier pipe. At least three spacers shall be provided for each length of carrier pipe, but the number of spacers used shall be not less than the minimum requirements of the manufacturer. They shall be attached to the barrel of the carrier pipe so they are parallel to the longitudinal centerline. The annular space between the casing pipe and carrier pipe will be filled with low density cellular concrete in the future and will not be part of this construction contract.

All carrier pipe within the limits of jacking pits shall be installed at CONTRACTOR's expense to resist all loads imposed including, if necessary, the use of special pipe. Thicker walls shall be provided to meet jacking pressures, soil loading, or to conform to permit requirements for the Work. Sections of pipe shall be field welded with a continuous circumferential, full depth single "V" groove (butt joint) weld. Welds shall have strength equal to pipe walls.

Jacking Work Plan: Contractor shall submit at least two weeks prior to construction a detailed work plan. At a minimum, work plan shall include following:

1. Layout showing dimensions of jacking shafts and thrust blocks, limits of excavation support, and any necessary specialized equipment and proposed work schedule.
2. Shop drawings and narratives describing proposed pipe jacking including; equipment, equipment layout, procedures, and labor schedule. For jacking shield, show configuration dimensions, method of operation, and steering control capability.
3. Manufacturer's information for steel casing pipe, including information on connections between casing pipe sections.
4. Description of precautions to be taken to provide face stability at locations where obstructions are encountered.
5. Details for supporting carrier pipe during insertion into casing.

Calculations: Submit design computations, prepared and stamped by a P.E. registered in the State of Wisconsin, that demonstrate that steel casing pipe has been designed to support maximum anticipated earth loads and superimposed live loads including railroad E 80 live loads, including but not limited to jacking loads, that may be imposed on pipe during construction. Contractor shall determine additional stresses imposed on pipe during jacking operations and upgrade quality and strength of pipe and pipe joints to the extent necessary to withstand additional stresses imposed by jacking operation. Excavation that extends into the 1.5:1 live load zone as defined by the AREMA Manual Section 1 5 53 Exhibit H must be shored for railroad live load surcharge pressures.

Design and computations will not be reviewed by engineer but maintained for informational purposes only. Calculations and stamped engineered shoring and bulkhead design package shall be provided by contractor and submitted to WisDOT and the Wisconsin and Southern Railroad (WSOR) Company for approval as required to complete the Trans 29 process prior to starting any work.

Contractor shall coordinate with WSOR to request railroad flagging from WSOR while working within 25 feet of the railroad centerline. Contractor shall coordinate flagging with Chris Jacobson, 414 750 6427. Railroad flagging is required any time people or equipment are within 25 feet of the rail. Contractor shall obtain WisDOT Temporary Authorization Permit (TAP) if requested by WisDOT

D Measurement

The department will measure Trenchless Casing Pipe, 48-Inch Steel Minimum, in length 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.0090.032	Trenchless Casing Pipe, 48-Inch Steel Minimum	LF

Payment is full compensation for all work herein specified and including but not limited to excavation, bedding and cover materials, disposal of material, testing, and notifications necessary to complete the work in compliance with these specifications. The carrier pipe inside the casing pipe will be paid for separately under the Interceptor Sewer bid item.

The department will pay separately for dewatering.

137. Fiber Optic Cable 12-Count, Item SPV.0090.033; Fiber Optic Cable 288-Count, Item SPV.0090.034.

A Description

This special provision describes furnishing and installing 288-count and 12-count fiber optic cable as specified in standard specs 651, 655, 670, and 678, as shown on the plans, and as provided hereinafter.

B Materials

Furnish single mode (SM), lt armored, loose-tube (specified)-count fiber optic cable rated for outdoor use.

All fiber optic cable glass shall be supplied by the same manufacturer and shall be part of a fiber optic cable utilizing loose tube construction with the following properties:

Parameters	Single Mode
Type	Step Index
Code Diameter	8.3µm (nominal)
Cladding Diameter	125 ± 1.0µm
Core to Cladding Offset	≤0.8 µm
Coating Diameter	245 ± 10µm
Cladding Non-Circularity	≤1.0%
Proof Tensile Test	0.7 GPa
Attenuation	@1310nm ≤ 0.4 dB/km @1550nm ≤ 0.3 dB/km
Chromatic Dispersion Zero Dispersion	1310 ± nm (centered on a nominal operating wavelength of 1310)
Zero Dispersion Slope	≤0.092 ps/nm^2/km
Maximum Dispersion	≤ 2.8 ps/nm/km at 1285 - 1330 nm
Cut-Off Wavelength	1260 nm

C Construction

Follow all manufacturer's recommended installation procedures. Contact Electrical Operations Lead Worker at the City of Madison Traffic Engineering shop at (608) 235-3649 a minimum of 7 working days in advance to coordinate installing equipment in existing traffic signal cabinet.

D Measurement

The department will measure Fiber-Optic Cable-288-Count and Fiber-Optic Cable-12-Count by the linear foot, acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.033	Fiber Optic Cable 12-Count	LF
SPV.0090.034	Fiber Optic Cable 288-Count	LF

Payment is full compensation for furnishing and installing the fiber optic cable.

138. Electrical Wire Lighting, 14-3 Grounded, Item, SPV.0090.035.

A Description

This special provision describes furnishing and installing electrical wire lighting, 14-3 type UF cable according to standard spec 655 and these specifications.

B Material

Furnish type UF cable with ground including the number and size of conductors as the plans show. Use cable conforming to ANSI/UL 493.

C Construction

Furnish and install one cable to each LED luminaire from base of pole to the luminaire.

D Measurement

The department will measure Electrical Wire Lighting, 14-3 Grounded by the linear foot, acceptably completed, measured from the splice with the system lighting circuit in the pole base to the connection terminals in the luminaire.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.035	Electrical Wire Lighting, 14-3 Grounded	LF

Payment is full compensation for furnishing and installing all materials, and for furnishing all equipment and incidentals necessary to complete the work.

139. Temporary Overhead Span Wire, Item SPV.0090.036.

A Description

This special provision describes furnishing and installing temporary overhead span wire to temporarily support electrical lighting conductors and fiber cable during construction.

B Materials

Furnish aerial cable consisting of an assembly of three No. 4 XLP insulated power conductors with an ACSR messenger (grounding) wire. Furnish a quantity of parallel cable assemblies as needed to maintain lighting circuits. Furnish a plastic cable guard to protect all cable that extends to/from grade to 10 feet above grade. Furnish guy, span and messenger wire conforming to the requirements in standard spec 661.2.1.3. Furnish aerial cable mounting hardware conforming to the requirements in standard spec 661.2.1.4.

C Construction

Install aerial cable and mounting hardware conforming to all requirements under standard spec 661.3.

D Measurement

The department will measure Temporary Overhead Span Wire 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.0090.036	Temporary Overhead Span Wire	LF

Payment is full compensation for furnishing and installing all materials, and for furnishing all equipment and incidentals necessary to complete the work.

140. Railing Steel Pedestrian Ornamental, Item SPV.0090.041.

A Description

This special provision describes providing ornamental railing fabricated from structural steel and steel structural tubing in accordance with Section 513 and these provisions.

B (Vacant)

C (Vacant)

D Measurement

The department will measure Railing Steel Pedestrian Ornamental 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.0090.041	Railing Steel Pedestrian Ornamental	LF

Payment is full compensation for providing railing; for anchor bolts, and for painting.

141. Wall Concrete Panel Mechanically Stabilized Earth R-13-360, Item SPV.0165.001; Wall Concrete Panel Mechanically Stabilized Earth R-13-361, Item SPV.0165.002.

A Description

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

This special provision describes the quality management program (QMP) for Mechanically Stabilized Earth (MSE) walls. A quality management program is defined as all activities, including process control, inspection, sampling and testing, and necessary adjustments in the process that are related to the construction of the MSE wall, which meets all the requirements of this provision.

This special provision describes contractor quality control (QC) sampling and testing for backfill density testing, documenting those results, and documenting related production and placement process changes. This special provision also describes department quality verification (QV), independent assurance (IA), and dispute resolution.

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

B Materials

B.1 Proprietary Wall Systems

The supplied wall system must be from the department's approved list of Concrete Panel Mechanically Stabilized Earth Wall systems. Proprietary wall systems must conform to the requirements of this specification and be pre-approved for use by the department's Bureau of Structures. The department maintains a list of pre-approved proprietary wall systems. The name of the pre-approved proprietary wall system selected shall be furnished to the engineer within 25 days after the award of contract.

To be eligible for use on this project, a system must have been pre-approved by the Bureau of Structures and added to that list prior to the bid opening date. To receive pre-approval, the retaining wall system must comply with all pertinent requirements of this provision and be prepared in accordance to the requirements of Chapter 14 of the department's LRFD Bridge Manual. Information and assistance with the pre-approval process can be obtained by contacting the Bureau of Structures, Structures Maintenance Section at the following email address: DOTDLStructuresFabrication@dot.wi.gov.

B.2 Design Requirements

It is the responsibility of the contractor to submit a design and supporting documentation as required by this special provision, for review and acceptance by the department, to show the proposed wall design is in compliance with the design specifications. The submittal shall include the following items for review: detailed plans and shop drawings, complete design calculations, explanatory notes, supporting materials, and specifications. The detailed plans and shop drawings shall include all details, dimensions, quantities and cross-sections necessary to construct the walls. Submit shop drawings to the engineer conforming to 105.2 with electronic submittal to the fabrication library under 105.2.2. Certify that shop drawings conform to quality control standards by submitting department form DT2329 with each set of shop drawings. Department review does not relieve the contractor from responsibility for errors or omissions on shop drawings. Submit no later than 60 days from the date of notification to proceed with the project and a minimum of 30 days prior to the date proposed to begin wall construction.

The plans and shop drawings shall be prepared on reproducible sheets 11 inch x 17 inch, including borders. Each sheet shall have a title block in the lower right corner. The title block shall include the WisDOT project identification number and structure number. Design calculations and notes shall be on 8 1/2 inch x 11 inch sheets, and shall contain the project identification number, name or designation of the wall, date of preparation, initials of designer and checker, and page number at the top of the page. All

plans, shop drawings, and calculations shall be signed, sealed and dated by a professional engineer licensed in the State of Wisconsin.

The design of the wall shall be in compliance with the current American Association of State Highway and Transportation Officials LRFD (AASHTO LRFD) Bridge Design Specifications with latest interim specifications for Mechanically Stabilized Earth Walls, WisDOT's current Standard Specifications for Highway and Structure Construction (standard spec), Chapter 14 of the WisDOT LRFD Bridge Manual and standard engineering design procedures as determined by the Department. Loads, load combinations, load and resistance factors shall be as specified in AASHTO LRFD Section 11. The associated resistance factors shall be defined in accordance with Table 11.5.7-1 in AASHTO LRFD.

Design and construct the walls in accordance to the lines, grades, heights and dimensions shown on the plans, as herein specified, and as directed by the engineer. Where walls or wall sections intersect with an included angle of 130 degrees or less, a vertical corner element separate from the standard panel face shall abut and interact with the opposing standard panels. The corner element shall have ground reinforcement connected specifically to that panel and shall be designed to preclude lateral spread of the intersecting panels. If the wall is installed in front of a bridge abutment or wing, it shall also be designed to resist the applied abutment/bridge lateral forces specified on the plans.

Walls parallel to supporting highway traffic shall be designed for the effects of highway surcharge loading equivalent of 2 feet soil surcharge weight or 240 psf. The design shall also consider the traffic barrier impact where applicable. Walls that do not carry highway traffic shall be designed for a live load surcharge of 100 psf in accordance with Chapter 14 of the WisDOT LRFD Bridge Manual or as stated on the plans.

A maximum value of the angle of internal friction of the wall backfill material used for design shall be assumed to be 30 degrees without a certified report of tests. If a certified report of tests yields an angle of internal friction greater than 30 degrees, the larger test value may be used for design, up to a maximum value of 36 degrees.

An external stability check at critical wall stations showing Capacity Demand Ratios (CDR) for sliding, eccentricity, and bearing checks is performed by the department and are provided on the wall plans.

The design of the wall by the contractor shall consider the internal and compound stability of the wall mass in accordance with AASHTO LRFD 11.10.6. The internal stability shall include soil reinforcement pullout, soil reinforcement rupture, and panel-reinforcement connection failure at each soil reinforcement level. The design shall be performed using the Simplified Method or Coherent Gravity Method. Calculations for factored stresses and resistances shall be based upon assumed conditions at the end of the design life. Compound stability shall be computed for the applicable strength limits. Sample analyses and hand calculations shall be submitted to verify the output of any software program used. The design calculations and notes shall clearly indicate the Capacity to Demand Ratios (CDR) for all internal and external stabilities as defined in AASHTO LRFD.

The wall facing shall be designed in accordance with AASHTO LRFD 11.10.2.3. The facing panels shall also be designed to resist compaction stresses that occur during the wall erection. The minimum thickness of the facing panel shall be 5.5 inches. The surface area of a standard single panel cannot exceed 60 square feet. The maximum height of a standard panel shall be 5 feet. The top and bottom panels may exceed 5 foot in height based on site topography subject to the approval by the Structures Design Section. The design of the steel reinforcement within the panels shall be based on one-way bending action. Design the wall panels and joints between panels to accommodate a maximum differential settlement of 1 foot over a 100-foot length, unless the plans indicate other.

The minimum length of soil reinforcement measured from the back face of the wall shall be equal to 0.7 of the wall height, or as shown on the plan. In no case shall this length be less than 8 feet. The soil reinforcement length shall be the same from the bottom to the top of the wall. All soil reinforcement layers shall be connected to facings. The soil reinforcement shall extend a minimum of 3.0 feet beyond the theoretical failure plane in all cases. The maximum vertical spacing of soil reinforcement layers shall be 31 inches. The uppermost layer of the reinforcement shall be located between 6 inches and 18 inches below the bottom of an overlying slab, footing or top of the wall. The upper layers of the soil reinforcement shall also be checked to verify that they have sufficient tensile resistance against traffic barrier impact where applicable.

All soil reinforcement required for the reinforced soil zone shall be connected to the face panels. The reinforcement and the reinforcement/facing connection strength shall be designed to resist maximum factored reinforcement loads in accordance with AASHTO LRFD Section 11.10.6. Facing connection strength shall be defined as the resistance factor times the failure load, or the load at 0.5 inch deformation

times 0.9, whichever is less. The nominal long term design strength in steel reinforcement and connections shall be based upon assumed conditions at the end of the design life.

Soil reinforcement shall be prefabricated into single or multiple elements before galvanizing. Soil reinforcement shall be fabricated or designed to avoid piling, drainage structures or other obstacles in the fill without field modifications. Unless approved by the Bureau of Structures cutting or altering of the basic structural section of either the strip or grid at the site is prohibited, a minimum clearance of 3" shall be maintained between any obstruction and reinforcement, and splicing reinforcement is not allowed.

The minimum embedment of the wall shall be 1 foot 6 inches below finished grade, or as given on the plans. All walls shall be provided with a concrete leveling pad. Minimum wall embedment does not include the leveling pad depth. Step the leveling pad to follow the general slope of the ground line. Frost depth shall not be considered in designing the wall for depth of leveling pad.

Wall facing units shall be installed on a leveling pad.

B.3 Wall System Components

Materials furnished for wall system components under this contract shall conform to the requirements of this specification. All documentation related to material and components of the wall systems specified in this subsection shall be submitted to the engineer.

B.3.1 Wall Facing

Wall facing shall consist of modular precast concrete face panels produced by a wet cast process. The concrete panels shall have a minimum strength of 4000 psi at 28 days. The concrete for the panels shall be air entrained, with an air content of 6% +/- 1.5%. All materials for the concrete mixture for the panels shall meet the requirements of standard spec 501. The panel edges shall be configured so as to conceal the joints. The detail shall be a shiplap, tongue and groove or other detail adequate to prevent vandalism or ultraviolet light damage to the backside of the wall joint covering. Joints between panels shall be no more than 0.75 inch. Use full wall height slip joints at points of differential settlement when detailed on the plan. Horizontal joints must be provided with a compressible bearing material to prevent concrete to concrete contact. Panels shall be reinforced using coated high-strength bar steel or welded steel wire fabric conforming to standard spec 505. Welded steel wire fabric shall be epoxy-coated in accordance with ASTM A884 or galvanized in accordance with AASHTO M 111 or ASTM A641. Panel dowels for cast-in-place copings shall be coated high-strength bar steel conforming to standard spec 505. Unless approved by the Bureau of Structures, adhesive anchors are prohibited.

For reinforced cast-in-place concrete cap or coping, use poured concrete Grade A, A-FA, A-S, A-T, A-IS, A-IP or A-IT concrete conforming to standard spec 501 as modified in standard spec 716. Provide QMP for cast-in-place cap and coping concrete as specified in standard spec 716, Class II Concrete. Use coated high-strength bar steel conforming to standard spec 505.

A minimum of two bearing pads shall be used per panel. The allowable bearing stress shall not exceed 900 psi. The bearing pads shall be preformed EPDM rubber conforming to ASTM D2000, Grade 2, Type A, Class A with a minimum Durometer Hardness of 80, or high- density polyethylene pads with a minimum density of 0.034 lb/in^3 in accordance with ASTM D1505.

An 18-inch wide geotextile shall be used on the backface of the wall panels to cover all panel joints. The geotextile shall meet the physical requirements stated in standard spec 645.2.4 for Geotextile, Type DF, Schedule B, except that the grab tensile strength shall be a minimum of 180 pounds in both the machine and cross-machine directions. The geotextile shall be attached with a standard construction adhesive suitable for use on concrete surfaces and cold temperatures. The adhesive shall be applied to the panels, not to the geotextile.

B.3.2 Leveling Pad

Provide an unreinforced cast-in-place concrete leveling pad. Use Grade A, A-FA, A-S, A-T, A-IS, A-IP, or A-IT concrete conforming to standard spec 501 as modified in standard spec 716. Provide QMP for leveling pad concrete as specified in standard spec 716, Class III Concrete.

The minimum width of the leveling pad shall be 12-inches. The minimum thickness of the leveling pad shall be 6-inches.

B.3.3 Backfill

Furnish and place backfill for the wall as shown on the plans and as hereinafter provided.

Place backfill in a zone extending horizontally from the back face of the wall facing to 1 foot minimum beyond the end of the reinforcement and extending vertically from the top of the leveling pad to a minimum of 3 inches above the final reinforcement layer.

Use natural sand or a mixture of sand with gravel, crushed gravel or crushed stone. Do not use foundry sand, bottom ash, blast furnace slag, crushed/recycled concrete, crushed/milled asphaltic concrete or other potentially corrosive material.

Provide material conforming to the following gradation requirements as per AASHTO T27.

Sieve Size	% by Weight Passing
1 inch	100
No. 40	0 - 60
No. 200	0 - 15

The material shall have a liquid limit not greater than 25, as per AASHTO T89, and a plasticity index not greater than 6, as per AASHTO T90. Provide the percent by weight, passing the #4 sieve.

In addition, backfill material shall meet the following requirements.

Test	Method	Value	
		(Galvanized)	(Aluminized Type 2)
pH	AASHTO T-289	5.0-10.0	5.0 – 9.0
Sulfate content	AASHTO T-290	200 ppm max.	
Chloride content	AASHTO T-291	100 ppm max.	
Electrical Resistivity	AASHTO T-288	3000 ohm-cm min.	1500 ohm-cm min.
Organic Content	AASHTO T-267	1.0% max.	
Angle of Internal Friction	AASHTO T-236[1]	30 degrees min. (At 95.0% of maximum density and optimum moisture, per AASHTO T99, or as modified by C.2.)	

[1] If the amount of P-4 material is greater than 60%, use AASHTO 236 with a standard-size shear box. Test results of this method may allow the use of larger angles of internal friction, up to the maximum allowed by this specification.

If the amount of P-4 material is less than or equal to 60%, two options are available to determine the angle of internal friction. The first method is to perform a fractured faces count, per ASTM D5821, on the R-4 material. If more than 90% of the material is fractured on one face and more than 50% is fractured on two faces, the material meets the specifications and the angle of internal friction can be assumed to be 30 degrees. The second method allows testing all P-1" material, as per AASHTO T-236, with a large shear box. Test results of this second method may allow the use of larger angles of internal friction, up to the maximum allowed by this specification.

Prior to placement of the backfill, obtain and furnish to the engineer a certified report of test results that the backfill material complies with the requirements of this specification. Specify the method used to determine the angle of internal friction. This certified report of test shall be less than 6 months old. Tests will be performed by a certified independent laboratory. In addition, when backfill characteristics and/or sources change, provide a certified report of tests for the new backfill material. Additional certified report of tests are also required. These additional backfill tests may be completed at the time of material production or material placement, with concurrence of the engineer. If this additional testing is completed at the time of material production, complete testing for every 2000 cubic yards of backfill or portion thereof. If this additional testing is completed at the time of material placement, complete testing for every 2000 cubic yards of backfill, or portion thereof, used per wall. For the additional required testing for every 2000 cubic yards of backfill placement, if the characteristic of the backfill and/or the source has not changed then Angle of Internal Friction tests are not included in the additional required testing. All certified reports of test results shall be less than 6 months old and performed by a certified independent laboratory.

B.3.4 Soil Reinforcement

All steel portions of the wall system exposed to earth shall be galvanized. All soil reinforcement and attachment devices shall be carefully inspected to ensure they are true size and free from defects that may impair the strength and durability. Soil reinforcement shall be galvanized or aluminized Type 2. Galvanized soil reinforcement shall be in accordance with AASHTO M 111 or ASTM A641. Aluminized soil reinforcement shall be in accordance with ASTM A463 Aluminized Type 2-100, SS, Grade 50, Class 2. Design of galvanized soil reinforcement shall be in accordance to Section 11.10.6.4.2 of the current AASHTO LRFD Specifications. The design life of steel soil reinforcements shall comply with AASHTO LRFD. Aluminized soil reinforcement shall be limited 16 years of steel protection. Aluminized steel shall only be used on soil reinforcement elements and shall not be used on facing connections or any other steel portion of the wall system. Steel soil reinforcement shall be prefabricated into single or multiple elements before galvanizing.

C Construction

C.1 Excavation and Backfill

Excavation and preparation of the foundation for the MSE wall and the leveling pad shall be in accordance to standard spec 206. The volume of excavation covered is limited to the width of the reinforced mass and to the depth of the leveling pad unless shown or noted otherwise on the plan. At the end of each working day, provide good temporary drainage such that the backfill shall not become contaminated with run-off soil or water if it should rain. Do not stockpile or store materials or large equipment within 10 feet of the back of the wall.

Place backfill materials in the areas as indicated on the plans and as detailed in this specification. Backfill lifts shall be no more than 8-inches in depth, after compaction.

Conduct backfilling operations in such a manner as to prevent damage or misalignment of the wall panels, soil reinforcement, or other wall components. At no expense to the department, correct any such damage or misalignment as directed by the engineer. A field representative of the wall supplier shall be available during wall construction to provide technical assistance to the contractor and the engineer.

Place and compact the MSE backfill to the level of the next higher layer of MSE reinforcement before placing the MSE reinforcement or connecting it to the wall facing. Place and compact material beyond the reinforced soil zone to allow for proper compaction of material within the reinforced zone. The MSE reinforcement shall lay horizontally on top of the most recently placed and compacted layer of MSE backfill.

Do not operate tracked or wheeled equipment on the backfill within 3 feet from the back panels. The engineer may order the removal of any large or heavy equipment that may cause damage or misalignment of the panels.

C.2 Compaction

Compact all backfill behind the wall as specified in standard spec 207.3.6. Compact the backfill to 95.0% of maximum dry density as determined by AASHTO T-99 (modified to compute densities to the nearest 0.1 pcf).

Ensure adequate moisture is present in the backfill during placement and compaction to prevent segregation and to help achieve compaction.

Compaction of backfill within 3 feet of the back face of the wall should be accomplished using lightweight compaction devices. Use of heavy compaction equipment or vehicles should be avoided within 3 feet of the panels. Do not use sheepsfoot or padfoot rollers within the reinforced soil zone.

A minimum of 3 inches of backfill shall be placed over the MSE reinforcement prior to working above the reinforcement.

C.3 Wall Components

C.3.1 General

Erect panel facing and other associated elements according to the wall manufacturer’s construction guide. Place and compact the MSE backfill to the level of the next higher layer of MSE reinforcement before placing the MSE reinforcement or connecting it to the wall facing.

The MSE reinforcement shall lay horizontally on the top of the most recently placed and compacted layer of MSE backfill. Bending of MSE reinforcement that result in a kink in the reinforcement shall not be allowed. If skewing of the reinforcement is required due to obstructions in the reinforced fill, the maximum

skew angle shall not exceed 15 degrees from the normal position unless a greater angle is shown on the plans. The adequacy of the skewed reinforcement in such a case shall be addressed by supporting calculations.

C.3.2 Leveling Pad

Provide an unreinforced cast-in-place concrete leveling pad as shown on the plans. Vertical tolerances shall not exceed 3/4-inch when measured along a 10-foot straight edge. Allow concrete to set at least 12 hours prior to placing wall facing units.

The bottom row of wall facing units shall be horizontal and 100% of the unit surface shall bear on the leveling pad. Rubber or plastic shims may be used to level the wall facing units at the leveling pad. No more than 2 shims (each 3/16-inch thick) shall be used to level the wall facing.

C.3.3 Steel Layers

Place the steel reinforcement full width in one piece as shown on the plans. No splicing will be allowed. Maintain elements in position during backfilling.

C3.4 Panel Tolerances

As backfill material is placed behind a panel, maintain the panel in its proper inclined position according to the supplier specifications and as approved by the engineer. The supplier shall specify the back batter so that the final position of the wall is vertical. Vertical tolerances and horizontal alignment tolerances shall not exceed 3/4-inch when measured along a 10-foot straight edge. The maximum allowable offset in any panel joint shall be 3/4-inch. The overall vertical tolerance of the wall (plumbness from top to bottom) shall not exceed 1/2-inch per 10 feet of wall height. Erect the precast face panels to ensure that they are located within 1 inch from the contract plan offset at any location to ensure proper wall location at the top of the wall. Provide a 3/4-inch joint separation between all adjacent face panels to prevent direct concrete-to-concrete contact. Maintain this gap by the use of bearing pads and/or alignment pins. Failure to meet this tolerance shall cause the engineer to require the contractor to disassemble and re-erect the affected portions of the wall. In addition, imperfect molding, honeycombing, cracking or severe chipping of panels shall be cause of panel rejection.

C.4 Quality Management Program

C.4.1 Quality Control Plan

Submit a comprehensive written quality control plan to the engineer at or before the pre-construction meeting. Do not perform MSE wall construction 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 and acceptance. Update the plan with changes as they become effective. Provide a current copy of the plan to the engineer and post in the contractor's laboratory as changes are adopted. Ensure that the plan provides the following elements:

1. An organizational chart with names, telephone numbers, current certifications and/or titles, and roles and responsibilities of QC personnel.
2. The process used to disseminate QC information and corrective action efforts to the appropriate persons. Include a list of recipients, the communication process that will be used, and action time frames.
3. A list of source locations, section and quarter descriptions, for all aggregate materials requiring QC testing.
4. Descriptions of stockpiling and hauling methods.
5. An outline for resolving a process control problem. Include responsible personnel, required documentation, and appropriate communication steps.
6. Location of the QC laboratory, retained sample storage, and other documentation.
7. A summary of the locations and calculated quantities to be tested under this provision.
8. A proposed sequencing plan of wall construction operations and random test locations.

C.4.2 Quality Control Personnel

Perform the quality control sampling, testing, and documentation required under this provision using HTCP certified technicians. Have a HTCP Grading Technician I (GRADINGTEC-I); or Assistant Certified Technician, Grading (ACT-GRADING); or Aggregate Technician I (AGGTEC-I); or Assistant Certified

Technician, Aggregate (ACT-AGG) present at the each grading site during all wall backfill placement, compaction, and nuclear testing activities. Have a HTCP Nuclear Density Technician I (NUCDENSITYTEC-I) or Assistant Certified Technician, Nuclear Density Gauge Operator (ACT-NUC) perform field density and field moisture content testing.

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

C.4.3 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://wisconsindot.gov/Pages/doing-bus/eng-consultants/cnslt-rsrces/tools/appr-prod/default.aspx

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

Conform to AASHTO T310 and CMM 8-15 for density testing and gauge monitoring methods.

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.

C.4.4 Documentation

(1) Document all observations, inspection records, and process adjustments daily. Submit test results to the department's project materials coordinator on the same day they become available.

(2) Use forms provided in CMM Chapter 8. Note other information in a permanent field record and as a part of process control documentation enumerated in the contractor's quality control plan. Enter QC data and backfill material certified report results into the applicable materials reporting system (MRS) software within 5 business days after results are available.

(3) Submit final testing records and other documentation to the engineer electronically within 10 business days after all contract-required information becomes available. The engineer may allow submission of scanned copies of hand-written documentation.

C.4.5 Quality Control (QC) Testing

Perform compaction testing on the backfill. Conform to CMM 8-15 for testing and gauge monitoring methods. Conduct testing at a minimum frequency of 1 test per 150 cubic yards of backfill, or major portion thereof in each lift. A minimum of one test for every lift is required. Deliver documentation of all compaction testing results to the engineer at the time of testing.

Perform 1 gradation test every 750 cubic yards of fill and one 5-point Proctor test (or as modified in C.2) every 2,250 cubic yards of fill. Provide the region split samples of both within 72 hours of sampling, at the region laboratory. Test sites shall be selected using ASTM Method D3665. Provide Proctor test results to the engineer within 48 hours of sampling. Provide gradation test results to the engineer within 24 hours of sampling.

C.4.6 Department Testing

C.4.6.1 General

(1) The department will conduct verification testing to validate the quality of the product and independent assurance testing to evaluate the sampling and testing. The department will provide the contractor with a listing of names and telephone numbers of all QV and IA personnel for the project, and provide test results to the contractor within 2 business days after the department obtains the sample.

C.4.6.2 Quality Verification (QV) Testing

(1) The department will have an HTCP technician, or ACT working under a certified technician, perform QV sampling and testing. Department verification testing personnel must meet the same certification level requirements specified in C.4.2 for contractor testing personnel for each test result being verified. The department will notify the contractor before sampling so the contractor can observe QV sampling.

(2) The department will conduct QV tests at the minimum frequency of 30% of the required contractor density, Proctor and gradation tests.

(3) The department will locate density tests and gradation samples randomly, at locations independent of the contractor's QC work. The department will split each Proctor and gradation QV sample, testing half for QV, and retaining the remaining half for 10 business days.

(4) The department will conduct QV Proctor and gradation tests in a separate laboratory and with separate equipment from the contractor's QC tests. The department will use the same methods specified for QC testing.

(5) The department will assess QV results by comparing to the appropriate specification limits. If QV test results conform to this special provision, the department will take no further action. If density QV test results are nonconforming, the area shall be reworked until the density requirements of this special provision are met. If the gradation test results are nonconforming, standard spec 106.5 will apply. Differing QC and QV nuclear density values of more than 1.5 pcf will be investigated and resolved. QV density tests will be based on the appropriate QC Proctor test results, unless the QV and QC Proctor result difference is greater than 3.0 pcf. Differing QC and QV Proctor values of more than 3.0 pcf will be investigated and resolved.

C.4.6.3 Independent Assurance (IA)

(1) Independent assurance is unbiased testing the department performs to evaluate the department's QV and the contractor's QC sampling and testing, including personnel qualifications, procedures, and equipment. The department will perform an IA review according to the department's independent assurance program. That review may include one or more of the following:

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

(2) If the department identifies a deficiency, and after further investigation confirms it, correct that deficiency. If the contractor does not correct or fails to cooperate in resolving identified deficiencies, the engineer may suspend placement until action is taken. Resolve disputes as specified in C.4.6.4.

C.4.6.4 Dispute Resolution

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

(2) Production test results, and results from other process control testing, may be considered when resolving a dispute.

(3) If the project personnel cannot resolve a dispute, and the dispute affects payment or could result in incorporating non-conforming product or work, the department will use third party testing to resolve the dispute. The department's central office laboratory, or a mutually agreed on independent testing laboratory, will provide this testing. The engineer and contractor will abide by the results of the third party tests. The party in error will pay service charges incurred for testing by an independent laboratory. The department may use third party test results to evaluate the quality of questionable materials and determine the appropriate payment. The department may reject material or otherwise determine the final disposition of nonconforming material as specified in standard spec 106.5.

C.5 Geotechnical Information

Geotechnical data to be used in the design of the wall is given on the wall plan. After completing wall excavation of the entire reinforced soil zone, notify the department and allow the Regional Soils Engineer two working days to review the foundation.

D Measurement

The department will measure Wall Concrete Panel Mechanically Stabilized Earth by the square foot acceptably completed. The department will compute the measured quantity from the theoretical pay limits the contract plans show. The department will make no allowance for wall area constructed above or below the theoretical pay limits. All work beyond the theoretical pay limits is incidental to the cost of work. The department will make no allowance for as-built quantities.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0165.001	Wall Concrete Panel Mechanically Stabilized Earth R-13-360	SF
SPV.0165.002	Wall Concrete Panel Mechanically Stabilized Earth R-13-361	SF

Payment is full compensation for supplying a design and shop drawings; preparing the site, including all necessary excavation and disposal of materials; supplying all necessary wall components to produce a functional wall system including cap, copings, leveling pads, leveling pad steps, and shims; constructing the retaining system and providing temporary drainage; providing backfill, backfilling, compacting, developing/completing/documenting the quality management program, and performing compaction testing.

The department will pay separately for parapets, traffic barriers, railings, and other items above the wall cap or coping.

142. Wall Modular Block Gravity Landscape, Item SPV.0165.003.

A Description

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

B Materials

B.1 Proprietary Wall Systems

The supplied wall system must be from the department's approved list of Modular Block Gravity Landscape Wall systems. Proprietary wall systems must conform to the requirements of this specification and be pre-approved for use by the department's Bureau of Structures. The department maintains a list of pre-approved proprietary wall systems. The name of the pre-approved proprietary wall system selected shall be furnished to the engineer within 25 days after the award of contract. The location of the plant manufacturing the facing units shall be furnished to the engineer at least 14 days prior to the project delivery.

To be eligible for use on this project, a system must have been pre-approved by the Bureau of Structures and added to that list prior to the bid closing date. To receive pre-approval, the retaining wall system must comply with all pertinent requirements of this provision and be prepared in accordance to the requirements of Chapter 14 of the department's LRFD Bridge Manual. Information and assistance with the pre-approval process can be obtained by contacting the Bureau of Structures, Structures Maintenance Section at the following email address: DOTDLStructuresFabrication@dot.wi.gov.

B.2 Design Requirements

It is the responsibility of the contractor to submit a design and supporting documentation as required by this special provision, for review and acceptance by the department, to show the proposed wall design is in compliance with the design specifications. The submittal shall include the following items for review: detailed plans and shop drawings, complete design calculations, explanatory notes, supporting materials, and specifications. The detailed plans and shop drawings shall include all details, dimensions, quantities and cross-sections necessary to construct the walls. Submit shop drawings to the engineer conforming to 105.2 with electronic submittal to the fabrication library under 105.2.2. Certify that shop drawings conform to quality control standards by submitting department form DT2329 with each set of shop drawings. Department review does not relieve the contractor from responsibility for errors or omissions on shop drawings. Submit no later than 60 days from the date of notification to proceed with the project and a minimum of 30 days prior to the date proposed to begin wall construction.

The plans and shop drawings shall be prepared on reproducible sheets 11 inch x 17 inch, including borders. Each sheet shall have a title block in the lower right corner. The title block shall include the WisDOT project identification number and structure number. Design calculations and notes shall be on 8 1/2 inch x 11 inch sheets, and shall contain the project identification number, name or designation of the wall, date of preparation, initials of designer and checker, and page number at the top of the page. All plans, shop drawings, and calculations shall be signed, sealed and dated by a professional engineer licensed in the State of Wisconsin.

The design of the wall shall be in compliance with the current American Association of State Highway and Transportation Officials LRFD (AASHTO LRFD) Bridge Design Specifications with latest interim specifications for Mechanically Stabilized Earth Walls, WisDOT's current Standard Specifications for Highway and Structure Construction (standard spec), Chapter 14 of the WisDOT LRFD Bridge Manual and standard engineering design procedures as determined by the Department. Loads, load combinations, load and resistance factors shall be as specified in AASHTO LRFD Section 11. The associated resistance factors shall be defined in accordance with Table 11.5.7-1 in AASHTO LRFD.

Design and construct the walls in accordance to the lines, grades, heights and dimensions shown on the plans, as herein specified, and as directed by the engineer.

Walls shall be designed for a minimum live load surcharge of 100 psf in accordance with Chapter 14 of the WisDOT LRFD Bridge Manual or as shown on the plans.

A maximum value of the angle of internal friction of the wall backfill material used for design shall be assumed to be 30 degrees without a certified report of tests. If a certified report of tests yields an angle of internal friction greater than 30 degrees, the larger test value may be used for design, up to a maximum value of 36 degrees.

An external stability check at critical wall stations showing Capacity Demand Ratio (CDR) for sliding, eccentricity, and bearing checks is provided by the department and are provided on the wall plans.

The design of the wall by the contractor shall consider the internal and compound stability of the wall mass in accordance with AASHTO LRFD 11.10.6. Internal stability shall also be considered at each block level. Calculations for factored stresses and resistances shall be based upon assumed conditions at the end of the design life. The width of the modular block (front face to back face) shall be included in the design computations and shown on the wall shop drawings. Blocks must have a minimum width of 8 inches. Block widths may vary among courses, but shall consist of only a single block. Compound stability shall be computed for the applicable strength limits. Sample analyses and hand calculations shall be submitted to verify the output of any software program used. The design calculations and notes shall clearly indicate the Capacity to Demand Ratios (CDR) for all internal and external stabilities as defined in AASHTO LRFD.

Wall facing units shall be designed in accordance with AASHTO LRFD 11.10.2.3.

The minimum embedment of the wall shall be 1 foot 6 inches below finished grade, or as given on the plans. All walls shall be provided with a concrete or base aggregate leveling pad. Minimum wall embedment does not include the leveling pad depth. Step the leveling pad to follow the general slope of the ground line. Frost depth shall not be considered in designing the wall for depth of leveling pad.

Wall facing units shall be installed on a concrete leveling pad or base aggregate leveling pad. The bottom row of blocks shall be horizontal and 100% of the block surface shall bear on the leveling pad.

Concrete leveling pads shall be as wide as the proposed blocks plus six inches, with six inches of the leveling pad extending beyond the front face of the blocks. The minimum thickness of the leveling pad shall be 6-inches.

Base aggregate leveling pads shall be as wide as the blocks plus 12 inches, and the modular blocks shall be centered on the leveling pad. The minimum thickness of the leveling pad shall be 12-inches after compaction. The leveling pad shall be made from base aggregate dense 1 1/4-inch in conformance with standard spec 305.

B.3 Wall System Components

Materials furnished for wall system components under this contract shall conform to the requirements of this specification. All documentation related to material and components of the wall systems specified in this subsection shall be submitted to the engineer.

B.3.1 Wall Facing

Wall facing units shall consist of precast modular concrete blocks. Furnish concrete produced by a dry-cast or wet-cast process. Concrete for all blocks shall not contain less than 565 pounds of cementitious materials per cubic yard. The contractor may use cement conforming to standard spec. 501.2.1 or may substitute for portland cement at the time of batching conforming to standard spec. 501.2.6 for fly, 501.2.7 for slag, or 501.2.8 for other pozzolans. In either case the maximum total supplementary cementitious content is limited to 30% of the total cementitious content by weight.

Dry-cast concrete blocks shall be manufactured in accordance with ASTM C1372 and this specification.

All units shall incorporate a mechanism or devices that develop a mechanical connection between vertical block layers. Units that are broken, have cracks wider than 0.02” and longer than 25% of the nominal height of the unit, chips larger than 1”, have excessive efflorescence, or are otherwise deemed unacceptable by the engineer, shall not be used within the wall. A single block front face style shall be used throughout each wall. The color and surface texture of the block shall be as given on the plan.

The top course of facing units shall be as noted on the plans, either;

- Solid precast concrete unit designed to be compatible with the remainder of the wall. The finishing course shall be bonded to the underlying facing units with a durable, high strength, flexible adhesive compound compatible with the block material.
- A formed cast-in-place concrete cap. A cap of this type shall have texture, color, and appearance, as noted on the plans. The vertical dimension of the cap shall not be less than 3 1/2 inches. Expansion joints shall be placed in the cap at a maximum spacing of 20 feet unless noted otherwise on the plan. Use Grade A, A-FA, A-S, A-T, A-IS, A-IP or A-IT concrete conforming to standard spec 501 as modified in standard spec 716. Provide QMP for cast in place cap and coping concrete as specified in standard spec 716, Class II Concrete.

Block dimensions may vary no more than ±1/8 inch from the standard values published by the manufacturer. Blocks must have a minimum width (front face to back face) of 8 inches. The minimum front face thickness of blocks shall be 4 inches measured perpendicular from the front face to inside voids greater than 4 square inches. The minimum allowed thickness of any other portions of the block is 1 3/4 inches. The front face of the blocks shall conform to plan requirements for color, texture, or patterns.

If pins are used to align modular block facing units, they shall consist of a non-degrading polymer, or hot dipping galvanized steel and be made for the express use with the modular block units supplied, to develop mechanical interlock between facing unit block layers. Connecting pins shall be capable of holding the wall in the proper position during backfilling. Furnish documentation that establishes and substantiates the design life of such devices.

For concrete leveling pad, use Grade A, A-FA, A-S, A-T, A-IS, A-IP, or A-IT concrete conforming to standard spec 501 as modified in standard spec 716. Provide QMP for leveling pad concrete as specified in standard spec 716, Class III Concrete.

For base aggregate leveling pad conform to item 305.0120 Base Aggregate Dense 1 1/4-Inch.

B.3.2 Material Testing

Provide independent quality verification testing of project materials according to the following requirements:

Test	Method	Requirement	
		Dry-cast	Wet-cast
Compressive Strength (psi)	ASTM C140	5000 min.	4000 min.
Air Content (%)	AASHTO T152	N/A	6.0 +/-1.5
Water Absorption (%)	ASTM C140	6 max.[3]	N/A
Freeze-Thaw Loss (%) 40 cycles, 5 of 5 samples 50 cycles, 4 of 5 samples	ASTM C1262[1]	1.0 max.[2][3] 1.5 max.[2][3]	N/A

[1] Test shall be run using a 3% saline solution and blocks greater than 45 days old.

[2] Test results that meet either of the listed requirements for Freeze-Thaw Loss are acceptable.

[3] The independent testing laboratory shall control and conduct all sampling and testing. Prior to sampling, the manufacturer's representative shall identify materials by lot. Five blocks per lot shall be randomly selected for testing. Solid blocks used as a finishing or top course shall not be selected. The selected blocks shall remain under the control of the person who conducted the sampling until shipped or delivered to the testing laboratory. All pallets of blocks within a lot shall be strapped or wrapped to secure the contents and tagged or marked for identification. The engineer will reject any pallet of blocks delivered to the project without intact security measures. At no expense to the department, the contractor shall remove all rejected blocks from the project. If a random sample of five blocks of any lot tested by the department fails to meet any of the above testing requirements, the entire lot will be considered non-conforming.

The contractor and fabricator shall coordinate with the independent testing agency to ensure that strength and air content samples can be taken appropriately during manufacturing. At the time of delivery of materials, furnish the engineer a certified report of test from an AASHTO-registered or ASTM-accredited independent testing laboratory for each lot.

The certified test report shall include the following:

- Project ID
- Production process used (dry-cast or wet-cast)
- Name and location of testing facility
- Name of sampling technician
- Lot number and lot size

Testing of project materials shall be completed not more than 18 months prior to delivery. Independent testing frequency shall not exceed 5000 blocks for dry-cast blocks and the lesser of 150 CY or 1 day's production for wet-cast blocks. The certified test results will represent all blocks within the lot. Each pallet of blocks delivered shall bear lot identification information. Block lots that do not meet the requirements of this specification or blocks without supporting certified test reports will be rejected and shall be removed from the project at no expense to the department.

Nonconforming materials will be subject to evaluation according to standard spec 106.5.

B.3.3 Backfill

Furnish and place backfill for the wall as shown on the plans and as hereinafter provided.

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

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

Backfill placed between retained soil and Type A backfill shall comply with the requirements for Granular Backfill Grade 1 as contained in 209.2.2 of the standard spec. The contractor may substitute Type A Backfill for Granular Backfill Grade 1.

C Construction

C.1 Excavation and Backfill

Excavation and preparation of the foundation for the wall and the leveling pad shall be in accordance to standard spec 206. At the end of each working day, provide good temporary drainage such that the backfill shall not become contaminated with run-off soil or water if it should rain. Do not stockpile or store materials or large equipment within 10 feet of the back of the wall.

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

Conduct backfilling operations in such a manner as to prevent damage or misalignment of the wall facing units or other wall components. At no expense to the department, correct any such damage or misalignment as directed by the engineer. A field representative of the wall supplier shall be available during wall construction to provide technical assistance to the contractor and the engineer.

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

C.2 Compaction

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

Ensure adequate moisture is present in the backfill during placement and compaction to prevent segregation and to help achieve compaction.

Compaction of backfill within 3 feet of the back face of the wall should be accomplished using lightweight compaction devices. Use of heavy compaction equipment or vehicles should be avoided within 3 feet of the modular blocks.

C.3 Wall Components

Erect wall facing units and other associated elements according to the wall manufacturer's construction guide and to the lines, elevations, batter, and tolerances as shown on the plans. Center the initial layer of facing units on the leveling pad; then level them and properly align them. Fill formed voids or openings in the facing units with wall backfill, Type A. Remove all debris on the top of each layer of facing units, before placing the next layer of facing units.

Install all pins, rods, clips, or other devices used to develop mechanical interlock between facing unit layers in accordance with the manufacturer's directions.

C.4 Geotechnical Information

Geotechnical data to be used in the design of the wall is given on the wall plan.

D Measurement

The department will measure Wall Modular Block Gravity Landscape by the square foot acceptably completed. The department will compute the measured quantity from the theoretical pay limits the contract plans show. The department will make no allowance for wall area constructed above or below the theoretical pay limits. All work beyond the theoretical pay limits is incidental to the cost of work. The department will make no allowance for as-built quantities.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0165.003	Wall Modular Block Gravity Landscape	SF

Payment is full compensation for supplying a design and shop drawings; preparing the site, including all necessary excavation and disposal of materials; supplying all necessary wall components to produce a functional wall system including cap, copings, leveling pad, and leveling pad steps; constructing the retaining system and providing temporary drainage; providing backfill, backfilling, compacting, developing/completing/documenting the quality management program, and performing compaction testing.

The department will pay separately for railings, and other items above the wall cap or coping.

143. High Friction Colored Surface – Bike Box Green, Item SPV.0165.004.

A Description

This work consists of placing a high friction colored surface the construction details shown in the plans and as hereinafter provided.

B Materials

High Friction Colored Surface-Bike Lane Green shall consist of a Methyl Methacrylate (MMA) resin system that is used for pavement area markings and anti-skid surfacing to provide high friction resistance and the desired color. The color of the High Friction Colored Surface shall be Bike Lane Green. The manufacturer's technical representative shall come to the construction site to train Owner and contractor personnel prior to surface treatment and shall be available during application as necessary or contractor shall provide documentation from manufacturer's representative endorsing contractor as qualified to install the material.

Use Color-Safe Pavement Marking with Anti-Skid Surface by Transpo Industries or an approved equal. Use a MMA based resin system capable of retaining an aggregate topping under vehicular traffic conditions. Install High Friction Colored Surface in accordance with manufactures specifications.

The MMA based resin system shall comply with chromaticity requirements in accordance with MUTCD Interim Approval for Optional Use of Green Colored Pavement for Bike Lanes.

The MMA based resin system shall meet the following requirements:

Property	Value	Test Method
Tensile Strength @ 7 days, psi, minimum	1000	ASTM D 638
Hardness, Shore D, minimum	80	ASTM D 2240
Gel Time, minutes, minimum	10	ASTM D 2471
Cure Rate, hours, maximum	3	Film@ 75ºF
Water Absorption @ 24 hours, max.	0.25%	ASTM D 570

The aggregate shall be high friction crushed Bauxite, Granite, or gravel. The aggregate will be delivered to the construction site in clearly labeled bags or sacks. The aggregate shall be clean, dry and free from foreign matter. The aggregate shall meet the following requirements:

Property	Value	Test Method
Aggregate Abrasion Value, maximum	20	LA Abrasion
Aggregate Grading,		
No 6 Sieve Size, minimum passing,	95%	
No 16 Sieve Size, maximum passing,	5%	

Aggregate Color Green

Finished surface shall have a minimum 60 FN40R in accordance with ASTM E274) of aggregate bonded to a vehicular bearing surface using the modified epoxy binder.

C Construction

Apply High Friction Colored Surface in accordance with manufactures specifications.

Prepare surfaces so that they are clean, dry, and free of all dust, oil, debris and any other material that might interfere with the bond between the epoxy binder material and existing surfaces. The manufacturer's representative will determine if all surfaces have been adequately cleaned.

Protect utilities, drainage structures, curbs and any other structure within or adjacent to the treatment location against the application of the surface treatment materials. Cover and protect all existing pavement markings that are adjacent to the application surfaces as directed by the Engineer. Remove by grinding any pavement markings that conflict with the surface application and thoroughly sweep or vacuum the surface clean prior to the epoxy binder application.

Pre-treat joints and cracks greater than 1/4 inches in width and depth with the mixed epoxy specified herein or by using an alternative procedure proposed by the manufacturer and agreed upon by the Engineer. Proceed with the epoxy binder and aggregate topping installation once the epoxy, in the pre-treated areas, has gelled or once the alternative procedure has been accomplished.

For applications on new pavements, install the high friction epoxy binder and aggregate topping a minimum of 20 days after the placement of the underlying and adjacent pavement.

Mixing and Application of MMA based resin system and Aggregate Wearing Course: Utilize one of the following methods for the application of the MMA based resin system, as applicable.

1) Hand mixing and application: Proportion the MMA based resin system as recommended by the manufacturer, and mix using a low speed, high torque drill fitted with a helical stirrer. Hand-apply the mixed components onto a prepared pavement surface at a thickness recommended by the manufacturer. Uniformly spread hand-applied base binder onto the substrate surface by means of a serrated edge squeegee.

2) Mechanical mixing and application: Apply the MMA based resin system material by a truck mounted application machine onto the pavement section to be treated in varying widths at a uniform application thickness. Proceed with operations in such a manner that will not allow the MMA based resin system material to separate in the mixing lines, cure, dry, or otherwise impair retention bonding of the high friction surfacing aggregate. Apply the mixed components mechanically onto the prepared pavement surface with a uniform thickness of 50 to 100 mils. Immediately, mechanically apply the high friction surfacing aggregate in a uniform, continuous manner.

For either of the above methods, do not use vibratory or impact type compaction on the aggregate after placement. Use only lightweight rollers to seat the aggregate topping without crushing the aggregate. Complete coverage of the “wet” MMA based resin system material with aggregate is necessary to achieve a uniform surface. No exposed wet spots shall be visible once the aggregate is placed.

Allow the high friction aggregate topped MMA based resin system to cure in accordance with manufacturer recommendations. Protect treated surfaces from traffic and environmental effects until the area has cured.

Remove the excess aggregate by hand brooms, mechanical sweeping, or vacuum sweeping before opening to traffic. Excess aggregate can be reused on the following day’s installation, provided the aggregate is clean, uncontaminated, and dry.

The Engineer may require additional mechanical or vacuum sweeping as necessary after the system fully cures and the treated surface is open to traffic.

Remove and replace high friction colored surface treatment that ravels, delaminates, or wears off within 90 days after placement, unless approved to remain in place by the Engineer. The limits of removal and replacement shall be approved by the Engineer. The replaced high friction colored surface treatment shall meet the requirements of this sub-article.

The MMA based resin system material shall be installed per plans and specification. The Engineer will notify the contractor within 48 hours of installation regarding any of the MMA based resin system material that is installed not to specification or to the satisfaction of the Engineer. Non conforming MMA based resin system material shall be removed at no charge to the City and replaced with conforming product.

The manufacturer warranty period in reference to the following points is to be 3 years from date of installation. Warranty of the following items shall be submitted in writing by the contractor or his installer prior to the pre-construction meeting.

- The MMA based resin system material will maintain its original color in the surface area throughout the ‘warranty period’ with the exception of natural weathering, tire and dirt deposits and abnormal markings applied after installation.
- Friction will achieve a minimum BPN of 60 in accordance with ASTM E-303
- The MMA based resin system material will maintain its skid resistance qualities in 100% of its surface area to never fall below a BPN of 60 during the ‘warranty period’.

With the exception of structural cracking or excessive movement of the surface beneath the two-part modified epoxy material will not be subject to excessive cracking in its surface.

D Measurement

The department will measure High Friction Colored Surface – Bike Box Green by the square foot acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0165.004	High Friction Colored Surface – Bike Box Green	SF

Payment is full compensation for all work herein specified and including but not limited to excavation, bedding materials, disposal of material, testing, and notifications necessary to complete the work in compliance with these specifications.

The department will pay separately for dewatering.

144. Pavement Cleanup Project 5992-11-31, Item SPV.0170.001.

A Description

This special provision describes cleanup of dust and debris from pavements within and adjacent to the job site.

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.

Utilize 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 herein or approved by the engineer.

C Construction

C.1 Pavement Cleanup

Keep all pavements, curb lanes and gutters both closed and open to public traffic within the job-site boundaries free of dust and debris generated from any activity under the contract. Keep all pavements, curb lanes and gutters adjacent to the project free of dust and debris that are affected by land disturbing, dust generating activities, as defined in the contractor's dust control implementation plan.

Conduct sweepings as the engineer directs or approves, to deal with 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. Respond to emergency sweeping requests within 4 hours.

If the vacuum-type sweeper breaks down, a mechanical broom sweeper may be substituted for no more than 24 hours total elapsed time. Repair the vacuum-type sweeper within that 24 hours or substitute a vacuum-type sweeper.

Skid steers with mechanical power brooms may only be utilized on sidewalks and driveways whose pavements will not support the weight of a street sweeper, unless otherwise approved by the engineer.

D Measurement

The department will measure Pavement Cleanup Project 5992-09-31 by the full 100-foot station acceptably completed, measured along the roadway centerline or reference line with each full 100-foot station starting and ending at a +00 station. If 2 or more roadways occur, the department will measure along the centerline or reference line of each roadway. For divided highways, the department will extend measurement units for each roadway, in width, from 5 feet outside the grading limit of that roadway to a line mid-way between the reference lines or centerlines for each roadway.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0170.001	Pavement Cleanup Project 5992-11-31	STA

Payment is full compensation for surveillance, mobilization, sweeping, and disposing of materials.

145. Stabilization Clear Stone, 3-Inch, Item SPV.0195.001.

A Description

This work consists of excavating additional trench depth, and placing foundational bedding materials when requested by the engineer.

B Materials

3-Inch Clear Stone wrapped in Geotextile Fabric.

Bed all interceptor sewer pipe and related appurtenances using Class "B" bedding as shown on the plans conforming to Gradation No. 1.

C Construction

When requested by MMSD due to poor foundation soils, Contractor shall excavate an additional 24-inches below the bedding material and install Stabilization Clear Stone, 3-Inch with Geotextile Fabric as shown in the drawings.

D Measurement

The department will measure Stabilization Clear Stone, 3-Inch by the ton acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0195.001	Stabilization Clear Stone, 3-Inch	TON

Payment is full compensation for all work herein specified and including but not limited to providing and placing all materials and all incidentals necessary to complete the work in compliance with these specifications.

146. Granular Backfill, Interceptor Sewer, Item SPV.0195.002.

A Description

This work consists of providing granular backfill for interceptor sewer trenches when called for in the plans or requested by the engineer.

B Materials

Backfill material shall be granular and shall consist of durable particles ranging in size from fine to coarse in a substantially uniform combination. Sufficient fine material shall be present to fill all the voids in the coarse material. No stones over 3 inches or clay lumps shall be present. Unless otherwise allowed by engineer, granular backfill shall generally conform to the following gradation specification:

GRANULAR BACKFILL

Sieve Size	Percentage by Weight Passing
3 inches	100
2 inches	95 to 100
No. 4	35 to 60
No. 200	5 to 10

Limestone screenings shall not be accepted as granular backfill.

C Construction

All trenches shall be backfilled using specified material so that excessive lengths of trench are not left open. In general, the backfilling operation shall proceed so that no more than 100 feet of trench is open behind the pipe laying operation.

Backfill shall be left below the original surface to allow for placement of restoration materials including pavement, base course, concrete, topsoil, sod, plus any pavement replacement specified in accordance with the Asphaltic Paving section herein. When settlement occurs, contractor shall restore the surface improvements at its expense to maintain the finished surface.

Unless specified otherwise, all trenches shall be consolidated as specified in this section for the entire depth and width of the trench.

Consolidation shall be achieved by use of smooth surface vibratory compactors or backhoe operated hydraulic compactors for granular materials and rotating sheepsfoot type mechanisms for loam/clay soils.

The lift height shall not exceed 8 inches for walk behind, hand operated, vibratory compactors and sheepsfoot. Lift height shall not exceed 24 inches for self propelled vibratory drum or backhoe operated hydraulic compactors. Smaller lift heights shall be provided as necessary to achieve the degree of compaction specified.

Unless specified otherwise, backfill material beneath paved areas or future paved areas and within 5 feet of paved areas or future paved areas shall be consolidated as follows: Within 3 feet of the surface 95% of maximum dry density, below 3 feet from the surface to 1 foot above the pipe 90% of maximum dry density, as determined by the modified Proctor Test (ASTM D1557).

Unless otherwise specified, backfill material placed in all other areas shall be compacted to the point where no additional consolidation can be observed from the compaction and backfill equipment being used.

Backfill material not meeting the compaction specification shall be recompacted by contractor at no cost to the department. Cost for additional testing on recompacted material shall be at contractor's expense.

Contractor shall maintain all backfilling, resurfacing, repaving, and other surface improvements constructed under this project. Contractor shall, upon proper notice from the engineer, make all repairs in surfaces of trenches and excavations. All expenses incurred by the department and/or contractor in making repairs and all expenses in maintaining trench and excavation surfaces shall be at the expense of contractor regardless of the material used in backfilling trench excavations.

D Measurement

The department will measure Granular Backfill, Interceptor Sewer, by the ton 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.0195.002	Granular Backfill, Interceptor Sewer	TON

Payment is full compensation for all work herein specified and including but not limited to hauling, placement, and compaction of backfill material necessary to complete the work in compliance with these specifications.

147. Excavation, Hauling, and Disposal of Petroleum Contaminated Soil, Item SPV.0195.003.

A Description

A.1 General

This special provision describes excavating, loading, hauling, and landfill treatment or disposal of petroleum contaminated soil at a Wisconsin DNR-licensed facility. Tipping fees shall be paid for by the contractor. The closest WDNR-licensed landfill and bioremediation facility that can treat or dispose of this soil is:

Waste Management Deer Track Park Landfill
N6756 Waldmann Lane
Watertown, WI 53094
(t) 608.837.9031

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

A.2 Notice to the Contractor – Petroleum-Contaminated Soil Locations

The City of Madison completed testing for soil and groundwater contamination for locations within this project where excavation is required. Testing indicated that petroleum-contaminated soil is present at the following locations the plans show:

1. Station 139+95EB to 140+40EB, south side of University Ave EB lane, from approximately 2 to 5 feet deep, as shown on the plans. Petroleum-contaminated soil from location area will require landfill disposal, as determined by the Environmental Consultant. The estimated volume of contaminated soil in this location is 200 CY.

2. Station 142+20WB to 142+55WB, north side of University Ave WB, from approximately 8 to 10 deep. Petroleum-contaminated soil from location area will require landfill disposal, as determined by the Environmental Consultant. The estimated volume of contaminated soil in this location is 50 CY.
3. Station 153+50WB to 154+80WB, north side of University Ave WB, from approximately 14 feet to the bottom of excavation. Petroleum-contaminated soil from location area will require landfill disposal, as determined by the Environmental Consultant. The estimated volume of contaminated soil in this location is 1500 CY.
4. Station 158+85WB to 160+40WB, north side of University Ave WB lane, from approximately 15 feet to the bottom of excavation. Petroleum-contaminated soil from location area will require landfill disposal, as determined by the Environmental Consultant. The estimated volume of contaminated soil in this location is 300 CY.
5. Station 72+30UA to 72+00UZ, south side of University Ave EB lane, from approximately 2 to 5 feet deep, as shown on the plans. Petroleum-contaminated soil from location area will require landfill disposal, as determined by the Environmental Consultant. The estimated volume of contaminated soil in this location is 150 CY.
6. Station 54+35 to 55+10, south side of Catafalque Court, from approximately 0 to 5 feet deep, as shown on the plans. Petroleum-contaminated soil from location area will require landfill disposal, as determined by the Environmental Consultant. The estimated volume of contaminated soil in this location is 300 CY.

If contaminated soils—based on unusual odor, presence of cinders, staining, etc.—are encountered elsewhere on the project, notify the Environmental Consultant and Engineer. Suspect or potentially contaminated soils or historic fill materials might include material that exhibits odors or staining, material that is solid waste/debris, ash, cinders, or material that is a mix of soil with these types of waste materials.

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

If dewatering is required at the above locations, conduct the dewatering in accordance with Section C below.

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

A review of available information for the construction corridor indicates that historic fill and contaminated soil is or may be present beyond the construction limits at various locations along corridor. Refer to the project's Phase 1 Hazardous Material Assessment by KL Engineering (dated July 2020) and plans for information regarding potential contamination beyond construction limits. Specifically, petroleum contaminated soils beyond the construction limits were identified at the following locations:

1. Station 138+70WB to 139+05WB, north side of University Ave WB, from approximately 4 feet and deeper, as shown on the plans.
2. Station 158+00EB to 158+65EB, south side of University Ave EB, from approximately 15 feet and deeper, as shown on the plans.

Historic fill and contaminated soil is expected to be beyond the excavation limits necessary to complete the work under this project. Control construction operations to ensure that they do not extend beyond the excavation limits indicated in the plans. If historic fill or contaminated soil are encountered elsewhere on the project, terminate excavation activities in the area and notify the environmental consultant and engineer.

A.4 Coordination

Coordinate work under this contract with the City of Madison:

Brynn Bemis
210 Martin Luther King Jr. Blvd., Rm 115
Madison, WI 53703
608.267.1986
608.695.1385 (cell)
bbemis@cityofmadison.com

The role of the City will be to hire an Environmental Consultant to be on site during excavation near and within the contaminated soils sites. The role of the Environmental Consultant will be limited to:

1. At contaminated soil locations, assist contractor with identifying excess contaminated soils to be hauled to the DNR-licensed treatment/disposal facility. The evaluation will be based on soil analytical results from previous investigations, visual observations, and field screening of soil that is excavated;
2. Documenting that activities associated with management of contaminated soil are in conformance with the contaminated soil management methods for this project as specified herein; and
3. Obtaining the necessary approvals for treatment or disposal of excess contaminated soil from the contractor-selected WDNR-licensed facility. This item will include obtaining the hauling manifests required for disposal.

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

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

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

A.5 Health and Safety Requirements

Add the following to standard spec 107.1:

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

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

B Materials

Furnish backfill materials in accordance with the respective section of the operation being performed (general excavation, structures, storm sewer, water main, sanitary sewer). Backfill materials are incidental to this item.

C Construction

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

The Environmental Consultant may periodically monitor soil excavated from the contaminated areas. The Environmental Consultant will evaluate excavated soil based on field screening results, visual observations, and soil analytical results from previous environmental investigations. Assist the Environmental Consultant in collecting soil samples for evaluation using excavation equipment.

Excavated petroleum-impacted soil shall be landfilled with the following exception. Excavated, historic fill shall be placed back in the trench or excavation from where it was excavated, if the material is suitable for reuse as fill or back fill, as directed by the Environmental Consultant per the WDNR-approved Material Management Plan. Only excess excavated contaminated soil and historic fill that cannot be reused on the project shall be considered for off-site treatment or disposal.

Load and haul excess material from the defined contaminated soil areas, or material designated by the Environmental Consultant for off-site treatment or disposal, to the WDNR-approved facility. If contaminated soil must be stored overnight on site, it shall be placed on a plastic sheet and covered in plastic, or some other impermeable material. Use loading and hauling practices that are appropriate to prevent any spills or releases of contaminated soils or residues. Prior to transport, sufficiently dewater soils designated for off-site treatment or disposal so as not to contain free liquids.

Based on boring logs, It is not anticipated that dewatering will be required as part of this project. However, if dewatering is required, the contractor is responsible for all work, materials and equipment required to comply with permit conditions to dewater the site. At a minimum, pump water into a settling tank to settle solids prior to discharge into the storm sewer for clean water and into the designated sanitary sewer for potentially contaminated water.

Potentially contaminated zones of groundwater may be encountered between Ridge Street and N. Franklin Street (Stations 153+00EB to 161+00EB), as indicated on the plan sheets. Conform with the requirements of Section 205 of the Standard Specifications, pertinent parts of the Wisconsin Administrative Code (Department of Natural Resources Environmental Investigation and Remediation of Environmental Contamination, Chapters NR 700-736), as shown on the construction plan set, and as supplemented herein.

Discharge potentially contaminated water to the sanitary sewer. For the purposes of this project suspended solids shall not be considered a type of contamination. Do not discharge contaminated groundwater without prior approval from the Environmental Consultant. Obtain a *City of Madison Permit to Discharge to the Sanitary Sewer* compliant with all local ordinances and state statutes, as follows:

1. Meet all applicable requirements of the City of Madison, including the control of suspended solids. Perform all necessary monitoring to document compliance with the City of Madison's requirements. Furnish, install, operate, maintain, disassemble, and remove treatment equipment necessary to comply with the City of Madison's requirements.
2. Ensure continuous dewatering and excavation safety at all times. Provide, operate, and maintain adequate pumping equipment and drainage and disposal facilities.
3. Notify the Project Engineer of any dewatering activities and obtain any permits necessary to discharge water. Provide copies of such permits to the engineer. Meet any requirements and pay any costs for obtaining and complying with such permit use. Follow all applicable legislative statutes, judiciary decisions, and regulations of the State of Wisconsin.

The contact for obtaining this permit is:

Megan Eberhardt
City of Madison Engineering
608.266.6432
meberhardt@cityofmadison.com

The City of Madison's Environmental Consultant will be responsible for obtaining the necessary approvals from the Madison Metropolitan Sewerage District (MMSD) for disposal of potentially contaminated groundwater. This approval will be issued at the same time as the *Permit to Discharge to the Sanitary Sewer.* Submit a dewatering plan to the City of Madison for approval with the application for *Permit to Discharge to the Sanitary Sewer.*

If free phase petroleum product, such as gasoline floating on the water, is observed during dewatering activities, terminate dewatering activities and notify the Engineer or the Environmental Consultant.

Costs associated with dewatering in the contaminated areas are considered incidental to this pay item.

D Measurement

The department will measure Excavating, Loading, Hauling, and Landfill Treatment or Disposal of Petroleum-Contaminated Soil in tons of contaminated soil accepted by the DNR-approved facility as documented by weight tickets generated by the facility. Excavation and onsite reuse of contaminated soils is incidental to the associated roadway items.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0195.003	Excavating, Loading, Hauling, and Landfill Treatment or Disposal of Cinder-Contaminated Soil	TON

Payment is full compensation for excavating, segregating, loading, hauling, and treatment or disposal of contaminated soil; furnishing and placing backfill material; tipping fees including applicable taxes and surcharges; obtaining solid waste collection and transportation service operating licenses; assisting in the collection soil samples for field evaluation.

The department will pay separately for dewatering of soils prior to transport, if necessary.

148. Excavating, Loading, Hauling, and Landfill Disposal of Cinder-Contaminated Soil, Item SPV.0195.004.

A Description

A.1 General

This special provision describes excavating, loading, hauling, and landfill treatment or disposal of historical fill at a Wisconsin DNR-licensed facility. **Tipping fees shall be paid for by the contractor**. The closest WDNR-licensed landfills that can treat or dispose of this soil are:

Waste Management Madison Prairie Landfill
6002 Nelson Road
Sun Prairie, WI
(608) 837-9031

OR

Waste Management Deer Track Park Landfill
N6756 Waldmann Lane
Watertown, WI 53094
(t) 608.837.9031

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

Excavated cinder-contaminated soil shall be reused on the project, under pavement, as fill or backfill in trenches and excavations to the maximum extent practicable, as directed by the Environmental Consultant. The Environmental Consultant shall work with the Project Engineer to reuse cinder-contaminated soils where geotechnically suitable, following the WDNR-approved Material Management Plan. Only excess excavated cinder-contaminated fill that cannot be reused on the project shall be considered for off-site treatment or disposal.

A.2 Notice to the Contractor – Cinder-Contaminated Soil Locations

The City of Madison completed testing for soil and groundwater contamination for locations within this project where excavation is required. Testing indicated that cinder-contaminated soil is present intermittently along the project's northern edge adjacent to the railroad corridor. Specifically, cinder-contaminated soil was identified at the following locations as shown on the plan sheets. Anticipate encountering cinders between these test locations. The materials management plan anticipates that approximately half of the cinders encountered will be suitable for re-use on site.

1. Station 140+60EB to 141+00, south side of University Ave EB lane, from 4 feet deep to the bottom of excavation. The estimated volume of contaminated soil in this location is 30 CY.
2. Station 153+50WB to 154+80WB, north side of University Ave WB, from approximately 14 feet to the bottom of excavation. The estimated volume of contaminated soil in this location is 925 CY.
3. Station 152+00WB to 165+00WB, north side of University Ave WB lane, from 1 foot deep to bottom of excavation. The estimated volume of contaminated soil in this location is 700 CY.
4. Station 166+80WB to 166+90WB, north side of University Ave WB lane, from approximately 10 to 12 feet below ground surface. The estimated volume of contaminated soil in this location is 10 CY.
5. Station 171+15EB to 171+25EB, median of University Ave, from approximately 3 to 9 feet below ground surface. The estimated volume of contaminated soil in this location is 520 CY.

6. Station 171+70EB to 171+80EB, median of University Ave, from approximately 1 foot below ground surface to the bottom of excavation. The estimated volume of contaminated soil in this location is 300 CY.
7. Station 21+50BD to 21+75BD, east and west side of University Bay Drive. Cinder-contaminated soils were identified intermittently both west and east of University Bay Drive as well as in the right-of-way between 0 to 5 feet below ground surface. The estimated volume of contaminated soil in this location is 20 CY.

Coordinate excavation in these areas with the project's Environmental Consultant. The Environmental Consultant and Project Engineer will evaluate cinder-contaminated soils for reuse on the project under pavement, as fill or backfill in trenches and excavations to the maximum extent practicable. The reuse of such material shall be placed near the location where the material was excavated, and shall not be reused below the high water table.

If contaminated soils—based on unusual odor, presence of cinders, staining, etc.—are encountered elsewhere on the project, notify the Environmental Consultant and Engineer. Suspect or potentially contaminated soils or historic fill materials might include material that exhibits odors or staining, material that is solid waste/debris, ash, cinders, or material that is a mix of soil with these types of waste materials.

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

If dewatering is required at the above locations, conduct the dewatering in accordance with Section C below.

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

A review of available information for the construction corridor indicates that cinder-contaminated fill may be present beyond the construction limits at various locations along corridor. Refer to the project's Phase 1 Hazardous Material Assessment by KL Engineering (dated July 2020) and the plan sheets for information regarding potential contamination beyond construction limits. Specifically, cinder-contaminated soil beyond the construction limits were identified at the following locations:

1. Station 156+80WB to 156+90WB, from approximately 0.5 to 5 feet below ground surface, as shown on the plans.

Historic fill and contaminated soil is expected to be beyond the excavation limits necessary to complete the work under this project. Control construction operations to ensure that they do not extend beyond the excavation limits indicated in the plans. If historic fill or contaminated soil are encountered elsewhere on the project, terminate excavation activities in the area and notify the environmental consultant and engineer.

A.4 Coordination

Coordinate work under this contract with the City of Madison:

Brynn Bemis
210 Martin Luther King Jr. Blvd., Rm 115
Madison, WI 53703
608.267.1986
608.695.1385 (cell)
bbemis@cityofmadison.com

The role of the City will be to hire an Environmental Consultant to be on site during excavation near and within the contaminated soils sites. The role of the Environmental Consultant will be limited to:

1. At contaminated soil locations, assist contractor with identifying cinder-contaminated soil that can be reused in construction and excess contaminated soils that must be hauled to the DNR-licensed treatment/disposal facility. The evaluation will be based on soil analytical results from previous investigations, visual observations, and field screening of soil that is excavated;

2. Documenting that activities associated with management of contaminated soil are in conformance with the contaminated soil management methods for this project as specified herein; and
3. Obtaining the necessary approvals for treatment or disposal of excess contaminated soil from the contractor-selected WDNR-licensed facility. This item will include obtaining the hauling manifests required for disposal.

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

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

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

A.5 Health and Safety Requirements

Supplement subsection 107.1 of the standard specifications with the following:

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

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

B Materials

Furnish backfill materials in accordance with the respective section of the operation being performed (general excavation, structures, storm sewer, water main, sanitary sewer). Backfill materials are incidental to this item.

C Construction

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

The Environmental Consultant may periodically monitor soil excavated from the contaminated areas. The Environmental Consultant will evaluate excavated soil based on field screening results, visual observations, and soil analytical results from previous environmental investigations. Assist the Environmental Consultant in collecting soil samples for evaluation using excavation equipment.

Excavated, cinder-contaminated soil and historic fill shall be placed back in the trench or excavation from where it was excavated, if the material is suitable for reuse as fill or back fill, as directed by the Environmental Consultant and Project Engineer. Only excess excavated contaminated soil and historic fill that cannot be reused on the project shall be considered for off-site treatment or disposal.

Load and haul excess material from the defined contaminated soil areas, or material designated by the Environmental Consultant for off-site treatment or disposal, to the WDNR-approved facility. If contaminated soil must be stored overnight on site, it shall be placed on a plastic sheet and covered in plastic, or some other impermeable material. Use loading and hauling practices that are appropriate to prevent any spills or releases of contaminated soils or residues. Prior to transport, sufficiently dewater soils designated for off-site treatment or disposal so as not to contain free liquids.

Based on boring logs, It is not anticipated that dewatering will be required as part of this project. However, if dewatering is required, the contractor is responsible for all work, materials and equipment required to comply with permit conditions to dewater the site. At a minimum, pump water into a settling

tank to settle solids prior to discharge into the storm sewer for clean water and into the designated sanitary sewer for potentially contaminated water.

Potentially contaminated zones of groundwater may be encountered between Ridge Street and N. Franklin Street (Stations 153+00EB to 161+00EB), as indicated on the plan sheets. Conform with the requirements of Section 205 of the Standard Specifications, pertinent parts of the Wisconsin Administrative Code (Department of Natural Resources Environmental Investigation and Remediation of Environmental Contamination, Chapters NR 700-736), as shown on the construction plan set, and as outlined under Item SPV.0195.003 Excavating, Loading, Hauling, and Landfill Treatment or Disposal of Petroleum-Contaminated Soil.

D Measurement

The department will measure Excavating, Loading, Hauling, and Landfill Treatment or Disposal of Cinder-Contaminated Soil in tons of contaminated soil accepted by the DNR-approved facility as documented by weight tickets generated by the facility. Excavation and onsite reuse of contaminated soils is incidental to the associated roadway items.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0195.004	Excavating, Loading, Hauling, and Landfill Treatment or Disposal of Cinder-Contaminated Soil	TON

Payment is full compensation for excavating, segregating, loading, hauling, and treatment or disposal of contaminated soil; furnishing and placing backfill material; tipping fees including applicable taxes and surcharges; obtaining solid waste collection and transportation service operating licenses; assisting in the collection soil samples for field evaluation.

The department will pay separately for dewatering of soils prior to transport, if necessary.

149. Construct Inside Drop 8-Inch, Item SPV.0200.001.

A Description

This special provision describes constructing inside drop structures on sanitary sewer access structures where shown in the drawings, or as directed by the City of Madison. Inside Drops are required if the elevation difference between the flow line of the incoming pipe and the springline of the outgoing pipe is greater than two feet.

B Materials

Provide all materials associated with this item according to Standard Detail Drawing 5.7.30 and section 507.3(d)1 of the City of Madison Standard Specifications.

C Construction

Construct Inside Drop according to section 507.3(d)1 of the City of Madison Standard Specifications.

Maintain the normal flow of wastewater at all times during installation of the sanitary sewer access structure, construction of the outside drop structure, and when connecting new and existing pipes to the structure.

Complete any necessary temporary wastewater control according to the City of Madison Standard Specifications, and as described under bid item Wastewater Control item.

D Measurement

The department will be measure Construct Inside Drop 8-Inch by the vertical foot measured from the invert of the entree tee to the springline of the outgoing sewer according to City of Madison Standard Detail Drawing 5.7.30. If the manhole has a bench above the spring line of the outgoing sewer, the inside drop should be measured from the invert of the tee to the top of the manhole structure bench. Sanitary tap connections for the inside drop shall be considered incidental to this 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.0200.001	Construct Inside Drop 8-Inch	VF

Payment is full compensation for excavating, backfilling and disposing of surplus materials; for making connections; and for furnishing all tools, materials, labor and incidentals necessary to complete the work

ADDITIONAL SPECIAL PROVISION 1 (ASP 1)
FOR TRANSPORTATION ALLIANCE FOR NEW SOLUTIONS (TrANS)
PROGRAM EMPLOYMENT PLACEMENTS AND APPRENTICESHIPS

The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), Section 5204(e) – Surface Transportation Workforce Development Training and Education, provides for 100 percent Federal funding if the core program funds are used for training, education, or workforce development purposes, including "pipeline" activities. The core programs includes: Congestion Mitigation and Air Quality Improvement (CMAQ) Program, Highway Bridge Program (HBP), Interstate Maintenance (IM), National Highway System (NHS), and Surface Transportation Program (STP). These workforce development activities cover surface transportation workers, including OJT/SS programs for women and minorities as authorized in 23 U.S.C. §140(b).

TrANS is an employment program originally established in 1995 in Southeastern Wisconsin. Currently TrANS has expanded to include TrANS program locations to serve contractors in Southeast (Milwaukee and surrounding counties), Southcentral (Dane County and surrounding counties including Rock County), and most Northeastern Wisconsin counties from locations in Keshena, Rhinelander and surrounding far Northern areas. TrANS attempts to meet contractor's needs in other geographic locations as possible. It is an industry driven plan of services to address the outreach, preparation, placement and retention of women, minorities and non-minorities as laborers and apprentices in the highway skilled trades. These candidate preparation and contractor coordination services are provided by community based organizations. For a list of the TrANS Coordinators contact the Disadvantaged Business Enterprise Office at (414) 438-4583 in Milwaukee or (608) 266-6961 in Madison. These services are provided to you at no cost.

I. BASIC CONCEPTS

Training reimbursements to employing contractors for new placements, rehires or promotions to apprentice of TrANS Program graduates will be made as follows:

1) **On-the-Job Training, Item ASP.1T0G, ASP 1 Graduate.** At the rate of $5.00 per hour on federal aid projects when TrANS graduates are initially hired, or seasonally rehired, as unskilled laborers or the equivalent.

   Eligibility and Duration: To the employing contractor, for up to 2000 hours from the point of initial hire as a TrANS program placement.

   Contract Goal: To maintain the intent of the Equal Employment Opportunity program, it is a goal that __12__ *(number)* TrANS Graduate(s) be utilized on this contract.

2) **On-the-Job Training, Item ASP.1T0A, ASP 1 Apprentice.** At the rate of $5.00 per hour on federal aid projects at the point when an employee who came out of the TrANS Program is subsequently entered into an apprenticeship contract in an underutilized skilled trade (this will include the Skilled Laborer Apprenticeship when that standard is implemented).

Eligibility and Duration: To the employing contractor, for the length of time the TrANS graduate is in apprentice status.

Contract Goal: To maintain the intent of the Equal Employment Opportunity program, it is a goal that __7___ *(number)* TrANS Apprentice(s) be utilized on this contract.

3) The maximum duration of reimbursement is two years as a TrANS graduate plus time in apprentice status.

4) If a TrANS program is not available in the contractor's area and another training program is utilized, payment of On-the-Job Training hours may be approved by the Wisconsin Department of Transportation (WisDOT) if the training program meets the established acceptance criteria. Only On-the-Job Training Hours accumulated after WisDOT approval will be reimbursed as specified under Items ASP.1T0G and ASP.1T0A. For more information, contact the Disadvantaged Business Enterprise Office at the phone numbers listed above.

5) WisDOT reserves the right to deny payments under items ASP.1T0G and ASP.1T0A if the contractor either fails to provide training or there is evidence of a lack of good faith in meeting the requirements of this training special provision.

II. RATIONALE AND SPECIAL NOTE

The $5.00 per hour now being paid for TrANS placements is intended to cover the duration of two years to allow for reaching entry-level laborer status. An additional incentive, the $5.00 rate, would promote movement into the underutilized skilled trades' apprenticeships and applies until the individual completes their apprenticeship. These incentives benefit TrANS candidates by giving them a better opportunity to enter a skilled trade; benefits contractors who will be assisted in meeting their EEO profiles and goals; and benefits the public who will see the program reinforce larger public-private employment reform in Wisconsin. The pool of TrANS graduates was created for the purpose of addressing underutilization in the skilled trades, an objective that is further reinforced by a parallel retention pilot program, known as the Companywide Reporting. *Whether or not reimbursement is involved, the WisDOT reassures contractors who are in the Companywide Program that TrANS placements still contribute toward fulfilling the new hire goal of 50% women and minorities.* Based on data administered by United States Department of Labor (US DOL), the highway skilled trades remain underutilized for women statewide (less than 6.9%); and for minorities in all counties (% varies by county).

NOTE: *Unless using other advancement strategies, contractors are encouraged to use some or all of this monetary incentive to offset the cut in hourly wages an individual may incur when entering an apprenticeship if the full general laborer hourly rate has been previously paid. No special accounting measures are required.*

III. IMPLEMENTATION

The implementation of ASP 1 is intended to cover only the amount of time it takes for underutilization to be resolved across the trades. This will be measured annually at the county and/or state levels using data administered by WisDWD in relation to goals set by the USDOL-

OFCCP. With appropriate state and federal approvals, we may also do some measurement at the company level.

It is the contractor's responsibility to note on their Certified Payrolls if their employee is a TrANS graduate or a TrANS apprentice. The District EEO Coordinators utilize the information on the Certified Payrolls to track the hours accumulated by TrANS Graduates and TrANS apprentices on WisDOT contracts. Payment under this ASP 1 is made based on the hours recorded off of the Certified Payrolls. Tracking may eventually include improved linkages with the WisDWD apprentice database, information from company and committee level sources.

TrANS is nondiscriminatory by regulation, and is a tool for optional use by contractors to address the underutilization of women and minorities as laborers and apprentices in our industry's skilled trades.

IV. *TRANS TRAINING*

As part of the contractor's equal employment opportunity affirmative action program, training shall be provided to employees enrolled in apprenticeship and on-the-job training programs as follows:

The contractor shall provide on-the-job training aimed at developing full journey workers in the type of trade or job classifications involved. In the event the contractor subcontracts a portion of the contract work, the contractor shall determine how many, if any, of the trainees are to be trained by the subcontractor provided, however, that the contractor shall retain the primary responsibility for meeting the training requirements imposed by this special provision. The contractor shall also insure that this training special provision is made applicable to such subcontract.

Training and upgrading of minorities and women toward journey workers status is a primary objective of this training special provision. Accordingly, the contractor shall make every effort to enroll minority trainees and women (e.g., by conducting systematic and direct recruitment through public and private sources likely to yield minority trainees and women trainees); to the extent such persons are available within a reasonable area of recruitment. The contractor will be given an opportunity and will be responsible for demonstrating the steps that they have taken in pursuance thereof, prior to determination as to whether the contractor is in compliance with this training special provision. This training commitment is not intended, and shall not be used, to discriminate against any applicant for training, whether a member of a minority group or not.

No employee shall be employed as a trainee in any classification in which they have successfully completed a training course leading to journey workers status or in which they have been employed as a journey worker. The contractor should satisfy this requirement by including appropriate questions in the employee application or by other suitable means. Regardless of the method used, the contractor's records should document the findings in each case.

V. *APPRENTICESHIP TRAINING*

The Federal Highway Administration's (FHWA) policy is to require full use of all available training and skill improvement opportunities to assure increased participation of minority groups, disadvantaged persons and women in all phases of the highway construction industry. The FHWA On-the-Job Training (OJT) Program requires the State transportation agencies (STAs) to establish apprenticeships and training programs targeted to move women, minorities, and disadvantaged individuals into journey-level positions to ensure that a competent workforce is available to meet highway construction hiring needs, and to address the historical under-representation of members of these groups in highway construction skilled crafts.

The OJT Supportive Services (OJT/SS) Program was established in Title 23 Code of Federal Regulations (CFR), Part 230) to supplement the OJT program and support STA training programs by providing services to highway construction contractors and assistance to highway construction apprentices and trainees. The primary objectives of OJT/SS are:

(1) To increase the overall effectiveness of the State highway agencies' approved training programs.
(2) To seek other ways to increase the training opportunities for women, minorities, and disadvantaged individuals.

The STAs are responsible for establishing procedures, subject to the availability of Surface Transportation and Bridge Funds under 23 U.S.C. §140(b*)* (Nondiscrimination), for the provision of supportive services with respect to training programs approved under 23 CFR, Part 230(a*)* (Equal Employment Opportunity on Federal and Federal-aid Construction Contracts – including Supportive Services).

The contractor and subcontractor shall maintain records to demonstrate compliance with these apprenticeship requirements. Reasonable exemptions and modifications to and from any or all of these requirements will be determined by the Wisconsin Department of Transportation-Civil Rights Office. A request for an exemption or modification, with justification, shall be made in writing, addressed to WisDOT Civil Rights Office, 4802 Sheboygan Avenue, P.O. Box 7965, Rm. 451, Madison, WI 53707.

ADDITIONAL SPECIAL PROVISION 3

DISADVANTAGED BUSINESS ENTERPRISE (DBE) PROGRAM IMPLEMENTATION

Authority

Wisconsin Department of Transportation (WisDOT) is a recipient of funds from the US Department of Transportation's Federal Highway Administration. The DBE program is a federal program applicable on all contracts administered by WisDOT that include federal-aid highway funds. The authority for the DBE program is the Transportation Bill as approved by Congress periodically. DBE program guidance and requirements are outlined in the Code of Federal Regulations at 49 CFR Part 26. This contract is subject to DBE provisions because it is financed with federal-aid-highway funds. Additionally, this contract is subject to the *State of Wisconsin Standard Specifications for Highway and Structure Construction* and all applicable contract documents.

Requirements

Pursuant to the federal DBE program regulation at 49 CFR Part 26, a contractor's failure to comply with any provision of the DBE program regulatory provisions will be considered a material breach of contract. This is nonnegotiable.

If a contractor fails to carry out the DBE program requirements and/or the Required Contract Provisions for Federal Aid Contracts (FHWA 1273) referenced in this document, sanctions will be assessed depending upon the facts, reasoning, severity, and remedial efforts of the contractor that may include: termination of contract, withholding payment, assessment of monetary sanctions, and/or suspension/debarment proceedings that could result in the disqualification of the contractor from bidding for a designated period of time.

(1) The Commitment to Subcontract to DBE (Form DT1506 or digital submittal), Attachments A, and Good Faith Effort Documentation (Form DT1202) will be submitted as described in Section 2.
(2) Any change to DBE Commitments thereafter must follow modification of DBE subcontracting commitment as described in Section 9.
(3) The Department requires this list of DBE subcontractors from all bidders at time of bid to ensure the lowest possible cost to taxpayers and fairness to other bidders and subcontractors. Bid shopping is prohibited.
(4) The contractor must utilize the specific DBE firms listed in the approved DBE Commitment to perform the work and/or supply the materials for which the DBE firm is listed unless the contractor obtains written consent in advance from WisDOT. The contractor will not be entitled to payment for any work or materials on the approved DBE Commitment that is not performed or supplied by the listed DBE without WisDOT's written consent.

Description

The Wisconsin Department of Transportation is committed to the compliant administration of the DBE Program. The DBE provisions work in tandem with FHWA 1273 and WisDOT's *Standard Specifications for Highway and Structure Construction* and *Construction and Materials Manual*. The WisDOT Secretary is signatory to assurances of department-wide compliance.

The Department assigns the contract DBE goal as a percentage of work items that could be performed by certified DBE firms on the contract. The assigned DBE goal is expressed on the bid proposal as a percentage applicable to the total contract bid amount.

(1) WisDOT identifies the assigned DBE goal in its contract advertisements and posts the contract DBE goal on the cover of the bidding proposal. The contractor can meet the assigned contract DBE goal by subcontracting work to a DBE firm or by procuring services or materials from a DBE firm.

(2) Under the contract, the prime contractor should inform, advise, and develop participating DBE firms to be more knowledgeable contractors who are prepared to successfully complete their contractual agreement through the proactive provision of assistance in the following areas:
- Produce accurate and complete quotes
- Understand highway plans applicable to their work
- Understand specifications and contract requirements applicable to their work
- Understand contracting reporting requirements

(3) The Department encourages contractors to assist DBE subcontractors more formally by participating in WisDOT's Business Development program as a mentor, coach, or resource. For comprehensive information on the Disadvantaged Business Enterprise Program, visit the Department's Civil Rights and Compliance Section website at: http://wisconsindot.gov/Pages/doing-bus/civil-rights/dbe/default.aspx

1. Definitions

Interpret these terms, used throughout this additional special provision, as follows:

a. **Assigned DBE Contract Goal:** The percentage shown on the cover of the Highway Work Proposal that represents the feasible level of DBE participation for each contract. The goal is calculated using the Engineer's Estimate and DBE Interest Report. Goal assignment includes review of FHWA funds, analyzes bid items for subcontract opportunity and compatibility with DBE certified firm work codes. Additional factors considered include proximity, proportion, and regulations.

b. **Bid Shopping:** In construction law, bid shopping is the practice of divulging a subcontractor's bid to another prospective contractor(s) before or after the award of a contract to secure a lower bid.

c. **DBE:** Disadvantaged Business Enterprise – A for-profit small business concern where socially and economically disadvantaged individuals own at least a 51% interest and control management and daily business operations.

d. **DBE Commitment:** The DBE Commitment is identified in the Commitment to Subcontract to DBE (Form DT1506) and is expressed as the amount of DBE participation the prime contractor has secured. The DT1506, a contract document completed by the bidder, is required to be considered a responsive bidder on an FHWA-funded contract that has an assigned DBE goal. The prime contractor will have the option to submit the DT1506 digitally, as an entry with the bid in Bid Express, or as an attachment to the bid.

e. **DBE Utilization:** The actual participation of a DBE subcontractor on a project. WisDOT verifies DBE utilization through review of the DBE Commitment, payments to subcontractors, and contract documentation. The Prime Contractor receives DBE credit for payments made to the DBE firms performing the work listed on the approved DBE Commitment, and those submitted after approved commitment with Attachment A.

f. **Good Faith Effort:** Legal term describing a diligent and honest effort taken by a reasonable person under the same set of facts or circumstances. For DBE subcontracting, the bidder must show that it took all necessary and reasonable steps to achieve the assigned DBE goal by the scope, intensity, and appropriateness of effort that could reasonably be expected for a contractor to obtain sufficient DBE participation.

g. **Manufacturer:** A firm that operates or maintains a factory or establishment that produces, on the premises, the materials, supplies, articles, or equipment required under the contract.

h. **Reasonable Price:** Contractors are expected to assess reasonable price by analyzing the contract scope for DBE subcontract feasibility and comparing common line items in DBE and non-DBE subcontract quotes for the same work. Per federal regulation, reasonable price is not necessarily the lowest price.

i. **Supplier:** A firm that owns, operates, or maintains a store, warehouse, or other establishment in which the materials, supplies, articles, or equipment required under the contract are bought, kept in stock, and regularly sold or leased to the public.

j. **Tied quote:** Subcontractor quote that groups multiple bid/line items at a bundled/package price with a notation that the items within the quote will not be separated.

2. WisDOT DBE Program Compliance

a. Documentation Submittal

- The Commitment to Subcontract to DBE (Form DT1506 or digital submittal) must be submitted at the time of bid (Tuesday) by all prime contractors.
- Attachments A OR quotes from all DBEs included in the Commitment must be submitted at bid (Tuesday) **OR**
- Within one-hour following bid submittal by ALL prime contractors via eSubmit (Tuesday).
- If only DBE quotes were submitted, all remaining signed Attachments A must be submitted within 24-hours of bid closing via eSubmit (Wednesday).
- If the assigned DBE contract goal is not met, Documentation of Good Faith Effort (Form DT1202) and supporting documentation must be submitted within 24-hours of bid closing (Wednesday) via eSubmit. Instructions for eSubmit.

**Bidders have the option of submitting the DBE Commitment at the time of bid via direct entry through Bid Express OR with attachment of Form DT1506 (Commitment to Subcontract to DBE). The DBE Commitment entered with bid is the digital form of the DT1506. Separate submission of Form DT1506 is not required if the DBE Commitment is entered in Bid Express. Form DT1202, if applicable, is no longer required to be submitted at time of bid; submit DT1202 within the 24-hour supplemental time frame following bid closing.

The DBE Office will not certify Good Faith Effort and the Bureau of Project Development will consider the bid nonresponsive if the contractor fails to furnish the DBE Commitment (digitally entered into the bid OR Form DT1506 as an attachment), Attachments A, and Form DT1202 if applicable, as required. See sample forms in the Appendix.

b. Verification of DBE Commitment

The documentation related to DBE subcontract commitment submitted prior to contract award is evaluated as follows:

(1) DBE Goal Met

If the bidder indicates that the contract DBE goal is met, the Department will evaluate the DBE Commitment submitted with bid OR Form DT1506, and Attachments A to verify the actual DBE percentage calculation. If the DBE Commitment is verified, the contract is eligible for award with respect to the DBE Commitment.

(2) DBE Goal Not Met

a) If the bidder indicates a bid percentage on the DBE Commitment that does not meet the assigned DBE contract goal, the bidder must request alternative evaluation of good faith effort through

submission of Form DT1202 (Documentation of Good Faith Effort) within 24-hours of bid including narrative description. Supplementary documentation of good faith effort that supports the DT1202 submission is also due within 24-hours of bid submission and prior to bid posting. The Department will review the bidder's DBE Commitment and evaluate the bidder's good faith efforts submission.

b) Following evaluation of the bidder's Good Faith Effort documentation the bidder will be notified that the Department intends to:
   1. *Approve* the request (adequate documentation of GFE has been submitted)- no conditions placed on the contract with respect to the DBE Commitment;
   2. *Deny* the request (inadequate documentation of GFE has been submitted)- the contract is viewed as non-responsive per Wisconsin Standard Specifications for Highway and Structure Construction and will not be executed.

c) If the Department denies the bidder's request, the contract is ineligible for award. The Department will provide a written explanation for denying the request to the bidder. The bidder may appeal the Department's denial (see Section 4).

Supplemental good faith effort documentation must be submitted through eSubmit (preferred) OR to the DBE Office by email at: DBE_Alert@dot.wi.gov. Email naming convention: "Project #, Proposal #, Let date, Business Name, GFE"

3. Department's Criteria for Good Faith Effort Documentation

The Federal-aid Construction Contract Provision, referenced as FHWA-1273, explicitly states that the prime contractor shall be responsible for all work performed on the contract by piecework, station work, or subcontract. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of the contract including assurances of equal employment opportunity laws, DBE regulations, and affirmative action. Compliance encompasses responsible and responsive action, documentation, and good faith effort.

Contractually, all contractors, subcontractors, and service providers on the contract are bound by FHWA 1273 and DBE program provisions. **Prime contractors should encourage subcontractors to utilize DBE firms whenever possible to contribute to the assigned DBE contract goal.**

Bidders are required to document good faith effort. Per 49 CFR Part 26.53, good faith effort is demonstrated in one of two ways. The bidder:

(1) Documents that it has obtained enough DBE participation to meet the goal; OR
(2) Documents that it made adequate good faith efforts to meet the goal, even though it did not succeed

Appendix A of 49 CFR Part 26 provides guidance concerning good faith efforts. WisDOT evaluates good faith effort on a contract basis just as each contract award is evaluated individually.

The efforts employed by the bidder should be those that WisDOT can reasonably expect a bidder to take to actively and aggressively obtain DBE participation sufficient to meet the DBE contract goal. The Department will only approve demonstration of good faith effort if the bidder documents the quality, quantity, and intensity of the variety of activities undertaken that are commensurate with expected efforts to meet the stated goal.

The Department, in conjunction with industry stakeholders, has developed the following guidance for contractor good faith effort activity. The guidance and the attached appendices provide a framework for the actions required by all parties in the processing and evaluation of bidder's total efforts to achieve the project specific DBE goal prior to the bid letting date.

a. Solicitation Guidance for Prime Contractors:

(1) Document all efforts and decisions made toward achieving the DBE goal on the contract. The bidder should use WisDOT-approved DBE outreach tools, including the UCP DBE Directory and the Bid Express Small Business Network to foster DBE participation on all applicable contracts.

(2) As needed, request assistance with DBE outreach and follow-up by contacting the Department's DBE Support Services Office by phone or email request at least 14 days prior to the bid letting date. Phone numbers are (414) 438-4584 and/or (608) 267-3849; Fax: (414) 438-5392; E-mail: DBE_Alert@dot.wi.gov

(3) Participate in and document a substantive conversation with at least one DBE firm per Let, to discuss questions, concerns, and any other contract related matters that may be applicable to the DBE firm. Guidelines for this conversation are provided in Appendix A of ASP-3.

(4) Request quotes by identifying potential items to subcontract and solicit. In their initial contacts, contractors are strongly encouraged to include a single page, detailed list of items for which they are accepting quotes, by project, within a letting. *See attached sample entitled "Sample Contractor Solicitation Letter" in* Appendix B. Prime contractors should also indicate a willingness to accept quotes in areas they are planning to perform themselves, as required by federal rules. In some cases, it might be appropriate to use DBE firms to do work in a prime contractor's area of specialization.

i. Solicit quotes from certified DBE firms who match possible items to subcontract using all reasonable and available means. Additionally, forward copies of solicitations highlighting the work areas for which quotes are being sought to DBE_Alert@dot.wi.gov

ii. Acceptable outreach tools include SBN (Small Business Network, see Appendix C): https://www.bidx.com/wi/main, postal mail, email, fax, and phone.

a. Contractors must ask DBE firms for a response in their solicitations. See *Sample Contractor Solicitation Letter,* Appendix B. This letter may be included as an attachment to the sub-quote request.

b. Solicit quotes at least 10 calendar days prior to the letting date to allow DBE firms sufficient time to respond. Prime contractors should contact DBE firms early, asking if they need help organizing their quote, assistance confirming equipment needs, or other assistance supporting their submission of a competitive quote for their services.

c. A follow up solicitation should take place within 5 calendar days of the letting date. Email and/or SBN are the preferred method for the solicitation.

iii. Upon request, provide interested DBE firms with adequate information about plans, specifications, and the requirements of the contract by letter, information session, email, phone call, and/or referral.

iv. When potential exists, the contractor should advise interested DBE firms on how to obtain bonding, line of credit, or insurance if requested.

v. Document DBE firm's interest in quoting by taking appropriate steps to follow up initial solicitation with:

a. Email to all prospective DBE firms in relevant work areas

b. Phone call log to DBE firms who express interest via written response or call

c. Fax/letter confirmation

d. Signed copy of record of subcontractor outreach effort

b. Guidance for Evaluating DBE quotes

(1) Quote evaluation practices required to evaluate DBE quotes:

i. Reasonable Price**:** Contractors are expected to assess reasonable price by analyzing the contract scope for DBE subcontract feasibility and comparing common line items in DBE and non-DBE subcontract quotes for the same work. Per federal regulation, reasonable price is not necessarily the lowest price. See 49 CFR Part 26, Appendix A. IV.D(2).

(2) Documentation submitted by the prime of the following evaluation is required to evaluate DBE quotes by contractors:

i. Evaluation of DBE firm's ability to perform "possible items to subcontract" using legitimate reasons, including but not limited to, ***a discussion*** between the prime and DBE firm regarding its capabilities prior to the bid letting. If lack of capacity is the reason for not utilizing the DBE firm's quote, the prime is required to contact the DBE by phone and email regarding their ability to perform the work indicated in the UCP directory listed as their work area by NAICS code. Only the work area indicated by the NAICS code(s) listed in the UCP directory can be counted toward DBE credit. Documentation of the conversation is required.
    a In striving to meet an assigned DBE contract goal, contractors are expected to use DBE quotes that are responsive and reasonable. This includes DBE quotes that are not the low quote.
    b Additional evaluation - Evaluation of DBE quotes with tied bid items. Typically, this type of quoting represents a cost saving but is not clearly stated as a discount. Tied quotes are usually presented as an 'all or none' quote. When non-DBE subcontractors submit tied bid items in their quotes, the DBE firm's quote may not appear competitive. In such a case, the following steps are taken in comparing the relevant quotes. These are qualitative examples:
        i Compare bid items common to both quotes, noting the reasonableness in the price comparison.
        ii Review quotes from other firms for the bid items not quoted by the DBE firm to see if combining both can provide the same competitive advantage that the tied bid items offered.

See Appendix D – *Good Faith Effort Evaluation Measures* and Appendix E - *Good Faith Effort Best Practices.*

c. Requesting Good Faith Effort Evaluation At the time of bid- if the DBE goal is not met in full, the prime contractor must indicate they will file form DT1202- Documentation of Good Faith Effort within 24-hours of bid submission. Supplementary documentation of good faith effort that supports the DT1202 submission is also due within 24-hours of bid submission and prior to bid posting. Supporting documentation for the DT1202 is to include the following:

(1) Solicitation Documentation: The names, addresses, email addresses, and telephone numbers of DBE firms contacted along with the dates of both initial and follow-up contact; electronic copies of all written solicitations to DBE firms. A printed copy of SBN solicitation is acceptable.

(2) Selected Work Items Documentation: Identify economically feasible work units to be performed by DBEs to include activities such as: list of work items to be performed; breaking up of large work items into smaller tasks or quantities; flexible time frames for performance and delivery schedules.

(3) Documentation of Project Information provided to interested DBEs: A description of information provided to the DBE firms regarding the plans, specifications, and estimated quantities for portions of the work to be performed by that DBE firm.

(4) Documentation of Negotiation with Interested DBEs: Provide sufficient evidence to demonstrate that good faith negotiations took place. Merely sending out solicitations requesting bids from DBEs does not constitute sufficient good faith efforts.

(5) Documentation of Sound Reasoning for Rejecting DBEs and copies of each quote received from a DBE firm and, if rejected, copies of quotes from non-DBEs for same items.

(6) Documentation of Assistance to Interested DBEs- Bonding, Credit, Insurance, Equipment, Supplies/Materials

(7) Documentation of outreach to Minority, Women, and Community Organizations and other DBE Business Development Support: Contact organizations and agencies for assistance in contacting, recruiting, and providing support to DBE subcontractors, suppliers, manufacturers, and truckers at least 14 days before bid opening. Participate in or host activities such as networking events, mentor-protégé programs, small business development workshops, and others consistent with DBE support.

Naming conventions: eSubmit (preferred) follow instructions OR when emailing files, use the following language to identify your submission- “Project #, Proposal #, Let date, Business Name, GFE” Email: DBE_Alert@dot.wi.gov

If the Good Faith Effort documentation is deemed adequate, the request will be approved and the DBE office will promptly notify the Prime Contractor and Bureau of Project Development.

If the DBE Office denies the request, the Prime Contractor will receive written correspondence outlining the reasons. The Department encourages the Prime Contractor to communicate with DBE staff to clarify any questions related to meeting goals and/or contractor demonstration of good faith efforts.

If the contract is awarded, the Prime Contractor must obtain written consent from the DBE Office to change or replace any DBE firm listed on the approved DBE Commitment. No contractor, prime or subsequent tier, shall be paid for completing work assigned to a DBE subcontractor on an approved DBE Commitment unless WisDOT has granted permission for the reduction, replacement, or termination of the assigned DBE in writing. If a prime contractor or a subcontractor on any tier uses its own forces to perform work assigned to a DBE on an approved DBE Commitment, **they will not be paid for the work**. Any changes to DBE Commitment after the approval of the DBE Commitment must be reviewed and approved by the DBE Office prior to the change (see Section 9).

4. Bidder's Documentation of Good Faith Effort Evaluation Request Appeal Process

A bidder can appeal the Department's decision to deny the bidder’s demonstration of Good Faith Effort through Administrative Reconsideration. The bidder must provide a written justification refuting the specific reasons for denial as stated in the Department's denial notice. The bidder may meet in person with the Department if so requested. Failure to appeal within 5 business days after receiving the Department's written notice denying the request constitutes a forfeiture of the bidder's right of appeal. Receipt of appeal is confirmed by email date stamp or certified mail signed by WisDOT staff. A contract will not be executed without documentation that the DBE provisions have been fulfilled.

The Department will appoint a representative who did not participate in the original good faith effort determination, to assess the bidder's appeal. The Department will issue a written decision within 5 business days after the bidder presents all written and oral information. In that written decision, the Department will explain the basis for finding that the bidder did or did not demonstrate an adequate good faith effort to meet the contract DBE goal. The Department's decision is final.

5. Determining DBE Eligibility

Directory of DBE firms

a. The only resource for DBE firms certified in the State of Wisconsin is the Wisconsin Unified Certification Program (UCP) DBE Directory. WisDOT maintains a current list of certified DBE firms at: http://wisconsindot.gov/Documents/doing-bus/civil-rights/dbe/dbe-ucp-directory.xlsx

b. The DBE Program office is available to assist with contracting DBE firms:(608) 267-3849.

c. DBE firms are certified based on various factors including the federal standards from the Small Business Administration that assigns a North American Industrial Classification (NAICS) Codes. DBE firms are only eligible for credit when performing work in their assigned NAICS code(s). If a DBE subcontractor performs work that is not with its assigned NAICS code, the prime contractor should contact the DBE Office to inquire about compatibility with the Business Development Program.

6. Counting DBE Participation

Assessing DBE Work

The Department will only count the DBE usage towards the contract DBE goal if the DBE firm is certified as a DBE by one of the UCP agencies. The Department only counts the value of the work a DBE actually performs towards the DBE goal. The Department assesses the DBE work as follows:

a. The Department counts work performed by the DBE firm's own resources. The Department includes the cost of materials and supplies the DBE firm obtains for the work. The Department also includes the cost of equipment the DBE firm leases for the work. The Department will not include the cost of materials, supplies, or equipment the DBE firm purchases or leases from the prime contractor or its affiliate, with the exception of non-project specific leases the DBE has in place before the work is advertised.

b. The Department counts fees and commissions the DBE subcontractor charges for providing bona fide professional, technical, consultant, or managerial services. The Department also counts fees and commissions the DBE charges for providing bonds or insurance. The Department will only count costs the program engineer deems reasonable based on experience or prevailing market rates.

c. If a DBE firm subcontracts work, the Department counts the value of the work subcontracted to a DBE subcontractor.

d. The contractor will maintain records and may be required to furnish periodic reports documenting its performance under this item.

e. It is the Prime Contractor's responsibility to determine whether the work that is committed and/or contracted to a DBE firm can be counted for DBE credit by referencing the work type and NAICS code listed for the DBE firm on the Wisconsin UCP DBE Directory.

f. It is the Prime Contractor's responsibility to assess the DBE firm's ability to perform the work for which it is committing/contracting the DBE to do. Note that the Department encourages the Prime Contractor to assist and develop DBE firms to become fully knowledgeable contractors to successfully perform on its contracts.

g. The Prime Contractor will inform the DBE office via email of all DBE subcontractors added to the project following execution of the contract. The Prime Contractor may omit submission of another form DT1506, but must submit signed Attachment A forms for additional DBE firms.

h. See Section 7 for DBE credit evaluation for Trucking and Section 8 for DBE credit evaluation for Manufacturers, Suppliers, and Brokers

Naming conventions: When emailing files, please use the following language to identify your submission- "Project #, Proposal #, Let date, Business Name, Attachment A" Email: DBE_Alert@dot.wi.gov

*Note: A sublet request is required for DBE work, regardless of subcontract tier, and also for reporting materials or supplies furnished by a DBE.

- Sublet Requests via form DT1925 or WS1925 are required for 1st Tier DBEs
- For all 2nd Tier and below notification of DBE sublet is indicated by the contractor entering them in CRCS

7. Credit Evaluation for Trucking

All bidders are expected to adhere to the Department's current trucking policy posted on the HCCI website at: http://wisconsindot.gov/Documents/doing-bus/civil-rights/dbe/trucking-utilization-policy.pdf

The prime contractor is responsible for ensuring that all subcontractors including trucking firms, receive Form FHWA 1273: https://www.fhwa.dot.gov/programadmin/contracts/1273/1273.pdf

See Section 8 for Broker credit.

8. Credit Evaluation for Manufacturers, Suppliers, Brokers

The Department will calculate the amount of DBE credit awarded to a prime using a DBE firm for the provisions of materials and supplies on a contract-by-contract basis. The Department will count the material and supplies that a DBE firm provides under the contract for DBE credit based on whether the DBE firm is a manufacturer, supplier, or broker. Generally, DBE credit is determined through evaluation of the DBE owner's role, responsibility, and contribution to the transaction. Maximum DBE credit is awarded when the DBE firm manufactures materials or supplies. DBE credit decreases when the DBE firm solely supplies materials, and minimal credit is allotted when the DBE firm's role is administrative or transactional. It is the bidder's responsibility to confirm that the DBE firm is considered a supplier or a manufacturer before listing them on Commitment to Subcontract to DBE form DT1506 or DBE Commitment submitted with the bid.

a. Manufacturers

(1) A manufacturer is a firm that operates or maintains a factory or establishment that produces, on the premises, the materials, supplies, articles, or equipment required under the contract and of the general character described by the specifications.

(2) If the materials or supplies are obtained from a DBE manufacturer, **100%** percent of the cost of the materials or supplies counts toward DBE goals.

b. Regular Dealers of Material and/or Supplies

(1) Supplies purchased in bulk from DBE firms at the beginning of the season may be credited to current contracts if submitted with appropriate documentation to the DBE office.

(2) A regular dealer is a firm that owns, operates, or maintains a store, warehouse, or other establishment in which the materials, supplies, articles or equipment of the general character described by the specifications and required under the contract are bought, kept in stock, and regularly sold or leased to the public in the usual course of business.

(3) If the materials or supplies are purchased from a DBE regular dealer, count **60%** percent of the cost of the materials or supplies toward DBE goals.

(4) At a minimum, a regular dealer must meet the following criteria to be counted for DBE credit:

i. The DBE firm must be an established, regular business that engages, as its principal business and under its own name, in the purchase and sale or lease of the products in question.

ii. The DBE firm must both own and operate distribution equipment for the product--bulk items such as petroleum products, steel, cement, gravel, stone, or asphalt. If some of the distribution equipment is leased, the lease agreement must accompany the DBE Commitment form for evaluation of the dealer's control before the DBE office approves the DBE credit.

(5) When DBE suppliers are contracted, additional documentation must accompany the DBE Commitment and Attachment A forms. An invoice or bill-of-sale that includes names of the bidder and the DBE supplier, along with documentation of the calculations used as the basis for the purchase agreement, subcontract, or invoice. WisDOT recognizes that the amount on the Attachment A form may be more or less than the amount on the invoice per b.(1) above.

i. The bidder should respond to the following questions and include with submission of form DT1506 or the DBE Commitment entered with bid:
   a. What is the product or material?
   b. Is this item in the prime's inventory or was the item purchased when contract was awarded?
   c. Which contract line items were referenced to develop this quote?
   d. What is the amount of material or product used on the project?

c. Brokers, Transaction Expediters, Packagers, Manufacturers' Representatives

(1) No portion of the cost of the materials, supplies, services themselves will count for DBE credit. However, WisDOT will evaluate the fees or commissions charged when a prime purchases materials, supplies, or services from a DBE certified firm which is neither a manufacturer nor a regular dealer, namely: brokers, packagers, manufacturers' representatives, or other persons who arrange or expedite transactions.

(2) Brokerage fees are calculated as **10%** of the purchase amount.

(3) WisDOT may count the amount of fees or commissions charged for assistance in the procurement of the materials and supplies, fees, or transportation charges for the delivery of materials or supplies required on a job site.

(4) Evaluation of DBE credit includes review of the contract need for the item/service, the sub-contract or invoice for the item/service, and a comparison of the fees customarily allowed for similar services to determine whether they are reasonable.

9. DBE Commitment Modification Policy (Formerly "DBE Replacement Policy")

a. Issuing a Contract Change Order

Any changes or modifications to the contract once executed are considered contract modifications and as such require a change order. In addition, the DBE office must provide consent for reduction, termination, or replacement of subcontractors approved on the DBE Commitment *in advance* of the modification for the prime contractor to receive payment for work or supplies. Additions to the DBE Commitment do not require advance notification of the DBE office. (see below e. DBE Utilization beyond the approved DBE Commitment)

b. Contractor Considerations

(1) A prime contractor cannot modify the DBE Commitment through reduction in participation, termination, or replacement of a DBE subcontractor listed on the approved DBE Commitment without prior written consent from the DBE Office. This includes, but is not limited to, instances in which a prime contractor seeks to perform work originally designated for a DBE subcontractor with its own forces or those of an affiliate, a non-DBE firm, or with another DBE firm.

(2) If a prime contractor reduces participation, replaces, or terminates a DBE subcontractor who has been approved for DBE credit toward its contract, the prime is required to provide documentation supporting its inability to fulfill the contractual commitment made to the Department regarding the DBE utilization.

(3) The Prime Contractor is required to demonstrate efforts to find another DBE subcontractor to perform at least the same amount of work under the contract as the DBE subcontractor that was terminated, to the extent needed to meet the assigned DBE contract goal.When additional opportunity is available by contract modifications, the Prime Contractor must utilize DBE subcontractors that were committed to equal work items, in the original contract.

(4) In circumstances when a DBE subcontractor fails to complete its work on the contract for any reason, or is terminated from a contract, the Prime Contractor must undertake efforts to maintain its commitment to the assigned DBE goal.

(5) The DBE subcontractor should communicate with the Prime Contractor regarding its schedule and capacity in the context of the contract. If the DBE firm anticipates that it cannot fulfill its subcontract, they will advise the Prime Contractor and suggest a DBE subcontractor that may replace their services and provide written consent to be released from its subcontract.

i. Before the Prime Contractor can request modification to the approved DBE Commitment, the Prime Contractor must:
   a. Make every effort to fulfill the DBE Commitment by working with the listed DBE subcontractor to ensure that the firm is fully knowledgeable of the Prime Contractor's expectations for successful performance on the contract. Document these efforts in writing.
   b. If those efforts fail, provide written notice to the DBE subcontractor of the Prime Contractor's intent to request to modify the Commitment through reduction in participation, termination, and/or replacement of the subcontractor including the reason(s) for pursuing this action.
   c. Copy the DBE Office on all correspondence related to changing a DBE subcontractor who has been approved for DBE credit on a contract, including preparation and coordination efforts.
   d. Clearly state the amount of time the DBE firm has to remedy and/or respond to the notice of intent to replace/terminate. The DBE must be allowed five days from the date notice was received as indicated by email time stamp or signed certified mail, to respond, in writing. EXCEPTION: The Prime Contractor must provide a verifiable reason for a response period shorter than five days. For example, a WisDOT project engineer or project manager confirms that WisDOT has eliminated an item the DBE subcontractor was contracted for.
   e. The DBE subcontractor must acknowledge the contract modification with written response to the Prime Contractor and the DBE Office. If objecting to the subcontract modification, the DBE subcontractor must outline the basis for objection to the proposed modification, providing sound reasoning for WisDOT to reject the prime's request.

c. Request to Modify DBE Subcontracting Commitment

The written request referenced above may be delivered by email or fax. The request must contain the following:

1. Project ID number
2. WisDOT Contract Project Engineer's name and contact information
3. DBE subcontractor name and work type and/or NAICS code
4. Contract's progress schedule
5. Reason(s) for requesting that the DBE subcontractor be replaced or terminated
6. Attach/include all communication with the DBE subcontractor to deploy/address/resolve work completion

Naming conventions: When emailing files, please use the following language to identify your submission- "Project #, Proposal #, Let date, Business Name, MODIFICATION" Email: DBE_Alert@dot.wi.gov + Project Engineer

WisDOT will review the request and any supporting documentation submitted to evaluate if the circumstance and the reasons constitute good cause for replacing or terminating the approved DBE subcontractor.

Good Causes to Replace a DBE subcontractor according to the federal DBE program guidelines {49 CFR part 26.53}

- The listed DBE subcontractor fails or refuses to execute a written contract
- The listed DBE subcontractor fails or refuses to perform the work of its subcontract in a way consistent with normal industry standards. Provided, however, that good cause does not exist if the failure or refusal of the DBE subcontractor to perform its work on the subcontract results from the bad faith or discriminatory action of the prime contractor
- The listed DBE subcontractor fails or refuses to meet the prime contractor's reasonable, nondiscriminatory bond requirements
- The listed DBE subcontractor becomes bankrupt, insolvent, or exhibits credit unworthiness
- The listed DBE subcontractor is ineligible to work on public works projects because of suspension and debarment proceedings pursuant 2 CFR Parts 180, 215, and 1,200 or applicable state law
- The prime has determined that the listed DBE subcontractor is not a responsible contractor

- The listed DBE subcontractor voluntarily withdraws from the project and provides written notice of its withdrawal
- The listed DBE subcontractor is ineligible to receive DBE credit for the type of work required
- A DBE firm owner dies or becomes disabled with the result that the listed DBE subcontractor is unable to complete its work on the contract

d. Evaluation and Response to the Request

WisDOT's timely response to the Prime Contractor's request for modification of the approved DBE Commitment will be provided to the prime and the WisDOT project engineer via email.

If WisDOT determines that the Prime Contractor's basis for reduction in participation, replacement, or termination of the DBE subcontractor is not consistent with the good cause guidelines, the DBE office will provide a response via email within 48-hours of receipt of request from the Prime Contractor as indicated by email time stamp. The communication will include: the requirement to utilize the committed DBE, actions to support the completion of the contractual commitment, a list of available WisDOT support services, and administrative remedies, including withholding payment to the prime, that may be invoked for failure to comply with federal DBE guidelines for DBE replacement.

The WisDOT contact for all actions related to modification of the approved DBE Commitment is the DBE Program Engineer who can be reached at DBE_Alert@dot.wi.gov or (414) 335-0413.

e. DBE Utilization beyond the approved DBE Commitment

When the prime or a subcontractor increases the scope of work for an approved DBE subcontractor or adds a DBE subcontractor who was not on the approved form DT1506 or DBE Commitment submitted with bid at any time after contract execution, this is referred to as voluntary DBE contract goal achievement. The contractor must follow these steps to ensure that the participation is accurately credited toward the DBE goal:

(1) Forward a complete, signed Attachment A form to the DBE Office. A complete Attachment A includes DBE subcontractor contact information, signatures, subcontract value, and description of the work areas to be performed by the DBE. The DBE Office will verify the DBE participation and revise the DBE Commitment based on the email/discussion and the new Attachment A.

(2) When adding to an existing DBE Commitment, submit a new Attachment A to the DBE Alert mailbox

(3) OR Submit a final Attachment A to DBE Alert during the Finals Process when Compliance receives notice of "Substantially Complete"
Naming conventions: When emailing files, please use the following language to identify your submission- "Project #, Proposal #, Let date, Business Name, New Attachment A" Email: DBE_Alert@dot.wi.gov

Special note on trucking

- DBE truckers added to the sublets in CRCS *will* be approved without DBE credit (You will see a "N" in CRCS instead of "Y")
- Prime Contractors may enter a "place holder" e.g. $1000.00, for DBE Trucking in CRCS if the full amount of trucking is unknown for sublet purposes only
- The hiring contractor may obtain the Attachment A with DBE signature included but the **Prime Contractor** must sign the Attachment A before submitting

10. Commercially Useful Function

a. Commercially Useful Function (CUF) is evaluated after the contract has been executed, while the DBE certified firm is performing contracted work items.

b. The Department uses Form DT1011, DBE Commercially Useful Function Review and Certification to evaluate if the DBE is performing a commercially useful function. WisDOT counts expenditures of a DBE toward the DBE goal only if the DBE is performing a commercially useful function on that contract.

c. A DBE firm is performing a commercially useful function if the following conditions are met:

(1) For contract work, the DBE is responsible for executing a distinct portion of the work and is carrying out its responsibilities by actually performing, managing, and supervising that work.

(2) For materials and supplies, the DBE is responsible for negotiating price, determining quality and quantity, ordering, and paying for those materials and supplies.

11. Credit Evaluation for DBE Primes

WisDOT calculates DBE credit based on the amount and type of work performed by DBE certified firms for work submitted with required documentation. If the prime contractor is a DBE certified firm, the Department will only count the work that the DBE prime performs with its own forces for DBE neutral credit. The Department will also calculate DBE credit for work performed by any other DBE certified subcontractor, DBE certified supplier, and DBE certified manufacturer on the contract in each firm's approved NAICS code/work areas that are submitted with required documentation. Crediting for manufacturers and suppliers is calculated consistent with Section 8 of this document and 49 CFR Part 26.

12. Joint Venture

If a DBE performs as a participant in a joint venture, the Department will only count the portion of the total dollar value of the contract equal to the portion of the work that the DBE performs with its own forces, for DBE credit.

13. Mentor-Protégé

a. If a DBE performs as a participant in a mentor-protégé agreement, the Department will credit the portion of the work performed by the DBE protégé firm.

b. DBE credit is evaluated and confirmed by the DBE Office for any contracts on which the mentor-protégé team identifies itself to the DBE Office as a current participant of the Mentor-Protégé Program.

c. Refer to WisDOT's Mentor-Protégé guidelines for guidance on the number of contracts and amount of DBE credit allowed on WisDOT projects.

14. Use of Joint Checks

The use of joint checks is allowable if it is a commonly recognized business practice in the material industry. A joint check is defined as a two-party check between a DBE subcontractor, a prime contractor, and the regular dealer or materials supplier who is neither the prime nor an affiliate of the prime. Typically, the prime contractor issues one check as payor to the DBE subcontractor and to the supplier jointly (to guarantee payment to the supplier) as payment for the material/supplies used by the DBE firm in cases where the DBE subcontractor and materials have been approved for DBE credit. The DBE subcontractor gains the opportunity to establish a direct

contracting relationship with the supplier to potentially facilitate a business rapport that results in a line of credit or increased partnering opportunities.

The cost of material and supplies purchased by the DBE firm is part of the value of work performed by the DBE to be counted toward the goal. To receive credit, the DBE firm must be responsible for negotiating price, determining quality and quantity, ordering the materials, and installing (where applicable) and "paying for the material itself." See 49 CFR 26.55(c)(1).

The approval to use joint checks constitutes a commitment to provide further information to WisDOT, upon request by staff. WisDOT will allow the use of joint checks when the following conditions are met:

a. The Prime Contractor must request permission to use joint checks from the DBE Office by submitting the Application to Use Joint Checks.
- **(1)** Request should be made when the DBE Commitment or the Request to Sublet is submitted; the request will not be considered if submitted after the DBE Subcontractor starts its work.
- **(2)** Approval/Permission must be granted prior to the issuance of any joint checks.
- **(3)** The payment schedule for the supplier must be presented to the DBE office before the first check is issued.
- **(4)** The joint check for supplies must be strictly for the cost of approved supplies.

b. The DBE subcontractor is responsible for furnishing and/or installing the material/work item and is not an ‘extra participant’ in the transaction. The DBE firm’s role in the transaction cannot be limited solely to signing the check(s) to release payment to the material supplier. At a minimum, the DBE subcontractor’s tasks should include the following:
- **(1)** The DBE subcontractor (not the prime/payor) negotiates the quantities, price, and delivery of materials.
- **(2)** The DBE subcontractor consents to sign/release the check to the supplier by signing the Application to Use Joint Checks after establishing the conditions and documentation of payment within the subcontract terms or in a separate written document.

c. The Prime contractor/payor acts solely as a guarantor.
- **(1)** The Prime Contractor agrees to furnish the check used for the payment of materials/supplies under the contract.
- **(2)** The prime contractor/payor cannot require the subcontractor to use a specific supplier or the prime contractor’s negotiated unit price.

15. Payment

Costs for conforming to this Additional Special Provision (ASP) and any associated DBE requirements are incidental to the contract.

Appendix A
Substantive Conversation Guidelines

The substantive conversation is critical to all bidders' demonstration of good faith effort to meet the DBE goal prior to bid opening. Relationship building between primes and subcontractors is crucial to DBE goal attainment. Responsible bidders seek to build rapport with potential DBE subcontractors to understand capacity, areas of expertise, and assess contracting feasibility. Bidders who compete for WisDOT contracts are specialty contractors responding to a growing and changing contract environment. Just as these specialists are responsible for care of the roads, they are likewise responsible for contributing to the health of the industry. The substantive conversation drives collaboration that will build industry health and capacity. The following is intended to provide guidance for such discussions but is not an exhaustive list. Contractors are encouraged to incorporate their existing strategies for cultivating business relationships as well.

<u>Prior to Bid Opening- this discussion should happen as early as possible (WisDOT advertisements are released 5 weeks prior to each Let)</u>

- Determine DBE subcontractor's interest in quoting
- If response indicates inexperience with quoting- offer support/assistance to the DBE in understanding the industry including fundamentals a subcontractor needs to know, required reading and/or resources.
- Assess their interest and experience in the road construction industry by asking questions such as:
  1. Have you competed for other WisDOT contracts? Ratio of competed/to wins
  2. Have you performed on any transportation industry contracts (locally or with other states)?
  3. What the largest contract you've completed?
  4. Have you worked in the industry: apprentice, journeyman, safety, inspection etc.?
  5. Does this project fit into your schedule? Are you working on any contracts now?
  6. Have you reviewed a copy of the plans? Are you comfortable performing within the scope and quantity considerations of this contract?
  7. What region do you work in? Home base?
  8. Which line items are you considering?
  9. Have you read/are you familiar with WisDOT Standard Specifications? Construction Material Manual?
  10. Do you understand where your work fits in the project schedule, project phases?

<u>Following Bid Opening- this discussion can happen at any time</u>

1. After reviewing their quote, note the following in your discussion:
   - Does the quote look complete? Irregular?
   - Are there errors in the quote? Are items very high or very low?
   - In general, does the quote look competitive?
2. Questions and Advice for the bidder to share with the potential DBE subcontractor:
   - What line items would typically be in a competitive quote for a subcontractor of their specialty?
   - How many employees and what is their role/experience/expertise in your firm?
   - Do you have resources for labor (union member, family-based, community-resourced) and capital (banking relationship, bond agent, CPA)?
   - Where have you worked: cities, states, government, commercial, residential/private sector, etc. Explain similarities or differences.
   - Refer them to reliable, trusted, industry resources that can educate or connect them to relevant resources, education/certification resources, more appropriate contract opportunities.
   - Discussion about prime contract and subcontract liability, critical path items, contract quantities, schedule risks, and potential profit/loss (for upcoming known projects or in general).
   - Discussion of bonding, insurance, and overall business risk considerations.

APPENDIX B
Sample Contractor Solicitation Letter Page 1
This sample is provided as a guide not a requirement

GFESAMPLE MEMORANDUM

TO: DBE FIRMS
FROM: POTENTIAL PRIME CONTRACTOR OR MAJOR SUBCONTRACTOR
SUBJECT: **REQUEST FOR DBE QUOTES**
LET DATE & TIME
DATE: MONTH DAY YEAR
CC: DBE OFFICE ENGINEER

Our company is considering bidding on the projects indicated on the next page, as a prime and/or a subcontractor for the Wisconsin Department of Transportation Month- date -year Letting. Page 2 lists the projects and work items that we may subcontract for this letting. We are interested in obtaining subcontractor quotes for these projects and work categories. Also note that we are willing to accept quotes in areas we may be planning to perform ourselves as required by federal rules.

Please review page 2, respond whether you plan to quote, highlight the projects and work items you are interested in performing and return it via fax or email within 3 days. Plans, specifications and addenda are available through WisDOT at the DBE Support Services office or at the Highway Construction Contract Information (HCCI) site at http://roadwaystandards.dot.wi.gov/hcci/

Your quote should include all of the costs required to complete the items you propose to perform including labor, equipment, material, and related bonding or insurance. The quote should note items that you are DBE certified to perform, tied items, and any special terms. Page 2, with the indicated projects and items you plan to quote, should be used as a cover sheet for your quote.

Please make every effort to have your quotes into our office by time deadline the prior to the letting date. ***Make sure the correct letting date, project ID and proposal number, unit price and extension are included in your quote.*** We prefer quotes be sent via SBN but prime's alternatives are acceptable. Our office hours are include hours and days.

Please call our office as soon as possible prior to the letting if you need information/clarification to prepare your quote at contact number.

If you wish to discuss or evaluate your quote in more detail, contact us after the contract is awarded. Status of the contract can be checked at WisDOT's HCCI site at http://roadwaystandards.dot.wi.gov/hcci/
All questions should be directed to:

Project Manager, John Doe, Phone:
(000) 123-4567
Email: Joe@joetheplumber.com
Fax: (000) 123- 4657

Sample Contractor Solicitation Letter Page 2

This sample is provided as a guide not a requirement

REQUEST FOR QUOTE

Prime's Name: _____

Letting Date: _____

Project ID: _____

Please check all that apply

- ☐ Yes, we will be quoting on the projects and items listed below
- ☐ No, we are not interested in quoting on the letting or its items referenced below
- ☐ Please take our name off your monthly DBE contact list
- ☐ We have questions about quoting this letting. Please have someone contact me at this number

Prime Contractor 's Contact Person:	DBE Contractor Contact Person:
Phone:	Phone:
Fax:	Fax:
Email:	Email:

Please circle the jobs and items you will be quoting below

Proposal No.	1	2	3	4	5	6	7
County							

WORK DESCRIPTION:

Clearing and Grubbing	X		X	X		X	X
Dump Truck Hauling	X		X	X		X	X
Curb & Gutter/Sidewalk, Etc.	X		X	X		X	X
Erosion Control Items	X		X	X		X	X
Signs and Posts/Markers	X		X	X		X	X
Traffic Control		X	X	X		X	X
Electrical Work/Traffic Signals		X	X	X		X	
Pavement Marking		X	X	X	X	X	X
Sawing Pavement		X	X	X	X	X	X
QMP, Base	X	X		X	X	X	X
Pipe Underdrain	X			X			
Beam Guard				X	X	X	X
Concrete Staining							X
Trees/Shrubs	X						X

Again please make every effort to have your quotes into our office by time deadline prior to the letting date.

We prefer quotes be sent via SBN but prime's preferred alternatives are acceptable.

If there are further questions please direct them to the prime contractor's contact person at phone number.

Appendix C
Small Business Network (SBN) Overview

The Small Business Network is a part of the Bid Express® service that was created to ensure that prime bidders have a centralized online location to find subs - including small and disadvantaged business enterprises (DBEs). It is available for prime bidders to use as part of their Basic Service subscription. Within the Small Business Network, **Prime Contractors** can:

1. Easily select proposals, work types and items:
    a. After adding applicable work types, select items that you wish to quote. Enter the sub-quote quantities and add comments, if desired. Adding or removing items and work types can be done quickly. If needed, you can save the sub-quote for later completion.
2. Create sub-quotes for the subcontracting community:
    a. Create sub-quotes with ease using the intuitive sub-quote creator. In seven short steps, you can rapidly create a custom sub-quote directed to all subcontractors that bid on the applicable work types. Steps include: provide contact information and sub-quote expiration date, select letting and proposal, add work types and items, specify terms and conditions, upload attachments, and select vendors.
    b. Create a sub-quote to send to subcontractors or suppliers that lists the items in a proposal that you want quoted
    c. Create an unlimited number of sub-quotes for items you want quoted, and optionally mark them as a DBE preferred request.
    d. Add attachments to sub-quotes.
3. View sub-quote requests & responses:
    a. After logging into the Bid Express service, you can quickly review all of your sub-quote requests and all unsolicited sub-quote requests from subcontractors. To simplify the Small Business Network home screen, sub-quote requests can be hidden with one click if they are not applicable.
    b. View or receive unsolicited sub-quotes that subcontractors have posted, complete with terms, conditions and pricing.
4. View Record of Subcontractor Outreach Effort:
    a. For each sub-quote produced, a *Record of Subcontractor Outreach Effort* is generated that shows the response statistics for a particular sub-quote. If accepted by the letting agency, this report may serve as proof of a “Good Faith” effort in reaching out to the DBE community.
    b. Easily locate pre-qualified and certified small and disadvantaged businesses.
    c. Advertise to small and disadvantaged businesses more efficiently and cost effectively.
    d. Document your interactions with subs/DBEs by producing an Outreach Report (may be accepted as proof of DBE outreach at the discretion of each agency).

The Small Business Network is a part of the Bid Express® service that was created to ensure that small businesses have a centralized area to access information about upcoming projects. It can help small businesses learn more about opportunities, compete more effectively, network with other contractors and subcontractors, and win more jobs. **DBE firms can:**

1. View and reply to sub-quote requests from primes:
    a. After logging into the Bid Express service, you can quickly review all incoming sub-quote requests and all unsolicited sub-quotes created by your company. Receive notifications by selected work type. To simplify on the Small Business Network home screen, sub-quote requests can be filtered by work types relevant to your interests or hidden with one click if they are not applicable.
2. Select items when responding to sub-quote requests from primes:
    a. You have the freedom to choose and price any number of items when responding to a sub-quote request. Quantities can be modified, and per-item comments are also available.
    b. View requests for sub-quotes for work that primes have posted for projects they are bidding, add your pricing, terms, and conditions, and submit completed sub-quotes to the requesting primes. c. Add attachments to a sub-quote.
3. Create and send unsolicited sub-quotes to specific contractors:
    a. Create unsolicited sub-quotes with ease using the intuitive sub-quote creator. In eight short steps, you can rapidly create a custom sub-quote directed at any number of specific vendors of your choosing. Steps include: provide contact information and sub-quote expiration date, select letting and proposal, add work types and items, specify terms and conditions, upload attachments, and select vendors.
4. Easily select and price items for unsolicited sub-quotes:
    a. After adding applicable work types, select items that you wish to quote. The extended price calculates automatically, cutting out costly calculation errors. Comments can be provided on a per-item basis as well.
    b. Create an unsolicited sub-quote that lists the items from a proposal that you want to quote, include pricing, terms and conditions, and send it to selected prime/plan holder.
    c. Add attachments to a sub-quote.
    d. Add unsolicited work items to sub-quotes that you are responding to.
5. Easy Access to Valuable Information
    a. Receive a confirmation that your sub-quote was opened by a prime.
    b. View Bid Tab Analysis data from past bids, including the high, average and low prices of items.
    c. View important notices and publications from DOT targeted to small and disadvantaged businesses.
6. Accessing Small Business Network for WisDOT contracting opportunities
    a. If you are a contractor not yet subscribing to the Bid Express service, go to **www.bidx.com** and select “Order Bid Express.” The Small Business Network is a part of the Bid Express Basic Service.
    b. DBE firms can request a Bid Express Small Business Network Account at no cost by calling 414-438-458

APPENDIX D

Good Faith Effort Evaluation Measures *by categories referenced in DBE regulations*

Bidders must demonstrate that they took all necessary and reasonable steps to achieve the assigned DBE contract goal. For each contract, all bidders must submit documentation indicating the goal has been met or if falling short of meeting the assigned goal, must request a DBE Goal Waiver and document all efforts employed to secure DBE subcontractor participation on Form DT1202.

DBE staff analyze the bidder's documented good faith efforts to determine if action taken was sufficient to meet the goal. Sufficiency is measured contract-by-contract. WisDOT evaluates active and aggressive efforts, quality, quantity, scope, intensity, and appropriateness of the bidder's efforts as a scale of the principles of Good Faith outlined in 49 CFR Part 26, Appendix A. Additional emphasis is placed on the bidder's demonstration of timely submission of documentation and communication with DBE subcontractors, and business development initiatives undertaken to support DBE firm growth.

The following is a sample of good faith effort activities that are rated according to the accompanying rubric. Contractors are encouraged to identify additional activities that align with their business type(s).

- Personal, tailored solicitation to firms that specialize in work types planned or desired for subcontracting
- Follow up to initial solicitation via email or phone
- Substantive conversation including topics such as contract liability, critical path work items, schedule risks, and potential profit/loss
- SBN utilization including posting quotes
- Review and response to DBE quotes including provision of information about plans, specifications,and requirements as applicable
- Documentation requesting subcontractors support DBE goal by solicitation and inclusion of DBE subcontractor quotes
- Responsive and timely submission of organized documentation
- Analysis of number of DBE firms who do work types that you typically subcontract
- Analysis of number of DBE firms who reside in geographical areas where prime seeks work
- Analysis of firms who express interest in bidding/quoting including the number of firms who declined your solicitation
- Reference check of DBE subcontractor work or training (documentation of questions and response required)
- Number of different efforts undertaken to meet the assigned DBE goal as documented in accompanying Form DT1202
- Submission of all DBE quotes received matched with a variety of work to be performed by DBEs
- Number and names of DBE firms provided written advice, or referral to industry-specific business development resources
- Overall pattern of DBE utilization on all WisDOT contracts which may include contracting with municipalities
- Documentation of resources expended to meet assigned DBE goal (#of hours, staff titles, average pay rate, actions taken)
- Analysis of subcontractable work items to be completed by prime beyond prime contractor's 30%
- Risk analysis of work items that are typically in tied quotes that could be unbundled
- List of contract work items in smallest economically feasible units, identifying schedule impact
- Submission of a Gap Analysis identifying DBE skillset and/or industry needs
- Staff training in EEO and Civil Rights laws as documented in training logs
- Written Capacity Assessment completed with DBE firm documenting its ability to perform the work quoted
- DBE engagement efforts beyond simple solicitation that include a substantive discussion, initiated as early in the acquisition process as possible (*points added for each day prior to letting*)
- Outreach and marketing efforts with minority, women, and veteran-focused organizations at least 10 days prior to bid opening
- Active involvement in WisDOT's Business Development Program, TrANS training, facilitated networking efforts, workshops
- Customized teaching/training efforts for future opportunities with DBE subcontractor, contract specific and/or annually
- Introduction and reference provided for DBE subcontractor to a prime who has not previously contracted with the DBE firm
- Prime utilization of a DBE subcontractor the prime has not contracted with previously
- Written referral/recommendation to bond/insurance agents, manufacturer, supplier
- Documented efforts fostering DBE participation through administrative and/or technical assistance
- Evidence of negotiation with the DBE firm about current and future Let opportunities
- Recommendation of local and state services that support small business and access to opportunity: DOA, SBA, WEDC, WPI, etc.
- Advice on bonding, lines of credit, or insurance as required to complete the items quoted and contract requirements

GFE EVALUATION RUBRIC – PHASE 1

	Active & Aggressive Category	Quality Category	Quantity Category	Scope & Intensity Category	Timing Category	Business Develop't Efforts	Total=
Solicitation Documentation							
Selected Work Items Documentation							
Documentation of Project Information provided to Interested DBEs							
Documentation of Negotiation with Interested DBEs							
Documentation of Sound Reason for Rejecting DBEs							
Documentation of Assistance to Interested DBEs- bonding, credit, insurance, equipment, supplies/materials							
Documentation of Outreach to Minority, Women, and Community organizations and other DBE Business Development Support							
Documentation of other GFE activities							
Overall Total=							

GFE EVALUATION RATING LEGEND – PHASE 1 – Initial Review

ACTIVE & AGGRESSIVE: Demonstrated through engaged and assertive activity
QUALITY: Demonstrated through essential character of conscientious and serious activity
QUANTITY: Demonstrated through a measurable number of activities
SCOPE & INTENSITY: Demonstrated through a rigorous approach to an appropriate and purposeful range of activities
TIMING: Demonstrated through engagement efforts beyond simple solicitation, initiated early in the process
BUSINESS DEVELOPMENT INITIATIVES: Demonstrated by efforts to support business growth and health of DBEs

Rating Scale

- **Each qualifying activity is worth 5 points per Category**
  - **Pro Forma efforts= 0-50 points**
    Perfunctory effort characterized by routine or superficial activities
  - **Bona Fide= 55+ points**
    Genuine effort characterized by sincere and earnest activities

GFE EVALUATION – PHASE 2 – Team Review

DBE Office completes:

- Review of quote comparisons submitted by Prime
- Bid analysis to confirm if any bid submitted met the DBE goal
- Review average of other bidders DBE goal achievement
- Team review of combined efforts documented in Phase 1 and 2 by apparent low bidder

Excerpt from Appendix A to 49 CFR Part 26:

V. In determining whether a bidder has made good faith efforts, it is essential to scrutinize its documented efforts. At a minimum, you must review the performance of other bidders in meeting the contract goal. For example, when the apparent successful bidder fails to meet the contract goal, but others meet it, you may reasonably raise the question of whether, with additional efforts, the apparent successful bidder could have met the goal. If the apparent successful bidder fails to meet the goal, but meets or exceeds the average DBE participation obtained by other bidders, you may view this, in conjunction with other factors, as evidence of the apparent successful bidder having made good faith efforts. As provided in §26.53(b)(2)((vi), you must also require the contractor to submit copies of each DBE and non-DBE subcontractor quote submitted to the bidder when a non-DBE subcontractor was selected over a DBE for work on the contract to review whether DBE prices were substantially higher; and contact the DBEs listed on a contractor's solicitation to inquire as to whether they were contacted by the prime. Pro forma mailings to DBEs requesting bids are not alone sufficient to satisfy good faith efforts under the rule.

APPENDIX E
Good Faith Effort Best Practices

This list is not a set of requirements; it is a list of potential strategies

Primes

- Prime contractor open houses inviting DBE firms to see the bid "war room" or providing technical assistance.
- Participate in speed networking and mosaic exercises as arranged by DBE office.
- Host information sessions not directly associated with a bid letting.
- Participate in a formal mentor protégé or joint venture with a DBE firm.
- Participate in WisDOT advisory committees i.e. TRANSAC, or Mega Project committee meetings.
- Facilitate a small group DBE 'training session' clarifying how your firm prepares for bid letting, evaluates subcontractors, preferred qualifications, and communication methods.
- Encourage subcontractors to solicit and highlight DBE participation in their quotes to you.
- Quality of communication, not quantity creates the best results. Contractors should be thorough in communicating with DBE firms before the bid and provide any assistance requested to assure best possible bid.

DBE

- DBE firms should contact primes as soon as possible with questions regarding their quotes or bid; seven days prior is optimal.
- Continually check for contract addendums on the HCCI website through the Thursday prior to letting to stay abreast of changes.
- Review the status of contracts on the HCCI website reviewing the 'apparent low bidder' list and bid tabs at a minimum.
- Prepare a portfolio or list of related projects and prime and supplier references; be sure to note transportation related projects of similar size and scope, firm expertise and staffing.
- Participate in DBE office assessment programs.
- Participate on advisory and mega-project committees.
- Sign up to receive the DBE Contracting Update.
- Consider membership in relevant industry or contractor organizations.
- Active participation is a must. Quote as many projects as you can reasonably work on; quoting the primes and bidding as a prime with the Department are the only ways to get work.

APPENDIX F
Good Faith Effort Evaluation Guidance
Appendix A of 49 CFR Part 26

I. When, as a recipient, you establish a contract goal on a DOT-assisted contract for procuring construction, equipment, services, or any other purpose, a bidder must, in order to be responsible and/or responsive, make sufficient good faith efforts to meet the goal. The bidder can meet this requirement in either of two ways. First, the bidder can meet the goal, documenting commitments for participation by DBE firms sufficient for this purpose. Second, even if it doesn't meet the goal, the bidder can document adequate good faith efforts. This means that the bidder must show that it took all necessary and reasonable steps to achieve a DBE goal or other requirement of this part which, by their scope, intensity, and appropriateness to the objective, could reasonably be expected to obtain sufficient DBE participation, even if they were not fully successful.

II. In any situation in which you have established a contract goal, Part 26 requires you to use the good faith efforts mechanism of this part. As a recipient, you have the responsibility to make a fair and reasonable judgment whether a bidder that did not meet the goal made adequate good faith efforts. It is important for you to consider the quality, quantity, and intensity of the different kinds of efforts that the bidder has made, based on the regulations and the guidance in this Appendix.

The efforts employed by the bidder should be those that one could reasonably expect a bidder to take if the bidder were actively and aggressively trying to obtain DBE participation sufficient to meet the DBE contract goal. Mere pro forma efforts are not good faith efforts to meet the DBE contract requirements. We emphasize, however, that your determination concerning the sufficiency of the firm's good faith efforts is a judgment call. Determinations should not be made using quantitative formulas.

III. The Department also strongly cautions you against requiring that a bidder meet a contract goal (i.e., obtain a specified amount of DBE participation) in order to be awarded a contract, even though the bidder makes an adequate good faith efforts showing. This rule specifically prohibits you from ignoring bona fide good faith efforts.

IV. The following is a list of types of actions which you should consider as part of the bidder's good faith efforts to obtain DBE participation. It is not intended to be a mandatory checklist, nor is it intended to be exclusive or exhaustive. Other factors or types of efforts may be relevant in appropriate cases.

A. (1) Conducing market research to identify small business contractors and suppliers and soliciting through all reasonable and available means the interest of all certified DBEs that have the capability to perform the work of the contract. This may include attendance at pre-bid and business matchmaking meetings and events, advertising and/or written notices, posting of Notices of Sources Sought and/or Requests for Proposals, written notices or emails to all DBEs listed in the State's directory of transportation firms that specialize in the areas of work desired (as noted in the DBE directory) and which are located in the area or surrounding areas of the project.

(2) The bidder should solicit this interest as early in the acquisition process as practicable to allow the DBEs to respond to the solicitation and submit a timely offer for the subcontract. The bidder should determine with certainty if the DBEs are interested by taking appropriate steps to follow up initial solicitations.

B. Selecting portions of the work to be performed by DBEs in order to increase the likelihood that the DBE goals will be achieved. This includes, where appropriate, breaking out contract work items into economically feasible units (for example, smaller tasks or quantities) to facilitate DBE participation, even when the prime contractor might otherwise prefer to perform these work items with its own forces. This may include, where possible, establishing flexible timeframes for performance and delivery schedules in a manner that encourages and facilitates DBE participation.

C. Providing interested DBEs with adequate information about the plans, specifications, and requirements of the contract in a timely manner to assist them in responding to a solicitation with their offer for the subcontract.

D. (1) Negotiating in good faith with interested DBEs. It is the bidder's responsibility to make a portion of the work available to DBE subcontractors and suppliers and to select those portions of the work or material needs consistent with the available DBE subcontractors and suppliers, so as to facilitate DBE participation. Evidence of such negotiation includes the names, addresses, and telephone numbers of DBEs that were considered; a description of the information provided regarding the plans and specifications for the work selected for subcontracting; and evidence as to why additional Agreements could not be reached for DBEs to perform the work.

(2) A bidder using good business judgment would consider a number of factors in negotiating with subcontractors, including DBE subcontractors, and would take a firm's price and capabilities as well as contract goals into consideration. However, the fact that there may be some additional costs involved in finding and using DBEs is not in itself sufficient reason for a bidder's failure to meet the contract DBE goal, as long as such costs are reasonable. Also, the ability or desire of a prime contractor to perform the work of a contract with its own organization does not relieve the bidder of the responsibility to make good faith efforts. Prime contractors are not, however, required to accept higher quotes from DBEs if the price difference is excessive or unreasonable.

E. (1) Not rejecting DBEs as being unqualified without sound reasons based on a thorough investigation of their capabilities. The contractor's standing within its industry, membership in specific groups, organizations, or associations and political or social affiliations (for example union vs. non-union status) are not legitimate causes for the rejection or non-solicitation of bids in the contractor's efforts to meet the project goal. Another practice considered an insufficient good faith effort is the rejection of the DBE because its quotation for the work was not the lowest received. However, nothing in this paragraph shall be construed to require the bidder or prime contractor to accept unreasonable quotes in order to satisfy contract goals.

(2) A prime contractor's inability to find a replacement DBE at the original price is not alone sufficient to support a finding that good faith efforts have been made to replace the original DBE. The fact that the contractor has the ability and/or desire to perform the contract work with its own forces does not relieve the contractor of the obligation to make good faith efforts to find a replacement DBE, and it is not a sound basis for rejecting a prospective replacement DBE's reasonable quote.

F. Making efforts to assist interested DBEs in obtaining bonding, lines of credit, or insurance as required by the recipient or contractor.

G. Making efforts to assist interested DBEs in obtaining necessary equipment, supplies, materials, or related assistance or services.

H. Effectively using the services of available minority/women community organizations; minority/women contractors' groups; local, State, and Federal minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBEs.

V. In determining whether a bidder has made good faith efforts, it is essential to scrutinize its documented efforts. At a minimum, you must review the performance of other bidders in meeting the contract goal. For example, when the apparent successful bidder fails to meet the contract goal, but others meet it, you may reasonably raise the question of whether, with additional efforts, the apparent successful bidder could have met the goal. If the apparent successful bidder fails to meet the goal, but meets or exceeds the average DBE participation obtained by other bidders, you may view this, in conjunction with other factors, as evidence of the apparent successful bidder having made good faith efforts. As provided in §26.53(b)(2)((vi), you must also require the contractor to submit copies of each DBE and non-DBE subcontractor quote submitted to the bidder when a non-DBE subcontractor was selected over a DBE for work on the contract to review whether DBE prices were substantially higher; and contact the DBEs listed on a contractor's solicitation to inquire as to whether they were contacted by the prime. Pro forma mailings to DBEs requesting bids are not alone sufficient to satisfy good faith efforts under the rule.

VI. A promise to use DBEs after contract award is not considered to be responsive to the contract solicitation or to constitute good faith efforts.

[79 FR 59600, Oct. 2, 2014]

APPENDIX G

(SAMPLE) Forms DT1506 and DT1202

COMMITMENT TO SUBCONTRACT TO DBE
ATTACHMENT A

CONFIRMATION OF PARTICIPATION

Project I.D.:	Proposal Number:
Letting Date:	

Name of DBE Firm Participating in this Contract:	
Name of the Prime/Subcontractor who hired the DBE Firm: *(list all names of tiers if more than one)*	
Type of Work or Type of Material Supplied:	
Total Subcontract Value:	Total DBE Credit Value:

FOR PRIME CONTRACTORS ONLY: I certify that I made arrangements with the participating DBE firm to perform the type of work listed or supply the material indicated above for the subcontract value listed above.	Prime Contractor Representative's Signature
	Prime Contractor Representative's Name (Print Name)
	Prime Contractor (Print Company Name)
	Date

FOR PARTICIPATING DBE FIRMS ONLY: I certify that I made arrangements with the Prime Contractor or the Hiring Contractor to perform the type of work or supply the material indicated above for the subcontract value listed above. **FOR DBE TRUCKING FIRMS ONLY:** I certify that I will utilize, for DBE credit, only trucks listed on my WisDOT approved Schedule of Owned/Leased Vehicles for DBE Credit form and I will be utilizing the number of trucks as listed below.	Participating DBE Firm Representative's Signature & Date
	Participating DBE Firm Representative's Name (Print Name)
	Participating DBE Firm (Print Company Name)
	DBE Firm's Address:

# Owned Trucks	# Leased Trucks	# DBE-Owned Leased Trucks	# Non-DBE-Owned Leased Trucks

Official Form DT1506 can be found here: www.wisconsindot.gov/DBEcontracting

DOCUMENTATION·OF·GOOD·FAITH·EFFORT·

Wisconsin·Department·of·Transportation
DT1202·····3/2020

Project·ID	Proposal·No.	Letting
*****	*****	*****
Prime·Contractor		County
*****		*****
Person·Submitting·Document		Telephone·Number
*****		*****
Address		Email·Address
*****		*****

All·bidders·must·undertake·necessary·and·reasonable·steps·to·achieve·the·assigned·DBE·contract·goal·per·federal·regulatory·guidance·at·49·CFR·Part·26.·Bidders·use·this·form·to·document·all·efforts·employed·to·meet·the·assigned·goal·as·a·record·of·contractor·good·faith·efforts·(GFE).·Refer·to·ASP3·or·49·CFR·Part·26·for·guidance·on·actions·that·demonstrate·good·faith·effort.·

It·is·critical·to·list·all·efforts,·attach·documentation,·and·follow·the·instructions·to·complete·this·submission.·Documentation·of·good·faith·effort·includes·copies·of·each·DBE·and·non-DBE·subcontractor·quote·submitted·to·the·bidder·for·the·same·line·items.·Utilize·the·sample·documentation·logs·to·document·and·organize·efforts.··

Submit·good·faith·effort·documentation·per·ASP-3·guidelines.

Instructions:·Provide·a·narrative·description·of·all·activities·pursued·to·demonstrate·good·faith·efforts,·any·corresponding·documentation,·and·applicable·explanation·on·separate·pages.·Include·the·following·items,·organized·in·the·order·listed·below.

1.→ **Solicitation·Documentation:**·
   - **a.→ Purpose:**·To·identify·all·reasonable·and·available·activities·the·bidder·performed·to·solicit·the·interest·of·all·certified·DBEs·who·have·the·capacity·and·ability·to·perform·work·on·the·project.·All·solicitation·efforts·should·begin·as·early·as·possible·to·ensure·DBEs·have·ample·time·to·respond·and·ask·questions.

   - **b.→ Action:**·Identify·and·list·all·activities·engaged·in·to·solicit·DBEs·using·all·reasonable·and·available·means·such·as·written·notice·and·follow-up·communications;·substantive·conversations;·pre-bid·meetings;·networking·events;·market·research;·advertising.

2.→ **Selected·Work·Items·Documentation:**·
   - **a.→ Purpose:**·To·ensure·that·all·work·items·are·broken·out·into·economically·feasible·units·to·facilitate·DBE·participation.·This·must·occur·even·when·you·prefer·to·perform·the·work·yourself.

   - **b.→ Action:**·Identify·economically·feasible·work·units·to·be·performed·by·DBEs·to·include·activities·such·as:·list·of·work·items·to·be·performed;·breaking·up·of·large·work·items·into·smaller·tasks·or·quantities;·flexible·time·frames·for·performance·and·delivery·schedules.

3.→ **Documentation·of·Project·Information·provided·to·Interested·DBEs:**·
   - **a.→ Purpose:**·To·provide·interested·DBEs·with·adequate·information·about·the·plans,·specifications,·and·any·other·contractual·requirements·in·a·timely·manner·to·assist·DBEs·in·response·to·solicitation.

   - **b.→ Action:**·Provide·DBEs·access·to·plans,·specifications,·and·other·contract·requirements.·Early·solicitation·allows·ample·opportunity·to·provide·project·information,·links·to·Let·advertisements,·and·substantive·engagement·with·DBEs.

4. **Documentation of Negotiation with Interested DBEs:**
   a. **Purpose:** To ensure that negotiations with interested DBEs were made in good faith providing evidence as to why agreements could not be reached for DBEs to perform work.

   b. **Action:** Provide sufficient evidence to demonstrate that good faith negotiations took place. Merely sending out solicitations requesting bids from DBEs does not constitute sufficient good faith efforts. A bidder using good business judgment considers a number of factors in negotiating with all subcontractors, and the firm's price and capabilities in addition to contract goals are taken into consideration. However, the fact that there may be some additional costs involved in finding and using DBEs is not in itself sufficient reason for failing to meet the DBE goal as long as costs are reasonable. (see 49 CFR Part 26 Appendix A)

5. **Documentation of Sound Reason for Rejecting DBEs:**
   a. **Purpose:** To ensure that bidders avoid rejecting DBEs as unqualified without sound reasons. Reasons for rejection must be based on thorough investigation of DBE capabilities.

   b. **Action:** Provide sufficient evidence to demonstrate that DBE was rejected for sound reasons such as past performance, relevant business experience and stability, safety record, business ethic and integrity, technical capacity, other tangible factors.

6. **Documentation of Assistance to Interested DBEs - Bonding, Credit, Insurance, Equipment, Supplies/Materials:**
   a. **Purpose:** To assist interested DBEs in obtaining bonds, lines of credit, insurance, equipment, supplies, materials, and other assistance or services.

   b. **Action:** Assist interested DBEs in obtaining bonding, lines of credit or insurance, and provide technical assistance or information related to plans, specifications, and project requirements. Assist DBEs in obtaining equipment, supplies, materials or other services related to meeting project requirements (excluding supplies or equipment the DBE purchases from the prime).

7. **Documentation of outreach to Minority, Women, and Community Organizations and other DBE Business Development Support:**
   a. **Purpose:** To effectively use the services of minority, women, and community organizations as well as contractors' groups, local, state, and federal business assistance offices and organization that provide assistance in recruiting and supporting DBEs, as well as participation in activities that support DBE business development.

   b. **Action:** Contact organizations and agencies for assistance in contacting, recruiting, and providing support to DBE subcontractors, suppliers, manufacturers, and truckers at least 14 days before bid opening. Participate in or host activities such as networking events, mentor-protégé programs, small business development workshops, and others consistent with DBE support.

Return to:
Wisconsin Department of Transportation
DBE Program Office
PO Box 7965
Madison, WI 53707-7965
DBE_Alert@dot.wi.gov

I certify that I have utilized comprehensive good faith efforts to solicit and utilize DBE firms to meet the DBE participation requirements of this contract proposal, as demonstrated by my responses and as specified in Additional Special Provision 3 (ASP-3).

I certify that the information given in the Documentation of Good Faith Efforts is true and correct to the best of my knowledge and belief.

I further understand that any willful falsification, fraudulent statement, or misrepresentation will result in appropriate sanctions, which may involve debarment and/or prosecution under applicable state (Trans 504) and Federal laws.

		(Bidder/Authorized Representative Signature)
		*****
		(Print Name)
		*****
		(Title)

Good Faith Effort -- Sample Documentation Logs

The sample logs below are provided as guides rather than exhaustive list. See ASP3, Appendix A for additional examples of demonstrable good faith efforts. Attach documentation for each activity listed.

Acceptable forms of documentation include copies of solicitations sent to DBEs, notes from substantive conversations and negotiations with DBEs, copies of advertisements placed, email communications, all quotes received from DBEs and from all subcontractors who were considered alongside DBE quotes, proof of attendance at applicable networking events; flyers for events or workshops for DBEs offered by the prime, and other physical records of good faith efforts activities.

SOLICITATION LOG

Date	Activity	Name of DBE Solicited	Follow-up
4/1/2020	Sent May Let solicitation	Winterland Electric	Spoke with Mark Winterland on 4/15/20 to ask if he would quote

SELECTED WORK ITEMS SOLICITED LOG

Work Type	DBE Firm	Contact Person	Date	Contact Mode
Pavement Marking	ABC Marking	Leslie Lynch	4/1/2020	Email; phone
	#1 Marking Co.	Mark Smart	4/1/2020	Email; left VM
Electrical	Winterland Electric	Tabitha Tinker	4/3/2020	Email, left VM
	Superstar Wiring	Jose Huascar	4/3/2020	Email; phone

INFORMATION PROVIDED LOG

Request Date	DBE Firm	Information Requested & Provided	Response Date
4/1/2020	Winterland Electric	Requested info on electrical requirements; provided plan and link to specs	4/3/2020
4/21/2020	Absolute Construction	Wanted to know how and when supplies are paid for by WisDOT; referred to spec that covers stockpiling	4/21/2020

NEGOTIATIONS LOG

Date	DBE Firm	Contact Name	Work Type	Quotes Rec'd?	Considered for project?	If not selected, why?
4/12/2020	ABC Landscape	John Dean	Erosion Control	Yes	No	Cannot perform all items
4/17/2020	Wild Ferns	Sandy Lynn	Erosion Control	Yes	Yes	
4/20/2020	#1 Marking	Mark Smart	Electrical	Yes	Yes	

ASSISTANCE LOG

Date	DBE Firm	Contact Person	Assistance Provided
4/1/2020	ABC Sawing	Jackie Swiggle	Informed DBE on how to obtain bonding
4/17/2020	Supreme Construction	Winston Walters	Provided contact for wholesale supply purchase

OUTREACH & BUSINESS DEVELOPMENT LOG

Date	Agency/Organization Contacted	Contact Person	Assistance Requested
4/1/2020	Women in Construction	LaTonya Klein	Contact information for woman-owned suppliers
4/28/2020	WBIC	Sam Smith	Asked for information to provide to DBE regarding financing programs through WBIC

Official Form DT1202 can be found here: www.wisconsindot.gov/DBEcontracting

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.

Additional Special Provision 6
ASP 6 - Modifications to the standard specifications

Make the following revisions to the standard specifications:

415.3.16 Tolerance in Pavement Thickness

Replace the entire text with the following effective with the November 2021 letting:

415.3.16.1 General

(1) Construct the plan thickness or thicker. The department will accept pavement thickness based on the results of department-performed acceptance testing conforming to:

Magnetic Pulse Induction .....CMM 870: ASTM E3209 WTM
Probing.....CMM 870: WTP C-002
Preplacement Measurement .....CMM 870: WTP C-003

415.3.16.2 Pavement Units

415.3.16.2.1 Basic Units

(1) Basic unit is defined as a slip formed, single lane, with a minimum lane width of 10 feet, measured, from the pavement edge to the adjacent longitudinal joint; from one longitudinal joint to the next; or between pavement edges if there is no longitudinal joint.

415.3.16.2.2 Special Units

(2) Establish special units for areas of fillets, intersections, gaps, gores, shoulders, ramps, pavement lanes less than 10 feet wide and other areas not included in basic units.

415.3.16.3 Test Plate Locations

(1) Place department-furnished test plates. Within 5 business days after paving, enter the sequential number and associated position data into MRS available at:

http://www.atwoodsystems.com/

(2) Contractor will maintain plate location markings for 10 business days after paving.

415.3.16.4 Acceptance Testing

415.3.16.4.1 Basic Units

415.3.16.4.1.2 Magnetic Pulse Induction

(1) The department will measure thickness within 10 business days of paving. Upon completion of the project thickness testing, the department will provide the test results to the contractor within 5 business days.

(2) Department will establish a project reference plate at the start of each paving stage. Project reference plate will be measured before each day of testing. Department will notify the contractor of project reference plate locations before testing.

(3) If the random plate test result falls within 80 to 50 percent pay range specified in 415.5.2, the department will measure the second plate in that unit. The department will notify the contractor immediately if the average of the 6 readings falls within the 80 to 50 percent pay range.

(4) If an individual random plate test result is more than 1 inch thinner than contract plan thickness, the pavement is unacceptable. Department will determine limits of unacceptable pavement by performing the following:

- The engineer will test each consecutive plate stationed ahead and behind until the thickness test result is plan thickness or greater.
- The engineer will direct the contractor to core the hardened concrete to determine the extent of the unacceptable area. In each direction, the contractor shall take cores at points approximately 20 feet from the furthest out of specification plate towards the plate that is plan thickness of greater. Once a core is within 80 to 100 percent pay range, the coring is complete and the limits of unacceptable pavement extend from the stationing between the core test results of 80 to 100 percent payment, inclusive of all unacceptable core and plate test results.
- The contractor shall perform coring according to AASHTO T24. The department will evaluate the results according to AASHTO T148
- The contractor shall fill core holes with concrete or mortar.

415.3.16.4.2 Special Units

415.3.16.4.2.1 Magnetic Pulse Induction

(1) The department will measure thickness within 10 business days of paving. Upon completion of the project thickness testing, the department will provide the test results to the contractor within 5 business days.

(2) Department will establish a project reference plate at the start of each paving stage. Project reference plate will be measured before each day of testing. Department will notify the contractor of project reference plate locations before testing.

(3) If the random plate test result falls within 80 to 50 percent pay range specified in 415.5.2, the department will measure the second plate in that unit. The department will notify the contractor immediately if the average of the 6 readings falls within the 80 to 50 percent pay range.

(4) If an individual random plate test result is more than 1 inch thinner than contract plan thickness, the department will measure the second plate in that unit. If both plates are required to be measured, then all six thickness measurements will be averaged for that unit. If the average of the six measurements is more than 1 inch thinner than contract plan thickness, the pavement is unacceptable.

415.3.16.4.2.2 Probing

(1) The department will measure slip form special units during concrete placement. Upon completion of the project thickness testing, the department will provide the test results to the contractor within 5 business days.

(2) Department will probe 2 random locations within the special unit. The average of the two readings will be the reported measurement for the special unit.

415.3.16.4.2.3 Preplacement Measurement

(1) The department will measure non-slip form special units before concrete placement.

(2) Thickness corrections will be made to a conforming thickness by reshaping the base aggregate before the pavement is placed.

415.5.2 Adjusting Pay for Thickness

Replace the entire text with the following effective with the November 2021 letting:

(1) The department will adjust pay for pavement thickness under the Nonconforming Thickness Concrete Pavement administrative item as follows:

FOR PAVEMENT THINNER THAN PLAN THICKNESS BY:	PERCENT OF THE CONTRACT UNIT PRICE
> 1/4 inch but <= 1/2 inch	80
> 1/2 inch but <= 3/4 inch	60
> 3/4 inch but <= 1 inch	50

(2) When pavement of unacceptable final thickness is determined, as specified in 415.3.16.4, the department will direct the contractor to either:

1. Remove and replace unacceptable concrete pavement to the nearest joint with new concrete pavement of conforming thickness. The department will pay once for the area at the full contract price.
2. If the unacceptable pavement is less than 100 LF, the department may allow the concrete to remain in place without payment for the unacceptable area.

460.2.6 Recovered Asphaltic Binders

Replace paragraph two with the following effective with the November 2021 letting:

(2) The contractor may replace virgin binder with recovered binder up to the maximum percentage allowed under 460.2.5 without further testing. When the design percent asphalt binder replaced exceeds the allowable limits in 460.2.5, the contractor must:

- Document adjustments made to the mix design in the mix design submittal.
- Submit test results that indicate the mixture's asphaltic binder meets or exceeds the upper and lower temperature grade requirements the bid item designates.
    - If only one recycled asphaltic material source is used, furnish one of the following:
        - Test results from extracted and recovered binder from the resultant mixture.
        - Blending charts that indicate the resultant mixture's high and low temperature PG as an interpolation of the percent binder replaced between the virgin binder's and the recycled asphaltic material source binder's high and low temperature PG.
    - If two or more recycled asphaltic material sources are used, furnish test results from extracted and

recovered binder from the resultant mixture.

501.2.6 Water

Retitle with the following effective with the November 2021 letting:

501.2.6 Mixing Water

501.2.6.2 Requirements

Replace paragraph two with the following effective with the November 2021 letting:

(2) Water from other sources must comply with the following:

Acidity, maximum of 0.1N NaOH to neutralize 200 mL of water; CMM 870: WTP C-001	2 mL
Alkalinity, maximum of 0.1N HCL to neutralize 200 mL of water; CMM 870: WTP C-001	15 mL
Maximum sulphate ($S0_4$); CMM 870: WTP C-001	0.05 percent
Maximum chloride; CMM 870: WTP C-001	0.10 percent
Maximum total solids; CMM 870: WTP C-001	
Organic	0.04 percent
Inorganic	0.15 percent

501.3.2.4.2 Air Entrainment

Replace paragraph two with the following effective with the November 2021 letting:

(2) Test fresh concrete air content according to AASHTO T152 or AASHTO TP118 at the contract-required frequency and as the engineer directs. Test concrete placed by pumping or belting at the point of discharge from the pump line or belt.

501.3.7.1 Slump

Replace paragraph one with the following effective with the November 2021 letting:

(1) Use a 1-inch to 4-inch slump for concrete used in structures or placed in forms, except as follows:

- Do not exceed a slump of 2 inches for grade E concrete.
- Increase slump as specified in 502.3.5.3 for concrete placed underwater.
- If BTS approves a concrete mixture using a superplasticizer, the contractor may increase slump for that mixture to a maximum of 9 inches without exceeding the maximum mix water allowed for that grade.

531.5 Payment

Replace paragraph two with the following effective with the November 2021 letting:

(2) Payment for Concrete Masonry Ancillary Structures Type NS is full compensation for providing concrete for non-standard sign structure foundations; and for anchor rod assemblies. The department will pay separately for excavating and backfilling drilled shafts under the Drilling Shafts bid items.

Replace paragraph five with the following effective with the November 2021 letting:

(5) Payment for the Foundation bid items is full compensation for providing concrete foundations; for anchor rod assemblies; for reinforcing steel; and for embedded conduit and electrical components. The department will pay separately for excavating and backfilling drilled shafts under the Drilling Shafts bid items.

642.2.2.1 General

Replace paragraph one with the following effective with the November 2021 letting:

(1) Provide each field office with two rooms, separated by an interior door with a padlock. Ensure that each room has a separate exterior door and its own air conditioner. Locate the office where a quality internet connection can be achieved. Ensure quality cell phone reception is achievable inside the field office.

701.3.1 General

Replace table 701-1 with the following effective with the November 2021 letting:

TABLE 701-1 TESTING AND CERTIFICATION STANDARDS

TEST	TEST STANDARD	MINIMUM REQUIRED CERTIFICATION (any one of the certifications listed for each test)
Random Sampling	CMM 830.9.2	Transportation Materials Sampling Technician (TMS) TMS Assistant Certified Technician (ACT-TMS) Aggregate Technician I (AGGTEC-I) AGGTEC-I Assistant Certified Technician (ACT-AGG) PCC Technician I (PCCTEC-I) PCCTEC-I Assistant Certified Technician (ACT-PCC) Grading Technician I (GRADINGTEC-I) Grading Assistant Certified Technician (ACT-GRADING)
Sampling Aggregates	AASHTO T2[1] [4]	TMS, ACT-TMS, AGGTECT-1, ACT-AGG
Percent passing the No. 200 sieve	AASHTO T11[1]	AGGTEC-I, ACT-AGG
Fine & coarse aggregate gradation	AASHTO T27[1]	
Aggregate moisture content	AASHTO T255[1]	
Fractured faces	ASTM D5821[1]	
Liquid limit	AASHTO T89	Aggregate Testing for Transportation Systems (ATTS) GRADINGTEC-I, or ACT-GRADING
Plasticity index	AASHTO T90[3]	
Sampling freshly mixed concrete	AASHTO R60	PCCTEC-1 ACT-PCC
Air content of fresh concrete	AASHTO T152[2] AASHTO TP118[5]	
Air void system of fresh concrete	AASHTO TP118[5]	
Concrete slump	AASHTO T119[2]	
Concrete temperature	ASTM C1064	
Making and curing concrete specimens	AASHTO T23	
Moist curing for concrete specimens	AASHTO M201	
Concrete compressive strength	AASHTO T22	Concrete Strength Tester (CST) CST Assistant Certified Technician (ACT-CST)
Concrete flexural strength	AASHTO T97	
Concrete surface resistivity[2]	AASHTO T358	
Voids in aggregate	AASHTO T19	PCCTEC-II
Profiling	__	PROFILER

[1] As modified in CMM 860.

[2] As modified in CMM 870.

[3] A plasticity check, if required under individual QMP specifications, may be performed by an AGGTEC-I in addition to the certifications listed for liquid limit and plasticity index tests.

[4] Plant personnel may operate equipment to obtain samples under the direct observation of a TMS or higher.

[5] Consolidate by rodding.

710.2 Small Quantities

Replace the entire text with the following effective with the November 2021 letting:

(1) The department defines small quantities as follows:

- As specified in 715.1.1.2 for class I concrete.
- Less than 50 cubic yards of class II ancillary concrete placed under a single bid item.

(2) For contracts with only small quantities of material subject to testing, modify the requirements of 710 as follows:

1. The contractor may submit an abbreviated quality control plan as allowed in 701.1.2.3.
2. Provide one of the following for aggregate process control:
   - Documented previous testing dated within 120 calendar days. Provide gradation test results to the engineer before placing material.
   - Non-random start-up gradation testing.

710.4 Concrete Mixes

Replace paragraph two with the following effective with the November 2021 letting:

(2) At least 7 business days before producing concrete, document that materials conform to 501 unless the engineer allows or individual QMP specifications provide otherwise. Include the following:

1. For mixes: quantities per cubic yard expressed as SSD weights and net water, water to cementitious material ratio, air content, and SAM number.
2. For cementitious materials and admixtures: type, brand, and source.
3. For aggregates: absorption, SSD bulk specific gravity, wear, soundness, freeze thaw test results if required, and air correction factor. Also include aggregate production records dated within 2 years if using those results in the design. Submit component aggregate gradations, aggregate proportions, and target combined blended aggregate gradations using the following:
    - DT2220 for combined aggregate gradations.
    - DT2221 for optimized aggregate gradations.
4. For optimized concrete mixtures:
    - Complete the worksheets within DT2221 according to the directions.
    - Ensure the optimized aggregate gradations and the optimized mix design conform to WisDOT specifications and pass the built-in tests within DT2221.
    - Verify slip-form mixture workability according to AASHTO TP137 and conformance to specifications through required trial batching.
    - Submit the completed DT2221 to the engineer electronically. Include the trial batch test results with the mix design submittal.

Replace paragraph four with the following effective with the November 2021 letting:

(4) Prepare and submit modifications to a concrete mix to the engineer for approval 3 business days before using that modified mix. Modifications requiring the engineer's approval include changes in:

1. Source of any material. For paving and barrier mixes, a source change for fly ash of the same class does not constitute a mix design change.
2. Quantities of cementitious materials.
3. Addition or deletion of admixtures. Minor admixture dosage adjustments required to maintain air content or slump do not require engineer review or approval.

710.5.5 Strength

Replace paragraph one with the following effective with the November 2021 letting:

(1) Cast all 6" x 12" cylinders or all 6" x 6" x 21" beams in a set from the same sample. Do not cast more than one set of specimens from a single truckload of concrete. Mark each specimen to identify the lot and sublot or location on the project it represents.

710.5.6 Aggregate Testing

Retitle and replace the entire text with the following effective with the November 2021 letting:

710.5.6 Aggregate Testing During Concrete Production

710.5.6.1 General

(1) The department will accept gradation based on the results of department-performed acceptance testing.

(2) The department and contractor will obtain samples using the same method. When belt sampling, contractor personnel shall obtain samples for the department under the direct observation of the department personnel. Contractor will define sampling method in the QMP or abbreviated QMP.

710.5.6.2 Contractor Control Charts

710.5.6.2.1 General

(1) Test aggregate gradations during concrete production except as allowed for small quantities under 710.2. Required contractor testing will be performed using non-random samples.

(2) Sample aggregates from either the conveyor belt or from the working face of the stockpiles.

(3) Sample aggregates within 2 business days before placement for each mix design. Include this gradation on the control charts.

(4) Report gradation test results and provide control charts to the engineer within 1 business day of obtaining the sample. Submit results to the engineer and electronically into MRS as specified in 701.1.2.7.

(5) Conduct aggregate testing at the minimum frequency shown based on the anticipated daily cumulative plant production for each mix design. The contractor's concrete production tests can be used for the same mix design on multiple contracts.

TABLE 710-1 CONTRACTOR GRADATION TESTING FREQUENCY - CLASS I

DAILY PLANT PRODUCTION RATE FOR WisDOT WORK	MINIMUM FREQUENCY
Gradation Report Before Placement	
1000 cubic yards or less	one test per day
more than 1000 cubic yards	two tests per day

TABLE 710-2 CONTRACTOR GRADATION TESTING FREQUENCY - CLASS II

MINIMUM FREQUENCY
Gradation Report Before Placement
One test per calendar week of production

710.5.6.2.2 Optimized Aggregate Gradation Control Charts

(1) Determine the complete gradation using a washed analysis for both fine and coarse aggregates. Report results for the following:

- 1 1/2", 1", 3/4", 1/2", 3/8", #4, #8, #16, #30, #50, #100, and #200 sieves.
- Sum of volumetric percentages retained on No. 8, No. 16, and No. 30 sieves.
- Sum of volumetric percentages retained on No. 30, No. 50, No. 100, and No. 200 sieves.

(2) Calculate blended aggregate gradations using the mix design batch percentages for the component aggregates. Ensure the blended aggregate gradation conforms to the volumetric percent retained of the optimized aggregate gradation limits specified in table 501-4.

(3) Throughout the contract, construct a 4-point running average of the volumetric percent retained for each sieve to determine if the blended aggregate gradation is within the tarantula curve limits specified in table 501-4.

710.5.6.2.3 Combined Aggregate Gradation Control Charts

(1) Determine the complete gradation using a washed analysis for both fine and coarse aggregates. Report results for the 1 1/2", 1", 3/4", 1/2", 3/8", #4, #8, #16, #30, #50, #100, and #200 sieves.

(2) Calculate blended aggregate gradations using the mix design batch percentages for the component aggregates. Ensure the blended aggregate gradation conforms to the percent passing by weight requirements of the combined aggregate gradation limits specified in table 501-4.

(3) Throughout the contract, construct a 4-point running average of the percent passing by weight for each sieve to determine if the blended aggregate gradation is within the combined aggregate gradation limits specified in table 501-4.

710.5.6.3 Department Acceptance Testing

(1) Department testing frequency is based on the quantity of each mix design placed under each individual WisDOT contract.

(2) The department will split each sample, test for acceptance, and retain the remainder for a minimum of 10 calendar days.

(3) The department will obtain the sample and deliver to regional testing lab in the same day. Department will report gradation test results to the contractor within 1 business day of being delivered to the lab. Department and contractor can agree to an alternative test result reporting timeframe; alternative timeframe is required to be documented in the QMP.

(4) Additional samples may be taken at the engineer's discretion due to change in condition.

TABLE 710-3 DEPARTMENT GRADATION TESTING FREQUENCY

CONCRETE CLASSIFICATION	MINIMUM DEPARTMENT FREQUENCY
Class I: Pavement	1 test per placement day for first 5 days of placement. If all samples are passing, reduced frequency is applied.
	Reduced frequency: 1 test per calendar week of placement
Class I: Structures	1 test per 250 CY placed - Minimum of 1 test per substructure - Minimum of 1 test per superstructure

Class I: Cast-in-Place Barrier	1 test per 500 CY placed
Class II	No minimum testing

710.5.7 Corrective Action

Replace the entire text with the following effective with the November 2021 letting:

710.5.7.1 Optimized Aggregate Gradations

(1) If the contractor's 4-point running average or a department test result of the volumetric percent retained exceeds the tarantula curve limits by less than or equal to 1.0 percent on a single sieve size, do the following:

1. Notify the other party immediately.
2. Perform corrective action documented in the QC plan or as the engineer approves.
3. Document and provide corrective action results to the engineer as soon as they are available.
4. Department will conduct two tests within the next business day after corrective action is complete.
5. If blended aggregate gradations are within the tarantula curve limits by the second department test:
    - Continue with concrete production.
    - Contractor will include a break in the 4-point running average.
    - For Class I: Pavements, department will discontinue reduced frequency testing and will test at a frequency of 1 test per placement day. Once 5 consecutive samples are passing at the 1 test per placement day frequency, the reduced frequency testing will be reapplied.
6. If blended aggregate gradations are not within the tarantula curve limits by the second department test:
    - Provide a new mix design with an increased cementitious content.
    - If the mix design already has a cementitious content of 565 or more pounds per cubic yard, provide a new mix design.
    - If the contract requires optimized aggregate gradations under 501.2.7.4.2.1(2), stop concrete production and submit a new mix design.

(2) If the contractor's 4-point running average or a department test result of the volumetric percent retained exceeds the tarantula curve limits by more than 1.0 percent on one or more sieves, stop concrete production and submit a new mix design.

(3) Department and contractor will sample and test aggregate of the new mix design at the frequency defined in 710.5.6.1.

710.5.7.2 Combined Aggregate Gradations

(1) If the contractor's 4-point running average or a department test result of the percent passing by weight exceeds the combined aggregate gradation limits by less than or equal to 1.0 percent on a single sieve size, do the following:

1. Notify the other party immediately.
2. Perform corrective action documented in the QC plan or as the engineer approves.
3. Document and provide corrective action results to the engineer as soon as they are available.
4. Department will conduct two tests within the next business day after corrective action is complete.
5. If blended aggregate gradations are within the combined aggregate gradation limits by the second department test:
    - Continue with concrete production.
    - Contractor will include a break in the 4-point running average.
    - For Class I: Pavements, department will discontinue reduced frequency testing and will test at a frequency of 1 test per placement day. Once 5 consecutive samples are passing at the 1 test per placement day frequency, the reduced frequency testing will be reapplied.
6. If blended aggregate gradations are not within the combined aggregate gradation limits by the second department test, stop concrete production and submit a new mix design.

(2) If the contractor's 4-point running average or a department test result of the percent passing by weight exceeds the combined aggregate gradation limits by more than 1.0 percent on one or more sieves, stop concrete production and submit a new mix design.

(3) Department and contractor will sample and test aggregate of the new mix design at the frequency defined in 710.5.6.1.

715.3.1.1 General

Replace paragraphs three and four with the following effective with the November 2021 letting:

(3) Cast a set of 3 additional 6"x12" cylinders and test the concrete surface resistivity according to AASHTO T358. Perform this testing at least once per lot if total contract quantities are greater than or equal to the following:

- 20,000 square yards for pavements.
- 5,000 linear feet for barriers.
- 500 cubic yards for structure concrete.

Submit the resistivity to the nearest tenth into MRS for information only. Resistivity testing is not required for the following:

- Lot with less than 3 sublots.
- Concrete items classified as ancillary.
- Concrete placed under the following bid items:
  - Concrete Pavement Approach Slab
  - Concrete Masonry Culverts
  - Concrete Masonry Retaining Walls

(4) Test the air void system at least once per lot and enter the SAM number in MRS for information only. SAM testing is not required for the following:

- For lots with less than 3 sublots.
- High early strength (HES) concrete.
- Special high early strength (SHES) concrete.
- Concrete placed under the following bid items:
  - Concrete Pavement Approach Slab
  - Concrete Masonry Culverts
  - Concrete Masonry Retaining Walls
  - Steel Grid Floor Concrete Filled
  - Crash Cushions Permanent
  - Crash Cushions Permanent Low Maintenance
  - Crash Cushions Temporary

715.3.1.2.3 Lots by Cubic Yard

Replace the entire text with the following effective with the November 2021 letting:

(1) Define standard lots and sublots conforming to the following:

TABLE 715-1 CLASS I - LOT AND SUBLOT SIZES

CONCRETE CLASSIFICATION	LOT SIZE	SUBLOT SIZE	NUMBER OF SUBLOTS PER LOT
Class I: Pavement	1250 cubic yards	250 cubic yards	5
Class I: Structures	250 cubic yards	50 cubic yards	5
Class I: Cast-in-Place Barrier	500 cubic yards	100 cubic yards	5

(2) The contractor may include sublots less than or equal to 25 percent of the standard volume in the previous sublot. For partial sublots exceeding 25 percent of the standard volume, notify the engineer who will direct additional testing to represent that partial sublot.

(3) An undersized lot is eligible for incentive payment under 715.5 if the lot has 3 or more sublots for that lot.

715.3.2 Strength Evaluation

Replace the entire text with the following effective with the November 2021 letting:

715.3.2.1 General

(1) The department will make pay adjustments for strength on a lot-by-lot basis using the compressive strength of contractor QC cylinders or the flexural strength of contractor QC beams.

(2) Randomly select 2 QC specimens to test at 28 days for percent within limits (PWL). Compare the strengths of the 2 randomly selected QC specimens and determine the 28-day sublot average strength as follows:

- If the lower strength divided by the higher strength is 0.9 or more, average the 2 QC specimens.
- If the lower strength divided by the higher strength is less than 0.9, break one additional specimen and average the 2 higher strength specimens.

715.3.2.2 Removal and Replacement

715.3.2.2.1 Pavement

(1) If a sublot strength is less than 2500 psi in compressive strength or 500 psi in flexural strength, the department may direct the contractor to core that sublot to determine its structural adequacy and whether to direct removal.

(2) If the engineer directs coring, obtain three cores from the sublot in question. Have an HTCP-certified PCC technician I perform or observe core sampling according to AASHTO T24.

(3) Have an independent consultant test cores according to AASHTO T24.

(4) The department will assess concrete for removal and replacement based on a sublot-by-sublot analysis of core strength. Perform coring and testing, fill core holes with an engineer-approved non-shrink grout or concrete, and provide traffic control during coring.

(5) The sublot pavement is conforming if the compressive strengths of all cores from the sublot are 2500 psi or greater.

(6) The sublot pavement is nonconforming if the compressive strengths of any core from the sublot is less than 2500 psi. The department may direct removal and replacement or otherwise determine the final disposition of nonconforming material as specified in 106.5.

715.3.2.2.2 Structures and Cast-in-Place Barrier

(1) The department will evaluate the sublot for possible removal and replacement if the 28-day sublot average compressive strength is lower than f'c minus 500 psi. The value of f'c is the design stress the plans show. The department may assess further strength price reductions or require removal and replacement only after coring the sublot.

(2) The engineer may initially evaluate the sublot strength using a non-destructive method. Based on the results of non-destructive testing, the department may accept the sublot at the previously determined pay for the lot, or direct the contractor to core the sublot.

(3) If the engineer directs coring, obtain three cores from the sublot in question. Have an HTCP-certified PCC technician I perform or observe core sampling according to AASHTO T24. Determine core locations, subject to the engineer's approval, that do not interfere with structural steel.

(4) Have an independent consultant test cores according to AASHTO T24.

(5) The department will assess concrete for removal and replacement based on a sublot-by-sublot analysis of core strength. Perform coring and testing, fill core holes with an engineer-approved non-shrink grout or concrete, and provide traffic control during coring.

(6) If the 3-core average is greater than or equal to 85 percent of f'c, and no individual core is less than 75 percent of f'c, the engineer will accept the sublot at the previously determined pay for the lot. If the 3-core average is less than 85 percent of f'c, or an individual core is less than 75 percent of f'c, the engineer may require the contractor to remove and replace the sublot. The department may direct removal and replacement or otherwise determine the final disposition of nonconforming material as specified in 106.5.

715.3.3 Aggregate

Replace the entire text with the following effective with the November 2021 letting:

715.3.3.1 General

(1) Except as allowed for small quantities in 710.2, test aggregate conforming to 710.5.6.

715.3.3.2 Structures

(1) In addition to the aggregate testing required under 710.5.6, determine the fine and coarse aggregate moisture content for each sample.

(2) Calculate target batch weights for each mix when production of that mix begins. Whenever the moisture content of the fine or coarse aggregate changes by more than 0.5 percent, adjust the batch weights to maintain the design w/cm ratio.

715.5 Payment

Replace the entire text with the following effective with the November 2021 letting:

715.5.1 General

(1) The department will pay incentive for compressive strength under the following bid items:

ITEM NUMBER	DESCRIPTION	UNIT
715.0502	Incentive Strength Concrete Structures	DOL
715.0603	Incentive Strength Concrete Barrier	DOL
715.0715	Incentive Flexural Strength Concrete Pavement	DOL
715.0720	Incentive Compressive Strength Concrete Pavement	DOL

(2) Incentive payment may be more or less than the amount the schedule of items shows.

(3) The department will administer disincentives for strength under the Disincentive Strength Concrete Structures, Disincentive Strength Concrete Barrier, Disincentive Flexural Strength Concrete Pavement, and Disincentive Compressive Strength Concrete Pavement, administrative items.

(4) The pay factor that is calculated from the equations in 715.5.2(2) and 715.5.3(2) will be applied to the unit costs listed below:

- Pavement: $45 per SY.
- Structure: $635 per CY.
- Cast-in-place barrier: $75 per LF.

(5) 28-day strength average for a lot is the average of the individual sublot strengths within the given lot.

(6) The department will not pay a strength incentive for concrete that is nonconforming in another specified property, for ancillary concrete accepted based on tests of class I concrete, or for high early strength concrete unless placed in pavement gaps as allowed under 715.3.1.2.2.

(7) Submit test results to the department electronically using MRS software. The department will validate contractor data before determining pay adjustments.

(8) All coring and testing costs under 715.3.2.2 including filling core holes and providing traffic control during coring are incidental to the contract.

715.5.2 Compressive Strength

(1) The department will measure PWL relative to strength lower specification limits as follows:

- Compressive strength of 3700 psi for pavements.
- Compressive strength of 4000 psi for structures and cast-in-place barrier.

(2) The department will adjust pay for each lot using equation "Comp2022" as follows:

Percent within Limits (PWL)	Pay Factor (%)
>= 90 to 100	(1/5 x PWL) + 82
>= 85 to < 90	100
>= 50 to < 85	(5/7 x PWL) + (275/7)
< 50	50[1]

[1] Any material resulting in a lot PWL value less than 50 will be evaluated according to 715.3.2. In the event the material remains in place, it will be paid at 50 percent of the contract unit price of the concrete bid item.

(3) The department will not pay incentive if the lot standard deviation is greater than the following:

- 400 psi for pavement.
- 350 psi for structure and cast-in-place barrier

(4) For lots with less than 3 sublots, there is no incentive but the department will reduce pay by 50 percent of the contract unit price for sublots with an average compressive strength below the following:

- 3700 psi for pavements.
- 4000 psi for structures and cast-in-place barrier.

715.5.3 Flexural Strength

(1) The department will measure PWL relative to strength lower specification limits as follows:

- Flexural strength of 650 psi for pavements.

(2) The department will adjust pay for each lot using equation "Flex2022" as follows:

Percent within Limits (PWL)	Pay Factor (%)
>= 90 to 100	(2/5 x PWL) + 64
>= 85 to < 90	100

>= 50 to < 85	(5/7 x PWL) + (275/7)
< 50	50[1]

[1] Material resulting in a lot PWL value less than 50 will be evaluated according to 715.3.2. In the event the material remains in place, it will be paid at 50 percent of the contract unit price of the concrete bid item.

(3) The department will not pay incentive if the lot standard deviation is greater than 60 psi.

(4) For lots with less than 3 sublots, there is no incentive but the department will reduce pay by 50 percent of the contract unit price for sublots with an average flexural strength below 650 psi.

ERRATA

460.2.2.3 Aggregate Gradation Master Range

Correct errata by adding US Standard equivalent sieve sizes.

(1) Ensure that the aggregate blend, including recycled material and mineral filler, conforms to the gradation requirements in table 460-1. The values listed are design limits; production values may exceed those limits.

TABLE 460-1 AGGREGATE GRADATION MASTER RANGE AND VMA REQUIREMENTS

SIEVE	PERCENT PASSING DESIGNATED SIEVES							
	NOMINAL SIZE							
	No. 1 (37.5 mm) (1 1/2 inch)	No. 2 (25.0 mm) (1 inch)	No.3 (19.0 mm) (3/4 inch)	No. 4 (12.5 mm) (1/2 inch)	No. 5 (9.5 mm) (3/8 inch)	No. 6 (4.75 mm) (3/16 inch)	SMA No. 4 (12.5 mm) (1/2 inch)	SMA No. 5 (9.5 mm) (3/8 inch)
50.0-mm (2-inch)	100							
37.5-mm (1 1/2-inch)	90 - 100	100						
25.0-mm (1-inch)	90 max	90 - 100	100					
19.0-mm (3/4-inch)	___	90 max	90 - 100	100			100	
12.5-mm (1/2-inch)	___	___	90 max	90 - 100	100		90 - 97	100
9.5-mm (3/8-inch)	___	___	___	90 max	90 - 100	100	58 - 80	90 - 100
4.75-mm (No. 4)	___	___	___	___	90 max	90 - 100	25 - 35	35 - 45
2.36-mm (No. 8)	15 - 41	19 - 45	23 - 49	28 - 58	32 - 67	90 max	15 - 25	18 - 28
1.18-mm (No. 16)	___	___	___	___	___	30 - 55	___	___
0.60-mm (No. 30)	___	___	___	___	___	___	18 max	18 max
0.075-mm (No. 200)	0 - 6.0	1.0 - 7.0	2.0 - 8.0	2.0 - 10.0	2.0 - 10.0	6.0 - 13.0	8.0 - 11.0	8.0 - 12.0
% VMA	11.0 min	12.0 min	13.0 min	14.0 min[1]	15.0 min[2]	16.0 - 17.5	16.0 min	17.0 min

[1] 14.5 for LT and MT mixes.

[2] 15.5 for LT and MT mixes.

715.5.1 General

Correct the bid item number for Incentive Compressive Strength Concrete Pavement.

(1) The department will pay incentive for compressive strength under the following bid items:

ITEM NUMBER	DESCRIPTION	UNIT
715.0502	Incentive Strength Concrete Structures	DOL
715.0603	Incentive Strength Concrete Barrier	DOL
715.0715	Incentive Flexural Strength Concrete Pavement	DOL
715.0720	Incentive Compressive Strength Concrete Pavement	DOL

ADDITIONAL SPECIAL PROVISION 7

A. Reporting 1st Tier and DBE Payments During Construction

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

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

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

Effective January 2019 Letting ASP 9

ADDITIONAL SPECIAL PROVISION 9

Electronic Certified Payroll or Labor Data Submittal

(1) Use the department's Civil Rights Compliance System (CRCS) 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. 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 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 or by telephone. Contact Paul Ndon at (414) 438-4584 to schedule the training.

(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) Firms wishing to export payroll/labor data from their computer system into CRCS should have their payroll coordinator contact Paul Ndon at paul.ndon@dot.wi.gov. Not every contractor's payroll system is capable of producing 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

REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS

I. General
II. Nondiscrimination
III. Nonsegregated Facilities
IV. Davis-Bacon and Related Act Provisions
V. Contract Work Hours and Safety Standards Act Provisions
VI. Subletting or Assigning the Contract
VII. Safety: Accident Prevention
VIII. False Statements Concerning Highway Projects
IX. Implementation of Clean Air Act and Federal Water Pollution Control Act
X. Compliance with Governmentwide Suspension and Debarment Requirements
XI. Certification Regarding Use of Contract Funds for Lobbying

ATTACHMENTS

A. Employment and Materials Preference for Appalachian Development Highway System or Appalachian Local Access Road Contracts (included in Appalachian contracts only)

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of $10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding $10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under

this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are

applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurance Required by 49 CFR 26.13(b):

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the contracting agency deems appropriate.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor

will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of $10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding $2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 “Contract provisions and related matters” with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages

a. All laborers and mechanics employed or working upon the site of the work, will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph 1.d. of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, That the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under paragraph 1.b. of this section) and the Davis-Bacon poster (WH–1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

b.(1) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(3) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Wage and Hour Administrator for determination. The Wage and Hour Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or

will notify the contracting officer within the 30-day period that additional time is necessary.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

c. Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

d. If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. Withholding

The contracting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the contractor under this contract, or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and basic records

a. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

b.(1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g. , the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH–347 is available for this purpose from the Wage and Hour Division Web site at http://www.dol.gov/esa/whd/forms/wh347instr.htm or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency..

(2) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(ii) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;

(iii) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(3) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH–347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph 3.b.(2) of this section.

(4) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the FHWA may, after written notice to the contractor, the contracting agency or the State DOT, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and trainees

a. Apprentices (programs of the USDOL).

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

b. Trainees (programs of the USDOL).

Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration.

The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration.

Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal employment opportunity. The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30.

d. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

5. Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR part 3, which are incorporated by reference in this contract.

6. Subcontracts. The contractor or subcontractor shall insert Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

7. Contract termination: debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of eligibility.

a. By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The following clauses apply to any Federal-aid construction contract in an amount in excess of $100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

1. Overtime requirements. No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; liability for unpaid wages; liquidated damages. In the event of any violation of the clause set forth in paragraph (1.) of this section, the contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1.) of this section, in the sum of $10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1.) of this section.

3. Withholding for unpaid wages and liquidated damages. The FHWA or the contacting agency shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2.) of this section.

4. Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraph (1.) through (4.) of this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1.) through (4.) of this section.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term “perform work with its own organization” refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:

(1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
(2) the prime contractor remains responsible for the quality of the work of the leased employees;
(3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and
(4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the work covered by the contract.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters into pursuant to this contract, that the contractor and any subcontractor shall not permit any employee, in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous or dangerous to his/her health or safety, as determined under construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 3704).

3. Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C.3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.
2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost $25,000 or more – as defined in 2 CFR Parts 180 and 1200.

1**. Instructions for Certification – First Tier Participants:**

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

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

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

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. “First Tier Covered Transactions” refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). “Lower Tier Covered Transactions” refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). “First Tier Participant” refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). “Lower Tier Participant” refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

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

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (https://www.epls.gov/), which is compiled by the General Services Administration.

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

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

* * * * *

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

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

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

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification; and

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

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

2. **Instructions for Certification - Lower Tier Participants:**

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost $25,000 or more - 2 CFR Parts 180 and 1200)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. “First Tier Covered Transactions” refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). “Lower Tier Covered Transactions” refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). “First Tier Participant” refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). “Lower Tier Participant” refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

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

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (https://www.epls.gov/), which is compiled by the General Services Administration.

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

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the

department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.

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

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed $100,000 (49 CFR 20).

1. The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

2. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

3. The prospective participant also agrees by submitting its bid or proposal that the participant shall require that the language of this certification be included in all lower tier subcontracts, which exceed $100,000 and that all such recipients shall certify and disclose accordingly.

ATTACHMENT A - EMPLOYMENT AND MATERIALS PREFERENCE FOR APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS ROAD CONTRACTS

This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

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).

SEPTEMBER 2002

NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY (EXECUTIVE ORDER 11246)

1. The Offeror's or Bidder's attention is called to the "Employment Practices" and "Equal Opportunity Clause" set forth in the Required Contract Provisions, FHWA 1273.

2. The goals and timetables for minority and female participation expressed in percentage terms for the contractor's aggregate work force in each trade, on all construction work in the covered area, are as follows:

Goals for Minority Participation for Each Trade:

County	%	County	%	County	%
Adams	1.7	Iowa	1.7	Polk	2.2
Ashland	1.2	Iron	1.2	Portage	0.6
Barron	0.6	Jackson	0.6	Price	0.6
Bayfield	1.2	Jefferson	7.0	Racine	8.4
Brown	1.3	Juneau	0.6	Richland	1.7
Buffalo	0.6	Kenosha	3.0	Rock	3.1
Burnett	2.2	Kewaunee	1.0	Rusk	0.6
Calumet	0.9	La Crosse	0.9	St. Croix	2.9
Chippewa	0.5	Lafayette	0.5	Sauk	1.7
Clark	0.6	Langlade	0.6	Sawyer	0.6
Columbia	1.7	Lincoln	0.6	Shawano	1.0
Crawford	0.5	Manitowoc	1.0	Sheboygan	7.0
Dane	2.2	Marathon	0.6	Taylor	0.6
Dodge	7.0	Marinette	1.0	Trempealeau	0.6
Door	1.0	Marquette	1.7	Vernon	0.6
Douglas	1.0	Menominee	1.0	Vilas	0.6
Dunn	0.6	Milwaukee	8.0	Walworth	7.0
Eau Claire	0.5	Monroe	0.6	Washburn	0.6
Florence	1.0	Oconto	1.0	Washington	8.0
Fond du Lac	1.0	Oneida	0.6	Waukesha	8.0
Forest	1.0	Outagamie	0.9	Waupaca	1.0
Grant	0.5	Ozaukee	8.0	Waushara	1.0
Green	1.7	Pepin	0.6	Winnebago	0.9
Green Lake	1.0	Pierce	2.2	Wood	0.6

Goals for female participation for each trade: 6.9%

These goals are applicable to all the contractor's construction work, (whether or not it is federal or federally assisted), performed in the covered area. If the contractor performs construction work in the geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its federally involved and nonfederally involved construction.

The contractor's compliance with the Executive Order and the Regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals. The hours of minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from contractor to contractor or from project to project for the sole purpose of meeting the contractor's goals shall be a violation of the contract, the Executive Order and the Regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within ten (10) working days of award of any construction subcontract in excess of $10,000.00 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor, employer identification number of the subcontractor; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the subcontract is to be performed.

   As referred to in this section, the Director means:

   Director
   Office of Federal Contract Compliance Programs
   Ruess Federal Plaza
   310 W. Wisconsin Ave., Suite 1115
   Milwaukee, WI 53202

   The "Employer Identification Number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941.

4. As used in this notice, and in the contract resulting from solicitation, the "covered area" is the county(ies) in Wisconsin to which this proposal applies.

APRIL 2013

ADDITIONAL FEDERAL-AID PROVISIONS

NOTICE TO ALL BIDDERS

To report bid rigging activities call:

1-800-424-9071

The U.S. Department of Transportation (DOT) operates the above toll-free "hotline" Monday through Friday, 8:00 a.m. to 5:00 p.m., Eastern Time. Anyone with knowledge of possible bid rigging, bidding collusion, or other fraudulent activities should use the "hotline" to report such activities.

The "hotline" is part of the DOT's continuing effort to identify and investigate highway construction contract fraud and abuse and is operated under the direction of the DOT Inspector General. All information will be treated confidentially and caller anonymity will be respected.

Effective November 2020 letting

BUY AMERICA PROVISION

All steel and iron materials permanently incorporated in this project shall be domestic products and all manufacturing and coating processes for these materials from smelting forward in the manufacturing process must have occurred within the United States. Coating includes epoxy coating, galvanizing, painting and any other coating that protects or enhances the value of a material subject to the requirements of Buy America. The exemption of this requirement is the minimal use of foreign materials if the total cost of such material permanently incorporated in the product does not exceed one-tenth of one percent (1/10 of 1%) of the total contract cost or $2,500.00, whichever is greater. For purposes of this paragraph, the cost is that shown to be the value of the subject products as they are delivered to the project. The contractor shall take actions and provide documentation conforming to CMM 2-28.5 to ensure compliance with this “Buy America” provision.

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 steel, iron, and coating processes for steel or iron incorporated into the contract work conform to these "Buy America" provisions. Attach a list of exemptions and their associated costs to the certification form. Department form DT4567 is available at:

https://wisconsindot.gov/Documents/formdocs/dt4567.docx

Effective February 2016 letting

Cargo Preference Act Requirement

All Federal-aid projects shall comply with 46 CFR 381.7 (a) – (b) as follows:

(a) *Agreement Clauses.* "Use of United States-flag vessels:"

(1) Pursuant to Pub. L. 664 (43 U.S.C. 1241(b)) at least 50 percent of any equipment, materials or commodities procured, contracted for or otherwise obtained with funds granted, guaranteed, loaned, or advanced by the U.S. Government under this agreement, and which may be transported by ocean vessel, shall be transported on privately owned United States-flag commercial vessels, if available.

(2) Within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, 'on-board' commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (a)(1) of this section shall be furnished to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590."

(b) *Contractor and Subcontractor Clauses.* "Use of United States-flag vessels: The contractor agrees—"

(1) To utilize privately owned United States-flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to this contract, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels.

(2) To furnish within 20 days following the date of loading for shipments originating within the United States or within 30 working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, 'on-board' commercial ocean bill-of-lading in English for each shipment of cargo described in paragraph (b) (1) of this section to both the Contracting Officer (through the prime contractor in the case of subcontractor bills-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590.

(3) To insert the substance of the provisions of this clause in all subcontracts issued pursuant to this contract.

Effective with December 2017 Letting

WISCONSIN DEPARTMENT OF TRANSPORTATION
DIVISION OF TRANSPORTATION AND SYSTEM DEVELOPMENT

SUPPLEMENTAL REQUIRED CONTRACT PROVISIONS
FOR PROJECTS WITH FEDERAL AID

I. PREVAILING WAGE RATES

The attached U.S. Department of Labor (Davis-Bacon Minimum Wage Rates) furnishes the minimum prevailing wage rates pursuant to the Davis-Bacon and Related Acts. The wage rates shown are the minimum rates required by the contract to be paid during its life, however this is not a representation that labor can be obtained at these rates. It is the responsibility of bidders to inform themselves as to the local labor conditions and prospective changes or adjustments of wage rates. No increase in the contract price will be allowed or authorized on account of the payment of wage rates in excess of those listed herein.

II. COVERAGE OF TRUCK DRIVERS

Truck drivers are covered by Davis-Bacon Minimum Wage Rates in the following circumstances:

- Drivers of a contractor or subcontractor for time spent working on the site of the work.
- Drivers of a contractor or subcontractor for time spent loading and/or unloading materials and supplies on the site of the work, if such time is not de minimis. https://www.dol.gov/whd/FOH/FOH_Ch15.pdf
- Truck drivers transporting materials or supplies between a facility that is deemed part of the site of the work and the actual construction site.
- Truck drivers transporting portions of the building or work between a site established specifically for the performance of the contract where a significant portion of such building or work is constructed and the physical place where the building or work called for in the contract will remain.

Truck drivers are not covered by Davis-Bacon Minimum Wage Rates in the following circumstances:

- Material delivery truck drivers while off the site of the work.
- Drivers of a contractor or subcontractor traveling between a Davis-Bacon job and a commercial supply facility while they are off the site of the work."
- Truck drivers whose time spent on the site of the work is de minimis, such as only a few minutes at a time merely to pick up or drop off materials or supplies.

Details are available online at:
https://www.dol.gov/whd/recovery/pwrb/Tab9.pdf
https://wisconsindot.gov/Pages/doing-bus/civil-rights/labornwage/trckng.aspx

III. POSTINGS AT THE SITE OF THE WORK

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

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

All required documents shall be posted by the first day of work and be accurate and complete. Postings must be readable, in an area where they will be noticed, and maintained until the last day of work.

IV. RESOURCES

Required information regarding compliance with federal provisions is found in the following resources:

- FHWA-1273 included in this contract
- U.S. Department of Labor Prevailing Wage Resource Book
- U.S. Department of Labor Field Operations Handbook
- U.S. Code of Federal Regulations
- Any applicable law, Act, or Executive Order enacted by the federal government at the time of the letting of this contract

"General Decision Number: WI20220010 01/21/2022

Superseded General Decision Number: WI20210010

State: Wisconsin

Construction Type: Highway

Counties: Wisconsin Statewide.

HIGHWAY, AIRPORT RUNWAY & TAXIWAY CONSTRUCTION PROJECTS (does not include bridges over navigable waters; tunnels; buildings in highway rest areas; and railroad construction)

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that aresubject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60).

If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022, Executive Order 14026 generally applies to the contract. The contractor must pay all covered workers at least $15.00 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2022.

If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022, Executive Order 13658 generally applies to the contract. The contractor must pay all covered workers at least $11.25 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2022.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/07/2022
1	01/21/2022

BRWI0001-002 06/01/2020

CRAWFORD, JACKSON, JUNEAU, LA CROSSE, MONROE, TREMPEALEAU, AND VERNON COUNTIES

	Rates	Fringes
BRICKLAYER	$ 35.31	24.7 7

BRWI0002-002 06/01/2020

ASHLAND, BAYFIELD, DOUGLAS, AND IRON COUNTIES

	Rates	Fringes
BRICKLAYER	$ 42.77	23.47

BRWI0002-005 06/01/2020

ADAMS, ASHLAND, BARRON, BROWN, BURNETT, CALUMET, CHIPPEWA, CLARK, COLUMBIA, DODGE, DOOR, DUNN, FLORENCE, FOND DU LAC, FOREST, GREEN LAKE, IRON, JEFFERSON, KEWAUNEE, LANGLADE, LINCOLN, MANITOWOC, MARATHON, MARINETTE, MARQUETTE, MENOMINEE, OCONTO, ONEIDA, OUTAGAMIE, POLK, PORTAGE, RUSK, ST CROIX, SAUK, SHAWANO, SHEBOYGAN, TAYLOR, VILAS, WALWORTH, WAUPACA, WAUSHARA, WINNEBAGO, AND WOOD COUNTIES

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER	$ 36.68	23.40

BRWI0003-002 06/01/2020

BROWN, DOOR, FLORENCE, KEWAUNEE, MARINETTE, AND OCONTO COUNTIES

	Rates	Fringes
BRICKLAYER	$ 35.68	24.40

BRWI0004-002 06/01/2020

KENOSHA, RACINE, AND WALWORTH COUNTIES

	Rates	Fringes
BRICKLAYER	$ 39.90	25.53

BRWI0006-002 06/01/2020

ADAMS, CLARK, FOREST, LANGLADE, LINCOLN, MARATHON, MENOMINEE, ONEIDA, PORTAGE, PRICE, TAYLOR, VILAS AND WOOD COUNTIES

	Rates	Fringes
BRICKLAYER	$ 36.60	23.48

BRWI0007-002 06/01/2020

GREEN, LAFAYETTE, AND ROCK COUNTIES

	Rates	Fringes
BRICKLAYER	$ 37.07	24.72

BRWI0008-002 06/01/2020

MILWAUKEE, OZAUKEE, WASHINGTON, AND WAUKESHA COUNTIES

	Rates	Fringes
BRICKLAYER	$ 40.75	24.32

BRWI0011-002 06/01/2020

CALUMET, FOND DU LAC, MANITOWOC, AND SHEBOYGAN COUNTIES

	Rates	Fringes
BRICKLAYER	$ 35.68	24.40

BRWI0019-002 06/01/2020

BARRON, BUFFALO, BURNETT, CHIPPEWA, DUNN, EAU CLAIRE, PEPIN, PIERCE, POLK, RUSK, ST. CROIX, SAWYER AND WASHBURN COUNTIES

	Rates	Fringes
BRICKLAYER	$ 34.86	25.22

BRWI0034-002 06/01/2020

COLUMBIA AND SAUK COUNTIES

	Rates	Fringes
BRICKLAYER	$ 37.36	24.43

CARP0087-001 05/01/2016

BURNETT (W. of Hwy 48), PIERCE (W. of Hwy 29), POLK (W. of Hwys 35, 48 & 65), AND ST. CROIX (W. of Hwy 65) COUNTIES

	Rates	Fringes
Carpenter & Piledrivermen	$ 36.85	18.39

CARP0252-002 06/01/2016

ADAMS, BARRON, BAYFIELD (Eastern 2/3), BROWN, BUFFALO, BURNETT (E. of Hwy 48), CALUMET, CHIPPEWA, CLARK, COLUMBIA, CRAWFORD, DANE, DODGE, DOOR, DUNN, EAU CLAIRE, FLORENCE (except area bordering Michigan State Line), FOND DU LAC, FOREST, GRANT, GREEN, GREEN LAKE, IOWA, IRON, JACKSON, JEFFERSON, JUNEAU, KEWAUNEE, LA CROSSE, LAFAYETTE, LANGLADE, LINCOLN, MANITOWOC, MARATHON, MARINETTE (except N.E. corner), MARQUETTE, MENOMINEE, MONROE, OCONTO, ONEIDA, OUTAGAMIE, PEPIN, PIERCE (E. of Hwys 29 & 65), POLK (E. of Hwys 35, 48 & 65), PORTAGE, PRICE, RICHLAND, ROCK, RUSK, SAUK, SAWYER, SHAWANO, SHEBOYGAN, ST CROIX (E. of Hwy 65), TAYLOR, TREMPEALEAU, VERNON, VILAS, WALWORTH, WASHBURN, WAUPACA, WAUSHARA, WINNEBAGO, AND WOOD COUNTIES

	Rates	Fringes
CARPENTER		
CARPENTER	$ 33.56	18.00
MILLWRIGHT	$ 35.08	18.35
PILEDRIVER	$ 34.12	18.00

CARP0252-010 06/01/2016

ASHLAND COUNTY

	Rates	Fringes
Carpenters		
Carpenter	$ 33.56	18.00
Millwright	$ 35.08	18.35
Pile Driver	$ 34.12	18.00

CARP0264-003 06/01/2016

KENOSHA, MILWAUKEE, OZAUKEE, RACINE, WAUKESHA, AND WASHINGTON COUNTIES

	Rates	Fringes
CARPENTER	$ 35.78	22.11

CARP0361-004 05/01/2018

BAYFIELD (West of Hwy 63) AND DOUGLAS COUNTIES

	Rates	Fringes
CARPENTER	$ 36.15	20.43

CARP2337-001 06/01/2016

ZONE A: MILWAUKEE, OZAUKEE, WAUKESHA AND WASHINGTON

ZONE B: KENOSHA & RACINE

	Rates	Fringes
PILEDRIVERMAN		
Zone A	$ 31.03	22.69
Zone B	$ 31.03	22.69

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* ELEC0014-002 12/26/2021

ASHLAND, BARRON, BAYFIELD, BUFFALO, BURNETT, CHIPPEWA, CLARK (except Maryville, Colby, Unity, Sherman, Fremont, Lynn & Sherwood), CRAWFORD, DUNN, EAU CLAIRE, GRANT, IRON, JACKSON, LA CROSSE, MONROE, PEPIN, PIERCE, POLK, PRICE, RICHLAND, RUSK, ST CROIX, SAWYER, TAYLOR, TREMPEALEAU, VERNON, AND WASHBURN COUNTIES

	Rates	Fringes
Electricians:	$ 37.83	21.89

ELEC0014-007 05/30/2021

REMAINING COUNTIES

	Rates	Fringes
Teledata System Installer		
Installer/Technician	$ 28.50	15.92

Low voltage construction, installation, maintenance and removal of teledata facilities (voice, data, and video) including outside plant, telephone and data inside wire, interconnect, terminal equipment, central offices, PABX,

fiber optic cable and equipment, micro waves, V-SAT, bypass, CATV, WAN (wide area networks), LAN (local area networks), and ISDN (integrated systems digital network).

ELEC0127-002 06/01/2020

KENOSHA COUNTY

	Rates	Fringes
Electricians:	$ 41.62	30%+12.70

ELEC0158-002 05/30/2021

BROWN, DOOR, KEWAUNEE, MANITOWOC (except Schleswig), MARINETTE(Wausuakee and area South thereof), OCONTO, MENOMINEE (East of a ine 6 miles West of the West boundary of Oconto County), SHAWANO (Except Area North of Townships of Aniwa and Hutchins) COUNTIES

	Rates	Fringes
ELECTRICIAN	$ 36.14	29.75%+10.26

ELEC0159-003 05/30/2021

COLUMBIA, DANE, DODGE (Area West of Hwy 26, except Chester and Emmet Townships), GREEN, LAKE (except Townships of Berlin, Seneca, and St. Marie), IOWA, MARQUETTE (except Townships of Neshkoka, Crystal Lake, Newton, and Springfield), and SAUK COUNTIES

	Rates	Fringes
ELECTRICIAN	$ 43.38	23.13

ELEC0219-004 06/01/2019

FLORENCE COUNTY (Townships of Aurora, Commonwealth, Fern, Florence and Homestead) AND MARINETTE COUNTY (Township of Niagara)

	Rates	Fringes
Electricians:		
Electrical contracts over $180,000	$ 33.94	21.80
Electrical contracts under $180,000	$ 31.75	21.73

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* ELEC0242-005 05/30/2021

DOUGLAS COUNTY

	Rates	Fringes
Electricians:	$ 41.37	69.25%

ELEC0388-002 06/01/2020

ADAMS, CLARK (Colby, Freemont, Lynn, Mayville, Sherman,

Sherwood, Unity), FOREST, JUNEAU, LANGLADE, LINCOLN, MARATHON, MARINETTE (Beecher, Dunbar, Goodman & Pembine), MENOMINEE (Area West of a line 6 miles West of the West boundary of Oconto County), ONEIDA, PORTAGE, SHAWANO (Aniwa and Hutchins), VILAS AND WOOD COUNTIES

	Rates	Fringes
Electricians:	$ 34.85	26%+11.20

ELEC0430-002 06/01/2021

RACINE COUNTY (Except Burlington Township)

	Rates	Fringes
Electricians:	$ 43.45	24.89

ELEC0494-005 06/01/2021

MILWAUKEE, OZAUKEE, WASHINGTON, AND WAUKESHA COUNTIES

	Rates	Fringes
Electricians:	$ 44.39	25.67

ELEC0494-006 06/01/2021

CALUMET (Township of New Holstein), DODGE (East of Hwy 26 including Chester Township), FOND DU LAC, MANITOWOC (Schleswig), and SHEBOYGAN COUNTIES

	Rates	Fringes
Electricians:	$ 37.91	22.74

ELEC0494-013 06/01/2021

DODGE (East of Hwy 26 including Chester Twp, excluding Emmet Twp), FOND DU LAC (Except Waupuin), MILWAUKEE, OZAUKEE, MANITOWOC (Schleswig), WASHINGTON, AND WAUKESHA COUNTIES

	Rates	Fringes
Sound & Communications		
Installer:	$ 22.39	18.80
Technician:	$ 32.49	20.26

Installation, testing, maintenance, operation and servicing of all sound, intercom, telephone interconnect, closed circuit TV systems, radio systems, background music systems, language laboratories, electronic carillion, antenna distribution systems, clock and program systems and low-voltage systems such as visual nurse call, audio/visual nurse call systems, doctors entrance register systems. Includes all wire and cable carrying audio, visual, data, light and radio frequency signals. Includes the installation of conduit, wiremold, or raceways in existing structures that have been occupied for six months or more where required for the protection of the wire or cable, but does not mean a complete conduit or raceway system. work covered does not include the installation of conduit,

wiremold or any raceways in any new construction, or the installation of power supply outlets by means of which external electric power is supplied to any of the foregoing equipment or products

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ELEC0577-003 06/01/2021

CALUMET (except Township of New Holstein), GREEN LAKE (N. part including Townships of Berlin, St Marie, and Seneca), MARQUETTE (N. part including Townships of Crystal Lake, Neshkoro, Newton, and Springfield), OUTAGAMIE, WAUPACA, WAUSHARA, AND WINNEBAGO COUNTIES

	Rates	Fringes
Electricians:	$ 35.66	29.50%+10.00

ELEC0890-003 06/01/2021

DODGE (Emmet Township only), GREEN, JEFFERSON, LAFAYETTE, RACINE (Burlington Township), ROCK AND WALWORTH COUNTIES

	Rates	Fringes
Electricians:	$ 39.00	25.95%+11.17

ELEC0953-001 06/02/2019

	Rates	Fringes
Line Construction:		
(1) Lineman	$ 47.53	21.43
(2) Heavy Equipment Operator	$ 42.78	19.80
(3) Equipment Operator	$ 38.02	18.40
(4) Heavy Groundman Driver	$ 33.27	16.88
(5) Light Groundman Driver	$ 30.89	16.11
(6) Groundsman	$ 26.14	14.60

ENGI0139-005 06/01/2020

	Rates	Fringes
Power Equipment Operator		
Group 1	$ 41.62	23.80
Group 2	$ 41.12	23.80
Group 3	$ 40.62	23.80
Group 4	$ 40.36	23.80
Group 5	$ 40.07	23.80
Group 6	$ 34.17	23.80

HAZARDOUS WASTE PREMIUMS:
EPA Level ""A"" protection - $3.00 per hour
EPA Level ""B"" protection - $2.00 per hour
EPA Level ""C"" protection - $1.00 per hour

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Cranes, tower cranes, and derricks with or without attachments with a lifting capacity of over 100 tons; or cranes, tower cranes, and derricks with boom, leads and/or jib lengths measuring 176 feet or longer.

GROUP 2: Cranes, tower cranes and derricks with or without attachments with a lifting capacity of 100 tons or less; or cranes, tower cranes, and derricks with boom, leads, and/or jibs lengths measuring 175 feet or under and Backhoes (excavators) weighing 130,000 lbs and over; caisson rigs; pile driver; dredge operator; dredge engineer; Boat Pilot.

GROUP 3: Mechanic or welder - Heavy duty equipment; cranes with a lifting capacity of 25 tons or under; concrete breaker (manual or remote); vibratory/sonic concrete breaker; concrete laser screed; concrete slipform paver; concrete batch plant operator; concrete pvt. spreader - heavy duty (rubber tired); concrete spreader & distributor; automatic subgrader (concrete); concrete grinder & planing machine; concrete slipform curb & gutter machine; slipform concrete placer; tube finisher; hydro blaster (10,000 psi & over); bridge paver; concrete conveyor system; concrete pump; Rotec type Conveyor; stabilizing mixer (self-propelled); shoulder widener; asphalt plant engineer; bituminious paver; bump cutter & grooving machine; milling machine; screed (bituminous paver); asphalt heater, planer & scarifier; Backhoes (excavators) weighing under 130,000 lbs; grader or motor patrol; tractor (scraper, dozer, pusher, loader); scraper - rubber tired (single or twin engine); endloader; hydraulic backhoe (tractor type); trenching machine; skid rigs; tractor, side boom (heavy); drilling or boring machine (mechanical heavy); roller over 5 tons; percussion or rotary drilling machine; air track; blaster; loading machine (conveyor); tugger; boatmen; winches & A-frames; post driver; material hoist.

GROUP 4: Greaser, roller steel (5 tons or less); roller (pneumatic tired) - self propelled; tractor (mounted or towed compactors & light equipment); shouldering machine; self- propelled chip spreader; concrete spreader; finishing machine; mechanical float; curing machine; power subgrader; joint sawer (multiple blade) belting machine; burlap machine; texturing machine; tractor endloader (rubber tired) - light; jeep digger; forklift; mulcher; launch operator; fireman, environmental burner

GROUP 5: Air compressor; power pack; vibrator hammer and extractor; heavy equipment, leadman; tank car heaters; stump chipper; curb machine operator; Concrete proportioning plants; generators; mudjack operator; rock breaker; crusher or screening plant; screed (milling machine); automatic belt conveyor and surge bin; pug mill operator; Oiler, pump (over 3 inches); Drilling Machine Tender, day light machine

GROUP 6: Off-road material hauler with or without ejector.

IRON0008-002 06/01/2021

BROWN, CALUMET, DOOR, FOND DU LAC, KEWAUNEE, MANITOWOC, MARINETTE, OCONTO, OUTAGAMI, SHAWANO, SHEBOYGAN, AND WINNEBAGO COUNTIES:

	Rates	Fringes
IRONWORKER	$ 38.77	28.15

Paid Holidays: New Year's Day, Memorial Day, July 4th, Labor Day, Thanksgiving Day & Christmas Day.

IRON0008-003 06/01/2021

KENOSHA, MILWAUKEE, OZAUKEE, RACINE, WALWORTH (N.E. 2/3), WASHINGTON, AND WAUKESHA COUNTIES

	Rates	Fringes
IRONWORKER	$ 40.57	28.40

Paid Holidays: New Year's Day, Memorial Day, July 4th, Labor Day, Thanksgiving Day & Christmas Day.

IRON0383-001 06/06/2021

ADAMS, COLUMBIA, CRAWFORD, DANE, DODGE, FLORENCE, FOREST, GRANT, GREENE, (Excluding S.E. tip), GREEN LAKE, IOWA, JEFFERSON, JUNEAU, LA CROSSE, LAFAYETTE, LANGLADE, MARATHON, MARQUETTE, MENOMINEE, MONROE, PORTAGE, RICHLAND, ROCK (Northern area, vicinity of Edgerton and Milton), SAUK, VERNON, WAUPACA, WAUSHARA, AND WOOD COUNTIES

	Rates	Fringes
IRONWORKER	$ 37.75	27.06

IRON0498-005 06/01/2021

GREEN (S.E. 1/3), ROCK (South of Edgerton and Milton), and WALWORTH (S.W. 1/3) COUNTIES:

	Rates	Fringes
IRONWORKER	$ 41.37	44.41

IRON0512-008 06/03/2019

BARRON, BUFFALO, CHIPPEWA, CLARK, DUNN, EAU CLAIRE, JACKSON, PEPIN, PIERCE, POLK, RUSK, ST CROIX, TAYLOR, AND TREMPEALEAU COUNTIES

	Rates	Fringes
IRONWORKER	$ 37.60	29.40

IRON0512-021 05/03/2021

ASHLAND, BAYFIELD, BURNETT, DOUGLAS, IRON, LINCOLN, ONEIDA, PRICE, SAWYER, VILAS AND WASHBURN COUNTIES

	Rates	Fringes
IRONWORKER	$ 35.09	31.80

LABO0113-002 06/01/2021

MILWAUKEE AND WAUKESHA COUNTIES

	Rates	Fringes
LABORER		
Group 1	$ 31.40	22.26
Group 2	$ 31.55	22.26
Group 3	$ 31.75	22.26
Group 4	$ 31.90	22.26
Group 5	$ 32.05	22.26
Group 6	$ 27.89	22.26

LABORERS CLASSIFICATIONS

GROUP 1: General Laborer; Tree Trimmer; Conduit Layer; Demolition and Wrecking Laborer; Guard Rail, Fence, and Bridge Builder; Landscaper; Multiplate Culvert Assembler; Stone Handler; Bituminous Worker (Shoveler, Loader, and Utility Man); Batch Truck Dumper or Cement Handler; Bituminous Worker (Dumper, Ironer, Smoother, and Tamper); Concrete Handler

GROUP 2: Air Tool Operator; Joint Sawer and Filler (Pavement); Vibrator or Tamper Operator (Mechanical Hand Operated); Chain Saw Operator; Demolition Burning Torch Laborer

GROUP 3: Bituminous Worker (Raker and Luteman); Formsetter (Curb, Sidewalk, and Pavement); Strike Off Man

GROUP 4: Line and Grade Specialist

GROUP 5: Blaster and Powderman

GROUP 6: Flagperson; traffic control person

LABO0113-003 06/01/2021

OZAUKEE AND WASHINGTON COUNTIES

	Rates	Fringes
LABORER		
Group 1	$ 30.65	22.26
Group 2	$ 30.75	22.26
Group 3	$ 30.80	22.26
Group 4	$ 31.00	22.26
Group 5	$ 30.85	22.26
Group 6	$ 27.74	22.26

LABORERS CLASSIFICATIONS

GROUP 1: General Laborer; Tree Trimmer; Conduit Layer; Demolition and Wrecking Laborer; Guard Rail, Fence, and Bridge Builder; Landscaper; Multiplate Culvert Assembler; Stone Handler; Bituminous Worker (Shoveler, Loader, and Utility Man); Batch Truck Dumper or Cement Handler; Bituminous Worker (Dumper, Ironer, Smoother, and Tamper); Concrete Handler

GROUP 2: Air Tool Operator; Joint Sawer and Filler (Pavement); Vibrator or Tamper Operator (Mechanical Hand Operated);

GROUP 3: Bituminous Worker (Raker and Luteman); Formsetter (Curb, Sidewalk, and Pavement); Strike Off Man

GROUP 4: Line and Grade Specialist

GROUP 5: Blaster; powderman

GROUP 6: Flagperson and Traffic Control Person

LABO0113-011 06/01/2021

KENOSHA AND RACINE COUNTIES

	Rates	Fringes
LABORER		
Group 1	$ 30.46	22.26
Group 2	$ 30.61	22.26
Group 3	$ 30.81	22.26
Group 4	$ 30.78	22.26
Group 5	$ 31.11	22.26
Group 6	$ 27.60	22.26

LABORERS CLASSIFICATIONS:

GROUP 1: General laborer; Tree Trimmer; Conduit Layer; Demolition and Wrecking Laborer; Guard Rail, Fence, and Bridge Builder; Landscaper; Multiplate Culvert Assembler; Stone Handler; Bituminous Worker (Shoveler, Loader, and Utility Man); Batch Truck Dumper or Cement Handler; Bituminous worker (Dumper, Ironer, Smoother, and Tamper); Concrete Handler

GROUP 2: Air Tool Operator; Joint Sawer and Filler (Pavement); Vibrator or Tamper Operator (Mechanical Hand Operated); Chain Saw Operator; Demolition Burning Torch Laborer

GROUP 3: Bituminous Worker (Raker and Luteman); Formsetter (Curb, Sidewalk, and Pavement); Strike Off Man

GROUP 4: Line and Grade Specialist

GROUP 5: Blaster and Powderman

GROUP 6: Flagman; traffic control person

LABO0140-002 06/01/2020

ADAMS, ASHLAND, BARRON, BAYFIELD, BROWN, BUFFALO, BURNETT, CALUMET, CHIPPEWA, CLARK, COLUMBIA, CRAWFORD, DODGE, DOOR, DOUGLAS, DUNN, EAU CLAIRE, FLORENCE, FOND DU LAC, FOREST, GRANT, GREEN, GREEN LAKE, IRON, JACKSON, JUNEAU, IOWA, JEFFERSON, KEWAUNEE, LA CROSSE, LAFAYETTE, LANGLADE, LINCOLN, MANITOWOC, MARATHON, MARINETTE, MARQUETTE, MENOMINEE, MONROE, OCONTO, ONEIDA, OUTAGAMIE, PEPIN, PIERCE, POLK, PORTAGE, PRICE, RICHLAND, ROCK, RUSK, SAUK, SAWYER, SHAWANO, SHEBOYGAN, ST. CROIX, TAYLOR, TREMPEALEAU, VERNON, VILLAS, WALWORTH, WASHBURN, WAUPACA, WAUSHARA, WINNEBAGO, AND WOOD COUNTIES

	Rates	Fringes

LABORER

Group 1	$ 33.72	17.95
Group 2	$ 33.82	17.95
Group 3	$ 33.87	17.95
Group 4	$ 34.07	17.95
Group 5	$ 33.92	17.95
Group 6	$ 30.35	17.95

LABORER CLASSIFICATIONS

GROUP 1: General Laborer; Tree Trimmer; Conduit Layer; Demolition and Wrecking Laborer; Guard Rail, Fence, and Bridge Builder; Landscaper; Multiplate Culvert Assembler; Stone Handler; Bitminous Worker (Shoveler, Loader, and Utility Man); Batch Truck Dumper or Cement Handler; Bituminous Worker (Dumper, Ironer, Smoother and Tamper); Concrete Handler

GROUP 2: Air Tool Operator; Joint Sawer and Filler (Pavement); Vibrator or Tamper Operator (Mechanical Hand Operated); Chain Saw Operator, Demolition Burning Torch Laborer

GROUP 3: Bituminous Worker (Raker and Luteman); Formsetter (Curb, Sidewalk and Pavement); Strike Off Man

GROUP 4: Line and Grade Secialist

GROUP 5: Blaster; powderman

GROUP 6: Flagperson; Traffic Control

LABO0464-003 06/01/2020

DANE COUNTY

	Rates	Fringes
LABORER		
Group 1	$ 34.00	17.95
Group 2	$ 34.10	17.95
Group 3	$ 34.15	17.95
Group 4	$ 34.35	17.95
Group 5	$ 34.20	17.95
Group 6	$ 30.35	17.95

LABORERS CLASSIFICATIONS:

GROUP 1: General Laborer; Tree Trimmer; Conduit Layer; Demolition and Wrecking Laborer; Guard Rail, Fence, and Bridge Builder; Landscaper; Multiplate Culvert Assembler; Stone Handler; Bituminous Worker (Shoveler, Loader, and Utility Man); Batch Truck Dumper or Cement Handler; Bituminious Worker (Dumper, Ironer, Smoother, and Tamper); Concrete Handler

GROUP 2: Air Tool Operator; Joint Sawer and Filler (Pavement); Vibrator or Tamper Operator (Mechanical Hand Operated); Chain Saw Operator; Demolition Burning Torch Laborer

GROUP 3: Bituminous Worker (Raker and Luteman); Formsetter (Curb, Sidewalk, and Pavement); Strike Off Man

GROUP 4: Line and Grade Specialist

GROUP 5: Blaster; Powderman

GROUP 6: Flagperson and Traffic Control Person

PAIN0106-008 05/01/2017

ASHLAND, BAYFIELD, BURNETT, AND DOUGLAS COUNTIES

	Rates	Fringes
Painters:		
New:		
Brush, Roller	$ 30.33	17.27
Spray, Sandblast, Steel	$ 30.93	17.27
Repaint:		
Brush, Roller	$ 28.83	17.27
Spray, Sandblast, Steel	$ 29.43	17.27

PAIN0108-002 06/01/2021

RACINE COUNTY

	Rates	Fringes
Painters:		
Brush, Roller	$ 36.08	20.36
Spray & Sandblast	$ 37.52	23.27

PAIN0259-002 05/01/2008

BARRON, CHIPPEWA, DUNN, EAU CLAIRE, PEPIN, PIERCE, POLK, RUSK, SAWYER, ST. CROIX, AND WASHBURN COUNTIES

	Rates	Fringes
PAINTER	$ 24.11	12.15

PAIN0259-004 05/01/2015

BUFFALO, CRAWFORD, JACKSON, LA CROSSE, MONROE, TREMPEALEAU, AND VERNON COUNTIES

	Rates	Fringes
PAINTER	$ 22.03	12.45

PAIN0781-002 06/01/2021

JEFFERSON, MILWAUKEE, OZAUKEE, WASHINGTON, AND WAUKESHA COUNTIES

	Rates	Fringes
Painters:		
Bridge	$ 36.70	24.50
Brush	$ 35.95	24.50
Spray & Sandblast	$ 36.70	24.50

PAIN0802-002 06/01/2021

COLUMBIA, DANE, DODGE, GRANT, GREEN, IOWA, LAFAYETTE, RICHLAND,

ROCK, AND SAUK COUNTIES

	Rates	Fringes
PAINTER		
Brush	$ 29.98	18.78

PREMIUM PAY:
Structural Steel, Spray, Bridges = $1.00 additional per hour.

PAIN0802-003 06/01/2021

ADAMS, BROWN, CALUMET, CLARK, DOOR, FOND DU LAC, FOREST, GREEN LAKE, IRON, JUNEAU, KEWAUNEE, LANGLADE, LINCOLN, MANITOWOC, MARATHON, MARINETTE, MARQUETTE, MENOMINEE, OCONTO, ONEIDA, OUTAGAMIE, PORTAGE, PRICE, SHAWANO, SHEBOYGAN, TAYLOR, VILAS, WAUSHARA, WAUPACA, WINNEBAGO, AND WOOD COUNTIES

	Rates	Fringes
PAINTER	$ 29.98	18.78

PAIN0934-001 06/01/2021

KENOSHA AND WALWORTH COUNTIES

	Rates	Fringes
Painters:		
Brush	$ 36.52	23.27
Spray	$ 37.52	23.27
Structural Steel	$ 36.67	23.27

PAIN1011-002 06/06/2021

FLORENCE COUNTY

	Rates	Fringes
Painters:	$ 26.71	14.38

PLAS0599-010 06/01/2017

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER		
Area 1	$ 39.46	17.17
Area 2 (BAC)	$ 35.07	19.75
Area 3	$ 35.61	19.40
Area 4	$ 34.70	20.51
Area 5	$ 36.27	18.73
Area 6	$ 32.02	22.99

AREA DESCRIPTIONS

AREA 1: BAYFIELD, DOUGLAS, PRICE, SAWYER, AND WASHBURN COUNTIES

AREA 2: ADAMS, ASHLAND, BARRON, BROWN, BURNETT, CALUMET, CHIPPEWA, CLARK, COLUMBIA, DODGE, DOOR, DUNN, FLORENCE, FOND DU LAC, FOREST, GREEN LAKE, IRON, JEFFERSON, KEWAUNEE,

LANGLADE, LINCOLN, MANITOWOC, MARATHON, MARINETTE, MARQUETTE, MENOMINEE, OCONTO, ONEIDA, OUTAGAMIE, POLK, PORTAGE, RUSK, ST CROIX, SAUK, SHAWANO, SHEBOYGAN, TAYLOR, VILAS, WALWORTH, WAUPACA, WAUSHARA, WINNEBAGO, AND WOOD COUNTIES

AREA 3: BUFFALO, CRAWFORD, EAU CLAIRE, JACKSON, JUNEAU, LA CROSSE MONROE, PEPIN, PIERCE, RICHLAND, TREMPEALEAU, AND VERNON COUNTIES

AREA 4: MILWAUKEE, OZAUKEE, WASHINGTON, AND WAUKESHA COUNTIES

AREA 5: DANE, GRANT, GREEN, IOWA, LAFAYETTE, AND ROCK COUNTIES

AREA 6: KENOSHA AND RACINE COUNTIES

TEAM0039-001 06/01/2021

	Rates	Fringes
TRUCK DRIVER		
1 & 2 Axles	$ 32.57	23.81
3 or more Axles; Euclids, Dumptor & Articulated, Truck Mechanic	$ 32.72	23.81
WELL DRILLER	$ 16.52	3.70

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification

and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union, which prevailed in the survey for this classification, which in this example would be Plumbers 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Division National Office Branch of Wage Surveys. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION"

"General Decision Number: WI20220008 01/21/2022

Superseded General Decision Number: WI20210008

State: Wisconsin

Construction Types: Heavy (Sewer and Water Line and Tunnel)

Counties: Wisconsin Statewide.

TUNNEL, SEWER & WATER LINE CONSTRUCTION PROJECTS

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that aresubject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60).

If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022, Executive Order 14026 generally applies to the contract. The contractor must pay all covered workers at least $15.00 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2022.

If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022, Executive Order 13658 generally applies to the contract. The contractor must pay all covered workers at least $11.25 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2022.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/07/2022
1	01/21/2022

BRWI0001-002 06/01/2020

CRAWFORD, JACKSON, JUNEAU, LA CROSSE, MONROE, TREMPEALEAU, AND VERNON COUNTIES

	Rates	Fringes
BRICKLAYER	$ 35.31	24.7 7

BRWI0002-002 06/01/2020

ASHLAND, BAYFIELD, DOUGLAS, AND IRON COUNTIES

	Rates	Fringes
BRICKLAYER	$ 42.77	23.47

BRWI0002-005 06/01/2020

ADAMS, ASHLAND, BARRON, BROWN, BURNETT, CALUMET, CHIPPEWA, CLARK, COLUMBIA, DODGE, DOOR, DUNN, FLORENCE, FOND DU LAC, FOREST, GREEN LAKE, IRON, JEFFERSON, KEWAUNEE, LANGLADE, LINCOLN, MANITOWOC, MARATHON, MARINETTE, MARQUETTE, MENOMINEE, OCONTO, ONEIDA, OUTAGAMIE, POLK, PORTAGE, RUSK, ST CROIX, SAUK, SHAWANO, SHEBOYGAN, TAYLOR, VILAS, WALWORTH, WAUPACA, WAUSHARA, WINNEBAGO, AND WOOD COUNTIES

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER	$ 36.68	23.40

BRWI0003-002 06/01/2020

BROWN, DOOR, FLORENCE, KEWAUNEE, MARINETTE, AND OCONTO COUNTIES

	Rates	Fringes
BRICKLAYER	$ 35.68	24.40

BRWI0004-002 06/01/2020

KENOSHA, RACINE, AND WALWORTH COUNTIES

	Rates	Fringes
BRICKLAYER	$ 39.90	25.53

BRWI0006-002 06/01/2020

ADAMS, CLARK, FOREST, LANGLADE, LINCOLN, MARATHON, MENOMINEE, ONEIDA, PORTAGE, PRICE, TAYLOR, VILAS AND WOOD COUNTIES

	Rates	Fringes
BRICKLAYER	$ 36.60	23.48

BRWI0007-002 06/01/2020

GREEN, LAFAYETTE, AND ROCK COUNTIES

	Rates	Fringes
BRICKLAYER	$ 37.07	24.72

BRWI0008-002 06/01/2020

MILWAUKEE, OZAUKEE, WASHINGTON, AND WAUKESHA COUNTIES

	Rates	Fringes
BRICKLAYER	$ 40.75	24.32

BRWI0009-001 06/01/2020

GREEN LAKE, MARQUETTE, OUTAGAMIE, SHAWANO, WAUPACA, WASHARA, AND WINNEBAGO COUNTIES

	Rates	Fringes
BRICKLAYER	$ 35.68	24.40

BRWI0011-002 06/01/2020

CALUMET, FOND DU LAC, MANITOWOC, AND SHEBOYGAN COUNTIES

	Rates	Fringes
BRICKLAYER	$ 35.68	24.40

BRWI0013-002 06/03/2019

DANE, GRANT, IOWA, AND RICHLAND COUNTIES

	Rates	Fringes
BRICKLAYER	$ 35.56	24.23

BRWI0019-002 06/01/2020

BARRON, BUFFALO, BURNETT, CHIPPEWA, DUNN, EAU CLAIRE, PEPIN, PIERCE, POLK, RUSK, ST. CROIX, SAWYER AND WASHBURN COUNTIES

	Rates	Fringes
BRICKLAYER	$ 34.86	25.22

BRWI0021-002 06/01/2020

DODGE AND JEFFERSON COUNTIES

	Rates	Fringes
BRICKLAYER	$ 36.80	24.97

BRWI0034-002 06/01/2020

COLUMBIA AND SAUK COUNTIES

	Rates	Fringes
BRICKLAYER	$ 37.36	24.43

CARP0087-001 05/01/2016

BURNETT (W. of Hwy 48), PIERCE (W. of Hwy 29), POLK (W. of Hwys 35, 48 & 65), AND ST. CROIX (W. of Hwy 65) COUNTIES

	Rates	Fringes
Carpenter & Piledrivermen	$ 36.85	18.39

CARP0252-002 06/01/2016

ADAMS, BARRON, BAYFIELD (Eastern 2/3), BROWN, BUFFALO,

BURNETT (E. of Hwy 48), CALUMET, CHIPPEWA, CLARK, COLUMBIA, CRAWFORD, DANE, DODGE, DOOR, DUNN, EAU CLAIRE, FLORENCE (except area bordering Michigan State Line), FOND DU LAC, FOREST, GRANT, GREEN, GREEN LAKE, IOWA, IRON, JACKSON, JEFFERSON, JUNEAU, KEWAUNEE, LA CROSSE, LAFAYETTE, LANGLADE, LINCOLN, MANITOWOC, MARATHON, MARINETTE (except N.E. corner), MARQUETTE, MENOMINEE, MONROE, OCONTO, ONEIDA, OUTAGAMIE, PEPIN, PIERCE (E. of Hwys 29 & 65), POLK (E. of Hwys 35, 48 & 65), PORTAGE, PRICE, RICHLAND, ROCK, RUSK, SAUK, SAWYER, SHAWANO, SHEBOYGAN, ST CROIX (E. of Hwy 65), TAYLOR, TREMPEALEAU, VERNON, VILAS, WALWORTH, WASHBURN, WAUPACA, WAUSHARA, WINNEBAGO, AND WOOD COUNTIES

	Rates	Fringes
CARPENTER		
CARPENTER	$ 33.56	18.00
MILLWRIGHT	$ 35.08	18.35
PILEDRIVER	$ 34.12	18.00

CARP0252-010 06/01/2016

ASHLAND COUNTY

	Rates	Fringes
Carpenters		
Carpenter	$ 33.56	18.00
Millwright	$ 35.08	18.35
Pile Driver	$ 34.12	18.00

CARP0264-003 06/01/2016

KENOSHA, MILWAUKEE, OZAUKEE, RACINE, WAUKESHA, AND WASHINGTON COUNTIES

	Rates	Fringes
CARPENTER	$ 35.78	22.11

CARP0361-004 05/01/2018

BAYFIELD (West of Hwy 63) AND DOUGLAS COUNTIES

	Rates	Fringes
CARPENTER	$ 36.15	20.43

CARP2337-001 06/01/2016

ZONE A: MILWAUKEE, OZAUKEE, WAUKESHA AND WASHINGTON

ZONE B: KENOSHA & RACINE

	Rates	Fringes
PILEDRIVERMAN		
Zone A	$ 31.03	22.69
Zone B	$ 31.03	22.69

CARP2337-003 06/01/2019

	Rates	Fringes
MILLWRIGHT		
Zone A	$ 33.58	21.53
Zone B	$ 33.58	21.53

ZONE DEFINITIONS

ZONE A: MILWAUKEE, OZAUKEE, WAUKESHA AND WASHINGTON COUNTIES

ZONE B: KENOSHA & RACINE COUNTIES

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* ELEC0014-002 12/26/2021

ASHLAND, BARRON, BAYFIELD, BUFFALO, BURNETT, CHIPPEWA, CLARK (except Maryville, Colby, Unity, Sherman, Fremont, Lynn & Sherwood), CRAWFORD, DUNN, EAU CLAIRE, GRANT, IRON, JACKSON, LA CROSSE, MONROE, PEPIN, PIERCE, POLK, PRICE, RICHLAND, RUSK, ST CROIX, SAWYER, TAYLOR, TREMPEALEAU, VERNON, AND WASHBURN COUNTIES

	Rates	Fringes
Electricians:	$ 37.83	21.89

ELEC0127-002 06/01/2020

KENOSHA COUNTY

	Rates	Fringes
Electricians:	$ 41.62	30%+12.70

ELEC0158-002 05/30/2021

BROWN, DOOR, KEWAUNEE, MANITOWOC (except Schleswig), MARINETTE(Wausuakee and area South thereof), OCONTO, MENOMINEE (East of a ine 6 miles West of the West boundary of Oconto County), SHAWANO (Except Area North of Townships of Aniwa and Hutchins) COUNTIES

	Rates	Fringes
ELECTRICIAN	$ 36.14	29.75%+10.26

ELEC0159-003 05/30/2021

COLUMBIA, DANE, DODGE (Area West of Hwy 26, except Chester and Emmet Townships), GREEN, LAKE (except Townships of Berlin, Seneca, and St. Marie), IOWA, MARQUETTE (except Townships of Neshkoka, Crystal Lake, Newton, and Springfield), and SAUK COUNTIES

	Rates	Fringes
ELECTRICIAN	$ 43.38	23.13

ELEC0219-004 06/01/2019

FLORENCE COUNTY (Townships of Aurora, Commonwealth, Fern, Florence and Homestead) AND MARINETTE COUNTY (Township of

Niagara)

	Rates	Fringes
Electricians:		
Electrical contracts over $180,000	$ 33.94	21.80
Electrical contracts under $180,000	$ 31.75	21.73

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* ELEC0242-005 05/30/2021

DOUGLAS COUNTY

	Rates	Fringes
Electricians:	$ 41.37	69.25%

ELEC0388-002 06/01/2020

ADAMS, CLARK (Colby, Freemont, Lynn, Mayville, Sherman, Sherwood, Unity), FOREST, JUNEAU, LANGLADE, LINCOLN, MARATHON, MARINETTE (Beecher, Dunbar, Goodman & Pembine), MENOMINEE (Area West of a line 6 miles West of the West boundary of Oconto County), ONEIDA, PORTAGE, SHAWANO (Aniwa and Hutchins), VILAS AND WOOD COUNTIES

	Rates	Fringes
Electricians:	$ 34.85	26%+11.20

ELEC0430-002 06/01/2021

RACINE COUNTY (Except Burlington Township)

	Rates	Fringes
Electricians:	$ 43.45	24.89

ELEC0494-005 06/01/2021

MILWAUKEE, OZAUKEE, WASHINGTON, AND WAUKESHA COUNTIES

	Rates	Fringes
Electricians:	$ 44.39	25.67

ELEC0494-006 06/01/2021

CALUMET (Township of New Holstein), DODGE (East of Hwy 26 including Chester Township), FOND DU LAC, MANITOWOC (Schleswig), and SHEBOYGAN COUNTIES

	Rates	Fringes
Electricians:	$ 37.91	22.74

ELEC0577-003 06/01/2021

CALUMET (except Township of New Holstein), GREEN LAKE (N. part including Townships of Berlin, St Marie, and Seneca), MARQUETTE (N. part including Townships of Crystal Lake, Neshkoro, Newton,

and Springfield), OUTAGAMIE, WAUPACA, WAUSHARA, AND WINNEBAGO COUNTIES

	Rates	Fringes
Electricians:	$ 35.66	29.50%+10.00

ELEC0890-003 06/01/2021

DODGE (Emmet Township only), GREEN, JEFFERSON, LAFAYETTE, RACINE (Burlington Township), ROCK AND WALWORTH COUNTIES

	Rates	Fringes
Electricians:	$ 39.00	25.95%+11.17

ENGI0139-003 06/01/2020

REMAINING COUNTIES

	Rates	Fringes
Power Equipment Operator		
Group 1	$ 42.92	23.15
Group 2	$ 41.67	23.15
Group 3	$ 39.97	23.15
Group 4	$ 39.44	23.15
Group 5	$ 37.37	23.15
Group 6	$ 35.84	23.15

HAZARDOUS WASTE PREMIUMS:
EPA Level ""A"" Protection: $3.00 per hour
EPA Level ""B"" Protection: $2.00 per hour
EPA Level ""C"" Protection: $1.00 per hour

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Cranes, Tower Cranes and Derricks with or without attachments with a lifting capacity of over 100 tons; Cranes, Tower Cranes, and Derricks with boom, leads and/or jib lengths 176 ft or longer.

GROUP 2: Backhoes (Excavators) weighing 130,00 lbs and over; Cranes, Tower Cranes and Derricks with or without attachments with a lifting capacity of 100 tons or less; Cranes, Tower Cranes, and Derricks with boom, leads, and/or jib lengths 175 ft or less; Caisson Rigs; Pile Driver

GROUP 3: Backhoes (Excavators) weighing under 130,000 lbs; Travelling Crane (bridge type); Milling Machine; Concrete Paver over 27 E; Concrete Spreader and Distributor; Concrete Laser Screed; Concrete Grinder and Planing Machine; Slipform Curb and Gutter Machine; Boring Machine (Directional); Dredge Operator; Skid Rigs; over 46 meter Concrete Pump.

GROUP 4: Hydraulic Backhoe (tractor or truck mounted); Hydraulic Crane, 10 tons or less; Tractor, Bulldozer, or End Loader (over 40 hp); Motor Patrol; Scraper Operator; Bituminous Plant and Paver Operator; Screed-Milling Machine; Roller over 5 tons; Concrete pumps 46 meter and under; Grout Pumps; Rotec type machine; Hydro Blaster, 10,000 psi and over; Rotary Drill Operator; Percussion

Drilling Machine; Air Track Drill with or without integral hammer; Blaster; Boring Machine (vertical or horizontal); Side Boom; Trencher, wheel type or chain type having 8 inch or larger bucket; Rail Leveling Machine (Railroad); Tie Placer; Tie Extractor; Tie Tamper; Stone Leveler; Straddle Carrier; Material Hoists; Stack Hoist; Man Hoists; Mechanic and Welder; Off Road Material Haulers.

GROUP 5: Tractor, Bulldozer, or Endloader (under 40 hp); Tampers -Compactors, riding type; Stump Chipper, large; Roller, Rubber Tire; Backfiller; Trencher, chain type (bucket under 8 inch); Concrete Auto Breaker, large; Concrete Finishing Machine (road type); Concrete Batch Hopper; Concrete Conveyor Systems; Concrete Mixers, 14S or over; Pumps, Screw Type and Gypsum); Hydrohammers, small; Brooms and Sweeeprs; Lift Slab Machine; Roller under 5 tons; Industrial Locomotives; Fireman (Pile Drivers and Derricks); Pumps (well points); Hoists, automatic; A-Frames and Winch Trucks; Hoists (tuggers); Boats (Tug, Safety, Work Barges and Launches); Assistant Engineer

GROUP 6: Shouldering Machine Operator; Farm or Industrial Tractor mounted equipment; Post Hole Digger; Auger (vertical and horizontal); Skid Steer Loader with or without attachments; Robotic Tool Carrier with or without attachments; Power Pack Vibratory/Ultra Sound Driver and Extractor; Fireman (Asphalt Plants); Screed Operator; Stone Crushers and Screening Plants; Air, Electric, Hydraulic Jacks (Slip Form); Prestress Machines; Air Compressor, 400 CFM or over; Refrigeration Plant/Freese Machine; Boiler Operators (temporary heat); Forklifts; Welding Machines; Generators; Pumps over 3""; Heaters, Mechanical; Combination small equipment operator; Winches, small electric; Oiler; Greaser; Rotary Drill Tender; Conveyor; Elevator Operator

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ENGI0139-007 06/01/2020

DODGE, FOND DU LAC, JEFFERSON, KENOSHA, MILWAUKEE, OZAUKEE, RACINE, SHEBOYGAN, WALWORTH, WASHINGTON, AND WAUKESHA COUNTIES

	Rates	Fringes
Power Equipment Operator		
Group 1	$ 41.64	23.25
Group 2	$ 40.86	23.25
Group 3	$ 39.91	23.25
Group 4	$ 38.86	23.25
Group 5	$ 37.46	23.25

HAZARDOUS WASTE PREMIUMS:
EPA Level ""A"" Protection: $3.00 per hour
EPA Level ""B"" Protection: $2.00 per hour
EPA Level ""C"" Protection: $1.00 per hour

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Cranes, Tower Cranes, and Derricks with or without attachments, with a lifting capacity of over 100 tons; or Cranes, Tower Cranes, and Derricks with boom, leads, and/or jib lengths measuring 176 feet or longer; Backhoes (Excavators) 130,000 lbs and over; Caisson Rigs and Pile Drivers

GROUP 2: Cranes, Tower Cranes and Derricks with or without attachments with a lifting capacity of 100 tons or under; or Cranes, Tower Cranes, and Derricks with boom, lead, and\or jib lengths measuring 175 feet or under; Backhoes (Excavators) under 130,000 lbs; Skid Rigs; Dredge Operator: Traveling Crane (Bridge type); Concrete Paver over 27 E; Concrete Spreader and Distributor; Concrete Pumps and Boring Machines (directional)

GROUP 3: Material Hoists; Stack Hoists; Tractor or Truck mounted Hydraulic Backhoe; Tractor or Truck Mounted Hydraulic Crane, 5 tons or under; Manhoist; Tractor over 40 hp; Bulldozer over 40 hp; Endloader over 40 hp; Forklift, 25 ft and over; Motor Patrol; Scraper Operator; Sideboom; Straddle Carrier; Mechanic and Welder; Bituminous Plant and Paver Operator; Roller over 5 tons; Percussion Drill Operator; Rotary Drill Operator; Blaster; Air Track Drill; Trencher (wheel type or chain type having over 8 inch bucket); Elevator; Milling Machine and Boring Machine (horizontal or vertical); Backhoe Mounted Compactor

GROUP 4: Backfiller; Concrete Auto Breaker (large); Concrete Finishing Machine (road type); Roller, Rubber Tire; Concrete Batch Hopper; Concrete Conveyor System; Concrete Mixers (14S or over); Screw type Pumps and Gypsum Pumps; Grout Pumps; Tractor, Bulldozer, End Loader, under 40 hp; Pumps (well points); Trencher (chain type 8 inch or smaller bucket; Industrial Locomotives; Roller under 5 tons; Fireman (Piledrivers and Derricks); Robotic Tool Carrier with or without attachments.

GROUP 5: Hoists (Automatic); Forklift, 12 ft to 25 ft; Tamper-Compactors, riding type; A-Frame andWinch Trucks; Concrete Auto Breaker; Hydrohammer, small; Brooms and Sweepers; Hoist (Tuggers); Stump Chipper, large; Boats (Tug, Safety, Work Barges and Launch); Shouldering Machine Operator; Screed Operator; Farm or Industrial Tractor; Post Hole Digger; Stone Crushers and Screening Plants; Firemen (Asphalt Plants); Air Compressor (400 CFM or over); Augers (vertical and horizontal); Generators, 150 KW and over; Air, Electric Hydraulic Jacks (Slipform); Prestress Machines; Skid Steer Loader with or without attachments; Boiler operators (temporary heat); Forklift, 12 ft and under; Screed Operator Milling Machine; Refrigeration Plant/Freeze Machine; Power Pack Vibratory/Ultra Sound Driver and Extractor; Generators under 150 KW; Combination small equipment operator; Compressors under 400 CFM; Welding Machines; Heaters, Mechanical; Pumps; Winches, Small Electric; Oiler and Greaser; Conveyor; High pressure utility locating machine (daylighting machine).

IRON0008-002 06/01/2021

BROWN, CALUMET, DOOR, FOND DU LAC, KEWAUNEE, MANITOWOC, MARINETTE, OCONTO, OUTAGAMI, SHAWANO, SHEBOYGAN, AND WINNEBAGO COUNTIES:

	Rates	Fringes
IRONWORKER	$ 38.77	28.15

Paid Holidays: New Year's Day, Memorial Day, July 4th, Labor Day, Thanksgiving Day & Christmas Day.

IRON0008-003 06/01/2021

KENOSHA, MILWAUKEE, OZAUKEE, RACINE, WALWORTH (N.E. 2/3), WASHINGTON, AND WAUKESHA COUNTIES

	Rates	Fringes
IRONWORKER	$ 40.57	28.40

Paid Holidays: New Year's Day, Memorial Day, July 4th, Labor Day, Thanksgiving Day & Christmas Day.

IRON0383-001 06/06/2021

ADAMS, COLUMBIA, CRAWFORD, DANE, DODGE, FLORENCE, FOREST, GRANT, GREENE, (Excluding S.E. tip), GREEN LAKE, IOWA, JEFFERSON, JUNEAU, LA CROSSE, LAFAYETTE, LANGLADE, MARATHON, MARQUETTE, MENOMINEE, MONROE, PORTAGE, RICHLAND, ROCK (Northern area, vicinity of Edgerton and Milton), SAUK, VERNON, WAUPACA, WAUSHARA, AND WOOD COUNTIES

	Rates	Fringes
IRONWORKER	$ 37.75	27.06

IRON0498-005 06/01/2021

GREEN (S.E. 1/3), ROCK (South of Edgerton and Milton), and WALWORTH (S.W. 1/3) COUNTIES:

	Rates	Fringes
IRONWORKER	$ 41.37	44.41

IRON0512-008 06/03/2019

BARRON, BUFFALO, CHIPPEWA, CLARK, DUNN, EAU CLAIRE, JACKSON, PEPIN, PIERCE, POLK, RUSK, ST CROIX, TAYLOR, AND TREMPEALEAU COUNTIES

	Rates	Fringes
IRONWORKER	$ 37.60	29.40

IRON0512-021 05/03/2021

ASHLAND, BAYFIELD, BURNETT, DOUGLAS, IRON, LINCOLN, ONEIDA, PRICE, SAWYER, VILAS AND WASHBURN COUNTIES

	Rates	Fringes
IRONWORKER	$ 35.09	31.80

LABO0113-004 06/01/2020

MILWAUKEE, OZAUKEE, WASHINGTON, AND WAUKESHA COUNTIES

	Rates	Fringes
Laborers: (Open Cut)		
Group 1	$ 16.38	21.08
Group 2	$ 18.65	21.08
Group 3	$ 22.19	21.08
Group 4	$ 31.56	21.08
Group 5	$ 31.70	21.08
Group 6	$ 31.76	21.08
Group 7	$ 34.77	21.08
Group 8	$ 37.59	21.08
Group 9	$ 38.23	21.08

LABORERS CLASSIFICATIONS [OPEN CUT]

GROUP 1: Yard Laborer

GROUP 2: Landscaper

GROUP 3: Flag Person

GROUP 4: Paving Laborer

GROUP 5: General Laborer on Surface; Top Man

GROUP 6: Mud Mixer

GROUP 7: Mucker; Form Stripper; Bottom Digger and Misc; Bottom Man and Welder on Surface

GROUP 8: Concrete Manhole Builder; Caisson Worker; Miner; Pipe Layer; Rock Driller and Joint Man; Timber Man and Concrete Brusher; Bracer in Trench Behind Machine & Tight Sheeting; Concrete Formsetter and Shoveler; Jackhammer Operator

GROUP 9: Blaster

LABO0113-005 06/01/2020

SEWER, TUNNEL & UNDERGROUND

KENOSHA AND RACINE COUNTIES

	Rates	Fringes
Laborers:		
Group 1	$ 23.05	21.08
Group 2	$ 28.98	21.08
Group 3	$ 32.34	21.08
Group 4	$ 34.11	21.08

TUNNEL WORK UNDER COMPRESSED AIR: 0-15 lbs add $1.00, 15-30 lbs add $2.00, over 30 lbs add $3.00

LABORERS CLASSIFICATIONS

GROUP 1: Flagperson

GROUP 2: Top Man, General Laborer, Wellpoint Installation, Wire Mesh and Reinforcement, Concrete Worker, Form Stripper, Strike-off Work

GROUP 3: Machine and Equipment Operator, Sheeting, Form Setting, Patch Finisher, Bottom Man, Joint Sawer, Gunnite Man, Manhole Builder, Welder-Torchman, Blaster, Caulker, Bracer, Bull Float, Conduit Worker, Mucker and Car Pusher, Raker and Luteman, Hydraulic Jacking of Shields, Shield Drivers, Mining Machine, Lock Tenders, Mucking Machine Operator, Motor Men & Gauge Tenders and operation of incidental Mechanical Equipment and all Power Driven Tools

GROUP 4: Pipelayer, Miner and Laser Operator

LABO0113-008 06/01/2020

MILWAUKEE, OZAUKEE, WASHINGTON & WAUKESHA COUNTIES

	Rates	Fringes
Laborers: (Tunnel-Free Air)		
Group 1	$ 22.19	21.08
Group 2	$ 31.70	21.08
Group 3	$ 31.76	21.08
Group 4	$ 34.77	21.08
Group 5	$ 34.91	21.08
Group 6	$ 37.59	21.08
Group 7	$ 38.23	21.08

LABORERS CLASSIFICATIONS [TUNNEL - FREE AIR]:

GROUP 1: Flagperson

GROUP 2: General Laborer on surface; Tower Man

GROUP 3: Saw Man; Top Man

GROUP 4: Form Stripper; Car Pusher

GROUP 5: Mucker; Dinkey; Welder (rate on surface)

GROUP 6: Concrete Manhole Builder; Mucking Machine; Miner; Mining Machine; Welder; Rock Driller; Concrete Buster; Jack Hammer Operator; Caisson Worker; Pipelayer and Joint Man; Bracerman

GROUP 7: Blaster

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* LABO0113-009 06/01/2020

MILWAUKEE, OZAUKEE, WASHINGTON & WAUKESHA COUNTIES

	Rates	Fringes
Laborers: (Tunnel - *COMPRESSED AIR 0 - 15 lbs.)		
Group 1	$ 22.19	21.08
Group 2	$ 31.70	21.08
Group 3	$ 35.31	21.08
Group 4	$ 36.11	21.08
Group 5	$ 36.23	21.08
Group 6	$ 38.93	21.08
Group 7	$ 39.55	21.08

LABORERS CLASSIFICATIONS [TUNNEL - COMPRESSED AIR]:

*Compressed Air 15 - 30 lbs add $2.00 to all classifications
*Compressed Air over 30 lbs add $3.00 to all classifcations

GROUP 1: Flagperson

GROUP 2: General Laborer on surface

GROUP 3: Lock Tender on surface

GROUP 4: Form Stripper; Car Pusher

GROUP 5: Mucker; Dinkey

GROUP 6: Mucking Machine; Miner; Mining Machine; Welder & Rock Driller; Lock Tender in tunnel; Concrete Buster; Jack Hammer Operator; Caisson Worker; Pielayer and Joint Man; Bracerman; Nozzle Man on Gunite; Timber Man; Concrete Brusher

GROUP 7: Blaster

NOTE: Hazardous & Toxic Waste Removal: add $0.15 per hour.

LABO0140-005 06/01/2020

ADAMS, ASHLAND, BARRON, BROWN, BUFFALO, CALUMET, CHIPPEWA, CLARK, COLUMBIA, CRAWFORD, DODGE, DOOR, DUNN, EAU CLAIRE, FLORENCE,FOND DU LAC, FOREST, GRANT, GREEN, GREEN LAKE, IOWA, JACKSON, JEFFERSON, JUNEAU, LACROSSE, LAFAYETTE, LANGLADE, LINCOLN, MANITOWOC, MARATHON, MARINETTE, MARQUETTE, MENOMINEE, MONROE, OCONTO, ONEIDA, OUTAGAMIE, PEPIN, PIERCE, POLK, PORTAGE, PRICE, RICHLAND, ROCK, RUSK, ST CROIX, SAUK, SAWYER, SHAWANO, SHEBOYGAN, TAYLOR, TREMMPEALEAU, VERNON, VILAS, WALWWORTH, WASHBURN, WAUPACA, WAUSHARA, WINNEBAGO, AND WOOD COUNTIES

	Rates	Fringes
LABORER (SEWER & WATER)		
Group 1	$ 29.33	17.88
Group 2	$ 31.18	17.88
Group 3	$ 31.48	17.88
Group 4	$ 32.13	17.88

FOR ALL TUNNEL WORK UNDER COMPRESSED AIR: 0-15 lbs add $1.00, 15-30 lbs add $2.00, over 30 lbs add $3.00

LABORER CLASSIFICATIONS:

GROUP 1: Flagperson

GROUP 2: General Laborer, Wellpoint Installation; Form Stripper; Strike Off worker

GROUP 3: Sheeting Formsetting; Patch Finisher; Bottom Man; Joint Sawer; Gunnite Man; Manhole Builder; Welder; Torchman; Blaster; Caulker Bracer; Bull Float; Mucker and Car Pusher; Raker and Luteman; Hydraulic jacking of shields, Shield Drivers; Mining Machine; Lock Tenders; Mucking Machine Operators; Motor Men and Gauge Tenders; Power Tool Operators

GROUP 4: Pipelayer, Miner, and Laser Operator

LABO0464-002 06/01/2020

DANE AND DOUGLAS COUNTIES

	Rates	Fringes
LABORER		
Group 1	$ 29.23	17.88
Group 2	$ 31.43	17.88
Group 3	$ 31.63	17.88
Group 4	$ 32.38	17.88

FOR ALL TUNNEL WORK UNDER COMPRESSED AIR: 0 - 15 lbs add $1.00, 15- 30 lbs add $2.00, over 30 lbs add $3.00

LABORERS CLASSIFICATIONS:

GROUP 1: Flagperson

GROUP 2: General Laborer; Wellpoint Installation; Concrete Worker; Form Stripper; Strike Off worker

GROUP 3: Sheeting Formsetting; Patch Finisher; Bottom Man; Joint Sawer; Gunnite Man; Manhole Builder; Welder; Torchman; Blaster; Caulker Bracer; Bull Float; Mucker and Car Pusher; Raker and Luteman; Hydraulic jacking of shields, Shield Dirvers; Mining Machine; Lock Tenders; Mucking Machine Operators; Motor Men and Gauge Tenders; Power Tool Operators

GROUP 4: Pipelayer, Miner, and Laser Operator

LABO1091-010 06/01/2020

BAYFIELD, BURNETT, IRON, SAWYER, AND WASHBURN COUNTIES

	Rates	Fringes
Laborers: (SEWER & WATER)		
Group 1	$ 29.02	17.88
Group 2	$ 31.08	17.88
Group 3	$ 31.28	17.88
Group 4	$ 32.03	17.88

FOR ALL TUNNEL WORK UNDER COMPRESSED AIR:
0 - 15 lbs add $1.00, 15-30 lbs add $2.00, over 30 lbs add $3.00

LABORERS CLASSIFICATIONS:

GROUP 1: Flagperson

GROUP 2: Laborers, Wellpoint Installation; Form Stripper; Strike Off worker

GROUP 3: Sheeting Formsetting; Patch Finisher; Bottom Man; Joint Sawer; Gunnite Man; Manhole Builder; Welder; Torchman; Blaster; Caulker Bracer; Bull Float; Mucker and Car Pusher; Raker and Luteman; Hydraulic jacking of

shields, Shield Dirvers; Mining Machine; Lock Tenders; Mucking Machine Operators; Motor Men and Gauge Tenders; Power Tool Operators

GROUP 4: Pipelayer, Miner, and Laser Operator

PLAS0599-010 06/01/2017

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER		
Area 1	$ 39.46	17.17
Area 2 (BAC)	$ 35.07	19.75
Area 3	$ 35.61	19.40
Area 4	$ 34.70	20.51
Area 5	$ 36.27	18.73
Area 6	$ 32.02	22.99

AREA DESCRIPTIONS

AREA 1: BAYFIELD, DOUGLAS, PRICE, SAWYER, AND WASHBURN COUNTIES

AREA 2: ADAMS, ASHLAND, BARRON, BROWN, BURNETT, CALUMET, CHIPPEWA, CLARK, COLUMBIA, DODGE, DOOR, DUNN, FLORENCE, FOND DU LAC, FOREST, GREEN LAKE, IRON, JEFFERSON, KEWAUNEE, LANGLADE, LINCOLN, MANITOWOC, MARATHON, MARINETTE, MARQUETTE, MENOMINEE, OCONTO, ONEIDA, OUTAGAMIE, POLK, PORTAGE, RUSK, ST CROIX, SAUK, SHAWANO, SHEBOYGAN, TAYLOR, VILAS, WALWORTH, WAUPACA, WAUSHARA, WINNEBAGO, AND WOOD COUNTIES

AREA 3: BUFFALO, CRAWFORD, EAU CLAIRE, JACKSON, JUNEAU, LA CROSSE MONROE, PEPIN, PIERCE, RICHLAND, TREMPEALEAU, AND VERNON COUNTIES

AREA 4: MILWAUKEE, OZAUKEE, WASHINGTON, AND WAUKESHA COUNTIES

AREA 5: DANE, GRANT, GREEN, IOWA, LAFAYETTE, AND ROCK COUNTIES

AREA 6: KENOSHA AND RACINE COUNTIES

TEAM0039-001 06/01/2021

	Rates	Fringes
TRUCK DRIVER		
1 & 2 Axles	$ 32.57	23.81
3 or more Axles; Euclids, Dumptor & Articulated, Truck Mechanic	$ 32.72	23.81
WELL DRILLER	$ 16.52	3.70

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave

for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union, which prevailed in the survey for this classification, which in this example would be Plumbers 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average

calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour Division National Office Branch of Wage Surveys. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor

200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISION"

August 2018

NOTICE TO BIDDERS
WAGE RATE DECISION

The wage rate decision of the Department of Labor which has been incorporated in these advertised specifications is incomplete in that the classifications may be omitted from the Department of Labor's decision.

Since the bidder is responsible, independently, for ascertaining area practice with respect to the necessity, or lack of necessity, for the use of these classifications in the prosecution of the work contemplated by this project, no inference may be drawn from the omission of these classifications concerning prevailing area practices relative to their use. Further, this omission will not, per se, be construed as establishing any governmental liability for increased labor cost if it is subsequently determined that such classifications are required.

There may be omissions and/or errors in the federal wage rates. The bidder is responsible for evaluating and determining the correct applicable rate.

If a project includes multiple types of construction (highway, bridge over navigable water, sanitary sewer and water main, building) and there is not a separate wage determination for this type of work included in the proposal, use the wage determination that is in the proposal.

If a project includes multiple types of construction, different wage rate determinations may be inserted into the contract (WI10/Highway = in all WisDOT highway contracts, WI15/Heavy = bridge over navigable water per USDOL and US Coast Guard designation, WI8/Heavy (Sewer & Water Line & Tunnel) = sanitary sewer and water main if the cost is more than 20% of the contract and/or at least $1,000,000, and Building). If multiple wage rate determinations are inserted into the contract, use the classification in the wage determination for the work being done. Use WI15 wage rates when working on the bridge and/or structure from bank to bank. Use WI8 wage rates when working on any sanitary sewer or water main work. Use Building wage rates for all work done within the footprint of the building. Use WI10 wage rates for all other highway work in the contract and approaches to structures. For example, if a laborer is working within the footprint of a building, use the Laborer rate in the Building wage determination inserted in the contract. If a laborer is working on a bridge/structure within the banks, use the Laborer rate in the WI15/Heavy wage determination if inserted in the contract. If the laborer is working on the highway, use the Laborer rate in the WI10/Highway wage determination.

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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	201.0105 Clearing	19.000 STA	_____.____	_____.____
0004	201.0120 Clearing	45.000 ID	_____.____	_____.____
0006	201.0205 Grubbing	19.000 STA	_____.____	_____.____
0008	201.0220 Grubbing	45.000 ID	_____.____	_____.____
0010	204.0100 Removing Concrete Pavement	29,835.000 SY	_____.____	_____.____
0012	204.0115 Removing Asphaltic Surface Butt Joints	8,660.000 SY	_____.____	_____.____
0014	204.0150 Removing Curb & Gutter	9,560.000 LF	_____.____	_____.____
0016	204.0155 Removing Concrete Sidewalk	3,370.000 SY	_____.____	_____.____
0018	204.0165 Removing Guardrail	240.000 LF	_____.____	_____.____
0020	204.0195 Removing Concrete Bases	82.000 EACH	_____.____	_____.____
0022	204.0210 Removing Manholes	2.000 EACH	_____.____	_____.____
0024	204.0220 Removing Inlets	72.000 EACH	_____.____	_____.____
0026	204.0245 Removing Storm Sewer (size) 001. 12'X4' Box	44.000 LF	_____.____	_____.____
0028	204.0245 Removing Storm Sewer (size) 002. 12-Inch	1,360.000 LF	_____.____	_____.____
0030	204.0245 Removing Storm Sewer (size) 003. 15-Inch	408.000 LF	_____.____	_____.____
0032	204.0245 Removing Storm Sewer (size) 004. 18-Inch	172.000 LF	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0034	204.0245 Removing Storm Sewer (size) 005. 24-Inch	111.000 LF	_____.____	_____.____
0036	204.0245 Removing Storm Sewer (size) 006. 30-Inch	118.000 LF	_____.____	_____.____
0038	204.0246 Removing Ancillary Structure (structure) 001. Sta 147+70	1.000 EACH	_____.____	_____.____
0040	204.0246 Removing Ancillary Structure (structure) 002. Sta 154+20	1.000 EACH	_____.____	_____.____
0042	204.0246 Removing Ancillary Structure (structure) 003. Sta 161+20	1.000 EACH	_____.____	_____.____
0044	204.0246 Removing Ancillary Structure (structure) 004. Sta 169+55	1.000 EACH	_____.____	_____.____
0046	204.9060.S Removing (item description) 001. Removing Street Light Assembly	66.000 EACH	_____.____	_____.____
0048	204.9060.S Removing (item description) 002. Traffic Signal	49.000 EACH	_____.____	_____.____
0050	204.9090.S Removing (item description) 001. Railing	425.000 LF	_____.____	_____.____
0052	205.0100 Excavation Common	43,698.000 CY	_____.____	_____.____
0054	206.1000 Excavation for Structures Bridges (structure) 001. B-13-891	LS	LUMP SUM	_____.____
0056	213.0100 Finishing Roadway (project) 001. 5992-11-31	1.000 EACH	_____.____	_____.____
0058	305.0110 Base Aggregate Dense 3/4-Inch	1,711.000 TON	_____.____	_____.____
0060	305.0120 Base Aggregate Dense 1 1/4-Inch	29,165.000 TON	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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	305.0130 Base Aggregate Dense 3-Inch	20,100.000 TON	_____.____	_____.____
0064	310.0110 Base Aggregate Open-Graded	56.000 TON	_____.____	_____.____
0066	312.0110 Select Crushed Material	7,349.000 TON	_____.____	_____.____
0068	371.2000.S QMP Base Aggregate Dense 1 1/4-Inch Compaction	10.000 EACH	_____.____	_____.____
0070	405.0100 Coloring Concrete WisDOT Red	155.000 CY	_____.____	_____.____
0072	405.1000 Stamping Colored Concrete	155.000 CY	_____.____	_____.____
0074	415.0090 Concrete Pavement 9-Inch	120.000 SY	_____.____	_____.____
0076	416.0170 Concrete Driveway 7-Inch	540.000 SY	_____.____	_____.____
0078	416.0270 Concrete Driveway HES 7-Inch	320.000 SY	_____.____	_____.____
0080	455.0605 Tack Coat	4,749.000 GAL	_____.____	_____.____
0082	460.2000 Incentive Density HMA Pavement	8,700.000 DOL	1.00000	8,700.00
0084	460.6223 HMA Pavement 3 MT 58-28 S	9,891.000 TON	_____.____	_____.____
0086	460.6424 HMA Pavement 4 MT 58-28 H	3,695.000 TON	_____.____	_____.____
0088	465.0105 Asphaltic Surface	140.000 TON	_____.____	_____.____
0090	465.0120 Asphaltic Surface Driveways and Field Entrances	75.000 TON	_____.____	_____.____
0092	465.0125 Asphaltic Surface Temporary	3,930.000 TON	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0094	465.0315 Asphaltic Flumes	18.000 SY	_____.____	_____.____
0096	502.0100 Concrete Masonry Bridges	427.000 CY	_____.____	_____.____
0098	502.3101 Expansion Device	28.000 LF	_____.____	_____.____
0100	502.3200 Protective Surface Treatment	629.000 SY	_____.____	_____.____
0102	504.2000.S Precast Concrete Box Culvert (ft X ft) 001. 12 FT X 4 FT	107.000 LF	_____.____	_____.____
0104	504.2000.S Precast Concrete Box Culvert (ft X ft) 002. 12 FT X 6 FT	50.000 LF	_____.____	_____.____
0106	505.0400 Bar Steel Reinforcement HS Structures	6,580.000 LB	_____.____	_____.____
0108	505.0600 Bar Steel Reinforcement HS Coated Structures	64,720.000 LB	_____.____	_____.____
0110	506.2605 Bearing Pads Elastomeric Non-Laminated	3.000 EACH	_____.____	_____.____
0112	506.8006.S Prefabricated Steel Truss Pedestrian Bridge LRFD (structure) 001. B-13-891	1.000 EACH	_____.____	_____.____
0114	511.1100 Temporary Shoring	19,642.000 SF	_____.____	_____.____
0116	511.2300 Temp Shoring Left in Place (location) 001. Stage 2	2,000.000 SF	_____.____	_____.____
0118	513.8016 Railing Steel Pedestrian Type C3	1,182.000 LF	_____.____	_____.____
0120	516.0500 Rubberized Membrane Waterproofing	7.000 SY	_____.____	_____.____
0122	517.1000 Painting Epoxy System Steel Truss (structure) 001. B-13-891	LS	LUMP SUM	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0124	517.1010.S Concrete Staining (structure) 001. B-13-891	3,072.000 SF	_____.____	_____.____
0126	517.1010.S Concrete Staining (structure) 002. R-13-360	1,142.000 SF	_____.____	_____.____
0128	517.1010.S Concrete Staining (structure) 003. R-13-361	849.000 SF	_____.____	_____.____
0130	517.1015.S Concrete Staining Multi-Color (structure) 001. B-13-891	829.000 SF	_____.____	_____.____
0132	517.1015.S Concrete Staining Multi-Color (structure) 002. R-13-360	2,470.000 SF	_____.____	_____.____
0134	517.1015.S Concrete Staining Multi-Color (structure) 003. R-13-061	2,680.000 SF	_____.____	_____.____
0136	517.1050.S Architectural Surface Treatment (structure) 001. B-13-891	1,521.000 SF	_____.____	_____.____
0138	517.1050.S Architectural Surface Treatment (structure) 002. R-13-360	2,470.000 SF	_____.____	_____.____
0140	517.1050.S Architectural Surface Treatment (structure) 003. R-13-361	2,680.000 SF	_____.____	_____.____
0142	520.8000 Concrete Collars for Pipe	19.000 EACH	_____.____	_____.____
0144	522.1012 Apron Endwalls for Culvert Pipe Reinforced Concrete 12-Inch	1.000 EACH	_____.____	_____.____
0146	531.2030 Drilling Shaft 30-Inch	26.000 LF	_____.____	_____.____
0148	531.5220 Foundation Single-Shaft Type MF-II (structure) 001. S-13-586	2.000 EACH	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0150	532.5120 Monotube Cantilever Type II (structure) 001. Sta. 143+10	1.000 EACH	_____.____	_____.____
0152	532.5120 Monotube Cantilever Type II (structure) 002. Sta. 142+63	1.000 EACH	_____.____	_____.____
0154	532.5120 Monotube Cantilever Type II (structure) 003. Sta. 153+40	1.000 EACH	_____.____	_____.____
0156	532.5120 Monotube Cantilever Type II (structure) 004. Sta. 154+06	1.000 EACH	_____.____	_____.____
0158	532.5120 Monotube Cantilever Type II (structure) 005. Sta. 160+47	1.000 EACH	_____.____	_____.____
0160	532.5220 Monotube Full Span Type II (structure) 001. S-13-856	1.000 EACH	_____.____	_____.____
0162	550.1100 Piling Steel HP 10-Inch X 42 Lb	2,070.000 LF	_____.____	_____.____
0164	550.1120 Piling Steel HP 12-Inch X 53 Lb	360.000 LF	_____.____	_____.____
0166	601.0407 Concrete Curb & Gutter 18-Inch Type D	160.000 LF	_____.____	_____.____
0168	601.0411 Concrete Curb & Gutter 30-Inch Type D	1,200.000 LF	_____.____	_____.____
0170	601.0600 Concrete Curb Pedestrian	445.000 LF	_____.____	_____.____
0172	602.0410 Concrete Sidewalk 5-Inch	58,870.000 SF	_____.____	_____.____
0174	602.0415 Concrete Sidewalk 6-Inch	2,010.000 SF	_____.____	_____.____
0176	602.0515 Curb Ramp Detectable Warning Field Natural Patina	455.000 SF	_____.____	_____.____
0178	602.0615 Curb Ramp Detectable Warning Field Radial Natural Patina	275.000 SF	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0180	603.8000 Concrete Barrier Temporary Precast Delivered	1,800.000 LF	_____.____	_____.____
0182	603.8125 Concrete Barrier Temporary Precast Installed	2,100.000 LF	_____.____	_____.____
0184	604.0400 Slope Paving Concrete	10.000 SY	_____.____	_____.____
0186	608.0005 Storm Sewer Rock Excavation	150.000 CY	_____.____	_____.____
0188	608.0312 Storm Sewer Pipe Reinforced Concrete Class III 12-Inch	1,100.000 LF	_____.____	_____.____
0190	608.0315 Storm Sewer Pipe Reinforced Concrete Class III 15-Inch	22.000 LF	_____.____	_____.____
0192	608.0318 Storm Sewer Pipe Reinforced Concrete Class III 18-Inch	97.000 LF	_____.____	_____.____
0194	608.0324 Storm Sewer Pipe Reinforced Concrete Class III 24-Inch	190.000 LF	_____.____	_____.____
0196	608.0396 Storm Sewer Pipe Reinforced Concrete Class III 96-Inch	2,522.000 LF	_____.____	_____.____
0198	608.0412 Storm Sewer Pipe Reinforced Concrete Class IV 12-Inch	768.000 LF	_____.____	_____.____
0200	608.0415 Storm Sewer Pipe Reinforced Concrete Class IV 15-Inch	562.000 LF	_____.____	_____.____
0202	608.0418 Storm Sewer Pipe Reinforced Concrete Class IV 18-Inch	134.000 LF	_____.____	_____.____
0204	608.0430 Storm Sewer Pipe Reinforced Concrete Class IV 30-Inch	112.000 LF	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0206	608.0436 Storm Sewer Pipe Reinforced Concrete Class IV 36-Inch	16.000 LF	_____.____	_____.____
0208	611.0420 Reconstructing Manholes	5.000 EACH	_____.____	_____.____
0210	611.0430 Reconstructing Inlets	4.000 EACH	_____.____	_____.____
0212	611.0530 Manhole Covers Type J	2.000 EACH	_____.____	_____.____
0214	611.0642 Inlet Covers Type MS	3.000 EACH	_____.____	_____.____
0216	611.2004 Manholes 4-FT Diameter	3.000 EACH	_____.____	_____.____
0218	611.2005 Manholes 5-FT Diameter	8.000 EACH	_____.____	_____.____
0220	611.2006 Manholes 6-FT Diameter	3.000 EACH	_____.____	_____.____
0222	611.3004 Inlets 4-FT Diameter	8.000 EACH	_____.____	_____.____
0224	611.3230 Inlets 2x3-FT	66.000 EACH	_____.____	_____.____
0226	611.3901 Inlets Median 1 Grate	3.000 EACH	_____.____	_____.____
0228	611.8110 Adjusting Manhole Covers	6.000 EACH	_____.____	_____.____
0230	611.8115 Adjusting Inlet Covers	11.000 EACH	_____.____	_____.____
0232	611.8120.S Cover Plates Temporary	20.000 EACH	_____.____	_____.____
0234	612.0106 Pipe Underdrain 6-Inch	700.000 LF	_____.____	_____.____
0236	612.0108 Pipe Underdrain 8-Inch	18.000 LF	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0238	612.0110 Pipe Underdrain 10-Inch	9.000 LF	_____.____	_____.____
0240	612.0112 Pipe Underdrain 12-Inch	333.000 LF	_____.____	_____.____
0242	612.0206 Pipe Underdrain Unperforated 6-Inch	15.000 LF	_____.____	_____.____
0244	612.0406 Pipe Underdrain Wrapped 6-Inch	850.000 LF	_____.____	_____.____
0246	616.0700.S Fence Safety	5,000.000 LF	_____.____	_____.____
0248	618.0100 Maintenance And Repair of Haul Roads (project) 001. 5992-11-31	1.000 EACH	_____.____	_____.____
0250	619.1000 Mobilization	1.000 EACH	_____.____	_____.____
0252	620.0200 Concrete Median Blunt Nose	12.000 SF	_____.____	_____.____
0254	620.0300 Concrete Median Sloped Nose	669.000 SF	_____.____	_____.____
0256	624.0100 Water	1,475.000 MGAL	_____.____	_____.____
0258	625.0100 Topsoil	5,780.000 SY	_____.____	_____.____
0260	628.1504 Silt Fence	2,560.000 LF	_____.____	_____.____
0262	628.1520 Silt Fence Maintenance	4,570.000 LF	_____.____	_____.____
0264	628.1905 Mobilizations Erosion Control	21.000 EACH	_____.____	_____.____
0266	628.1910 Mobilizations Emergency Erosion Control	14.000 EACH	_____.____	_____.____
0268	628.2008 Erosion Mat Urban Class I Type B	5,780.000 SY	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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	628.7010 Inlet Protection Type B	61.000 EACH	_____.____	_____.____
0272	628.7015 Inlet Protection Type C	149.000 EACH	_____.____	_____.____
0274	629.0210 Fertilizer Type B	6.800 CWT	_____.____	_____.____
0276	630.0140 Seeding Mixture No. 40	104.000 LB	_____.____	_____.____
0278	630.0200 Seeding Temporary	156.000 LB	_____.____	_____.____
0280	630.0500 Seed Water	85.000 MGAL	_____.____	_____.____
0282	631.0300 Sod Water	81.000 MGAL	_____.____	_____.____
0284	631.1000 Sod Lawn	5,075.000 SY	_____.____	_____.____
0286	637.1220 Signs Type I Reflective SH	410.000 SF	_____.____	_____.____
0288	637.2210 Signs Type II Reflective H	810.050 SF	_____.____	_____.____
0290	637.2215 Signs Type II Reflective H Folding	88.060 SF	_____.____	_____.____
0292	637.2230 Signs Type II Reflective F	55.250 SF	_____.____	_____.____
0294	638.2102 Moving Signs Type II	20.000 EACH	_____.____	_____.____
0296	638.2601 Removing Signs Type I	2.000 EACH	_____.____	_____.____
0298	638.2602 Removing Signs Type II	100.000 EACH	_____.____	_____.____
0300	638.3000 Removing Small Sign Supports	26.000 EACH	_____.____	_____.____
0302	638.4000 Moving Small Sign Supports	4.000 EACH	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0304	642.5201 Field Office Type C	1.000 EACH	_____.____	_____.____
0306	643.0300 Traffic Control Drums	43,400.000 DAY	_____.____	_____.____
0308	643.0410 Traffic Control Barricades Type II	2,420.000 DAY	_____.____	_____.____
0310	643.0420 Traffic Control Barricades Type III	5,440.000 DAY	_____.____	_____.____
0312	643.0500 Traffic Control Flexible Tubular Marker Posts	280.000 EACH	_____.____	_____.____
0314	643.0600 Traffic Control Flexible Tubular Marker Bases	280.000 EACH	_____.____	_____.____
0316	643.0705 Traffic Control Warning Lights Type A	8,300.000 DAY	_____.____	_____.____
0318	643.0715 Traffic Control Warning Lights Type C	3,230.000 DAY	_____.____	_____.____
0320	643.0800 Traffic Control Arrow Boards	550.000 DAY	_____.____	_____.____
0322	643.0900 Traffic Control Signs	20,300.000 DAY	_____.____	_____.____
0324	643.1000 Traffic Control Signs Fixed Message	34.500 SF	_____.____	_____.____
0326	643.1050 Traffic Control Signs PCMS	900.000 DAY	_____.____	_____.____
0328	643.5000 Traffic Control	1.000 EACH	_____.____	_____.____
0330	644.1410 Temporary Pedestrian Surface Asphalt	400.000 SF	_____.____	_____.____
0332	644.1601 Temporary Pedestrian Curb Ramp	1,195.000 DAY	_____.____	_____.____
0334	644.1810 Temporary Pedestrian Barricade	400.000 LF	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0336	646.1020 Marking Line Epoxy 4-Inch	6,625.000 LF	_____.____	_____.____
0338	646.3020 Marking Line Epoxy 8-Inch	3,080.000 LF	_____.____	_____.____
0340	646.5020 Marking Arrow Epoxy	42.000 EACH	_____.____	_____.____
0342	646.5120 Marking Word Epoxy	12.000 EACH	_____.____	_____.____
0344	646.5220 Marking Symbol Epoxy	13.000 EACH	_____.____	_____.____
0346	646.5320 Marking Railroad Crossings Epoxy	4.000 EACH	_____.____	_____.____
0348	646.6120 Marking Stop Line Epoxy 18-Inch	550.000 LF	_____.____	_____.____
0350	646.7420 Marking Crosswalk Epoxy Transverse Line 6-Inch	330.000 LF	_____.____	_____.____
0352	646.7520 Marking Crosswalk Epoxy Block Style 24-Inch	1,765.000 LF	_____.____	_____.____
0354	646.8120 Marking Curb Epoxy	240.000 LF	_____.____	_____.____
0356	646.8220 Marking Island Nose Epoxy	13.000 EACH	_____.____	_____.____
0358	646.9000 Marking Removal Line 4-Inch	3,065.000 LF	_____.____	_____.____
0360	646.9100 Marking Removal Line 8-Inch	790.000 LF	_____.____	_____.____
0362	646.9300 Marking Removal Special Marking	6.000 EACH	_____.____	_____.____
0364	649.0105 Temporary Marking Line Paint 4-Inch	23,855.000 LF	_____.____	_____.____
0366	649.0120 Temporary Marking Line Epoxy 4-Inch	5,950.000 LF	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0368	649.0150 Temporary Marking Line Removable Tape 4-Inch	7,675.000 LF	_____.____	_____.____
0370	649.0205 Temporary Marking Line Paint 8-Inch	2,660.000 LF	_____.____	_____.____
0372	649.0220 Temporary Marking Line Epoxy 8-Inch	3,610.000 LF	_____.____	_____.____
0374	649.0250 Temporary Marking Line Removable Tape 8-Inch	1,060.000 LF	_____.____	_____.____
0376	649.0505 Temporary Marking Arrow Paint	14.000 EACH	_____.____	_____.____
0378	649.0520 Temporary Marking Arrow Epoxy	52.000 EACH	_____.____	_____.____
0380	649.0550 Temporary Marking Arrow Removable Tape	10.000 EACH	_____.____	_____.____
0382	649.0620 Temporary Marking Word Epoxy	9.000 EACH	_____.____	_____.____
0384	649.0805 Temporary Marking Stop Line Paint 18-Inch	560.000 LF	_____.____	_____.____
0386	649.0820 Temporary Marking Stop Line Epoxy 18-Inch	1,620.000 LF	_____.____	_____.____
0388	649.0850 Temporary Marking Stop Line Removable Tape 18-Inch	70.000 LF	_____.____	_____.____
0390	652.0225 Conduit Rigid Nonmetallic Schedule 40 2-Inch	8,575.000 LF	_____.____	_____.____
0392	652.0235 Conduit Rigid Nonmetallic Schedule 40 3-Inch	6,050.000 LF	_____.____	_____.____
0394	652.0325 Conduit Rigid Nonmetallic Schedule 80 2-Inch	3,140.000 LF	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0396	652.0335 Conduit Rigid Nonmetallic Schedule 80 3-Inch	2,850.000 LF	_____.____	_____.____
0398	652.0900 Loop Detector Slots	70.000 LF	_____.____	_____.____
0400	653.0900 Adjusting Pull Boxes	1.000 EACH	_____.____	_____.____
0402	653.0905 Removing Pull Boxes	24.000 EACH	_____.____	_____.____
0404	654.0110 Concrete Bases Type 10	5.000 EACH	_____.____	_____.____
0406	655.0230 Cable Traffic Signal 5-14 AWG	1,975.000 LF	_____.____	_____.____
0408	655.0240 Cable Traffic Signal 7-14 AWG	4,615.000 LF	_____.____	_____.____
0410	655.0250 Cable Traffic Signal 9-14 AWG	2,029.000 LF	_____.____	_____.____
0412	655.0260 Cable Traffic Signal 12-14 AWG	1,910.000 LF	_____.____	_____.____
0414	655.0615 Electrical Wire Lighting 10 AWG	14,608.000 LF	_____.____	_____.____
0416	655.0620 Electrical Wire Lighting 8 AWG	24,420.000 LF	_____.____	_____.____
0418	655.0630 Electrical Wire Lighting 4 AWG	8,140.000 LF	_____.____	_____.____
0420	655.0800 Loop Detector Wire	9,292.000 LF	_____.____	_____.____
0422	656.0200 Electrical Service Meter Breaker Pedestal (location) 001. Ridge & University	LS	LUMP SUM	_____.____
0424	656.0200 Electrical Service Meter Breaker Pedestal (location) 002. University Bay & University	LS	LUMP SUM	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0426	656.0200 Electrical Service Meter Breaker Pedestal (location) 003. University Bay & Marshall	LS	LUMP SUM	_____.____
0428	656.0200 Electrical Service Meter Breaker Pedestal (location) 004. Ridge & University	LS	LUMP SUM	_____.____
0430	656.0200 Electrical Service Meter Breaker Pedestal (location) 005. University Bay & University	LS	LUMP SUM	_____.____
0432	657.0100 Pedestal Bases	21.000 EACH	_____.____	_____.____
0434	657.0255 Transformer Bases Breakaway 11 1/2-Inch Bolt Circle	43.000 EACH	_____.____	_____.____
0436	657.0346 Poles Type 9-Over Height	1.000 EACH	_____.____	_____.____
0438	657.0420 Traffic Signal Standards Aluminum 13-FT	16.000 EACH	_____.____	_____.____
0440	657.0425 Traffic Signal Standards Aluminum 15-FT	2.000 EACH	_____.____	_____.____
0442	657.0430 Traffic Signal Standards Aluminum 10-FT	5.000 EACH	_____.____	_____.____
0444	657.0515 Monotube Arms 15-FT	2.000 EACH	_____.____	_____.____
0446	658.0500 Pedestrian Push Buttons	29.000 EACH	_____.____	_____.____
0448	658.5069 Signal Mounting Hardware (location) 001. Hill	LS	LUMP SUM	_____.____
0450	658.5069 Signal Mounting Hardware (location) 002. Ridge	LS	LUMP SUM	_____.____
0452	658.5069 Signal Mounting Hardware (location) 003. Farley	LS	LUMP SUM	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0454	658.5069 Signal Mounting Hardware (location) 004. Marshall	LS	LUMP SUM	_____._____
0456	690.0150 Sawing Asphalt	9,615.000 LF	_____._____	_____._____
0458	690.0250 Sawing Concrete	6,720.000 LF	_____._____	_____._____
0460	715.0502 Incentive Strength Concrete Structures	500.000 DOL	1.00000	500.00
0462	715.0720 Incentive Compressive Strength Concrete Pavement	500.000 DOL	1.00000	500.00
0464	740.0440 Incentive IRI Ride	7,600.000 DOL	1.00000	7,600.00
0466	801.0117 Railroad Flagging Reimbursement	110,000.000 DOL	1.00000	110,000.00
0468	999.1001.S Seismograph	1.000 EACH	_____._____	_____._____
0470	999.1501.S Crack and Damage Survey	1.000 EACH	_____._____	_____._____
0472	ASP.1T0A On-the-Job Training Apprentice at $5.00/HR	2,100.000 HRS	5.00000	10,500.00
0474	ASP.1T0G On-the-Job Training Graduate at $5.00/HR	6,480.000 HRS	5.00000	32,400.00
0476	SPV.0035 Special 001. Abandon Sanitary Sewer-Slurry	22.860 CY	_____._____	_____._____
0478	SPV.0035 Special 002. Rock Excavation For Sanitary Sewer	50.000 CY	_____._____	_____._____
0480	SPV.0035 Special 003. Rock Excavation For Water Main	30.000 CY	_____._____	_____._____
0482	SPV.0060 Special 001. Settlement Monitoring	2.000 EACH	_____._____	_____._____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0484	SPV.0060 Special 002. Locate and Reference Property Corners	27.000 EACH	_____.____	_____.____
0486	SPV.0060 Special 003. Reset Property Corners	27.000 EACH	_____.____	_____.____
0488	SPV.0060 Special 004. Precast Sign Post Base	46.000 EACH	_____.____	_____.____
0490	SPV.0060 Special 005. Sign Post Base For Concrete Installation	7.000 EACH	_____.____	_____.____
0492	SPV.0060 Special 006. Project Dewatering	1.000 EACH	_____.____	_____.____
0494	SPV.0060 Special 007. Wastewater Control	1.000 EACH	_____.____	_____.____
0496	SPV.0060 Special 008. Construction Staking Sanitary Sewer	1.000 EACH	_____.____	_____.____
0498	SPV.0060 Special 009. Construction Staking Water Main	1.000 EACH	_____.____	_____.____
0500	SPV.0060 Special 010. Inlet Cover Type H Special	82.000 EACH	_____.____	_____.____
0502	SPV.0060 Special 011. Inlet Cover Type H-S Special	12.000 EACH	_____.____	_____.____
0504	SPV.0060 Special 012. Manhole Cover Type J Special	24.000 EACH	_____.____	_____.____
0506	SPV.0060 Special 013. Temporary Inlet Cover	55.000 EACH	_____.____	_____.____
0508	SPV.0060 Special 014. Storm Sewer Pipe 96-Inch Bend	9.000 EACH	_____.____	_____.____
0510	SPV.0060 Special 015. Wastewater Control MMSD	1.000 EACH	_____.____	_____.____
0512	SPV.0060 Special 016. Inlet 2x3-Ft Special	9.000 EACH	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0514	SPV.0060 Special 017. Manhole Special	1.000 EACH	_____.____	_____.____
0516	SPV.0060 Special 018. Storm Sewer Tap	27.000 EACH	_____.____	_____.____
0518	SPV.0060 Special 019. MMSD Sanitary Sewer Bypassing	1.000 EACH	_____.____	_____.____
0520	SPV.0060 Special 020. Close Storm Sewer Connection	8.000 EACH	_____.____	_____.____
0522	SPV.0060 Special 021. Construction Staking Project 5992-11-31	1.000 EACH	_____.____	_____.____
0524	SPV.0060 Special 022. Construction Staking Project 5992-11-33	1.000 EACH	_____.____	_____.____
0526	SPV.0060 Special 023. Implement Tree Protection Plan	1.000 EACH	_____.____	_____.____
0528	SPV.0060 Special 024. Furnish and Install Fluorocarbon Gaskets, 6-Inch	5.000 EACH	_____.____	_____.____
0530	SPV.0060 Special 025. Furnish and Install Fluorocarbon Gaskets, 8-Inch	5.000 EACH	_____.____	_____.____
0532	SPV.0060 Special 026. Furnish and Install Fluorocarbon Gaskets, 12-Inch	12.000 EACH	_____.____	_____.____
0534	SPV.0060 Special 027. Furnish and Install Fluorocarbon Gaskets, 16-Inch	20.000 EACH	_____.____	_____.____
0536	SPV.0060 Special 028. MMSD Sanitary Sewer Manhole (6-Foot Diameter)	3.000 EACH	_____.____	_____.____
0538	SPV.0060 Special 029. MMSD Sanitary Sewer Manhole (7-Foot Diameter)	1.000 EACH	_____.____	_____.____
0540	SPV.0060 Special 030. Utility Line Opening (ULO)	42.000 EACH	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0542	SPV.0060 Special 031. Sewer Electronic Markers	41.000 EACH	_____.____	_____.____
0544	SPV.0060 Special 032. Sanitary Lateral Reconnect	21.000 EACH	_____.____	_____.____
0546	SPV.0060 Special 033. Sanitary Sewer Tap	13.000 EACH	_____.____	_____.____
0548	SPV.0060 Special 034. Sanitary Sewer Access Structure (4-Foot Diameter)	9.000 EACH	_____.____	_____.____
0550	SPV.0060 Special 035. Sanitary Sewer Access Structure (5-Foot Diameter)	8.000 EACH	_____.____	_____.____
0552	SPV.0060 Special 036. Sanitary Sewer Internal Chimney Seal	3.000 EACH	_____.____	_____.____
0554	SPV.0060 Special 037. Remove Sanitary Sewer Access Structure	3.000 EACH	_____.____	_____.____
0556	SPV.0060 Special 039. Abandon Sanitary Sewer Access Structure	9.000 EACH	_____.____	_____.____
0558	SPV.0060 Special 040. Abandon Sanitary Sewer-Pipe Plug	14.000 EACH	_____.____	_____.____
0560	SPV.0060 Special 041. Furnish & Install 6-Inch Water Valve, 6-Inch	15.000 EACH	_____.____	_____.____
0562	SPV.0060 Special 042. Furnish & Install 8-Inch Water Valve, 8-Inch	9.000 EACH	_____.____	_____.____
0564	SPV.0060 Special 043. Furnish & Install 12-Inch Water Valve, 12-Inch	4.000 EACH	_____.____	_____.____
0566	SPV.0060 Special 044. Furnish & Install 16-Inch Water Valve, 16-Inch	17.000 EACH	_____.____	_____.____
0568	SPV.0060 Special 045. Furnish And Install Hydrant / Salvage Existing Hydrant	6.000 EACH	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0570	SPV.0060 Special 045. Furnish And Install Hydrant/Salvage Existing Hydrant	1.000 EACH	_____.____	_____.____
0572	SPV.0060 Special 046. Reconnect Water Service Lateral, 1-Inch	17.000 EACH	_____.____	_____.____
0574	SPV.0060 Special 048. Reconnect Water Service Lateral, 2-Inch	2.000 EACH	_____.____	_____.____
0576	SPV.0060 Special 049. Cut-In Or Connect-To Existing Water System	26.000 EACH	_____.____	_____.____
0578	SPV.0060 Special 051. Abandon Water Valve Box	16.000 EACH	_____.____	_____.____
0580	SPV.0060 Special 052. Abandon Water Valve Access Structure	2.000 EACH	_____.____	_____.____
0582	SPV.0060 Special 053. Furnish and Install Insulation	11.000 EACH	_____.____	_____.____
0584	SPV.0060 Special 054. Adjust Water Valve Box Sections	4.000 EACH	_____.____	_____.____
0586	SPV.0060 Special 055. Furnish And Install Anode	1.000 EACH	_____.____	_____.____
0588	SPV.0060 Special 056. Clay Trench Plug	5.000 EACH	_____.____	_____.____
0590	SPV.0060 Special 057. Interceptor Sewer Manhole, (6-Foot Diameter)	5.000 EACH	_____.____	_____.____
0592	SPV.0060 Special 058. Interceptor Manhole Lining System	5.000 EACH	_____.____	_____.____
0594	SPV.0060 Special 059. Adjust MMSD Special	2.000 EACH	_____.____	_____.____
0596	SPV.0060 Special 060. MMSD Manhole 02-048 Flat Top Replacement	1.000 EACH	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0598	SPV.0060 Special 061. Rock Excavation for Concrete Bases	6.000 EACH	_____.____	_____.____
0600	SPV.0060 Special 062. Electrical Pull Box Type I	34.000 EACH	_____.____	_____.____
0602	SPV.0060 Special 063. Electrical Pull Box Type III	5.000 EACH	_____.____	_____.____
0604	SPV.0060 Special 064. Electrical Pull Box Type V	19.000 EACH	_____.____	_____.____
0606	SPV.0060 Special 065. Electrical Pull Box Type VII	12.000 EACH	_____.____	_____.____
0608	SPV.0060 Special 066. Concrete Bases Type G	16.000 EACH	_____.____	_____.____
0610	SPV.0060 Special 067. Concrete Bases Type LB-3	39.000 EACH	_____.____	_____.____
0612	SPV.0060 Special 068. Concrete Bases Type LB-8	15.000 EACH	_____.____	_____.____
0614	SPV.0060 Special 069. Concrete Bases Type P	5.000 EACH	_____.____	_____.____
0616	SPV.0060 Special 070. Concrete Bases Type G Spread Footing	1.000 EACH	_____.____	_____.____
0618	SPV.0060 Special 071. Transformer Base 16-Inch Steel	13.000 EACH	_____.____	_____.____
0620	SPV.0060 Special 072. Pole 20-Ft 7 Gauge	6.000 EACH	_____.____	_____.____
0622	SPV.0060 Special 073. Pole 30-Foot, 7 Gauge Single Mount	2.000 EACH	_____.____	_____.____
0624	SPV.0060 Special 074. Pole 30-Foot, 7 Gauge Twin Mount	3.000 EACH	_____.____	_____.____
0626	SPV.0060 Special 075. Pole 30-Foot, 11 Gauge Single Mount	37.000 EACH	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0628	SPV.0060 Special 076. Pole 30-Foot, 11 Gauge Twin Mount	9.000 EACH	_____.____	_____.____
0630	SPV.0060 Special 077. Monotube Pole, Type 9	4.000 EACH	_____.____	_____.____
0632	SPV.0060 Special 079. LED Luminaire and Mounting Bracket Type V	5.000 EACH	_____.____	_____.____
0634	SPV.0060 Special 080. Monotube Arm, 25-Foot	2.000 EACH	_____.____	_____.____
0636	SPV.0060 Special 081. Monotube Arm, 30-Foot	2.000 EACH	_____.____	_____.____
0638	SPV.0060 Special 082. LED Luminaire And Mounting Bracket Type I	17.000 EACH	_____.____	_____.____
0640	SPV.0060 Special 083. LED Luminaire And Mounting Bracket Type II	24.000 EACH	_____.____	_____.____
0642	SPV.0060 Special 084. LED Luminaire And Mounting Bracket Type III	8.000 EACH	_____.____	_____.____
0644	SPV.0060 Special 085. LED Luminaire And Mounting Bracket Type IV	11.000 EACH	_____.____	_____.____
0646	SPV.0060 Special 086. Traffic Signal Trombone Arm Aluminum 12-Foot	1.000 EACH	_____.____	_____.____
0648	SPV.0060 Special 087. Traffic Signal Trombone Arm Aluminum 15-Foot	3.000 EACH	_____.____	_____.____
0650	SPV.0060 Special 088. Traffic Signal Trombone Arm Aluminum 18-Foot	2.000 EACH	_____.____	_____.____
0652	SPV.0060 Special 089. Traffic Signal Trombone Arm Aluminum 20-Foot	3.000 EACH	_____.____	_____.____
0654	SPV.0060 Special 090. Traffic Signal Trombone Arm Aluminum 22-Foot	2.000 EACH	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0656	SPV.0060 Special 091. Traffic Signal Heads 12-Inch, 3-Section Vertical	71.000 EACH	_____.____	_____.____
0658	SPV.0060 Special 092. Traffic Signal Heads 12-Inch, 4-Section Vertical	7.000 EACH	_____.____	_____.____
0660	SPV.0060 Special 093. Traffic Signal Heads 12-Inch, 5-Section Vertical	2.000 EACH	_____.____	_____.____
0662	SPV.0060 Special 094. Traffic Signal Heads 16-Inch Pedestrian with Countdown	39.000 EACH	_____.____	_____.____
0664	SPV.0060 Special 095. Backplates Signal Face, 3-Section 12-Inch	71.000 EACH	_____.____	_____.____
0666	SPV.0060 Special 096. Backplates Signal Face, 4-Section 12-Inch	7.000 EACH	_____.____	_____.____
0668	SPV.0060 Special 097. Backplates Signal Face, 5-Section 12-Inch	2.000 EACH	_____.____	_____.____
0670	SPV.0060 Special 098. NEMA TS2 Type 1 Traffic Signal Control Cabinet	4.000 EACH	_____.____	_____.____
0672	SPV.0060 Special 099. Traffic Signal Controller	4.000 EACH	_____.____	_____.____
0674	SPV.0060 Special 100. Optical Signal Preempt	4.000 EACH	_____.____	_____.____
0676	SPV.0060 Special 101. Traffic Signal Ethernet Switch	4.000 EACH	_____.____	_____.____
0678	SPV.0060 Special 102. Malfunction Management Unit (MMU)	4.000 EACH	_____.____	_____.____
0680	SPV.0060 Special 103. Lighting Control Cabinet	2.000 EACH	_____.____	_____.____
0682	SPV.0060 Special 104. Vehicular Detection System Programming Unit	4.000 EACH	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0684	SPV.0060 Special 105. No Right Turn Blank Out Signal	4.000 EACH	_____.____	_____.____
0686	SPV.0060 Special 106. Temporary Traffic Signals (Hill)	1.000 EACH	_____.____	_____.____
0688	SPV.0060 Special 107. Temporary Traffic Signals (Ridge)	1.000 EACH	_____.____	_____.____
0690	SPV.0060 Special 108. Temporary Traffic Signals (Farley)	1.000 EACH	_____.____	_____.____
0692	SPV.0060 Special 109. Temporary Street Lighting System Maintenance and Operations	1.000 EACH	_____.____	_____.____
0694	SPV.0060 Special 110. Temporary Wood Poles	37.000 EACH	_____.____	_____.____
0696	SPV.0060 Special 111. Temporary Lighting Arms	18.000 EACH	_____.____	_____.____
0698	SPV.0060 Special 112. Temporary Luminaires Utility	18.000 EACH	_____.____	_____.____
0700	SPV.0060 Special 113. Reconstruct Bench And Flowlines	5.000 EACH	_____.____	_____.____
0702	SPV.0060 Special 115. Salvage Hydrant	4.000 EACH	_____.____	_____.____
0704	SPV.0090 Special 001. Concrete Curb And Gutter 24-Inch Type D Special	14,010.000 LF	_____.____	_____.____
0706	SPV.0090 Special 002. Concrete Curb 24-Inch Type D Special	205.000 LF	_____.____	_____.____
0708	SPV.0090 Special 003. Pedestrian Railing	550.000 LF	_____.____	_____.____
0710	SPV.0090 Special 004. Sign Post	276.000 LF	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0712	SPV.0090 Special 005. Reflective Sign Post	238.000 LF	_____.____	_____.____
0714	SPV.0090 Special 006. Loop Detector Lead-In Cable Special	8,886.000 LF	_____.____	_____.____
0716	SPV.0090 Special 007. Concrete Curb and Gutter 24-Inch Type A Special	240.000 LF	_____.____	_____.____
0718	SPV.0090 Special 008. Temporary Asphaltic Curb	6,800.000 LF	_____.____	_____.____
0720	SPV.0090 Special 011. Storm Sewer Pipe Reinforced Concrete Class IV 96-Inch	92.000 LF	_____.____	_____.____
0722	SPV.0090 Special 012. Storm Sewer Pipe Reinforced Concrete Class IV 96-Inch Rock Cut	900.000 LF	_____.____	_____.____
0724	SPV.0090 Special 019. Remove Pipe Sanitary	144.000 LF	_____.____	_____.____
0726	SPV.0090 Special 020. Sanitary Sewer Lateral	423.000 LF	_____.____	_____.____
0728	SPV.0090 Special 021. Sanitary Sewer Pipe PVC, 8-Inch	576.000 LF	_____.____	_____.____
0730	SPV.0090 Special 022. Sanitary Sewer Pipe PVC, 10-Inch	1,079.000 LF	_____.____	_____.____
0732	SPV.0090 Special 023. Sanitary Sewer Pipe PVC, 12-Inch	697.000 LF	_____.____	_____.____
0734	SPV.0090 Special 024. Select Fill for Sanitary Sewer	2,755.000 LF	_____.____	_____.____
0736	SPV.0090 Special 025. Furnish And Install Watermain Pipe & Fittings, 6-Inch	272.000 LF	_____.____	_____.____
0738	SPV.0090 Special 026. Furnish And Install Watermain Pipe & Fittings, 8-Inch	340.000 LF	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0740	SPV.0090 Special 027. Furnish And Install Watermain Pipe & Fittings, 12-Inch	216.000 LF	_____.____	_____.____
0742	SPV.0090 Special 028. Furnish And Install Watermain Pipe & Fittings, 16-Inch	2,268.000 LF	_____.____	_____.____
0744	SPV.0090 Special 029. Furnish And Install Watermain Pipe & Fittings, 10-Inch	160.000 LF	_____.____	_____.____
0746	SPV.0090 Special 030. Select Fill For Water Main	3,256.000 LF	_____.____	_____.____
0748	SPV.0090 Special 031. Interceptor Sewer, 30-Inch	1,363.000 LF	_____.____	_____.____
0750	SPV.0090 Special 032. Trenchless Casing Pipe, 48-Inch Steel Minimum	45.000 LF	_____.____	_____.____
0752	SPV.0090 Special 033. Fiber Optic Cable 12-Count	3,867.000 LF	_____.____	_____.____
0754	SPV.0090 Special 034. Fiber Optic Cable 288-Count	2,923.000 LF	_____.____	_____.____
0756	SPV.0090 Special 035. Electrical Wire Lighting, 14-3 Grounded	2,079.000 LF	_____.____	_____.____
0758	SPV.0090 Special 036. Temporary Overhead Span Wire	3,769.000 LF	_____.____	_____.____
0760	SPV.0090 Special 037. MMSD Sanitary Sewer, 36-Inch	167.600 LF	_____.____	_____.____
0762	SPV.0090 Special 041. Railing Steel Pedestrian Ornamental	311.000 LF	_____.____	_____.____
0764	SPV.0165 Special 001. Wall Concrete Panel Mechanically Stabilized Earth R-13-360	3,810.000 SF	_____.____	_____.____
0766	SPV.0165 Special 002. Wall Concrete Panel Mechanically Stabilized Earth R-13-361	3,610.000 SF	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0768	SPV.0165 Special 003. Wall Modular Block Gravity Landscape	435.000 SF	_____.____	_____.____
0770	SPV.0165 Special 004. High Friction Colored Surface - Bike Box Green	710.000 SF	_____.____	_____.____
0772	SPV.0170 Special 001. Pavement Cleanup Project 5992-11-31	82.000 STA	_____.____	_____.____
0774	SPV.0195 Special 001. Stabilization Clear Stone, 3-Inch	100.000 TON	_____.____	_____.____
0776	SPV.0195 Special 002. Granular Backfill, Interceptor Sewer	4,000.000 TON	_____.____	_____.____
0778	SPV.0195 Special 003. Excavation, Hauling, and Disposal of Petroleum Contaminated Soil	4,250.000 TON	_____.____	_____.____
0780	SPV.0195 Special 004. Excavating, Loading, Hauling, and Landfill Disposal of Cinder-Cntmated Soil	2,125.000 TON	_____.____	_____.____
0782	SPV.0200 Special 001. Construct Inside Drop 8-Inch	2.300 VF	_____.____	_____.____

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

March 2, 2022

NOTICE TO ALL CONTRACTORS:

Federal Wage Rate Addendum #01

Letting of March 8, 2022

Attached is a copy of the revised WI 10 Highway Davis Bacon Prevailing Wage Rates that are included in proposals 03 – 11, 13 – 22, 25 – 29, 31, 32, 37, 39 – 41, 44, 45, and 47 - 51; WI 8 Heavy (Sewer & Water Line & Tunnel) Davis Bacon Prevailing Wage Rates that are included in proposals 09 and 15 These wage rates are effective for all proposals they are included in in the March 8, 2022 letting. The updated wage rates are dated February 25, 2022 and are effective on or after March 7, 2022.

The responsibility for notifying potential subcontractors and suppliers of these changes remains with the prime contractors.

Sincerely,

Mike Coleman
Proposal Development Specialist
Proposal Management Section

"General Decision Number: WI20220010 02/25/2022

Superseded General Decision Number: WI20210010

State: Wisconsin

Construction Type: Highway

Counties: Wisconsin Statewide.

HIGHWAY, AIRPORT RUNWAY & TAXIWAY CONSTRUCTION PROJECTS (does not include bridges over navigable waters; tunnels; buildings in highway rest areas; and railroad construction)

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60).

If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:	. Executive Order 14026 generally applies to the contract. . The contractor must pay all covered workers at least $15.00 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2022.
If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:	. Executive Order 13658 generally applies to the contract. . The contractor must pay all covered workers at least $11.25 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2022.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at https://www.dol.gov/agencies/whd/government-contracts.

Modification Number	Publication Date
0	01/07/2022

1	01/21/2022
2	02/04/2022
3	02/25/2022

BRWI0001-002 06/01/2020

CRAWFORD, JACKSON, JUNEAU, LA CROSSE, MONROE, TREMPEALEAU, AND VERNON COUNTIES

	Rates	Fringes
BRICKLAYER	$ 35.31	24.7 7

BRWI0002-002 06/01/2020

ASHLAND, BAYFIELD, DOUGLAS, AND IRON COUNTIES

	Rates	Fringes
BRICKLAYER	$ 42.77	23.47

BRWI0002-005 06/01/2020

ADAMS, ASHLAND, BARRON, BROWN, BURNETT, CALUMET, CHIPPEWA, CLARK, COLUMBIA, DODGE, DOOR, DUNN, FLORENCE, FOND DU LAC, FOREST, GREEN LAKE, IRON, JEFFERSON, KEWAUNEE, LANGLADE, LINCOLN, MANITOWOC, MARATHON, MARINETTE, MARQUETTE, MENOMINEE, OCONTO, ONEIDA, OUTAGAMIE, POLK, PORTAGE, RUSK, ST CROIX, SAUK, SHAWANO, SHEBOYGAN, TAYLOR, VILAS, WALWORTH, WAUPACA, WAUSHARA, WINNEBAGO, AND WOOD COUNTIES

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER	$ 36.68	23.40

BRWI0003-002 06/01/2020

BROWN, DOOR, FLORENCE, KEWAUNEE, MARINETTE, AND OCONTO COUNTIES

	Rates	Fringes
BRICKLAYER	$ 35.68	24.40

BRWI0004-002 06/01/2020

KENOSHA, RACINE, AND WALWORTH COUNTIES

	Rates	Fringes
BRICKLAYER	$ 39.90	25.53

BRWI0006-002 06/01/2020

ADAMS, CLARK, FOREST, LANGLADE, LINCOLN, MARATHON, MENOMINEE, ONEIDA, PORTAGE, PRICE, TAYLOR, VILAS AND WOOD COUNTIES

	Rates	Fringes
BRICKLAYER	$ 36.60	23.48

BRWI0007-002 06/01/2020

GREEN, LAFAYETTE, AND ROCK COUNTIES

	Rates	Fringes
BRICKLAYER	$ 37.07	24.72

BRWI0008-002 06/01/2020

MILWAUKEE, OZAUKEE, WASHINGTON, AND WAUKESHA COUNTIES

	Rates	Fringes
BRICKLAYER	$ 40.75	24.32

BRWI0011-002 06/01/2020

CALUMET, FOND DU LAC, MANITOWOC, AND SHEBOYGAN COUNTIES

	Rates	Fringes
BRICKLAYER	$ 35.68	24.40

BRWI0019-002 06/01/2020

BARRON, BUFFALO, BURNETT, CHIPPEWA, DUNN, EAU CLAIRE, PEPIN, PIERCE, POLK, RUSK, ST. CROIX, SAWYER AND WASHBURN COUNTIES

	Rates	Fringes
BRICKLAYER	$ 34.86	25.22

BRWI0034-002 06/01/2020

COLUMBIA AND SAUK COUNTIES

	Rates	Fringes
BRICKLAYER	$ 37.36	24.43

CARP0087-001 05/01/2016

BURNETT (W. of Hwy 48), PIERCE (W. of Hwy 29), POLK (W. of Hwys 35, 48 & 65), AND ST. CROIX (W. of Hwy 65) COUNTIES

	Rates	Fringes
Carpenter & Piledrivermen	$ 36.85	18.39

CARP0252-002 06/01/2016

ADAMS, BARRON, BAYFIELD (Eastern 2/3), BROWN, BUFFALO, BURNETT (E. of Hwy 48), CALUMET, CHIPPEWA, CLARK, COLUMBIA, CRAWFORD, DANE, DODGE, DOOR, DUNN, EAU CLAIRE, FLORENCE (except area bordering Michigan State Line), FOND DU LAC, FOREST, GRANT, GREEN, GREEN LAKE, IOWA, IRON, JACKSON, JEFFERSON, JUNEAU, KEWAUNEE, LA CROSSE, LAFAYETTE, LANGLADE, LINCOLN, MANITOWOC, MARATHON, MARINETTE (except N.E. corner), MARQUETTE, MENOMINEE, MONROE, OCONTO, ONEIDA, OUTAGAMIE, PEPIN, PIERCE (E. of Hwys 29 & 65), POLK (E. of Hwys 35, 48 & 65), PORTAGE, PRICE, RICHLAND, ROCK, RUSK, SAUK, SAWYER, SHAWANO, SHEBOYGAN, ST CROIX (E. of Hwy 65), TAYLOR, TREMPEALEAU, VERNON, VILAS, WALWORTH, WASHBURN, WAUPACA, WAUSHARA, WINNEBAGO, AND WOOD COUNTIES

	Rates	Fringes
CARPENTER		
CARPENTER	$ 33.56	18.00
MILLWRIGHT	$ 35.08	18.35
PILEDRIVER	$ 34.12	18.00

CARP0252-010 06/01/2016

ASHLAND COUNTY

	Rates	Fringes
Carpenters		
Carpenter	$ 33.56	18.00
Millwright	$ 35.08	18.35
Pile Driver	$ 34.12	18.00

CARP0264-003 06/01/2016

KENOSHA, MILWAUKEE, OZAUKEE, RACINE, WAUKESHA, AND WASHINGTON COUNTIES

	Rates	Fringes
CARPENTER	$ 35.78	22.11

CARP0361-004 05/01/2018

BAYFIELD (West of Hwy 63) AND DOUGLAS COUNTIES

	Rates	Fringes
CARPENTER	$ 36.15	20.43

CARP2337-001 06/01/2016

ZONE A: MILWAUKEE, OZAUKEE, WAUKESHA AND WASHINGTON

ZONE B: KENOSHA & RACINE

	Rates	Fringes
PILEDRIVERMAN		
Zone A	$ 31.03	22.69
Zone B	$ 31.03	22.69

ELEC0014-002 12/26/2021

ASHLAND, BARRON, BAYFIELD, BUFFALO, BURNETT, CHIPPEWA, CLARK (except Maryville, Colby, Unity, Sherman, Fremont, Lynn & Sherwood), CRAWFORD, DUNN, EAU CLAIRE, GRANT, IRON, JACKSON, LA CROSSE, MONROE, PEPIN, PIERCE, POLK, PRICE, RICHLAND, RUSK, ST CROIX, SAWYER, TAYLOR, TREMPEALEAU, VERNON, AND WASHBURN COUNTIES

	Rates	Fringes
Electricians:	$ 37.83	21.89

ELEC0014-007 05/30/2021

REMAINING COUNTIES

	Rates	Fringes
Teledata System Installer		
Installer/Technician	$ 28.50	15.92

Low voltage construction, installation, maintenance and removal of teledata facilities (voice, data, and video) including outside plant, telephone and data inside wire, interconnect, terminal equipment, central offices, PABX, fiber optic cable and equipment, micro waves, V-SAT, bypass, CATV, WAN (wide area networks), LAN (local area networks), and ISDN (integrated systems digital network).

ELEC0127-002 06/01/2020

KENOSHA COUNTY

	Rates	Fringes
Electricians:	$ 41.62	30%+12.70

ELEC0158-002 05/30/2021

BROWN, DOOR, KEWAUNEE, MANITOWOC (except Schleswig), MARINETTE(Wausuakee and area South thereof), OCONTO, MENOMINEE (East of a ine 6 miles West of the West boundary of Oconto County), SHAWANO (Except Area North of Townships of Aniwa and Hutchins) COUNTIES

	Rates	Fringes
ELECTRICIAN	$ 36.14	29.75%+10.26

ELEC0159-003 05/30/2021

COLUMBIA, DANE, DODGE (Area West of Hwy 26, except Chester and Emmet Townships), GREEN, LAKE (except Townships of Berlin, Seneca, and St. Marie), IOWA, MARQUETTE (except Townships of Neshkoka, Crystal Lake, Newton, and Springfield), and SAUK COUNTIES

	Rates	Fringes
ELECTRICIAN	$ 43.38	23.13

ELEC0219-004 06/01/2019

FLORENCE COUNTY (Townships of Aurora, Commonwealth, Fern, Florence and Homestead) AND MARINETTE COUNTY (Township of Niagara)

	Rates	Fringes
Electricians:		
Electrical contracts over $180,000	$ 33.94	21.80
Electrical contracts under		

$180,000	$ 31.75	21.73

ELEC0242-005 05/30/2021

DOUGLAS COUNTY

	Rates	Fringes
Electricians:	$ 41.37	69.25%

ELEC0388-002 06/01/2020

ADAMS, CLARK (Colby, Freemont, Lynn, Mayville, Sherman, Sherwood, Unity), FOREST, JUNEAU, LANGLADE, LINCOLN, MARATHON, MARINETTE (Beecher, Dunbar, Goodman & Pembine), MENOMINEE (Area West of a line 6 miles West of the West boundary of Oconto County), ONEIDA, PORTAGE, SHAWANO (Aniwa and Hutchins), VILAS AND WOOD COUNTIES

	Rates	Fringes
Electricians:	$ 34.85	26%+11.20

ELEC0430-002 06/01/2021

RACINE COUNTY (Except Burlington Township)

	Rates	Fringes
Electricians:	$ 43.45	24.89

ELEC0494-005 06/01/2021

MILWAUKEE, OZAUKEE, WASHINGTON, AND WAUKESHA COUNTIES

	Rates	Fringes
Electricians:	$ 44.39	25.67

ELEC0494-006 06/01/2021

CALUMET (Township of New Holstein), DODGE (East of Hwy 26 including Chester Township), FOND DU LAC, MANITOWOC (Schleswig), and SHEBOYGAN COUNTIES

	Rates	Fringes
Electricians:	$ 37.91	22.74

ELEC0494-013 06/01/2021

DODGE (East of Hwy 26 including Chester Twp, excluding Emmet Twp), FOND DU LAC (Except Waupuin), MILWAUKEE, OZAUKEE, MANITOWOC (Schleswig), WASHINGTON, AND WAUKESHA COUNTIES

	Rates	Fringes
Sound & Communications		
Installer	$ 22.39	18.80
Technician	$ 32.49	20.26

Installation, testing, maintenance, operation and servicing

of all sound, intercom, telephone interconnect, closed circuit TV systems, radio systems, background music systems, language laboratories, electronic carillion, antenna distribution systems, clock and program systems and low-voltage systems such as visual nurse call, audio/visual nurse call systems, doctors entrance register systems. Includes all wire and cable carrying audio, visual, data, light and radio frequency signals. Includes the installation of conduit, wiremold, or raceways in existing structures that have been occupied for six months or more where required for the protection of the wire or cable, but does not mean a complete conduit or raceway system. work covered does not include the installation of conduit, wiremold or any raceways in any new construction, or the installation of power supply outlets by means of which external electric power is supplied to any of the foregoing equipment or products

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ELEC0577-003 06/01/2021

CALUMET (except Township of New Holstein), GREEN LAKE (N. part including Townships of Berlin, St Marie, and Seneca), MARQUETTE (N. part including Townships of Crystal Lake, Neshkoro, Newton, and Springfield), OUTAGAMIE, WAUPACA, WAUSHARA, AND WINNEBAGO COUNTIES

	Rates	Fringes
Electricians:	$ 35.66	29.50%+10.00

ELEC0890-003 06/01/2021

DODGE (Emmet Township only), GREEN, JEFFERSON, LAFAYETTE, RACINE (Burlington Township), ROCK AND WALWORTH COUNTIES

	Rates	Fringes
Electricians:	$ 39.00	25.95%+11.17

ELEC0953-001 06/02/2019

	Rates	Fringes
Line Construction:		
(1) Lineman	$ 47.53	21.43
(2) Heavy Equipment Operator	$ 42.78	19.80
(3) Equipment Operator	$ 38.02	18.40
(4) Heavy Groundman Driver	$ 33.27	16.88
(5) Light Groundman Driver	$ 30.89	16.11
(6) Groundsman	$ 26.14	14.60

ENGI0139-005 06/07/2021

	Rates	Fringes
Power Equipment Operator		
Group 1	$ 42.62	24.75
Group 2	$ 42.62	24.75
Group 3	$ 41.62	24.75
Group 4	$ 41.36	24.75
Group 5	$ 41.07	24.75

Group 6.....$ 35.17 24.75

HAZARDOUS WASTE PREMIUMS:
EPA Level ""A"" protection - $3.00 per hour
EPA Level ""B"" protection - $2.00 per hour
EPA Level ""C"" protection - $1.00 per hour

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Cranes, tower cranes, and derricks with or without attachments with a lifting capacity of over 100 tons; or cranes, tower cranes, and derricks with boom, leads and/or jib lengths measuring 176 feet or longer.

GROUP 2: Cranes, tower cranes and derricks with or without attachments with a lifting capacity of 100 tons or less; or cranes, tower cranes, and derricks with boom, leads, and/or jibs lengths measuring 175 feet or under and Backhoes (excavators) weighing 130,000 lbs and over; caisson rigs; pile driver; dredge operator; dredge engineer; Boat Pilot.

GROUP 3: Mechanic or welder - Heavy duty equipment; cranes with a lifting capacity of 25 tons or under; concrete breaker (manual or remote); vibratory/sonic concrete breaker; concrete laser screed; concrete slipform paver; concrete batch plant operator; concrete pvt. spreader - heavy duty (rubber tired); concrete spreader & distributor; automatic subgrader (concrete); concrete grinder & planing machine; concrete slipform curb & gutter machine; slipform concrete placer; tube finisher; hydro blaster (10,000 psi & over); bridge paver; concrete conveyor system; concrete pump; Rotec type Conveyor; stabilizing mixer (self-propelled); shoulder widener; asphalt plant engineer; bituminious paver; bump cutter & grooving machine; milling machine; screed (bituminous paver); asphalt heater, planer & scarifier; Backhoes (excavators) weighing under 130,000 lbs; grader or motor patrol; tractor (scraper, dozer, pusher, loader); scraper - rubber tired (single or twin engine); endloader; hydraulic backhoe (tractor type); trenching machine; skid rigs; tractor, side boom (heavy); drilling or boring machine (mechanical heavy); roller over 5 tons; percussion or rotary drilling machine; air track; blaster; loading machine (conveyor); tugger; boatmen; winches & A-frames; post driver; material hoist.

GROUP 4: Greaser, roller steel (5 tons or less); roller (pneumatic tired) - self propelled; tractor (mounted or towed compactors & light equipment); shouldering machine; self- propelled chip spreader; concrete spreader; finishing machine; mechanical float; curing machine; power subgrader; joint sawer (multiple blade) belting machine; burlap machine; texturing machine; tractor endloader (rubber tired) - light; jeep digger; forklift; mulcher; launch operator; fireman, environmental burner

GROUP 5: Air compressor; power pack; vibrator hammer and extractor; heavy equipment, leadman; tank car heaters; stump chipper; curb machine operator; Concrete proportioning plants; generators; mudjack operator; rock breaker; crusher or screening plant; screed (milling machine); automatic belt conveyor and surge bin; pug mill operator; Oiler, pump (over 3 inches); Drilling Machine Tender, day light machine

GROUP 6: Off-road material hauler with or without ejector.

IRON0008-002 06/01/2021

BROWN, CALUMET, DOOR, FOND DU LAC, KEWAUNEE, MANITOWOC, MARINETTE, OCONTO, OUTAGAMI, SHAWANO, SHEBOYGAN, AND WINNEBAGO COUNTIES:

	Rates	Fringes
IRONWORKER	$ 38.77	28.15

Paid Holidays: New Year's Day, Memorial Day, July 4th, Labor Day, Thanksgiving Day & Christmas Day.

IRON0008-003 06/01/2021

KENOSHA, MILWAUKEE, OZAUKEE, RACINE, WALWORTH (N.E. 2/3), WASHINGTON, AND WAUKESHA COUNTIES

	Rates	Fringes
IRONWORKER	$ 40.57	28.40

Paid Holidays: New Year's Day, Memorial Day, July 4th, Labor Day, Thanksgiving Day & Christmas Day.

IRON0383-001 06/06/2021

ADAMS, COLUMBIA, CRAWFORD, DANE, DODGE, FLORENCE, FOREST, GRANT, GREENE, (Excluding S.E. tip), GREEN LAKE, IOWA, JEFFERSON, JUNEAU, LA CROSSE, LAFAYETTE, LANGLADE, MARATHON, MARQUETTE, MENOMINEE, MONROE, PORTAGE, RICHLAND, ROCK (Northern area, vicinity of Edgerton and Milton), SAUK, VERNON, WAUPACA, WAUSHARA, AND WOOD COUNTIES

	Rates	Fringes
IRONWORKER	$ 37.75	27.06

IRON0498-005 06/01/2021

GREEN (S.E. 1/3), ROCK (South of Edgerton and Milton), and WALWORTH (S.W. 1/3) COUNTIES:

	Rates	Fringes
IRONWORKER	$ 41.37	44.41

IRON0512-008 06/03/2019

BARRON, BUFFALO, CHIPPEWA, CLARK, DUNN, EAU CLAIRE, JACKSON, PEPIN, PIERCE, POLK, RUSK, ST CROIX, TAYLOR, AND TREMPEALEAU COUNTIES

	Rates	Fringes
IRONWORKER	$ 37.60	29.40

IRON0512-021 05/03/2021

ASHLAND, BAYFIELD, BURNETT, DOUGLAS, IRON, LINCOLN, ONEIDA,
PRICE, SAWYER, VILAS AND WASHBURN COUNTIES

	Rates	Fringes
IRONWORKER	$ 35.09	31.80

LABO0113-002 06/01/2021

MILWAUKEE AND WAUKESHA COUNTIES

	Rates	Fringes
LABORER		
Group 1	$ 31.40	22.26
Group 2	$ 31.55	22.26
Group 3	$ 31.75	22.26
Group 4	$ 31.90	22.26
Group 5	$ 32.05	22.26
Group 6	$ 27.89	22.26

LABORERS CLASSIFICATIONS

GROUP 1: General Laborer; Tree Trimmer; Conduit Layer; Demolition and Wrecking Laborer; Guard Rail, Fence, and Bridge Builder; Landscaper; Multiplate Culvert Assembler; Stone Handler; Bituminous Worker (Shoveler, Loader, and Utility Man); Batch Truck Dumper or Cement Handler; Bituminous Worker (Dumper, Ironer, Smoother, and Tamper); Concrete Handler

GROUP 2: Air Tool Operator; Joint Sawer and Filler (Pavement); Vibrator or Tamper Operator (Mechanical Hand Operated); Chain Saw Operator; Demolition Burning Torch Laborer

GROUP 3: Bituminous Worker (Raker and Luteman); Formsetter (Curb, Sidewalk, and Pavement); Strike Off Man

GROUP 4: Line and Grade Specialist

GROUP 5: Blaster and Powderman

GROUP 6: Flagperson; traffic control person

LABO0113-003 06/01/2021

OZAUKEE AND WASHINGTON COUNTIES

	Rates	Fringes
LABORER		
Group 1	$ 30.65	22.26
Group 2	$ 30.75	22.26
Group 3	$ 30.80	22.26
Group 4	$ 31.00	22.26
Group 5	$ 30.85	22.26
Group 6	$ 27.74	22.26

LABORERS CLASSIFICATIONS

GROUP 1: General Laborer; Tree Trimmer; Conduit Layer; Demolition and Wrecking Laborer; Guard Rail, Fence, and Bridge Builder; Landscaper; Multiplate Culvert Assembler; Stone Handler; Bituminous Worker (Shoveler, Loader, and Utility Man); Batch Truck Dumper or Cement Handler; Bituminous Worker (Dumper, Ironer, Smoother, and Tamper); Concrete Handler

GROUP 2: Air Tool Operator; Joint Sawer and Filler (Pavement); Vibrator or Tamper Operator (Mechanical Hand Operated);

GROUP 3: Bituminous Worker (Raker and Luteman); Formsetter (Curb, Sidewalk, and Pavement); Strike Off Man

GROUP 4: Line and Grade Specialist

GROUP 5: Blaster; powderman

GROUP 6: Flagperson and Traffic Control Person

LABO0113-011 06/01/2021

KENOSHA AND RACINE COUNTIES

	Rates	Fringes
LABORER		
Group 1	$ 30.46	22.26
Group 2	$ 30.61	22.26
Group 3	$ 30.81	22.26
Group 4	$ 30.78	22.26
Group 5	$ 31.11	22.26
Group 6	$ 27.60	22.26

LABORERS CLASSIFICATIONS:

GROUP 1: General laborer; Tree Trimmer; Conduit Layer; Demolition and Wrecking Laborer; Guard Rail, Fence, and Bridge Builder; Landscaper; Multiplate Culvert Assembler; Stone Handler; Bituminous Worker (Shoveler, Loader, and Utility Man); Batch Truck Dumper or Cement Handler; Bituminous worker (Dumper, Ironer, Smoother, and Tamper); Concrete Handler

GROUP 2: Air Tool Operator; Joint Sawer and Filler (Pavement); Vibrator or Tamper Operator (Mechanical Hand Operated); Chain Saw Operator; Demolition Burning Torch Laborer

GROUP 3: Bituminous Worker (Raker and Luteman); Formsetter (Curb, Sidewalk, and Pavement); Strike Off Man

GROUP 4: Line and Grade Specialist

GROUP 5: Blaster and Powderman

GROUP 6: Flagman; traffic control person

LABO0140-002 06/01/2020

ADAMS, ASHLAND, BARRON, BAYFIELD, BROWN, BUFFALO, BURNETT,

CALUMET, CHIPPEWA, CLARK, COLUMBIA, CRAWFORD, DODGE, DOOR, DOUGLAS, DUNN, EAU CLAIRE, FLORENCE, FOND DU LAC, FOREST, GRANT, GREEN, GREEN LAKE, IRON, JACKSON, JUNEAU, IOWA, JEFFERSON, KEWAUNEE, LA CROSSE, LAFAYETTE, LANGLADE, LINCOLN, MANITOWOC, MARATHON, MARINETTE, MARQUETTE, MENOMINEE, MONROE, OCONTO, ONEIDA, OUTAGAMIE, PEPIN, PIERCE, POLK, PORTAGE, PRICE, RICHLAND, ROCK, RUSK, SAUK, SAWYER, SHAWANO, SHEBOYGAN, ST. CROIX, TAYLOR, TREMPEALEAU, VERNON, VILLAS, WALWORTH, WASHBURN, WAUPACA, WAUSHARA, WINNEBAGO, AND WOOD COUNTIES

	Rates	Fringes
LABORER		
Group 1	$ 33.72	17.95
Group 2	$ 33.82	17.95
Group 3	$ 33.87	17.95
Group 4	$ 34.07	17.95
Group 5	$ 33.92	17.95
Group 6	$ 30.35	17.95

LABORER CLASSIFICATIONS

GROUP 1: General Laborer; Tree Trimmer; Conduit Layer; Demolition and Wrecking Laborer; Guard Rail, Fence, and Bridge Builder; Landscaper; Multiplate Culvert Assembler; Stone Handler; Bitminous Worker (Shoveler, Loader, and Utility Man); Batch Truck Dumper or Cement Handler; Bituminous Worker (Dumper, Ironer, Smoother and Tamper); Concrete Handler

GROUP 2: Air Tool Operator; Joint Sawer and Filler (Pavement); Vibrator or Tamper Operator (Mechanical Hand Operated); Chain Saw Operator, Demolition Burning Torch Laborer

GROUP 3: Bituminous Worker (Raker and Luteman); Formsetter (Curb, Sidewalk and Pavement); Strike Off Man

GROUP 4: Line and Grade Secialist

GROUP 5: Blaster; powderman

GROUP 6: Flagperson; Traffic Control

LABO0464-003 06/01/2020

DANE COUNTY

	Rates	Fringes
LABORER		
Group 1	$ 34.00	17.95
Group 2	$ 34.10	17.95
Group 3	$ 34.15	17.95
Group 4	$ 34.35	17.95
Group 5	$ 34.20	17.95
Group 6	$ 30.35	17.95

LABORERS CLASSIFICATIONS:

GROUP 1: General Laborer; Tree Trimmer; Conduit Layer; Demolition and Wrecking Laborer; Guard Rail, Fence, and Bridge Builder; Landscaper; Multiplate Culvert Assembler;

Stone Handler; Bituminous Worker (Shoveler, Loader, and Utility Man); Batch Truck Dumper or Cement Handler; Bituminious Worker (Dumper, Ironer, Smoother, and Tamper); Concrete Handler

GROUP 2: Air Tool Operator; Joint Sawer and Filler (Pavement); Vibrator or Tamper Operator (Mechanical Hand Operated); Chain Saw Operator; Demolition Burning Torch Laborer

GROUP 3: Bituminous Worker (Raker and Luteman); Formsetter (Curb, Sidewalk, and Pavement); Strike Off Man

GROUP 4: Line and Grade Specialist

GROUP 5: Blaster; Powderman

GROUP 6: Flagperson and Traffic Control Person

PAIN0106-008 05/01/2017

ASHLAND, BAYFIELD, BURNETT, AND DOUGLAS COUNTIES

	Rates	Fringes
Painters:		
New:		
Brush, Roller	$ 30.33	17.27
Spray, Sandblast, Steel	$ 30.93	17.27
Repaint:		
Brush, Roller	$ 28.83	17.27
Spray, Sandblast, Steel	$ 29.43	17.27

PAIN0108-002 06/01/2021

RACINE COUNTY

	Rates	Fringes
Painters:		
Brush, Roller	$ 36.08	20.36
Spray & Sandblast	$ 37.52	23.27

PAIN0259-002 05/01/2008

BARRON, CHIPPEWA, DUNN, EAU CLAIRE, PEPIN, PIERCE, POLK, RUSK, SAWYER, ST. CROIX, AND WASHBURN COUNTIES

	Rates	Fringes
PAINTER	$ 24.11	12.15

PAIN0259-004 05/01/2015

BUFFALO, CRAWFORD, JACKSON, LA CROSSE, MONROE, TREMPEALEAU, AND VERNON COUNTIES

	Rates	Fringes
PAINTER	$ 22.03	12.45

PAIN0781-002 06/01/2021

JEFFERSON, MILWAUKEE, OZAUKEE, WASHINGTON, AND WAUKESHA COUNTIES

	Rates	Fringes
Painters:		
Bridge	$ 36.70	24.50
Brush	$ 35.95	24.50
Spray & Sandblast	$ 36.70	24.50

PAIN0802-002 06/01/2021

COLUMBIA, DANE, DODGE, GRANT, GREEN, IOWA, LAFAYETTE, RICHLAND, ROCK, AND SAUK COUNTIES

	Rates	Fringes
PAINTER		
Brush	$ 29.98	18.78

PREMIUM PAY:
Structural Steel, Spray, Bridges = $1.00 additional per hour.

PAIN0802-003 06/01/2021

ADAMS, BROWN, CALUMET, CLARK, DOOR, FOND DU LAC, FOREST, GREEN LAKE, IRON, JUNEAU, KEWAUNEE, LANGLADE, LINCOLN, MANITOWOC, MARATHON, MARINETTE, MARQUETTE, MENOMINEE, OCONTO, ONEIDA, OUTAGAMIE, PORTAGE, PRICE, SHAWANO, SHEBOYGAN, TAYLOR, VILAS, WAUSHARA, WAUPACA, WINNEBAGO, AND WOOD COUNTIES

	Rates	Fringes
PAINTER	$ 29.98	18.78

PAIN0934-001 06/01/2021

KENOSHA AND WALWORTH COUNTIES

	Rates	Fringes
Painters:		
Brush	$ 36.52	23.27
Spray	$ 37.52	23.27
Structural Steel	$ 36.67	23.27

PAIN1011-002 06/06/2021

FLORENCE COUNTY

	Rates	Fringes
Painters:	$ 26.71	14.38

PLAS0599-010 06/01/2017

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER		
Area 1	$ 39.46	17.17
Area 2 (BAC)	$ 35.07	19.75

Area 3	$ 35.61	19.40
Area 4	$ 34.70	20.51
Area 5	$ 36.27	18.73
Area 6	$ 32.02	22.99

AREA DESCRIPTIONS

AREA 1: BAYFIELD, DOUGLAS, PRICE, SAWYER, AND WASHBURN COUNTIES

AREA 2: ADAMS, ASHLAND, BARRON, BROWN, BURNETT, CALUMET, CHIPPEWA, CLARK, COLUMBIA, DODGE, DOOR, DUNN, FLORENCE, FOND DU LAC, FOREST, GREEN LAKE, IRON, JEFFERSON, KEWAUNEE, LANGLADE, LINCOLN, MANITOWOC, MARATHON, MARINETTE, MARQUETTE, MENOMINEE, OCONTO, ONEIDA, OUTAGAMIE, POLK, PORTAGE, RUSK, ST CROIX, SAUK, SHAWANO, SHEBOYGAN, TAYLOR, VILAS, WALWORTH, WAUPACA, WAUSHARA, WINNEBAGO, AND WOOD COUNTIES

AREA 3: BUFFALO, CRAWFORD, EAU CLAIRE, JACKSON, JUNEAU, LA CROSSE MONROE, PEPIN, PIERCE, RICHLAND, TREMPEALEAU, AND VERNON COUNTIES

AREA 4: MILWAUKEE, OZAUKEE, WASHINGTON, AND WAUKESHA COUNTIES

AREA 5: DANE, GRANT, GREEN, IOWA, LAFAYETTE, AND ROCK COUNTIES

AREA 6: KENOSHA AND RACINE COUNTIES

TEAM0039-001 06/01/2021

	Rates	Fringes
TRUCK DRIVER		
1 & 2 Axles	$ 32.57	23.81
3 or more Axles; Euclids, Dumptor & Articulated, Truck Mechanic	$ 32.72	23.81
WELL DRILLER	$ 16.52	3.70

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information

on contractor requirements and worker protections under the EO is available at https://www.dol.gov/agencies/whd/government-contracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate

that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour National Office because National Office has responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISIO"

"General Decision Number: WI20220008 02/25/2022

Superseded General Decision Number: WI20210008

State: Wisconsin

Construction Types: Heavy (Sewer and Water Line and Tunnel)

Counties: Wisconsin Statewide.

TUNNEL, SEWER & WATER LINE CONSTRUCTION PROJECTS

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60).

If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:	. Executive Order 14026 generally applies to the contract. . The contractor must pay all covered workers at least $15.00 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2022.
If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:	. Executive Order 13658 generally applies to the contract. . The contractor must pay all covered workers at least $11.25 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2022.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at https://www.dol.gov/agencies/whd/government-contracts.

Modification Number	Publication Date
0	01/07/2022
1	01/21/2022

2 02/04/2022
3 02/25/2022

BRWI0001-002 06/01/2020

CRAWFORD, JACKSON, JUNEAU, LA CROSSE, MONROE, TREMPEALEAU, AND VERNON COUNTIES

	Rates	Fringes
BRICKLAYER	$ 35.31	24.7 7

BRWI0002-002 06/01/2020

ASHLAND, BAYFIELD, DOUGLAS, AND IRON COUNTIES

	Rates	Fringes
BRICKLAYER	$ 42.77	23.47

BRWI0002-005 06/01/2020

ADAMS, ASHLAND, BARRON, BROWN, BURNETT, CALUMET, CHIPPEWA, CLARK, COLUMBIA, DODGE, DOOR, DUNN, FLORENCE, FOND DU LAC, FOREST, GREEN LAKE, IRON, JEFFERSON, KEWAUNEE, LANGLADE, LINCOLN, MANITOWOC, MARATHON, MARINETTE, MARQUETTE, MENOMINEE, OCONTO, ONEIDA, OUTAGAMIE, POLK, PORTAGE, RUSK, ST CROIX, SAUK, SHAWANO, SHEBOYGAN, TAYLOR, VILAS, WALWORTH, WAUPACA, WAUSHARA, WINNEBAGO, AND WOOD COUNTIES

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER	$ 36.68	23.40

BRWI0003-002 06/01/2020

BROWN, DOOR, FLORENCE, KEWAUNEE, MARINETTE, AND OCONTO COUNTIES

	Rates	Fringes
BRICKLAYER	$ 35.68	24.40

BRWI0004-002 06/01/2020

KENOSHA, RACINE, AND WALWORTH COUNTIES

	Rates	Fringes
BRICKLAYER	$ 39.90	25.53

BRWI0006-002 06/01/2020

ADAMS, CLARK, FOREST, LANGLADE, LINCOLN, MARATHON, MENOMINEE, ONEIDA, PORTAGE, PRICE, TAYLOR, VILAS AND WOOD COUNTIES

	Rates	Fringes
BRICKLAYER	$ 36.60	23.48

BRWI0007-002 06/01/2020

GREEN, LAFAYETTE, AND ROCK COUNTIES

	Rates	Fringes
BRICKLAYER	$ 37.07	24.72

BRWI0008-002 06/01/2020

MILWAUKEE, OZAUKEE, WASHINGTON, AND WAUKESHA COUNTIES

	Rates	Fringes
BRICKLAYER	$ 40.75	24.32

BRWI0009-001 06/01/2020

GREEN LAKE, MARQUETTE, OUTAGAMIE, SHAWANO, WAUPACA, WASHARA, AND WINNEBAGO COUNTIES

	Rates	Fringes
BRICKLAYER	$ 35.68	24.40

BRWI0011-002 06/01/2020

CALUMET, FOND DU LAC, MANITOWOC, AND SHEBOYGAN COUNTIES

	Rates	Fringes
BRICKLAYER	$ 35.68	24.40

BRWI0013-002 06/03/2019

DANE, GRANT, IOWA, AND RICHLAND COUNTIES

	Rates	Fringes
BRICKLAYER	$ 35.56	24.23

BRWI0019-002 06/01/2020

BARRON, BUFFALO, BURNETT, CHIPPEWA, DUNN, EAU CLAIRE, PEPIN, PIERCE, POLK, RUSK, ST. CROIX, SAWYER AND WASHBURN COUNTIES

	Rates	Fringes
BRICKLAYER	$ 34.86	25.22

BRWI0021-002 06/01/2020

DODGE AND JEFFERSON COUNTIES

	Rates	Fringes
BRICKLAYER	$ 36.80	24.97

BRWI0034-002 06/01/2020

COLUMBIA AND SAUK COUNTIES

	Rates	Fringes
BRICKLAYER	$ 37.36	24.43

CARP0087-001 05/01/2016

BURNETT (W. of Hwy 48), PIERCE (W. of Hwy 29), POLK (W. of Hwys 35, 48 & 65), AND ST. CROIX (W. of Hwy 65) COUNTIES

	Rates	Fringes
Carpenter & Piledrivermen	$ 36.85	18.39

CARP0252-002 06/01/2016

ADAMS, BARRON, BAYFIELD (Eastern 2/3), BROWN, BUFFALO, BURNETT (E. of Hwy 48), CALUMET, CHIPPEWA, CLARK, COLUMBIA, CRAWFORD, DANE, DODGE, DOOR, DUNN, EAU CLAIRE, FLORENCE (except area bordering Michigan State Line), FOND DU LAC, FOREST, GRANT, GREEN, GREEN LAKE, IOWA, IRON, JACKSON, JEFFERSON, JUNEAU, KEWAUNEE, LA CROSSE, LAFAYETTE, LANGLADE, LINCOLN, MANITOWOC, MARATHON, MARINETTE (except N.E. corner), MARQUETTE, MENOMINEE, MONROE, OCONTO, ONEIDA, OUTAGAMIE, PEPIN, PIERCE (E. of Hwys 29 & 65), POLK (E. of Hwys 35, 48 & 65), PORTAGE, PRICE, RICHLAND, ROCK, RUSK, SAUK, SAWYER, SHAWANO, SHEBOYGAN, ST CROIX (E. of Hwy 65), TAYLOR, TREMPEALEAU, VERNON, VILAS, WALWORTH, WASHBURN, WAUPACA, WAUSHARA, WINNEBAGO, AND WOOD COUNTIES

	Rates	Fringes
CARPENTER		
CARPENTER	$ 33.56	18.00
MILLWRIGHT	$ 35.08	18.35
PILEDRIVER	$ 34.12	18.00

CARP0252-010 06/01/2016

ASHLAND COUNTY

	Rates	Fringes
Carpenters		
Carpenter	$ 33.56	18.00
Millwright	$ 35.08	18.35
Pile Driver	$ 34.12	18.00

CARP0264-003 06/01/2016

KENOSHA, MILWAUKEE, OZAUKEE, RACINE, WAUKESHA, AND WASHINGTON COUNTIES

	Rates	Fringes
CARPENTER	$ 35.78	22.11

CARP0361-004 05/01/2018

BAYFIELD (West of Hwy 63) AND DOUGLAS COUNTIES

	Rates	Fringes
CARPENTER	$ 36.15	20.43

CARP2337-001 06/01/2016

ZONE A: MILWAUKEE, OZAUKEE, WAUKESHA AND WASHINGTON

ZONE B: KENOSHA & RACINE

	Rates	Fringes
PILEDRIVERMAN		
Zone A	$ 31.03	22.69
Zone B	$ 31.03	22.69

CARP2337-003 06/01/2019

	Rates	Fringes
MILLWRIGHT		
Zone A	$ 33.58	21.53
Zone B	$ 33.58	21.53

ZONE DEFINITIONS

ZONE A: MILWAUKEE, OZAUKEE, WAUKESHA AND WASHINGTON COUNTIES

ZONE B: KENOSHA & RACINE COUNTIES

ELEC0014-002 12/26/2021

ASHLAND, BARRON, BAYFIELD, BUFFALO, BURNETT, CHIPPEWA, CLARK (except Maryville, Colby, Unity, Sherman, Fremont, Lynn & Sherwood), CRAWFORD, DUNN, EAU CLAIRE, GRANT, IRON, JACKSON, LA CROSSE, MONROE, PEPIN, PIERCE, POLK, PRICE, RICHLAND, RUSK, ST CROIX, SAWYER, TAYLOR, TREMPEALEAU, VERNON, AND WASHBURN COUNTIES

	Rates	Fringes
Electricians:	$ 37.83	21.89

ELEC0127-002 06/01/2020

KENOSHA COUNTY

	Rates	Fringes
Electricians:	$ 41.62	30%+12.70

ELEC0158-002 05/30/2021

BROWN, DOOR, KEWAUNEE, MANITOWOC (except Schleswig), MARINETTE(Wausuakee and area South thereof), OCONTO, MENOMINEE (East of a ine 6 miles West of the West boundary of Oconto County), SHAWANO (Except Area North of Townships of Aniwa and Hutchins) COUNTIES

	Rates	Fringes
ELECTRICIAN	$ 36.14	29.75%+10.26

ELEC0159-003 05/30/2021

COLUMBIA, DANE, DODGE (Area West of Hwy 26, except Chester and Emmet Townships), GREEN, LAKE (except Townships of Berlin,

Seneca, and St. Marie), IOWA, MARQUETTE (except Townships of Neshkoka, Crystal Lake, Newton, and Springfield), and SAUK COUNTIES

	Rates	Fringes
ELECTRICIAN.....	$ 43.38	23.13

ELEC0219-004 06/01/2019

FLORENCE COUNTY (Townships of Aurora, Commonwealth, Fern, Florence and Homestead) AND MARINETTE COUNTY (Township of Niagara)

	Rates	Fringes
Electricians:		
Electrical contracts over $180,000.....	$ 33.94	21.80
Electrical contracts under $180,000.....	$ 31.75	21.73

ELEC0242-005 05/30/2021

DOUGLAS COUNTY

	Rates	Fringes
Electricians:.....	$ 41.37	69.25%

ELEC0388-002 06/01/2020

ADAMS, CLARK (Colby, Freemont, Lynn, Mayville, Sherman, Sherwood, Unity), FOREST, JUNEAU, LANGLADE, LINCOLN, MARATHON, MARINETTE (Beecher, Dunbar, Goodman & Pembine), MENOMINEE (Area West of a line 6 miles West of the West boundary of Oconto County), ONEIDA, PORTAGE, SHAWANO (Aniwa and Hutchins), VILAS AND WOOD COUNTIES

	Rates	Fringes
Electricians:.....	$ 34.85	26%+11.20

ELEC0430-002 06/01/2021

RACINE COUNTY (Except Burlington Township)

	Rates	Fringes
Electricians:.....	$ 43.45	24.89

ELEC0494-005 06/01/2021

MILWAUKEE, OZAUKEE, WASHINGTON, AND WAUKESHA COUNTIES

	Rates	Fringes
Electricians:.....	$ 44.39	25.67

ELEC0494-006 06/01/2021

CALUMET (Township of New Holstein), DODGE (East of Hwy 26

including Chester Township), FOND DU LAC, MANITOWOC
(Schleswig), and SHEBOYGAN COUNTIES

	Rates	Fringes
Electricians:	$ 37.91	22.74

ELEC0577-003 06/01/2021

CALUMET (except Township of New Holstein), GREEN LAKE (N. part including Townships of Berlin, St Marie, and Seneca), MARQUETTE (N. part including Townships of Crystal Lake, Neshkoro, Newton, and Springfield), OUTAGAMIE, WAUPACA, WAUSHARA, AND WINNEBAGO COUNTIES

	Rates	Fringes
Electricians:	$ 35.66	29.50%+10.00

ELEC0890-003 06/01/2021

DODGE (Emmet Township only), GREEN, JEFFERSON, LAFAYETTE, RACINE (Burlington Township), ROCK AND WALWORTH COUNTIES

	Rates	Fringes
Electricians:	$ 39.00	25.95%+11.17

ENGI0139-003 06/06/2021

REMAINING COUNTIES

	Rates	Fringes
Power Equipment Operator		
Group 1	$ 44.27	23.80
Group 2	$ 43.02	23.80
Group 3	$ 40.97	23.80
Group 4	$ 40.44	23.80
Group 5	$ 38.37	23.80
Group 6	$ 36.84	23.80

HAZARDOUS WASTE PREMIUMS:
EPA Level ""A"" Protection: $3.00 per hour
EPA Level ""B"" Protection: $2.00 per hour
EPA Level ""C"" Protection: $1.00 per hour

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Cranes, Tower Cranes and Derricks with or without attachments with a lifting capacity of over 100 tons; Cranes, Tower Cranes, and Derricks with boom, leads and/or jib lengths 176 ft or longer.

GROUP 2: Backhoes (Excavators) weighing 130,00 lbs and over; Cranes, Tower Cranes and Derricks with or without attachments with a lifting capacity of 100 tons or less; Cranes, Tower Cranes, and Derricks with boom, leads, and/or jib lengths 175 ft or less; Caisson Rigs; Pile Driver

GROUP 3: Backhoes (Excavators) weighing under 130,000 lbs; Travelling Crane (bridge type); Milling Machine; Concrete

Paver over 27 E; Concrete Spreader and Distributor; Concrete Laser Screed; Concrete Grinder and Planing Machine; Slipform Curb and Gutter Machine; Boring Machine (Directional); Dredge Operator; Skid Rigs; over 46 meter Concrete Pump.

GROUP 4: Hydraulic Backhoe (tractor or truck mounted); Hydraulic Crane, 10 tons or less; Tractor, Bulldozer, or End Loader (over 40 hp); Motor Patrol; Scraper Operator; Bituminous Plant and Paver Operator; Screed-Milling Machine; Roller over 5 tons; Concrete pumps 46 meter and under; Grout Pumps; Rotec type machine; Hydro Blaster, 10,000 psi and over; Rotary Drill Operator; Percussion Drilling Machine; Air Track Drill with or without integral hammer; Blaster; Boring Machine (vertical or horizontal); Side Boom; Trencher, wheel type or chain type having 8 inch or larger bucket; Rail Leveling Machine (Railroad); Tie Placer; Tie Extractor; Tie Tamper; Stone Leveler; Straddle Carrier; Material Hoists; Stack Hoist; Man Hoists; Mechanic and Welder; Off Road Material Haulers.

GROUP 5: Tractor, Bulldozer, or Endloader (under 40 hp); Tampers -Compactors, riding type; Stump Chipper, large; Roller, Rubber Tire; Backfiller; Trencher, chain type (bucket under 8 inch); Concrete Auto Breaker, large; Concrete Finishing Machine (road type); Concrete Batch Hopper; Concrete Conveyor Systems; Concrete Mixers, 14S or over; Pumps, Screw Type and Gypsum); Hydrohammers, small; Brooms and Sweeeprs; Lift Slab Machine; Roller under 5 tons; Industrial Locomotives; Fireman (Pile Drivers and Derricks); Pumps (well points); Hoists, automatic; A-Frames and Winch Trucks; Hoists (tuggers); Boats (Tug, Safety, Work Barges and Launches); Assistant Engineer

GROUP 6: Shouldering Machine Operator; Farm or Industrial Tractor mounted equipment; Post Hole Digger; Auger (vertical and horizontal); Skid Steer Loader with or without attachments; Robotic Tool Carrier with or without attachments; Power Pack Vibratory/Ultra Sound Driver and Extractor; Fireman (Asphalt Plants); Screed Operator; Stone Crushers and Screening Plants; Air, Electric, Hydraulic Jacks (Slip Form); Prestress Machines; Air Compressor, 400 CFM or over; Refrigeration Plant/Freese Machine; Boiler Operators (temporary heat); Forklifts; Welding Machines; Generators; Pumps over 3""; Heaters, Mechanical; Combination small equipment operator; Winches, small electric; Oiler; Greaser; Rotary Drill Tender; Conveyor; Elevator Operator

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ENGI0139-007 06/07/2021

DODGE, FOND DU LAC, JEFFERSON, KENOSHA, MILWAUKEE, OZAUKEE, RACINE, SHEBOYGAN, WALWORTH, WASHINGTON, AND WAUKESHA COUNTIES

	Rates	Fringes
Power Equipment Operator		
Group 1	$ 42.54	24.15
Group 2	$ 41.76	24.15
Group 3	$ 40.81	24.15
Group 4	$ 39.76	24.15
Group 5	$ 38.36	24.15

HAZARDOUS WASTE PREMIUMS:

EPA Level ""A"" Protection: $3.00 per hour
EPA Level ""B"" Protection: $2.00 per hour
EPA Level ""C"" Protection: $1.00 per hour

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Cranes, Tower Cranes, and Derricks with or without attachments, with a lifting capacity of over 100 tons; or Cranes, Tower Cranes, and Derricks with boom, leads, and/or jib lengths measuring 176 feet or longer; Backhoes (Excavators) 130,000 lbs and over; Caisson Rigs and Pile Drivers

GROUP 2: Cranes, Tower Cranes and Derricks with or without attachments with a lifting capacity of 100 tons or under; or Cranes, Tower Cranes, and Derricks with boom, lead, and\or jib lengths measuring 175 feet or under; Backhoes (Excavators) under 130,000 lbs; Skid Rigs; Dredge Operator: Traveling Crane (Bridge type); Concrete Paver over 27 E; Concrete Spreader and Distributor; Concrete Pumps and Boring Machines (directional)

GROUP 3: Material Hoists; Stack Hoists; Tractor or Truck mounted Hydraulic Backhoe; Tractor or Truck Mounted Hydraulic Crane, 5 tons or under; Manhoist; Tractor over 40 hp; Bulldozer over 40 hp; Endloader over 40 hp; Forklift, 25 ft and over; Motor Patrol; Scraper Operator; Sideboom; Straddle Carrier; Mechanic and Welder; Bituminous Plant and Paver Operator; Roller over 5 tons; Percussion Drill Operator; Rotary Drill Operator; Blaster; Air Track Drill; Trencher (wheel type or chain type having over 8 inch bucket); Elevator; Milling Machine and Boring Machine (horizontal or vertical); Backhoe Mounted Compactor

GROUP 4: Backfiller; Concrete Auto Breaker (large); Concrete Finishing Machine (road type); Roller, Rubber Tire; Concrete Batch Hopper; Concrete Conveyor System; Concrete Mixers (14S or over); Screw type Pumps and Gypsum Pumps; Grout Pumps; Tractor, Bulldozer, End Loader, under 40 hp; Pumps (well points); Trencher (chain type 8 inch or smaller bucket; Industrial Locomotives; Roller under 5 tons; Fireman (Piledrivers and Derricks); Robotic Tool Carrier with or without attachments.

GROUP 5: Hoists (Automatic); Forklift, 12 ft to 25 ft; Tamper-Compactors, riding type; A-Frame andWinch Trucks; Concrete Auto Breaker; Hydrohammer, small; Brooms and Sweepers; Hoist (Tuggers); Stump Chipper, large; Boats (Tug, Safety, Work Barges and Launch); Shouldering Machine Operator; Screed Operator; Farm or Industrial Tractor; Post Hole Digger; Stone Crushers and Screening Plants; Firemen (Asphalt Plants); Air Compressor (400 CFM or over); Augers (vertical and horizontal); Generators, 150 KW and over; Air, Electric Hydraulic Jacks (Slipform); Prestress Machines; Skid Steer Loader with or without attachments; Boiler operators (temporary heat); Forklift, 12 ft and under; Screed Operator Milling Machine; Refrigeration Plant/Freeze Machine; Power Pack Vibratory/Ultra Sound Driver and Extractor; Generators under 150 KW; Combination small equipment operator; Compressors under 400 CFM; Welding Machines; Heaters, Mechanical; Pumps; Winches, Small Electric; Oiler and Greaser; Conveyor; High pressure utility locating machine (daylighting machine).

IRON0008-002 06/01/2021

BROWN, CALUMET, DOOR, FOND DU LAC, KEWAUNEE, MANITOWOC, MARINETTE, OCONTO, OUTAGAMI, SHAWANO, SHEBOYGAN, AND WINNEBAGO COUNTIES:

	Rates	Fringes
IRONWORKER	$ 38.77	28.15

Paid Holidays: New Year's Day, Memorial Day, July 4th, Labor Day, Thanksgiving Day & Christmas Day.

IRON0008-003 06/01/2021

KENOSHA, MILWAUKEE, OZAUKEE, RACINE, WALWORTH (N.E. 2/3), WASHINGTON, AND WAUKESHA COUNTIES

	Rates	Fringes
IRONWORKER	$ 40.57	28.40

Paid Holidays: New Year's Day, Memorial Day, July 4th, Labor Day, Thanksgiving Day & Christmas Day.

IRON0383-001 06/06/2021

ADAMS, COLUMBIA, CRAWFORD, DANE, DODGE, FLORENCE, FOREST, GRANT, GREENE, (Excluding S.E. tip), GREEN LAKE, IOWA, JEFFERSON, JUNEAU, LA CROSSE, LAFAYETTE, LANGLADE, MARATHON, MARQUETTE, MENOMINEE, MONROE, PORTAGE, RICHLAND, ROCK (Northern area, vicinity of Edgerton and Milton), SAUK, VERNON, WAUPACA, WAUSHARA, AND WOOD COUNTIES

	Rates	Fringes
IRONWORKER	$ 37.75	27.06

IRON0498-005 06/01/2021

GREEN (S.E. 1/3), ROCK (South of Edgerton and Milton), and WALWORTH (S.W. 1/3) COUNTIES:

	Rates	Fringes
IRONWORKER	$ 41.37	44.41

IRON0512-008 06/03/2019

BARRON, BUFFALO, CHIPPEWA, CLARK, DUNN, EAU CLAIRE, JACKSON, PEPIN, PIERCE, POLK, RUSK, ST CROIX, TAYLOR, AND TREMPEALEAU COUNTIES

	Rates	Fringes
IRONWORKER	$ 37.60	29.40

IRON0512-021 05/03/2021

ASHLAND, BAYFIELD, BURNETT, DOUGLAS, IRON, LINCOLN, ONEIDA,
PRICE, SAWYER, VILAS AND WASHBURN COUNTIES

	Rates	Fringes
IRONWORKER	$ 35.09	31.80

LABO0113-004 06/01/2020

MILWAUKEE, OZAUKEE, WASHINGTON, AND WAUKESHA COUNTIES

	Rates	Fringes
Laborers: (Open Cut)		
Group 1	$ 16.38	21.08
Group 2	$ 18.65	21.08
Group 3	$ 22.19	21.08
Group 4	$ 31.56	21.08
Group 5	$ 31.70	21.08
Group 6	$ 31.76	21.08
Group 7	$ 34.77	21.08
Group 8	$ 37.59	21.08
Group 9	$ 38.23	21.08

LABORERS CLASSIFICATIONS [OPEN CUT]

GROUP 1: Yard Laborer

GROUP 2: Landscaper

GROUP 3: Flag Person

GROUP 4: Paving Laborer

GROUP 5: General Laborer on Surface; Top Man

GROUP 6: Mud Mixer

GROUP 7: Mucker; Form Stripper; Bottom Digger and Misc; Bottom Man and Welder on Surface

GROUP 8: Concrete Manhole Builder; Caisson Worker; Miner; Pipe Layer; Rock Driller and Joint Man; Timber Man and Concrete Brusher; Bracer in Trench Behind Machine & Tight Sheeting; Concrete Formsetter and Shoveler; Jackhammer Operator

GROUP 9: Blaster

LABO0113-005 06/01/2020

SEWER, TUNNEL & UNDERGROUND

KENOSHA AND RACINE COUNTIES

	Rates	Fringes
Laborers:		
Group 1	$ 23.05	21.08
Group 2	$ 28.98	21.08
Group 3	$ 32.34	21.08
Group 4	$ 34.11	21.08

TUNNEL WORK UNDER COMPRESSED AIR: 0-15 lbs add $1.00, 15-30 lbs add $2.00, over 30 lbs add $3.00

LABORERS CLASSIFICATIONS

GROUP 1: Flagperson

GROUP 2: Top Man, General Laborer, Wellpoint Installation, Wire Mesh and Reinforcement, Concrete Worker, Form Stripper, Strike-off Work

GROUP 3: Machine and Equipment Operator, Sheeting, Form Setting, Patch Finisher, Bottom Man, Joint Sawer, Gunnite Man, Manhole Builder, Welder-Torchman, Blaster, Caulker, Bracer, Bull Float, Conduit Worker, Mucker and Car Pusher, Raker and Luteman, Hydraulic Jacking of Shields, Shield Drivers, Mining Machine, Lock Tenders, Mucking Machine Operator, Motor Men & Gauge Tenders and operation of incidental Mechanical Equipment and all Power Driven Tools

GROUP 4: Pipelayer, Miner and Laser Operator

LABO0113-008 06/01/2020

MILWAUKEE, OZAUKEE, WASHINGTON & WAUKESHA COUNTIES

	Rates	Fringes
Laborers: (Tunnel-Free Air)		
Group 1	$ 22.19	21.08
Group 2	$ 31.70	21.08
Group 3	$ 31.76	21.08
Group 4	$ 34.77	21.08
Group 5	$ 34.91	21.08
Group 6	$ 37.59	21.08
Group 7	$ 38.23	21.08

LABORERS CLASSIFICATIONS [TUNNEL - FREE AIR]:

GROUP 1: Flagperson

GROUP 2: General Laborer on surface; Tower Man

GROUP 3: Saw Man; Top Man

GROUP 4: Form Stripper; Car Pusher

GROUP 5: Mucker; Dinkey; Welder (rate on surface)

GROUP 6: Concrete Manhole Builder; Mucking Machine; Miner; Mining Machine; Welder; Rock Driller; Concrete Buster; Jack Hammer Operator; Caisson Worker; Pipelayer and Joint Man; Bracerman

GROUP 7: Blaster

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* LABO0113-009 06/01/2020

MILWAUKEE, OZAUKEE, WASHINGTON & WAUKESHA COUNTIES

	Rates	Fringes

Laborers: (Tunnel -
*COMPRESSED AIR 0 - 15 lbs.)

Group 1	$ 22.19	21.08
Group 2	$ 31.70	21.08
Group 3	$ 35.31	21.08
Group 4	$ 36.11	21.08
Group 5	$ 36.23	21.08
Group 6	$ 38.93	21.08
Group 7	$ 39.55	21.08

LABORERS CLASSIFICATIONS [TUNNEL - COMPRESSED AIR]:

*Compressed Air 15 - 30 lbs add $2.00 to all classifications
*Compressed Air over 30 lbs add $3.00 to all classifcations

GROUP 1: Flagperson

GROUP 2: General Laborer on surface

GROUP 3: Lock Tender on surface

GROUP 4: Form Stripper; Car Pusher

GROUP 5: Mucker; Dinkey

GROUP 6: Mucking Machine; Miner; Mining Machine; Welder & Rock Driller; Lock Tender in tunnel; Concrete Buster; Jack Hammer Operator; Caisson Worker; Pielayer and Joint Man; Bracerman; Nozzle Man on Gunite; Timber Man; Concrete Brusher

GROUP 7: Blaster

NOTE: Hazardous & Toxic Waste Removal: add $0.15 per hour.

LABO0140-005 06/01/2020

ADAMS, ASHLAND, BARRON, BROWN, BUFFALO, CALUMET, CHIPPEWA, CLARK, COLUMBIA, CRAWFORD, DODGE, DOOR, DUNN, EAU CLAIRE, FLORENCE,FOND DU LAC, FOREST, GRANT, GREEN, GREEN LAKE, IOWA, JACKSON, JEFFERSON, JUNEAU, LACROSSE, LAFAYETTE, LANGLADE, LINCOLN, MANITOWOC, MARATHON, MARINETTE, MARQUETTE, MENOMINEE, MONROE, OCONTO, ONEIDA, OUTAGAMIE, PEPIN, PIERCE, POLK, PORTAGE, PRICE, RICHLAND, ROCK, RUSK, ST CROIX, SAUK, SAWYER, SHAWANO, SHEBOYGAN, TAYLOR, TREMMPEALEAU, VERNON, VILAS, WALWWORTH, WASHBURN, WAUPACA, WAUSHARA, WINNEBAGO, AND WOOD COUNTIES

	Rates	Fringes
LABORER (SEWER & WATER)		
Group 1	$ 29.33	17.88
Group 2	$ 31.18	17.88
Group 3	$ 31.48	17.88
Group 4	$ 32.13	17.88

FOR ALL TUNNEL WORK UNDER COMPRESSED AIR: 0-15 lbs add $1.00, 15-30 lbs add $2.00, over 30 lbs add $3.00

LABORER CLASSIFICATIONS:

GROUP 1: Flagperson

  GROUP 2: General Laborer, Wellpoint Installation; Form
  Stripper; Strike Off worker

  GROUP 3: Sheeting Formsetting; Patch Finisher; Bottom Man;
  Joint Sawer; Gunnite Man; Manhole Builder; Welder;
  Torchman; Blaster; Caulker Bracer; Bull Float; Mucker and
  Car Pusher; Raker and Luteman; Hydraulic jacking of
  shields, Shield Drivers; Mining Machine; Lock Tenders;
  Mucking Machine Operators; Motor Men and Gauge Tenders;
  Power Tool Operators

GROUP 4: Pipelayer, Miner, and Laser Operator

 LABO0464-002 06/01/2020

DANE AND DOUGLAS COUNTIES

	Rates	Fringes
LABORER		
Group 1	$ 29.23	17.88
Group 2	$ 31.43	17.88
Group 3	$ 31.63	17.88
Group 4	$ 32.38	17.88

  FOR ALL TUNNEL WORK UNDER COMPRESSED AIR: 0 - 15 lbs add
  $1.00, 15- 30 lbs add $2.00, over 30 lbs add $3.00

LABORERS CLASSIFICATIONS:

GROUP 1: Flagperson

  GROUP 2: General Laborer; Wellpoint Installation; Concrete
  Worker; Form Stripper; Strike Off worker

  GROUP 3: Sheeting Formsetting; Patch Finisher; Bottom Man;
  Joint Sawer; Gunnite Man; Manhole Builder; Welder;
  Torchman; Blaster; Caulker Bracer; Bull Float; Mucker and
  Car Pusher; Raker and Luteman; Hydraulic jacking of
  shields, Shield Dirvers; Mining Machine; Lock Tenders;
  Mucking Machine Operators; Motor Men and Gauge Tenders;
  Power Tool Operators

GROUP 4: Pipelayer, Miner, and Laser Operator

 LABO1091-010 06/01/2020

BAYFIELD, BURNETT, IRON, SAWYER, AND WASHBURN COUNTIES

	Rates	Fringes
Laborers: (SEWER & WATER)		
Group 1	$ 29.02	17.88
Group 2	$ 31.08	17.88
Group 3	$ 31.28	17.88
Group 4	$ 32.03	17.88

FOR ALL TUNNEL WORK UNDER COMPRESSED AIR:
  0 - 15 lbs add $1.00, 15-30 lbs add $2.00, over 30 lbs add
  $3.00

LABORERS CLASSIFICATIONS:

GROUP 1: Flagperson

GROUP 2: Laborers, Wellpoint Installation; Form Stripper; Strike Off worker

GROUP 3: Sheeting Formsetting; Patch Finisher; Bottom Man; Joint Sawer; Gunnite Man; Manhole Builder; Welder; Torchman; Blaster; Caulker Bracer; Bull Float; Mucker and Car Pusher; Raker and Luteman; Hydraulic jacking of shields, Shield Dirvers; Mining Machine; Lock Tenders; Mucking Machine Operators; Motor Men and Gauge Tenders; Power Tool Operators

GROUP 4: Pipelayer, Miner, and Laser Operator

PLAS0599-010 06/01/2017

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER		
Area 1	$ 39.46	17.17
Area 2 (BAC)	$ 35.07	19.75
Area 3	$ 35.61	19.40
Area 4	$ 34.70	20.51
Area 5	$ 36.27	18.73
Area 6	$ 32.02	22.99

AREA DESCRIPTIONS

AREA 1: BAYFIELD, DOUGLAS, PRICE, SAWYER, AND WASHBURN COUNTIES

AREA 2: ADAMS, ASHLAND, BARRON, BROWN, BURNETT, CALUMET, CHIPPEWA, CLARK, COLUMBIA, DODGE, DOOR, DUNN, FLORENCE, FOND DU LAC, FOREST, GREEN LAKE, IRON, JEFFERSON, KEWAUNEE, LANGLADE, LINCOLN, MANITOWOC, MARATHON, MARINETTE, MARQUETTE, MENOMINEE, OCONTO, ONEIDA, OUTAGAMIE, POLK, PORTAGE, RUSK, ST CROIX, SAUK, SHAWANO, SHEBOYGAN, TAYLOR, VILAS, WALWORTH, WAUPACA, WAUSHARA, WINNEBAGO, AND WOOD COUNTIES

AREA 3: BUFFALO, CRAWFORD, EAU CLAIRE, JACKSON, JUNEAU, LA CROSSE MONROE, PEPIN, PIERCE, RICHLAND, TREMPEALEAU, AND VERNON COUNTIES

AREA 4: MILWAUKEE, OZAUKEE, WASHINGTON, AND WAUKESHA COUNTIES

AREA 5: DANE, GRANT, GREEN, IOWA, LAFAYETTE, AND ROCK COUNTIES

AREA 6: KENOSHA AND RACINE COUNTIES

TEAM0039-001 06/01/2021

	Rates	Fringes
TRUCK DRIVER		
1 & 2 Axles	$ 32.57	23.81

3 or more Axles; Euclids,
Dumptor & Articulated,
Truck Mechanic.....$ 32.72 23.81

WELL DRILLER.....$ 16.52 3.70

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at https://www.dol.gov/agencies/whd/government-contracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour National Office because National Office has responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the

Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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END OF GENERAL DECISIO"

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 24, 2022

NOTICE TO ALL CONTRACTORS:

Seed Mix Addendum #01

Letting of March 8, 2022

Below is the revised Seeding Mixture Specification that affects proposals 02, 04, 05, 09 - 11, 13 - 15, 19 - 22, 25, 26, 28, - 41, 45 - 49, and 51 in the March 8, 2022 letting.

Seeding.

Add the following to standard spec spec 630.2.1.5.1.1:

Due to a temporary shortage in some fescue species, Table 630-3 may be used for the mixtures provided in the table:

TABLE 630-3 (OPTIONAL SEED MIXTURES)

SPECIES COMMON NAME (Acceptable Varieties)	SPECIES BOTANICAL NAME	PURITY minimum %	GERMINATION minimum %	MIXTURE PROPORTIONS (in percent)			
				NO.10	NO.20	NO.30	NO.40
Kentucky Bluegrass (Low Maintenance)	Poa pratensis	98	85	40	6	10	35
Red Fescue (Creeping)	Festuca rubra	97	85	10	5	15	10
Hard Fescue (Improved)	Festuca ovina var. duriuscula	97	85		24	25	20
Tall Fescue (Improved Turf Type)	Festuca arundinacea	98	85		40		
Salt Grass (Fult's or Salty)	Puccinella distans	98	85			15	
Redtop	Agrostis alba	92	85	5			
Perennial Ryegrass	Lolium perenne	96	85	25	25	25	25
White Clover	Triflium repens	95	90	10			
Chewings Fescue	Festuca rubra var. commutata	98	85	10		10	10

The responsibility for notifying potential subcontractors and suppliers of these changes remains with the prime contractors.

Sincerely,

Mike Coleman

Proposal Development Specialist
Proposal Management Section

END OF ADDENDUM

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 25, 2022

NOTICE TO ALL CONTRACTORS:

Proposal #09: 5992-11-31/32/33, WISC 2022233
City of Madison, University Avenue
Shorewood Blvd to University Bay Drive
Local Street
Dane County

5992-11-32
City of Madison, University Avenue
Shorewood Blvd to University Bay Drive
Local Street
Dane County

5992-11-33
City of Madison, University Avenue
Shorewood Blvd to University Bay Drive
Local Street
Dane County

Letting of March 8, 2022

This is Addendum No. 01, which provides for the following:

Special Provisions:

Revised Special Provisions	
Article No.	Description
4	Traffic
6	Utilities
17	Coordination with Business and Residents
22	General Provisions for City of Madison Storm Sewer
50	Rock Excavation for Sanitary Sewer, Item SPV.0035.002
51	Rock Excavation for Water Main, Item SPV.0035.003
64	Storm Sewer Pipe 96-Inch Bend, Item SPV.0060.014
67	Storm Sewer Tap, Item SPV.0060.018
70	Construction Staking Project 5992-11-31, Item SPV.0060.021, Construction Staking Project 5992-11-33, Item SPV.0060.022
76	Sanitary Lateral Reconnect, Item SPV.0060.032

77	Sanitary Sewer Tap, Item SPV.0060.033
96	Rock Excavation for Concrete Bases, Item SPV.0060.061
115	Temporary Traffic Signals (Hill), Item SPV.0060.106; Temporary Traffic Signals (Ridge), Item SPV/0060.107; Temporary Traffic Signals (Farley), Item SPV.0060.108
116	Temporary Street Lighting System Maintenance and Operations, Item SPV.0060.109
130	Sanitary Sewer Lateral, Item SPV.0090.020

Added Special Provisions	
Article No.	Description
150	Rock Excavation
151	Temporary Crosswalk Access Shorewood Blvd/Hill St, Item SPV.0045.001; Marshall Ct/Ridge St, Item SPV.0045.002; University Bay Dr/Farley Ave, Item SPV.0045.003
152	External Sewer Access Structure Joint Seal, Item SPV.0060.038
153	Private Storm Sewer Connection, Item SPV.0060.047
154	Sanitary Sewer Pressure Pipe (C900), 10-Inch, Item SPV.0090.037; 12-Inch, Item SPV.0090.038
155	Precast Concrete Box Culvert 12 FT x 4 FT, Item 504.2000.S.001; 15 FT x 6 FT, Item 504.2000.S.003
156	Construction Staking Project 5992-11-31, Item SPV.0060.021, Construction Staking Project 5992-11-33, Item SPV.0060.022
157	Construct Inside Drop 10-Inch, Item SPV.0200.002

Deleted Special Provisions	
Article No.	Description
33	General Requirements for Blasting Rock
37	Precast Concrete Box Culvert 12 FT x 4 FT, Item 504.2000.S.001; 12 FT x 6 FT, Item 504.2000.S.002
59	Construction Staking Sanitary Sewer, Item SPV.0060.008.
60	Construction Staking Water Main, Item SPV.0060.009.
70	Construction Staking Project 5992-11-31, Item SPV.0060.021, Construction Staking Project 5992-11-33, Item SPV.0060.022
149	Construct Inside Drop 8-Inch, Item SPV.0200.001

Schedule of Items:

Revised Bid Item Quantities					
Bid Item	Item Description	Unit	Old Quantity	Revised Quantity	Proposal Total
643.0900	Traffic Control Signs	DAY	20,300	1,750	22,050
643.1050	Traffic Control Signs PCMS	DAY	900	400	1,300
644.1810	Temporary Pedestrian Barricade	LF	400	400	800
SPV.0060.027	Furnish and Install Fluorocarbon Gaskets, 16-Inch	EACH	13	29	36
SPV.0060.056	Clay Trench Plug	EACH	2	5	7
SPV.0090.021	Sanitary Sewer Pipe PVC, 8-Inch	LF	576	563	563
SPV.0090.023	Sanitary Sewer Pipe PVC, 12-Inch	LF	697	460	460

Added Bid Item Quantities					
Bid Item	Item Description	Unit	Old Quantity	Revised Quantity	Proposal Total
204.0120	Removing Asphaltic Surface Milling	SY	0	8660	8660

504.2000.S.003	Precast Concrete Box Culvert (15 FT X 6 FT)	LF	0	50	50
628.7560	Tracking Pads	EACH	0	8	8
642.5401	Field Office Type D	EACH	0	1	1
644.1420	Temporary Pedestrian Surface Plywood	SF	0	1365	1365
SPV.0045.001	Temporary Crosswalk Access Shorewood Blvd/Hill St	DAYS	0	247	247
SPV.0045.002	Temporary Crosswalk Access Marshall Ct/Ridge St	DAYS	0	247	247
SPV.0045.003	Temporary Crosswalk Access University Bay Dr/Farley Ave	DAYS	0	247	247
SPV.0060.008	Construction Staking Project 5992-11-32	EACH	0	1	1
SPV.0060.038	External Sewer Access Structure Joint Seal	EACH	0	2	2
SPV.0060.047	Private Storm Sewer Connection	EACH	0	8	8
SPV.0090.037	Sanitary Sewer Pressure Pipe (C900), 10-Inch	LF	0	13	13
SPV.0090.038	Sanitary Sewer Pressure Pipe (C900), 12-Inch	LF	0	237	237
SPV.0200.002	Construct Inside Drop 10-Inch	VF	0	2.3	2.3

Deleted Bid Item Quantities					
Bid Item	Item Description	Unit	Old Quantity	Revised Quantity	Proposal Total
204.0115	Removing Asphaltic Surface Butt Joints	SY	8,660	-8,660	0
504.2000.S.002	Precast Concrete Box Culvert (15 FT X 6 FT)	LF	50	-50	0
642.5201	Field Office Type C	EACH	1	-1	0
SPV.0060.008	Construction Staking Sanitary Sewer	EACH	1	-1	0
SPV.0060.009	Construction Staking Water Main	EACH	1	-1	0
SPV.0200.001	Construct Inside Drop 8-Inch	VF	2.3	-2.3	0

Plan Sheets:

Revised Plan Sheets	
Plan Sheet	Plan Sheet Title (brief description of changes to sheet)
18	Traffic Control Wedge Detail. Revise note on paying for removal
57-61	Monotube Cantilever Detail. Update stationing and add elevations
64	Plan Detail. Add note for sidewalk replacement
137-138	Utility Plan. Add clay plugs and fluorocarbon gaskets and revise note for sanitary sewer material
142	Utility Plan. Update water main crossing over sanitary sewer
143	Utility Plan. Revise note for sanitary sewer material
236, 238, 240-241, 245, 247, 253, 255-256, 258, 268, 271-273, 278, 281-283, 289, 292-293, 295, 299, 303	Traffic Control. Add Hospital Signing

308	Alternate Route. Add additional signing
328	MQ. Revise Removing Asphaltic Surface Butt Joints to Removing Asphaltic Surface Milling
335	MQ. Revise Box Culvert Size
338	MQ. Add Private Storm Sewer Connections
342	MQ. Add Tracking Pads
343	MQ. Revise Temporary Pedestrian items
344	MQ. Revise Traffic Control Items
364-366	MQ. Revise Sanitary Sewer
617	R-13-360. Update coursing note
625	R-13-361. Update coursing note

Added Plan Sheets	
Plan Sheet	Plan Sheet Title (brief description of why sheet was added)
307A	Traffic Control Detour – University Bay Drive

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

PROJECT ID 5992-11-31/32/33

February 25, 2022

Special Provisions

4. Traffic.

Add the following sectioin:

I Madison Metro Transit Access and Bus Stops

Maintain pedestrian access, according to current ADAAG, within the project limits to all Madison Metro Transit bus stop locations as shown in the plans. Place Temporary Bus Stop Pad as shown in the plans and as directed by the engineer. Closures of bus stops shall be according to the plans. Do not close a bus stop without approval of the engineer. Notify Madison Metro Transit a minimum of one week prior to closing a bus stop.

6. Utilities.

Replace entire section titled **AT&T (Communication)** *with the following:*

AT&T (Communication). AT&T has underground communications facilities at the following locations:
University Avenue: Along the westbound lanes from west of the beginning of the project to 147+05'EB', then shifting to the median from 147+05'EB' to 165+00'EB', then shifting to the eastbound lanes from 165+00'EB' to east of the project limits.
Shorewood: along the east side of the roadway from University Avenue to north of the project limits.
Schmitt Place: along the west side of the roadway from University Avenue to south of the project limits.
Pedestrian Path: along the path from west of the path limits to 55+05.
University Bay Drive: along the west side of the roadway from 21+45'BD' to north of the project limits with a crossing at 23+15'BD'

The AT&T facilities will be adjusted as follows:

- AT&T will need to be on site for any construction operations completed underneath the AT&T facilities. Contact AT&T at least one week prior to needing staff on site.
- The existing underground duct at the following locations will be lowered to avoid conflict with the proposed storm sewer:

  -Station 139+05'WB' to Station 139+85'WB'

  -Station 140+85'WB' to Station 141+70'WB'

  -Station 145+35'WB' to Station 146+05'WB'

  -Station 148+65'WB' to Station 149+45'WB'

  This work is anticipated to take two (2) weeks during Stage 2 to complete after the existing pavement is removed. Contact AT&T at least one week prior to needing this work completed.
- The pedestal at Station 140+38'WB' will be removed.
- The existing underground duct crossing at Station 144+70'EB' will be lowered to avoid conflict with the proposed storm sewer. This duct crossing will be braced during the 96-inch storm sewer operations. This work is anticipated to take one (1) week during Stage 2 to complete after the existing pavement is removed. Contact AT&T at least one week prior to needing this work completed.

- The manhole at Station 151+55'WB', LT will be adjusted to final grade during construction. This work is anticipated to take one (1) day during Stage 2 to complete. Contact AT&T at least one week prior to needing this work completed.
- The manhole at Station 158+95'EB' and Station 159+20'EB' will be adjusted to final grade during construction. This work is anticipated to take one (1) day during Stage 5 to complete. Contact AT&T at least one week prior to needing this work completed.
- The manhole at Station 166+10'EB', RT will be adjusted to final grade during construction. This work is anticipated to take one (1) day during Stage 5 to complete. Contact AT&T at least one week prior to needing this work completed.
- A new underground facility will be installed under the south side of Catafalque Court from Station 50+25 to Station 54+00 then extend along the northern right-of-way line to University Bay Drive. This work will be completed prior to construction.
- A new underground facility will be installed from Station 59+60 to Station 55+90 along the new north right-of-way line then extend northern along University Bay Drive under the east sidewalk, then cross University Bay Drive at Station 22+80'BD' to the west terrace. This work will be completed prior to construction.

17. Coordination with Businesses and Residents.

Replace entire article language with the following:

The contractor shall arrange and conduct a meeting between the contractor, the department, affected residents, local officials and business people to discuss the project schedule of operations including vehicular and pedestrian access during construction operations. Hold the first meeting at least one week

before the start of work under this contract and hold one meeting per month thereafter. The contractor shall arrange for a suitable location for meetings that provides reasonable accommodation for public involvement. The department will prepare and coordinate publication of the meeting notices and mailings for meetings. The contractor shall schedule meetings with at least 2 weeks' prior notice to the engineer to allow for these notifications.

stp-108-060 (20141107)

22. General Provisions for City of Madison Storm Sewer.

Replace paragraph three with the following:

Seal the joints for reinforced concrete pipe with internal rubber gaskets as described in section 608.2 of the standard specifications. The use of mastic joint sealer or mortar as a pipe joint method is prohibited.

Replace paragraphs seven, eight, and nine with the following

Bid all structures (manholes and inlets) as field poured, and construct all structures as field-poured unless the contractor receives approval of the City of Madison design engineer to precast the structures. This approval will not be given until it can be confirmed that the proposed design will fit existing conditions including possible utility conflicts.

No precast approval shall be authorized for any structure until such time as all ULO's that could affect the structure/structures in question have been completed and the City of Madison design engineer has had a minimum of three working days to review all the relevant information.

Upon completion of the ULO information, the design engineer shall provide the information for revision of the storm sewer design. Once the design has been proposed any revisions to the precast submittal shall be provided to thef City for review and approval. The precast submittals shall include any revised designs as necessary for consideration. The city design engineer shall have three days to approve or reject shop

drawings. Under no circumstances shall a precast structure be brought to or used on construction without written approval of shop drawings for that structure prior to its use on site. The contractor may choose to field pour structures and no additional compensation shall be provided.

33. DELETED

37. DELETED

50. Rock Excavation for Sanitary Sewer, Item SPV.0035.002.

Replace entire section titled **A Description** *with the following:*

A Description

This special provision describes providing rock excavation in accordance with the Rock Excavation article of these special provisions.

51. Rock Excavation for Water Main, Item SPV.0035.003.

Replace entire section titled **A Description** *with the following:*

A Description

This special provision describes providing rock excavation in accordance with the Rock Excavation article of these special provisions.

59. DELETED

60. DELETED

64. Storm Sewer Pipe 96-Inch Bend, Item SPV.0060.014.

Add the following to the section titled **B Materials***:*

Submit shop drawings, sealed by a structural engineer, to the engineer in accordance with standard specification 105.2. Review does not relieve the contractor from responsibility for errors or omissions on shop drawings.

67. Storm Sewer Tap, Item SPV.0060.018.

Add the following to the section titled **B Materials***:*

Submit shop drawings, sealed by a structural engineer, to the engineer in accordance with standard specification 105.2 for the 96-inch precast storm sewer tap. Review does not relieve the contractor from responsibility for errors or omissions on shop drawings.

Add the following to Section C Construction:

Precast any storm sewer taps for the 96-inch storm sewer pipe.

70. DELETED

76. Sanitary Lateral Reconnect, Item SPV.0060.032.

Add the following to the section titled **B Materials:**

Provide fittings conforming to the requirements of the American National Standard for Ductile–Iron and Gray-Iron fittings for Water and other liquids, ASA A21.10 (AWWA C110) where the sewer main being installed is Pressure Sanitary Sewer Pipe. Both long body and short body wye ductile iron fittings are acceptable for PVC Pressure Sanitary Sewer Pipe installations where there is less than 8 feet of horizontal separation from water main measured from center of each pipe and/ or where there is encroachment to a City of Madison Well (Franklin Ave.).

77. Sanitary Sewer Tap, Item SPV.0060.033.

Replace paragraph two under section titled **C.2 Existing Pipe to New Structure** *with the following:*

Provide PVC (SDR-26, SDR-35, AWWA C900) that matches the existing pipe's diameter, or the next larger diameter, to reconnect the existing sewer main or lateral. The PVC (SDR-26, SDR-35, AWWA C900) sanitary sewer pipe is considered incidental to this bid item.

96. Rock Excavation for Concrete Bases, Item SPV.0060.061.

Replace entire section titled **A Description** *with the following:*

A Description

This special provision describes providing rock excavation in accordance with the Rock Excavation article of these special provisions.

115. Temporary Traffic Signals (Hill), Item SPV.0060.106; Temporary Traffic Signals (Ridge), Item SPV/0060.107; Temporary Traffic Signals (Farley), Item SPV.0060.108.

Add the following to section titled **C.1 General**:

Hydro-excavation for temporary signal pole installation maybe required due to the location of various private utilities and is included in the temporary traffic signal item.

116. Temporary Street Lighting System Maintenance and Operations, Item SPV.0060.109.

Add the following to section titled **C.1 General**:

Hydro-excavation for temporary lighting pole installation maybe required due to the location of various private utilities and is included in the temporary traffic signal item.

130. Sanitary Sewer Lateral, Item SPV.0090.020.

Add the following to section titled **B Materials***:*

Install AWWA C900 Class 150, DR-18 Pipe type will be installed for laterals where the sewer main being installed is Sanitary Sewer Pressure Pipe (C900).

149. DELETED

150. Rock Excavation.

Replace section 205.2.3 (1) with the following:

Weathered to increasingly more competent bedrock was encountered in the borings and the depth and consistency of these materials should be expected to vary across the site. Final rock excavation quantities shall be determined and paid in accordance with the rock excavation following definition.

Under the associated rock excavation bid items, excavate hard, solid rock in ledges, bedded deposits, and unstratified masses, and conglomerate deposits or any other material so firmly cemented they present the characteristics of solid rock, and the engineer determines it is impracticable to excavate this material without using the use of special equipment such as a pneumatic hammer, hydraulic breakers, grinders (trenchers) or single tooth rippers. Rock excavation also includes removing rock boulders having a volume of one cubic yard or more. Rock excavation shall not apply to plain or asphaltic bound bases or surface courses of macadam, gravel, or broken stone.

Due to the variability of rock depth and compression strength it is encouraged for the contractor to perform independent investigations prior to bidding.

151. Temporary Crosswalk Access Shorewood Blvd/Hill St, Item SPV.0045.001; Marshall Ct/Ridge St, Item SPV.0045.002; University Bay Dr/Farley Ave, Item SPV.0045.003.

A Description

This special provision describes maintaining accessible marked crosswalks and their sidewalk approaches across the construction zone at the intersections, to provide continuous pedestrian access as shown in the plans.

B Materials

Furnish a hard temporary pedestrian surface of asphalt, plywood, or plate according to standard spec 644.2, and SDD 15D30. Gravel or base course material is not acceptable. Asphalt cold-patch to anchor plate may only be placed outside the area intended for use by pedestrians.

Furnish temporary pedestrian barricade according to standard spec 644.2, and SDD 15D30.

Furnish temporary curb ramps accommodating drainage, according to standard spec 644.2, and SDD 15D30. Instead of the metal fixture shown in detail b of SDD 15D30, curb ramps may be constructed with temporary pedestrian surface asphalt, accommodating drainage with 4-inch diameter polyvinyl chloride drainage pipe conforming to AASHTO M 278. If the asphalt abuts pavement or curb and gutter to remain after construction, furnish a protective layer to allow easy and thorough removal of the asphalt while avoiding damage to the permanent feature. Obtain approval from the engineer for the protective layer material.

Provide white 4-inch minimum width paint lines for crosswalk pavement marking according to standard spec 649.2.

C Construction

At a minimum, maintain pedestrian access at all times across University Avenue.

Maintain accessible hard temporary pedestrian surface on existing pavement or sidewalk, new pavement or sidewalk, or temporary surface material where shown on the plans or directed by the engineer.

For temporary surface, curb ramps, and crosswalks, meet the requirements of Americans with Disabilities Act Accessibility Guidelines (ADA).

Construct temporary pedestrian surface, barricade, and curb ramps accommodating drainage according to standard spec 644.3, and SDD 15D30. In areas not already paved, form the foundation by excavating at least 3 inches, and level and compact the foundation to ensure stability.

For each crosswalk, place two 4-inch minimum-width white pavement marking lines between 4-feet and 5-feet apart. Where the marking type transitions, closely match the existing or permanent pavement marking.

Remove temporary features once permanent curb ramps and crosswalks are in service and restore the site.

C.1 Temporary Crosswalks

Install, maintain, relocate (if necessary to accommodate work or operations), and remove hard temporary pedestrian surface material for crosswalks at the intersections as shown on the plans or as approved by the engineer.

The temporary crosswalk shall have a clear width between 4-feet and 5-feet, identified by pavement marking. Locate the crosswalk outside the immediate work area, as approved by the engineer.

Meet the requirements of ADA.

Where vehicular traffic does not cross, install temporary pedestrian barricade along both sides of the temporary crosswalk.

C.2 Temporary Curb Ramps

Install, maintain, and relocate (if necessary to accommodate work or operations) temporary pedestrian curb ramps for crosswalks at the intersections as shown on the plans or as approved by the engineer.

Meet the requirements of ADA.

If curb ramps are temporary pedestrian surface asphalt, place 4-inch PVC drainage pipe in the flow line of the curb and gutter to maintain storm water drainage. If the asphalt curb ramp abuts pavement or curb and gutter to remain after construction, place a protective layer between the two surfaces.

Maintain temporary curb ramps until permanent curb ramps and crosswalks are in place and open to pedestrian traffic as directed by the engineer.

C.3 Sidewalk Approaches to Temporary Curb Ramps and Crosswalks

Install, maintain, relocate (if necessary to accommodate work or operations), and remove hard temporary pedestrian surface material for sidewalk approaches to crosswalks to the intersections as shown on the plans or as approved by the engineer.

At a minimum, continually maintain access through the sidewalk and crosswalk approaches across University Avenue.

Level and compact the surface prior to placing hard temporary pedestrian surface material. The temporary surface shall have a clear width between 4-feet and 5-feet. Locate the temporary pedestrian surface outside the immediate work area, as approved by the engineer.

Meet the requirements of ADA.

Install temporary pedestrian barricade along both sides of the temporary pedestrian surface.

D Measurement

The department will measure Temporary Crosswalk Access (Intersection) by the day in service, acceptably completed. The measured quantity will equal the number of calendar days the crosswalks and their sidewalk approaches through the work area are open to pedestrian traffic. Each day any portion of crosswalk, or curb ramp, or section of sidewalk identified in this article is out of service more than one hour will result in one day being deducted from the quantity measured for payment.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0045.001	Temporary Crosswalk Access Shorewood Blvd/Hill St	DAYS
SPV.0045.002	Temporary Crosswalk Access Marshall Ct/Ridge St	DAYS
SPV.0045.003	Temporary Crosswalk Access University Bay Dr/Farley Ave	DAYS

Payment for this item is full compensation for the following, located in the work zone, at crosswalks, at curb ramps and terraces, and along sidewalk approaches to curb ramps, up to 10' outside the limits of sidewalk replacement: maintaining temporary pedestrian access to the intersection, including associated curb ramps and sidewalk approaches; for temporary pedestrian surface, temporary pedestrian barricade, temporary curb ramps accommodating drainage, including preparing the foundation, furnishing, loading, hauling, installing, maintaining, moving or relaying, and removing and disposing of the temporary white crosswalk pavement marking lines.

The following are not included with this item but will instead be measured and paid for separately: temporary pedestrian barrier more than 10' outside the area of sidewalk replacement; temporary crosswalk pavement marking after completion of lower layer HMA pavement, curb ramps, and medians; temporary traffic signals; temporary traffic control devices or signs required to maintain vehicular traffic.

152. External Sewer Access Structure Joint Seal, Item SPV.0060.038.

A Description

Furnish and install sealed barrel joints on sanitary sewer structures around the outside circumferenceof the Sewer Access Structure.

B Materials

Provide barrel joint seals consisting of flexible rubberized seal conforming to ASTM C923 held in place with stainless steel compression bands or butyl adhesive tape conforming to ASTM C877 or heat shrink sleeve over visco-elastic adhesive sealant. Manhole joint seals shall be a minimum of nine (9) inches wide. Acceptable products and manufacturers are the following: 1. Mac Wrap, Mar Mac Manufacturing Company, Inc. 2. NPC External Joint Seal, NPC, Inc. 3. EZ-Wrap, Press-Seal Gasket Corporation 4. Riser-Wrap, Pipeline Seal and Insulator, or equal.

C Construction

Install sealed barrel joints according to the manufacturer's instructions.

D Measurement

The department will measure External Sewer Access Structure Joint Seal by each structure acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.038	External Sewer Access Structure Joint Seal	EACH

Payment is full compensation for the installation of the external sewer access structure joint seal. Payment shall be for each structure where joint seals are called.

153. Private Storm Sewer Connection, Item SPV.0060.047.

A Description

Furnish and install storm sewer connection for private drainage pipes.

B Materials

Provide materials conforming to the plans and Section 507.3 (d) of the City of Madison Standard Specifications for Public Work Construction – Latest Edition.

C Construction

Use construction methods conforming to the plans and Section 507.3 (d) of the City of Madison Standard Specifications for Public Work Construction – Latest Edition.

D Measurement

The department will measure Private Storm Sewer Connection by each connection acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.047	Private Storm Sewer Connection	EACH

Payment is full compensation for providing all excavation and backfilling; for proving and installing pipe and connections and incidental necessary to complete the work.

154. Sanitary Sewer Pressure Pipe (C900), 10-Inch, Item SPV.0090.037; 12-Inch, Item SPV.0090.038.

A Description

Work under this item will include installing Pressure sewer pipe (10-Inch and 12-Inch) at the alignment and grades shown on the plan set. Conduct a low pressure air test as specified in Article 501.3(b) of the City of Madison Standard Specifications for Public Works Construction – Latest Edition on all sections of the sewer mainline. A passing test is required in order to be acceptable. Include all costs associated with the testing of the gravity main in the contract unit price bid for this item. Maintain the normal flow of wastewater at all times during replacement of the existing sanitary sewer main with the new sanitary sewer main. Payment for furnishing all bypass pumping, temporary piping, and/or temporary connections, which are required to maintain the normal flow of wastewater throughout the sewer construction, is under SPV.0060.007 Wastewater Control.

B Materials

Provide all sewer pipe and fittings of solid-wall Poly (Vinyl Chloride) (PVC) conforming to the requirements of the Specification for Poly (Vinyl Chloride) (PVC) Sewer Pipe and Fittings, AWWA C900 Class 150, DR-18

Provide fittings conforming to the requirements of the American National Standard for Ductile- Iron and Gray-Iron fittings for Water and other liquids, ASA A21.10 (AWWA C110) payable separately under Sanitary Lateral Reconnect, Item SPV.0060.032

Provide joints with integral bell with elastomeric gaskets, or couplings with elastomeric gaskets. Make solvent cement as recommended by the manufacturer.

C Construction

Install sewer pipe in accordance to all applicable provisions of the City of Madison Standard Specifications for Public Works Construction – Latest Edition. Remove all abandon or existing material located within 3’ of the new sanitary sewer alignment. Removal of material (including existing sanitary sewer/water main/etc) is incidental to this bid item. Use Ductile Iron Wye pressure rated fittings to install new laterals to the new main as called for on the plans; provide and place in accordance to Article 503 of Standard Specifications for Public Works Construction – Latest Edition.

D Measurement

The department will measure Sanitary Sewer Pressure Pipe (C900), (Inch) by the linear foot, acceptably completed, to the nearest whole foot of each of the various types, classes and sizes of pipe installed at the various depths, measured along the centerline of the pipe center to center of junctions and fittings. The quantity to be paid for includes construction through Sewer Access Structures, from center of Sewer Access Structure casting to center of Sewer Access Structure casting. Main extensions continuing through Sewer Access Structures will be measured from center of Sewer Access Structure casting to the end of pipe. The

depths of installation will be measured in feet from the invert of the sewer pipe to the elevation of the existing ground. There will be no deductions from the measured lengths for wye installations.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0090.037	Sanitary Sewer Pressure Pipe (C900), 10-Inch	LF
SPV.0090.038	Sanitary Sewer Pressure Pipe (C900), 12-Inch	LF

Payment is full compensation for furnishing all materials, except wyes, necessary to perform the work; excavation of the trench, except tunneling and jacking; installation and removal of sheeting and bracing; removal of water from the trench; disposal of surplus material from the trench; backfilling the trench and compaction of the backfill material; embankment over the sewer using surplus material from the excavation of the trench bedding the pipe; laying the pipe and installing the fittings and accessories; jointing and sealing of joints in pipe, fittings and accessories; encasement, where specified; connections to existing structures; cleaning out the sewer; restoring the site; and all other work incidental to the installation of sanitary sewers.

155. Precast Concrete Box Culvert 12 FT x 4 FT, Item 504.2000.S.001; 15 FT x 6 FT, Item 504.2000.S.003.

A Description

This special provision describes furnishing and installing precast concrete box culverts of the size and length the plans show.

B Materials

Provide materials and fabricate Precast Concrete Box Culvert according to ASTM C1577, except that the concrete mixture shall contain not less than 565 pounds of Portland cement, blended cement or Portland cement plus pozzolanic admixture per cubic yard. Slab thickness, areas of reinforcement, and other details shall be as the plans show.

Submit shop drawings of the removal and reconnections, sealed by a professional engineer, to the engineer in accordance with standard specification 105.2. Review does not relieve the contractor from responsibility for errors or omissions on shop drawings.

C (Vacant)

D Measurement

The department will measure Precast Concrete Box Culvert (size), completed according to the contract and accepted, in length by the linear foot in place. The box culvert will be measured on the centerline of the box along the flow line.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
504.2000.S.001	Precast Concrete Box Culvert, 12 FT x 4 FT	LF
504.2000.S.003	Precast Concrete Box Culvert, 15 FT x 6 FT	LF

Payment is full compensation for furnishing, hauling and placing the box, including joint ties, and joint sealer.

156. Construction Staking Project 5992-11-32, Item SPV.0060.008, Construction Staking Project 5992-11-31, Item SPV.0060.021, Construction Staking Project 5992-11-33, Item SPV.0060.022

A Description

Standard spec 105.6 and 650 are supplemented as noted below to define the requirements for construction staking for this contract.

Supplement standard spec 105.6.2 with the following:

The department will not perform any construction staking for this contract. The contractor shall perform all survey required to layout and construct the work under this contract, subject to engineer's approval. The survey includes establishing horizontal and vertical position for all aspects of construction including but not limited to storm sewer, sanitary sewer, watermain, subgrade, base, curb, gutter, curb and gutter, pipe culverts, structure layout, pavement (temporary and permanent), barriers (temporary and permanent), sawcut locations, pavement markings (temporary and permanent), electrical installations, supplemental control, slope stakes, curb ramps, ponds, parking lots, utilities, landscaping elements, irrigation system layout, installation of community sensitive design elements, traffic control items, fencing, etc.

Delete standard spec 650.1.

B (Vacant)

C Construction

Survey required under this item shall be according to all pertinent requirements of standard spec 650 and shall include all other miscellaneous survey required to layout and construct all work under this contract. Verify existing field conditions and adjust stakes to ensure compatibility with existing field conditions. Notify the engineer immediately if discrepancies between the proposed grades and existing field conditions are discovered.

D Measurement

The department will measure Construction Staking (project) once for the contract acceptably completed.

E Payment

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0060.008	Construction Staking Project 5992-11-32	EACH
SPV.0060.021	Construction Staking Project 5992-11-31	EACH
SPV.0060.022	Construction Staking Project 5992-11-33	EACH

Payment is full compensation for performing all survey work required to layout and construct all work under this contract.

157. Construct Inside Drop 10-Inch, Item SPV.0200.002.

A Description

This special provision describes constructing inside drop structures on sanitary sewer access structures where shown in the drawings, or as directed by the City of Madison. Inside Drops are required if the elevation difference between the flow line of the incoming pipe and the springline of the outgoing pipe is greater than two feet.

B Materials

Provide all materials associated with this item according to Standard Detail Drawing 5.7.30 and section 507.3(d)1 of the City of Madison Standard Specifications.

C Construction

Construct Inside Drop according to section 507.3(d)1 of the City of Madison Standard Specifications.

Maintain the normal flow of wastewater at all times during installation of the sanitary sewer access structure, construction of the outside drop structure, and when connecting new and existing pipes to the structure. Complete any necessary temporary wastewater control according to the City of Madison Standard Specifications, and as described under bid item Wastewater Control item.

The department will be measure Construct Inside Drop 10-Inch by the vertical foot measured from the invert of the entree tee to the springline of the outgoing sewer according to City of Madison Standard Detail Drawing 5.7.30. If the manhole has a bench above the spring line of the outgoing sewer, the inside drop should be measured from the invert of the tee to the top of the manhole structure bench. Sanitary tap connections for the inside drop shall be considered incidental to this bid item.

Revise Section E Payment to the following:

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

ITEM NUMBER	DESCRIPTION	UNIT
SPV.0200.001	Construct Inside Drop 10-Inch	VF

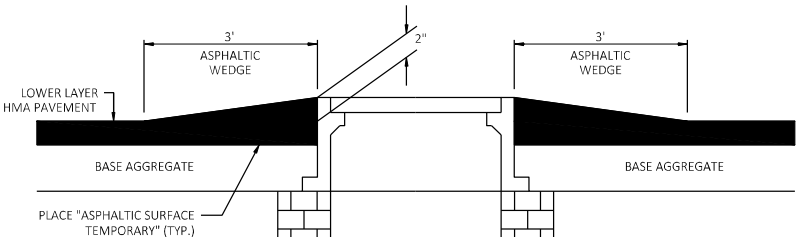
Payment is full compensation for excavating, backfilling and disposing of surplus materials; for making connections; and for furnishing all tools, materials, labor and incidentals necessary to complete the work.

Schedule of Items
Attached, dated February 25, 2022, are the revised Schedule of Items Pages 1 – 28.

Plan Sheets
The following 8½ x 11-inch sheets are attached and made part of the plans for this proposal:
Revised: 18, 57-61, 64, 137-138, 142-143, 236, 238, 240-241, 245, 247, 253, 255-256, 258, 268, 271-273, 278, 281-283, 289, 292-293, 295, 299, 303, 308, 328, 335, 338, 342-344, 364-366, 617 and 625.
Added: 307A.

END OF ADDENDUM

2

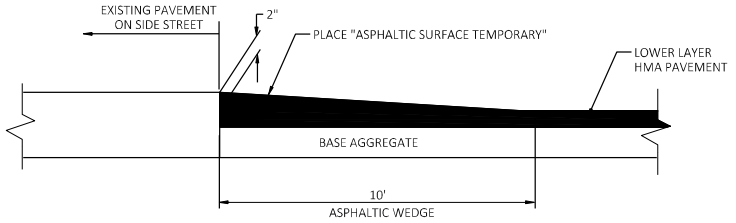


NOTES:

REMOVAL OF ASPHALTIC WEDGES WILL BE PAID FOR AS "REMOVING ASPHALTIC SURFACE MILLING."

PROVIDE ASPHALTIC WEDGES PRIOR TO OPENING LANE TO TRAFFIC.

TEMPORARY WEDGES DETAIL (MANHOLES)

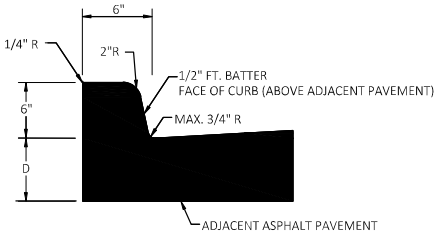


NOTES:

REMOVAL OF ASPHALTIC WEDGES WILL BE PAID FOR AS "REMOVING ASPHALTIC SURFACE MILLING."

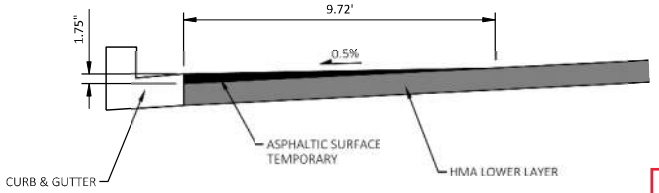
PROVIDE ASPHALTIC WEDGE PRIOR TO OPENING LANE TO TRAFFIC.

TEMPORARY WEDGES DETAIL (MATCH POINTS)



D = DEPTH OF ADJACENT ASPHALT PAVEMENT

TEMPORARY ASPHALTIC CURB DETAIL



TRAFFIC CONTROL WEDGE DETAIL

NOTES:

WEDGE TO BE PLACED PRIOR TRAFFIC LANE SWITCH FOR STAGE 3.

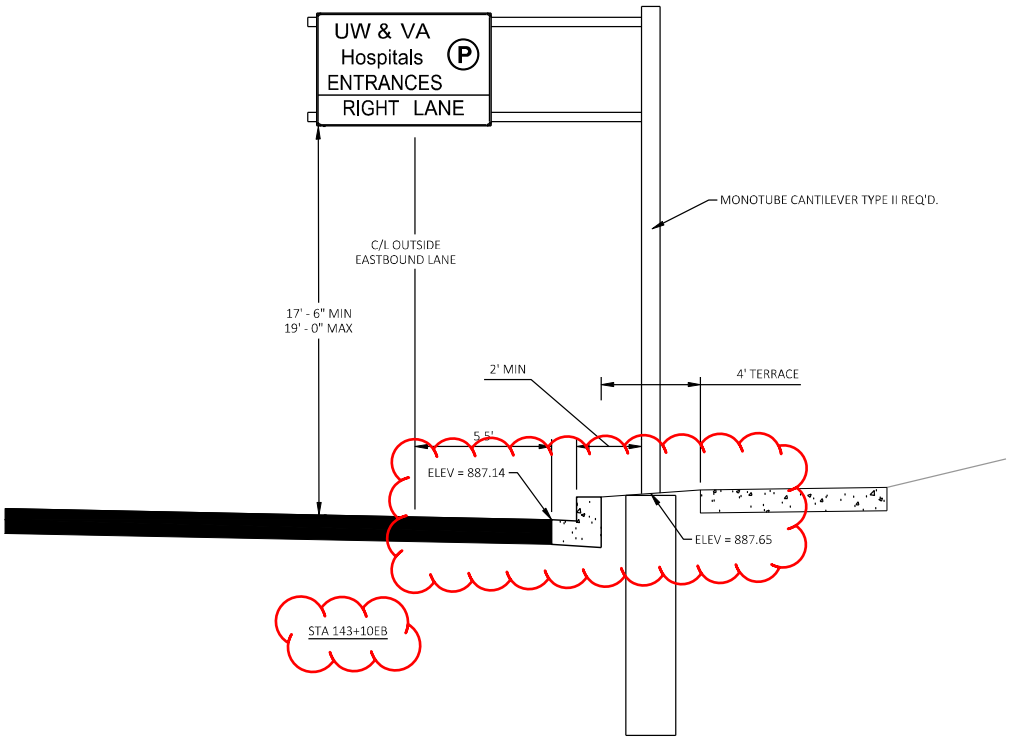
REMOVAL OF TEMPORARY ASPHALTIC SURFACE WILL BE PAID FOR AS "REMOVING ASPHALTIC SURFACE MILLING".

Addendum No. 01
ID 5992-11-31/32/33
Revised Sheet 18
February 25, 2022

PROJECT NO: 5992-11-31	HWY: UNIVERSITY AVENUE	COUNTY: DANE	CONSTRUCTION DETAILS	SHEET 18	E

FILE NAME : G:\MADISON\18026-001 UNIV AVE (SHOREWOOD - UNIVERSITY BAY)\CIVIL 3D\SHEETSPLAN\021001-CD.DWG
LAYOUT NAME - 06
PLOT DATE : 2/21/2022 9:51 AM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1" = 1'

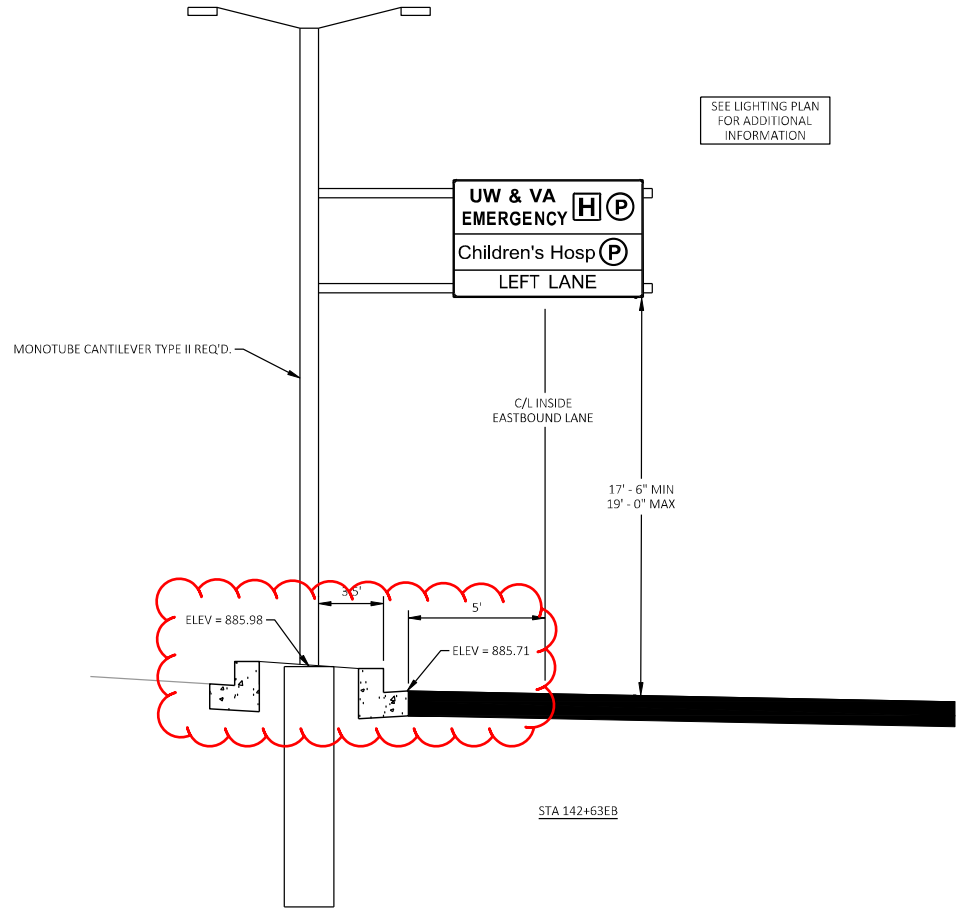
WISDOT/CADDS SHEET 42



Addendum No. 01
ID 5992-11-31/32/33
Revised Sheet 57
February 25, 2022

PROJECT NO: 5992-11-31	HWY: UNIVERSITY AVENUE	COUNTY: DANE	SPECIAL SIGN DETAILS	SHEET 57	E

FILE NAME : G:\MADISON\18026-001 UNIV AVE (SHOREWOOD - UNIVERSITY BAY)\CIVIL 3D\SHEETSPLAN\05 PLAN DETAILS\070103-SD.DWG
LAYOUT NAME - MONOTUBE DETAIL - 1
PLOT DATE : 2/23/2022 12:06 PM PLOT BY : BRADLEY DOMASKY PLOT NAME : PLOT SCALE : 1 IN:20 FT

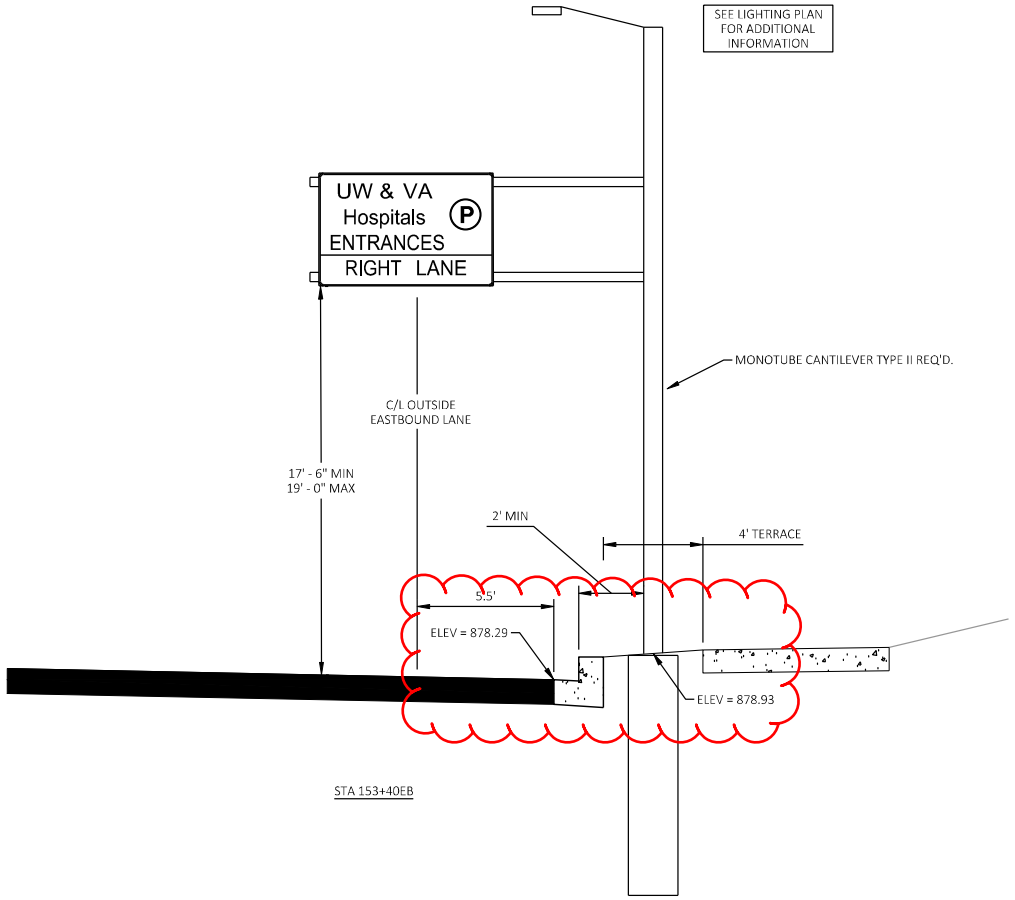


Addendum No. 01
ID 5992-11-31/32/33
Revised Sheet 58
February 25, 2022

PROJECT NO: 5992-11-31	HWY: UNIVERSITY AVENUE	COUNTY: DANE	SPECIAL SIGN DETAILS	SHEET 58	E

FILE NAME : G:\MADISON\18026-001 UNIV AVE (SHOREWOOD - UNIVERSITY BAY)\CIVIL 3D\SHEETSPLAN\05 PLAN DETAILS\070103-SD.DWG
LAYOUT NAME - MONOTUBE DETAIL - 4
PLOT DATE : 2/23/2022 12:06 PM PLOT BY : BRADLEY DOMASKY PLOT NAME : PLOT SCALE : 1 IN:20 FT

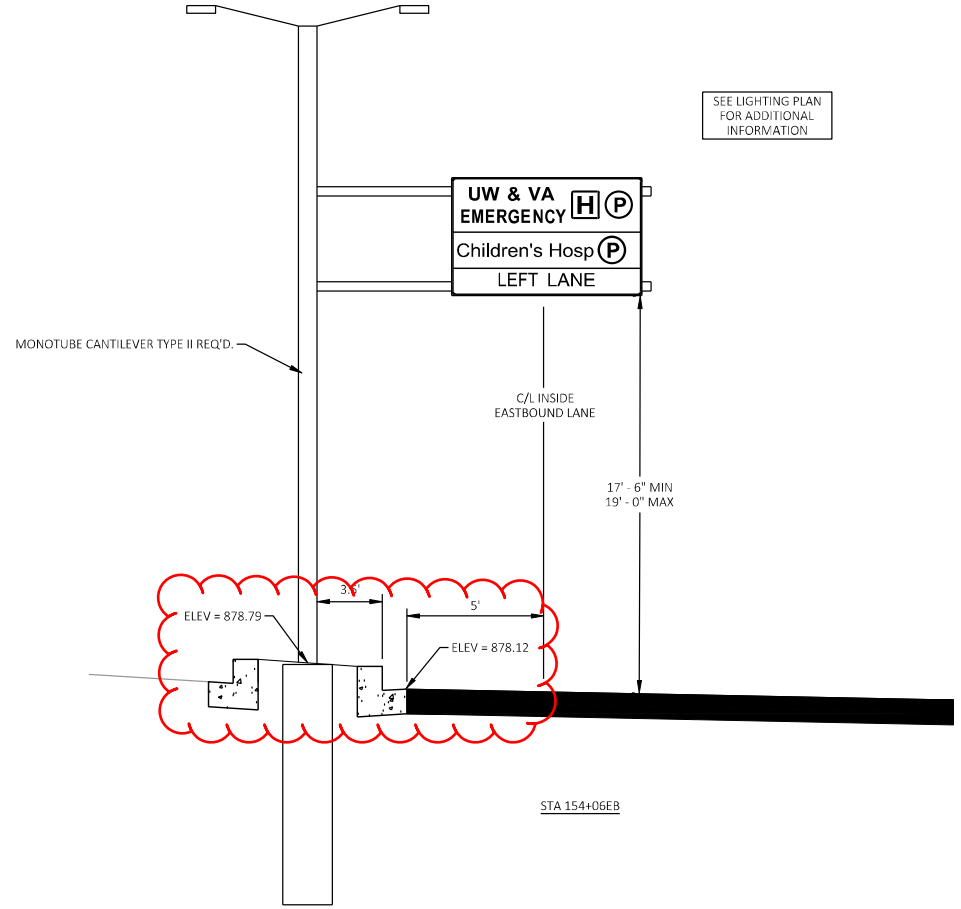
WISDOT/CADDS SHEET 42



Addendum No. 01
ID 5992-11-31/32/33
Revised Sheet 59
February 25, 2022

PROJECT NO: 5992-11-31	HWY: UNIVERSITY AVENUE	COUNTY: DANE	SPECIAL SIGN DETAILS	SHEET 59 E

FILE NAME : G:\MADISON\18026-001 UNIV AVE (SHOREWOOD - UNIVERSITY BAY)\CIVIL 3D\SHEETSPLAN\05 PLAN DETAILS\070103-SD.DWG
LAYOUT NAME - MONOTUBE DETAIL - 2
PLOT DATE : 2/23/2022 12:06 PM PLOT BY : BRADLEY DOMASKY PLOT NAME : PLOT SCALE : 1 IN:20 FT

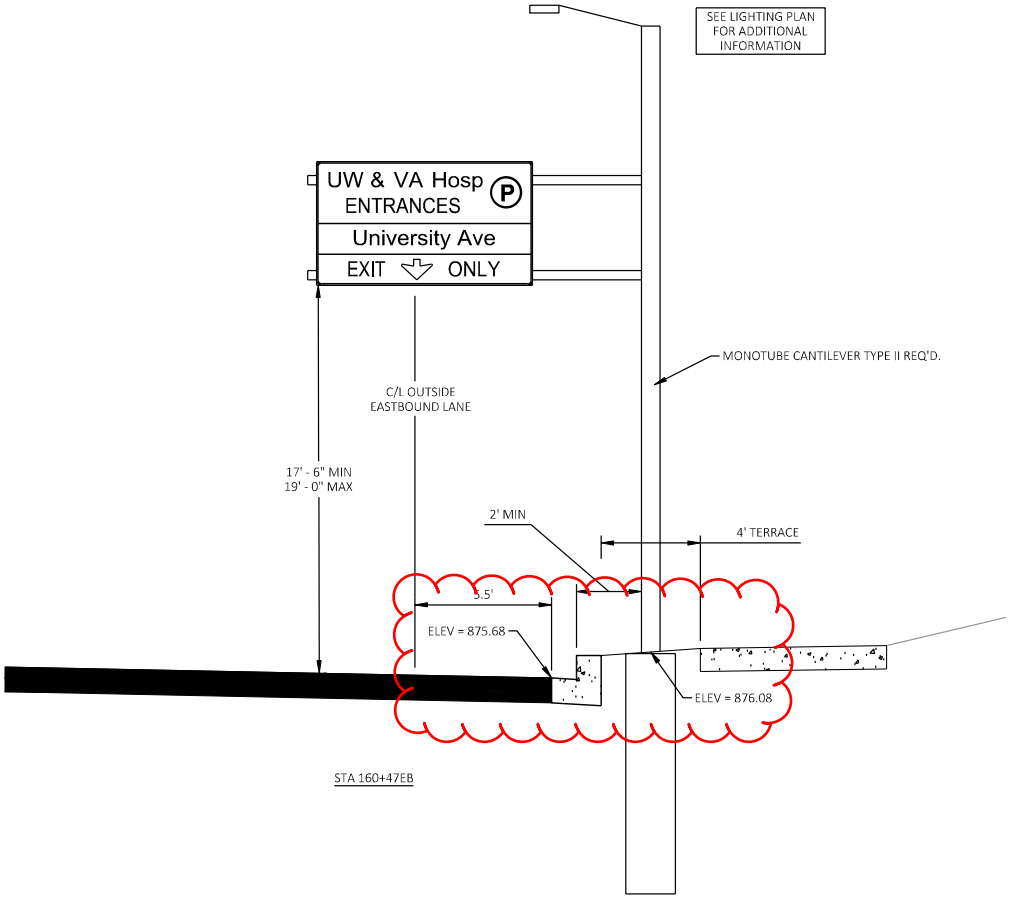


Addendum No. 01
ID 5992-11-31/32/33
Revised Sheet 60
February 25, 2022

PROJECT NO: 5992-11-31	HWY: UNIVERSITY AVENUE	COUNTY: DANE	SPECIAL SIGN DETAILS	SHEET 60	E

FILE NAME : G:\MADISON\18026-001 UNIV AVE (SHOREWOOD - UNIVERSITY BAY)\CIVIL 3D\SHEETSPLAN\05 PLAN DETAILS\070103-SD.DWG
LAYOUT NAME - MONOTUBE DETAIL - 5
PLOT DATE : 2/23/2022 12:07 PM PLOT BY : BRADLEY DOMASKY PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 42



Addendum No. 01
ID 5992-11-31/32/33
Revised Sheet 61
February 25, 2022

PROJECT NO: 5992-11-31	HWY: UNIVERSITY AVENUE	COUNTY: DANE	SPECIAL SIGN DETAILS	SHEET 61	E

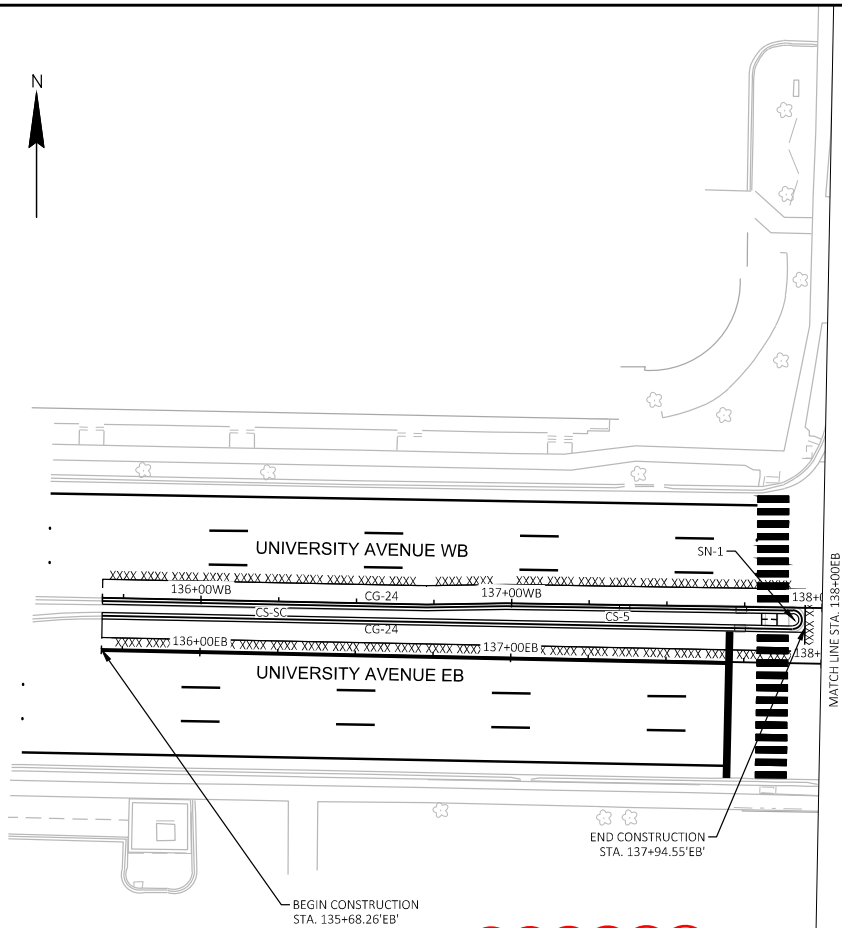
FILE NAME : G:\MADISON\18026-001 UNIV AVE (SHOREWOOD - UNIVERSITY BAY)\CIVIL 3D\SHEETSPLAN\05 PLAN DETAILS\070103-SD.DWG
LAYOUT NAME - MONOTUBE DETAIL - 3
PLOT DATE : 2/23/2022 12:07 PM PLOT BY : BRADLEY DOMASKY PLOT NAME : PLOT SCALE : 1 IN:20 FT

WISDOT/CADDS SHEET 42

2

PLAN DETAILS LEGEND

←	TRAFFIC FLOW
□	PROPOSED STORM SEWER INLET
○	PROPOSED STORM SEWER MANHOLE
– – – – –	SLOPE INTERCEPT
XXXX XXXX XXXX	SAWING ASPHALT
//////////	SAWING CONCRETE
R-WAL	RETAINING WALL
CS-5	CONCRETE SIDEWALK 5-INCH
CS-6	CONCRETE SIDEWALK 6-INCH
CS-SC	CONCRETE SIDEWALK STAMPED/COLORED
CD-7	CONCRETE DRIVEWAY 7-INCH
ASPH	ASPHALTIC SURFACE DRIVEWAYS
TER	TERRACE (SEE TYPICAL SECTION FOR LANDSCAPING TYPE)
GRVL-6	6-INCH BASE AGGREGATE DENSE 3/4 -INCH
CG-30	CONCRETE CURB & GUTTER, 30-INCH TYPE D
CG-24	CONCRETE CURB & GUTTER, 24-INCH TYPE D SPECIAL (SEE CONSTRUCTION DETAIL)
CG-24X	CONCRETE CURB & GUTTER, 24-INCH TYPE X SPECIAL (PAID FOR AS CONCRETE CURB & GUTTER, 24-INCH TYPE D SPECIAL)
CP	CONCRETE CURB PEDESTRIAN
AC	ASPHALTIC CURB
M-A	MAINTENANCE OPENING (SEE CONSTRUCTION DETAIL)
SN-1	CONCRETE MEDIAN SLOPED NOSE TYPE-1

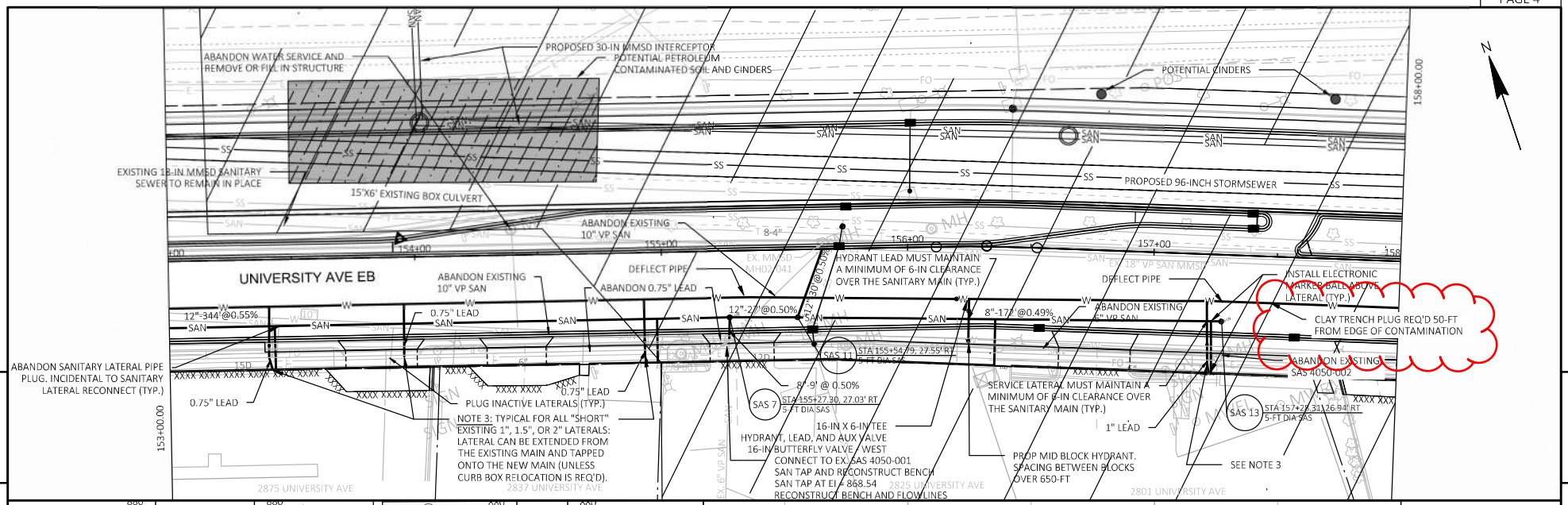


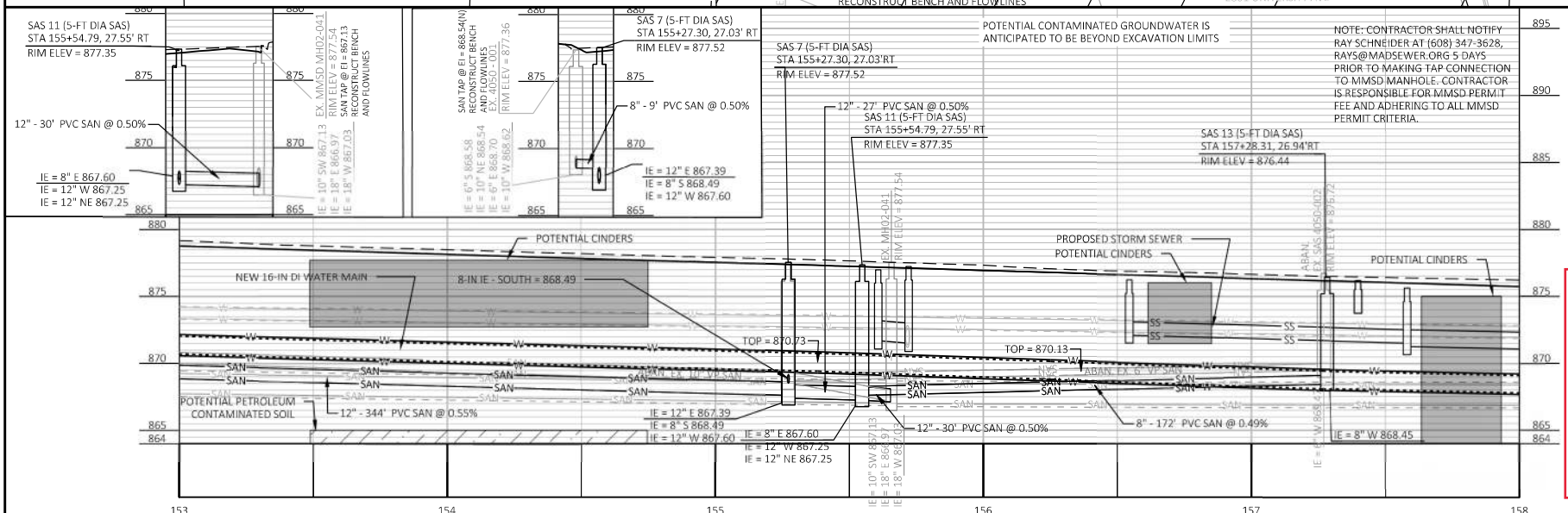
REPLACE CONCRETE SIDEWALK AS NEEDED FROM TEMPORARY SIGNAL POLE INSTALLATION.

Addendum No. 01
ID 5992-11-31/32/33
Revised Sheet 64
February 25, 2022

PROJECT NO: 5992-11-31	HWY: UNIVERSITY AVENUE	COUNTY: DANE	PLAN DETAILS - UNIVERSITY AVENUE	SHEET 64	E

FILE NAME : G:\MADISON\18026-001 UNIV AVE (SHOREWOOD - UNIVERSITY BAY)\CIVIL 3D\SHEETSPLAN\05 PLAN DETAILS\021201-PD.DWG
LAYOUT NAME - LEGEND
PLOT DATE : 2/17/2022 9:34 AM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:40 FT

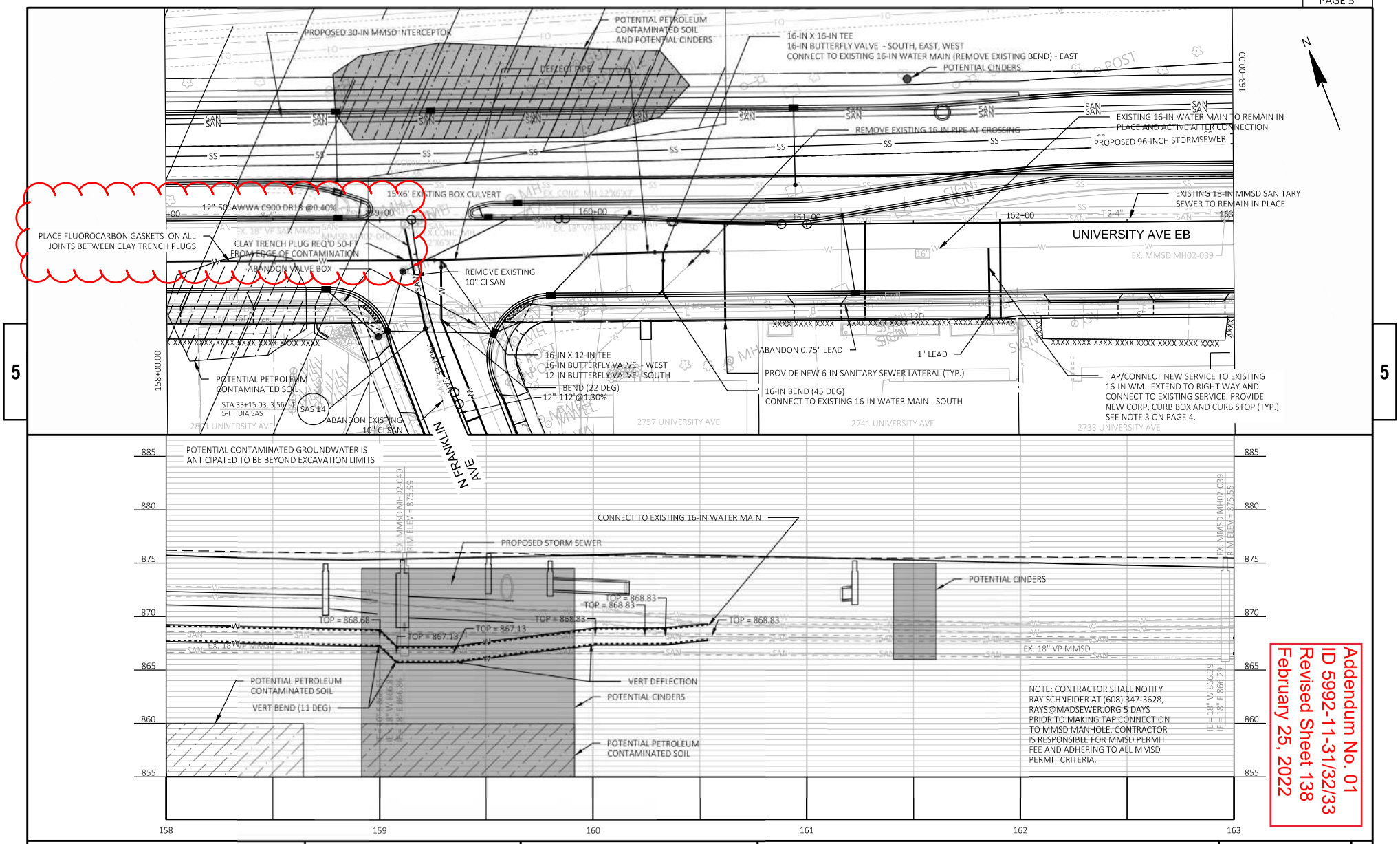




Addendum No. 01
ID 5992-11-31/32/33
Revised Sheet 137
February 25, 2022

PROJECT NO: 5992-11-31	HWY: UNIVERSITY AVENUE	COUNTY: DANE	PLAN AND PROFILE: UNIVERSITY AVENUE UTILITIES	SHEET 137 E

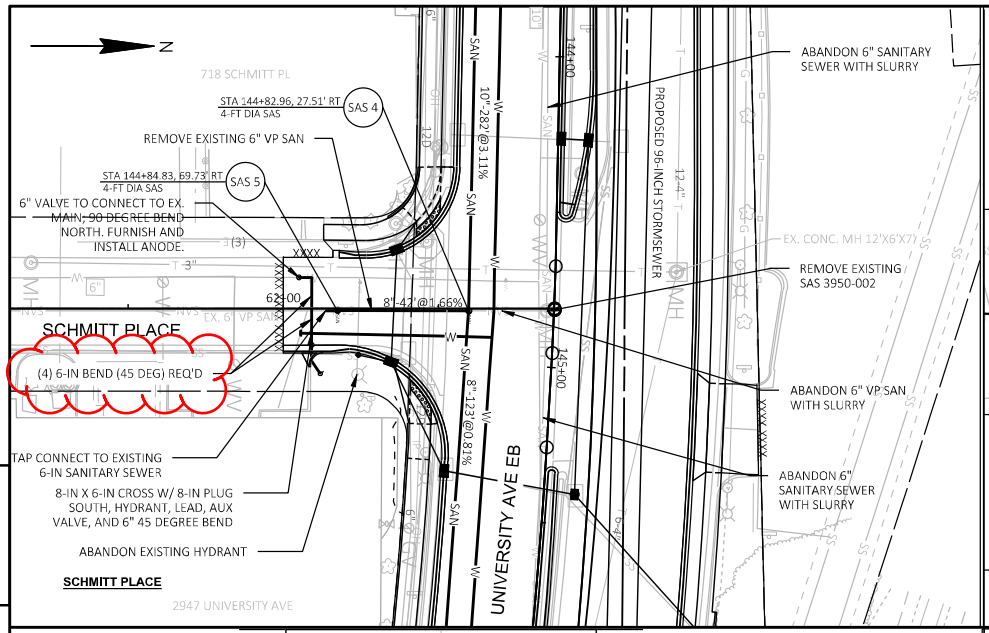
FILE NAME : G:\MADISON\18026-001 UNIV AVE (SHOREWOOD - UNIVERSITY BAY)\CIVIL 3D\SHEETSPLAN\UTILITIES\UTILITY PLAN AND PROFILE.DWG
LAYOUT NAME - UA Utility P&P - (11)
PLOT DATE : 2/22/2022 9:25 AM
PLOT BY : KL ENGINEERING
PLOT NAME :
PLOT SCALE : 1 IN:40 FT

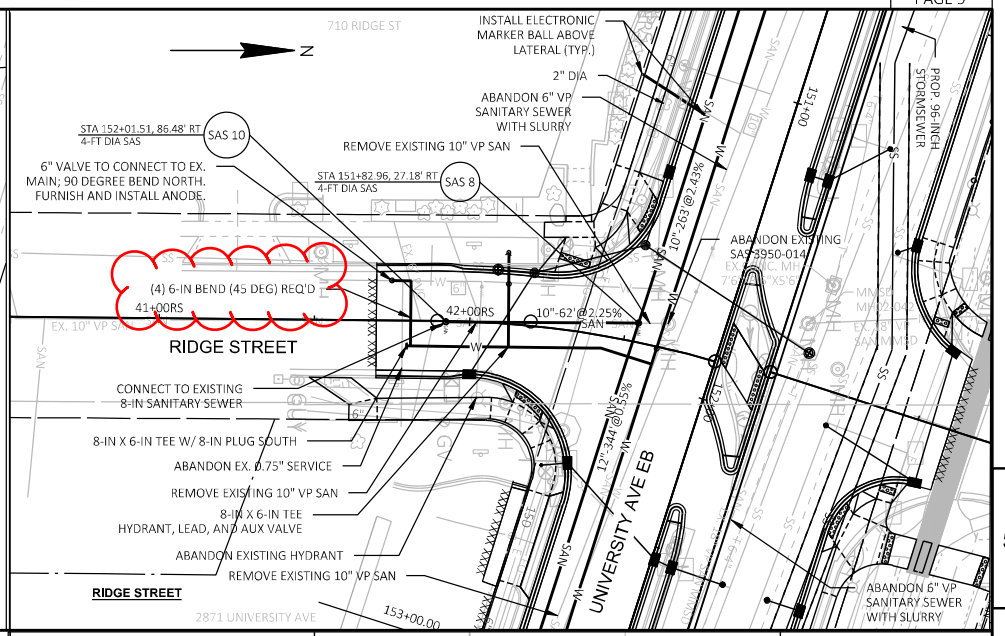


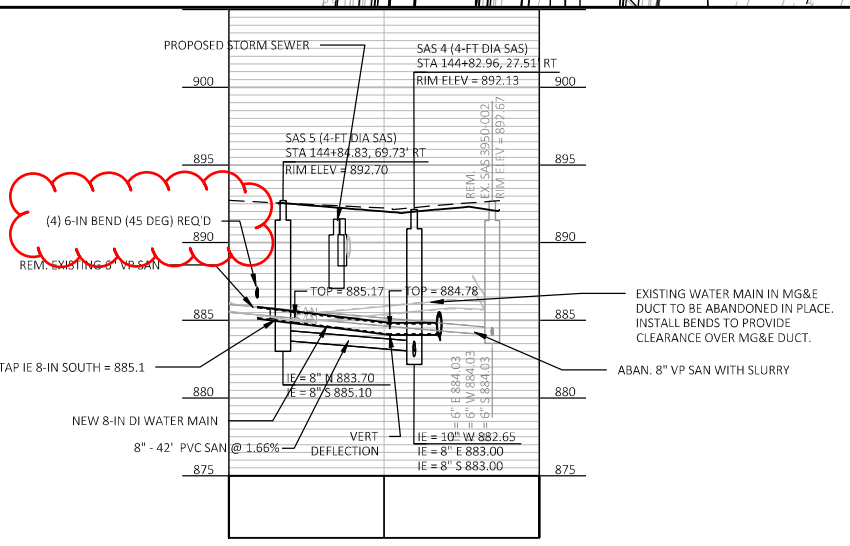
Addendum No. 01
ID 5992-11-31/32/33
Revised Sheet 138
February 25, 2022

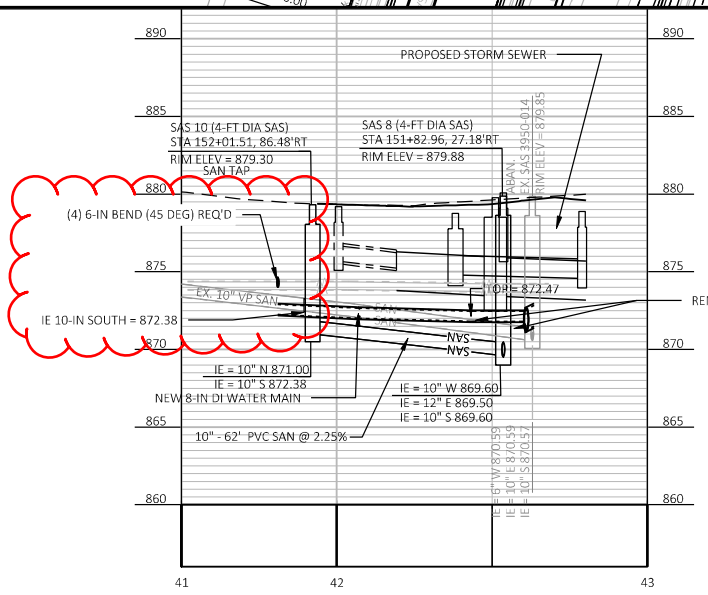
PROJECT NO: 5992-11-31	HWY: UNIVERSITY AVENUE	COUNTY: DANE	PLAN AND PROFILE: UNIVERSITY AVENUE UTILITIES	SHEET 138	E

FILE NAME : G:\MADISON\18026-001 UNIV AVE (SHOREWOOD - UNIVERSITY BAY)\CIVIL 3D\SHEETSPLAN\UTILITIES\UTILITY PLAN AND PROFILE.DWG
LAYOUT NAME - UA Utility P&P - (12)
PLOT DATE : 2/22/2022 9:34 AM
PLOT BY : KL ENGINEERING
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 44





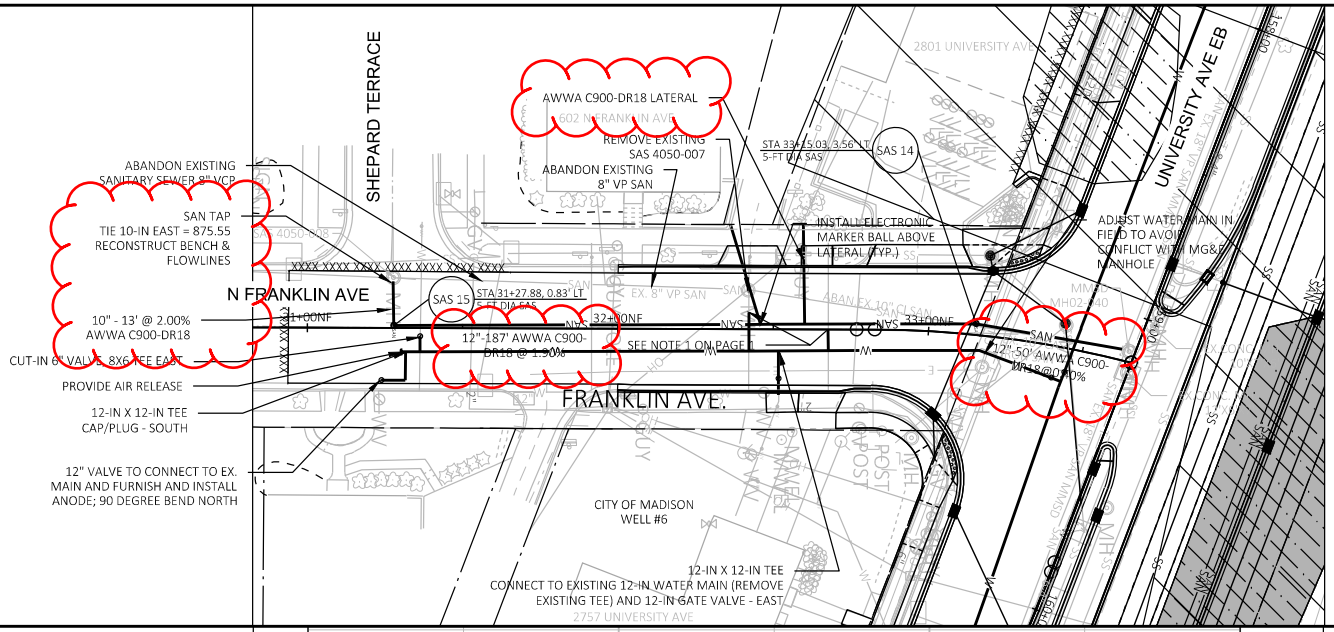




Addendum No. 01
ID 5992-11-31/32/33
Revised Sheet 142
February 25, 2022

PROJECT NO: 5992-11-31	HWY: UNIVERSITY AVENUE	COUNTY: DANE	PLAN AND PROFILE: UNIVERSITY AVENUE UTILITIES - SCHMITT PL & RIDGE ST	SHEET 142	E

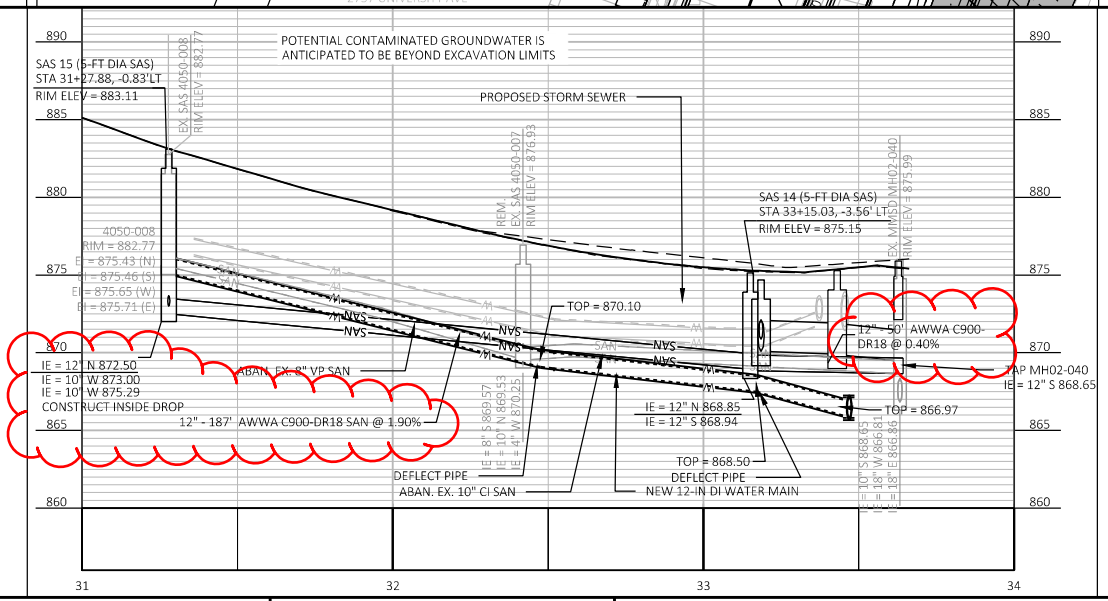
FILE NAME : G:\MADISON\18026-001 UNIV AVE (SHOREWOOD - UNIVERSITY BAY)\CIVIL 3D\SHEETSPLAN\UTILITIES\UTILITY PLAN AND PROFILE.DWG
LAYOUT NAME - Side Road P&P 1
PLOT DATE : 2/17/2022 1:44 PM
PLOT BY : KL ENGINEERING
PLOT NAME :
PLOT SCALE : 1 IN:40 FT



N. FRANKLIN AVE

NOTE:
REMOVE AND REPLACE SIDEWALK AS NEEDED TO REPLACE SANITARY LATERALS (MAX. OF 4 SW SQUARES = 100 SF PER LATERAL)

INSTALL EXTERNAL SAS WRAP IN CONFORMANCE WITH SDD 5.7.2 & ARTICLE 507.3(e) OF CITY OF MADISON STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION SAS #14 & SAS #15



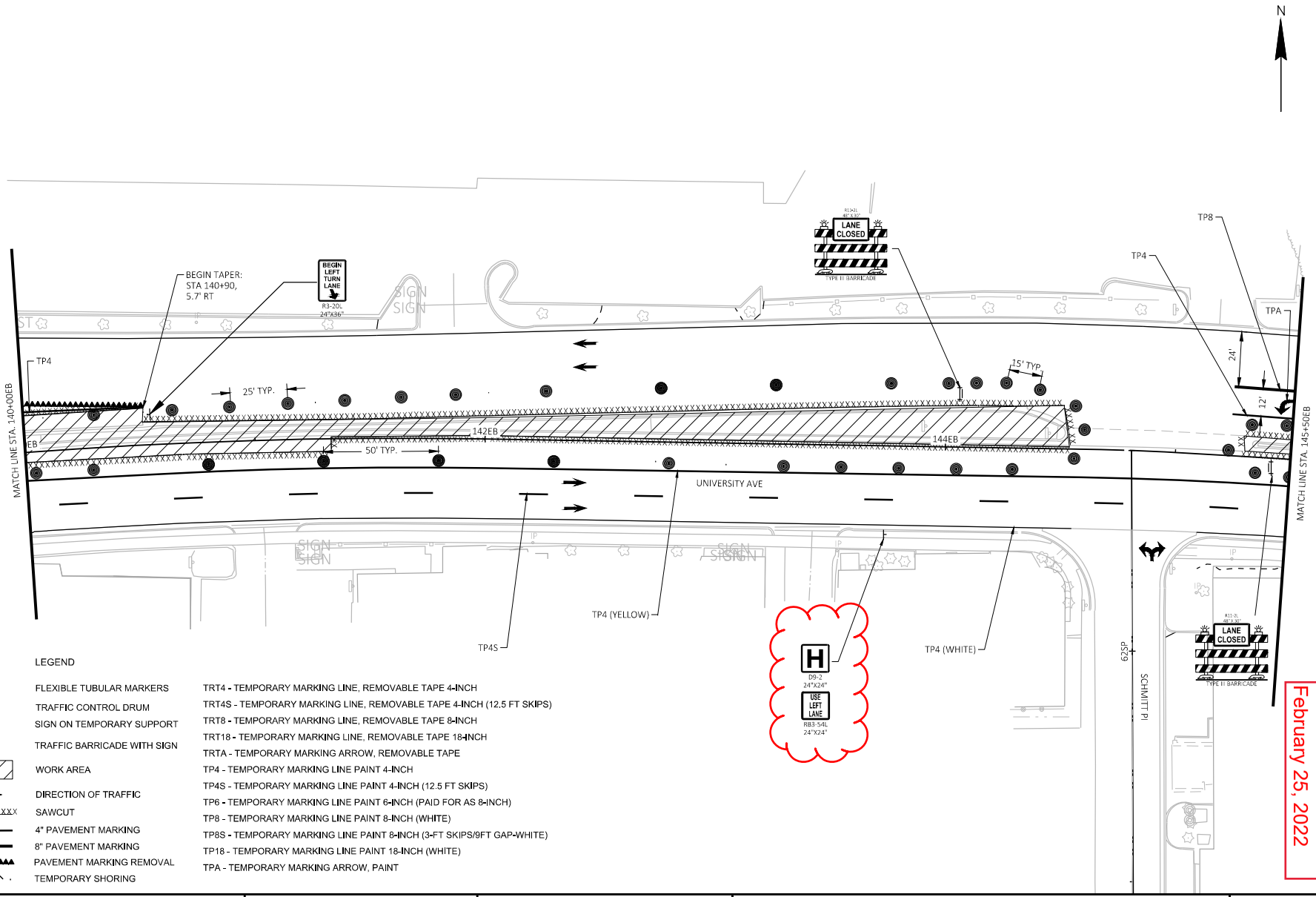
NOTE: CONTRACTOR SHALL NOTIFY RAY SCHNEIDER AT (608) 347-3628, RAYS@MADSEWER.ORG 5 DAYS PRIOR TO MAKING TAP CONNECTION TO MMSD MANHOLE. CONTRACTOR IS RESPONSIBLE FOR MMSD PERMIT FEE AND ADHERING TO ALL MMSD PERMIT CRITERIA.

Addendum No. 01
ID 5992-11-31/32/33
Revised Sheet 143
February 25, 2022

PROJECT NO: 5992-11-31	HWY: UNIVERSITY AVENUE	COUNTY: DANE	PLAN AND PROFILE: UNIVERSITY AVENUE UTILITIES - N FRANKLIN AVE	SHEET 143 E

FILE NAME : G:\MADISON\18026-001 UNIV AVE (SHOREWOOD - UNIVERSITY BAY)\CIVIL 3D\SHEETSPLAN\UTILITIES\UTILITY PLAN AND PROFILE.DWG
LAYOUT NAME - Side Road P&P 2
PLOT DATE : 2/17/2022 10:14 AM
PLOT BY : KL ENGINEERING
PLOT NAME :
PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 44



LEGEND

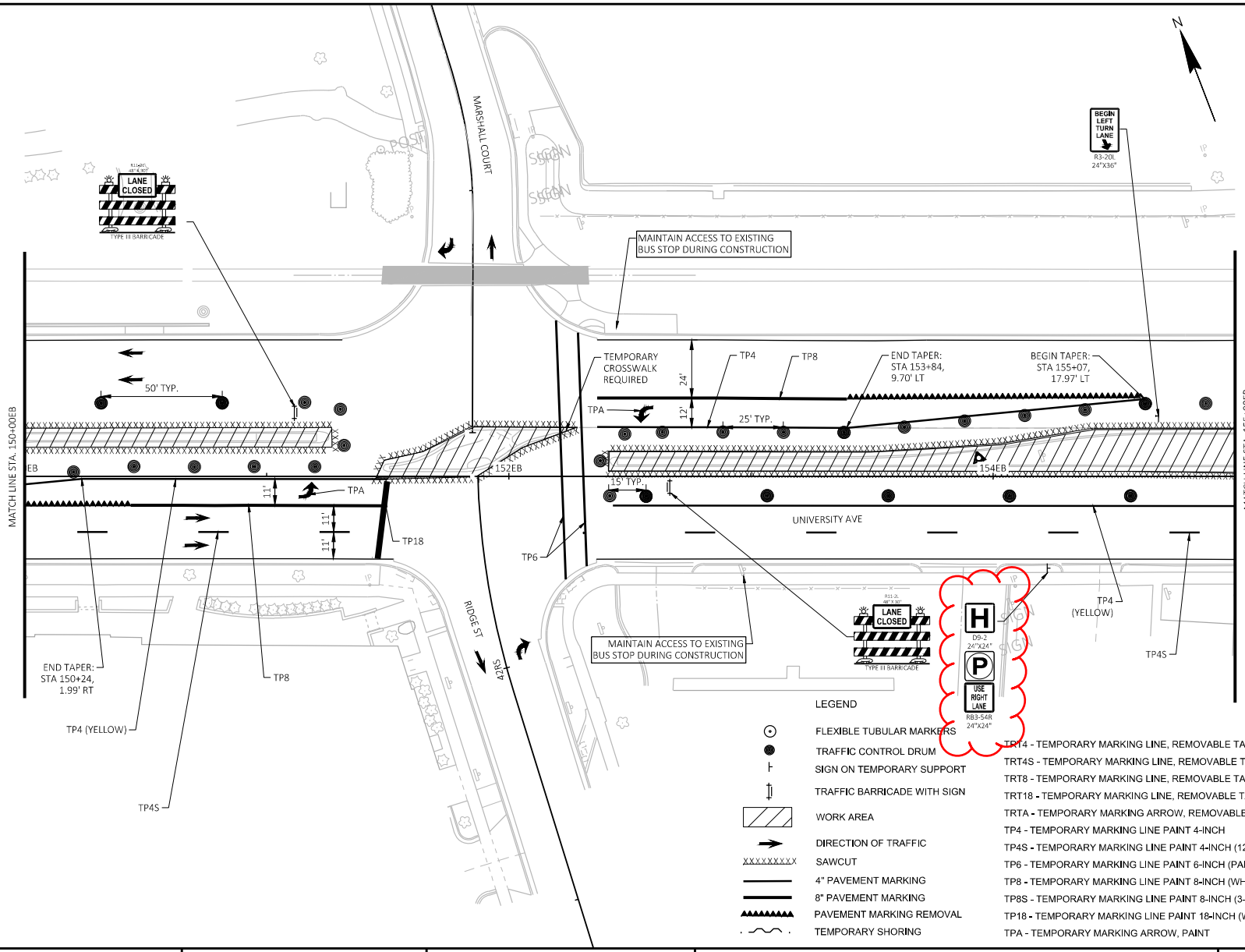
	FLEXIBLE TUBULAR MARKERS
	TRAFFIC CONTROL DRUM
	SIGN ON TEMPORARY SUPPORT
	TRAFFIC BARRICADE WITH SIGN
	WORK AREA
	DIRECTION OF TRAFFIC
XXXXXXXX	SAWCUT
	4" PAVEMENT MARKING
	8" PAVEMENT MARKING
	PAVEMENT MARKING REMOVAL
	TEMPORARY SHORING

TRT4 - TEMPORARY MARKING LINE, REMOVABLE TAPE 4-INCH
TRT4S - TEMPORARY MARKING LINE, REMOVABLE TAPE 4-INCH (12.5 FT SKIPS)
TRT8 - TEMPORARY MARKING LINE, REMOVABLE TAPE 8-INCH
TRT18 - TEMPORARY MARKING LINE, REMOVABLE TAPE 18-INCH
TRTA - TEMPORARY MARKING ARROW, REMOVABLE TAPE
TP4 - TEMPORARY MARKING LINE PAINT 4-INCH
TP4S - TEMPORARY MARKING LINE PAINT 4-INCH (12.5 FT SKIPS)
TP6 - TEMPORARY MARKING LINE PAINT 6-INCH (PAID FOR AS 8-INCH)
TP8 - TEMPORARY MARKING LINE PAINT 8-INCH (WHITE)
TP8S - TEMPORARY MARKING LINE PAINT 8-INCH (3-FT SKIPS/9FT GAP-WHITE)
TP18 - TEMPORARY MARKING LINE PAINT 18-INCH (WHITE)
TPA - TEMPORARY MARKING ARROW, PAINT

Addendum No. 01
ID 5992-11-31/32/33
Revised Sheet 236
February 25, 2022

PROJECT NO: 5992-11-31	HWY: UNIVERSITY AVENUE	COUNTY: DANE	TRAFFIC CONTROL STAGE 1	SHEET 236	E

FILE NAME : G:\MADISON\18026-001 UNIV AVE (SHOREWOOD - UNIVERSITY BAY)\CIVIL 3D\SHEETSPLAN\06 TRAFFIC CONTROL\026101-TC- STAGE 1.DWG
LAYOUT NAME - Sheet - (2)
PLOT DATE : 2/17/2022 11:23 AM
PLOT BY : KL ENGINEERING
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42



LEGEND

- FLEXIBLE TUBULAR MARKERS
- TRAFFIC CONTROL DRUM
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC BARRICADE WITH SIGN
- WORK AREA
- DIRECTION OF TRAFFIC
- SAWCUT
- 4" PAVEMENT MARKING
- 8" PAVEMENT MARKING
- PAVEMENT MARKING REMOVAL
- TEMPORARY SHORING

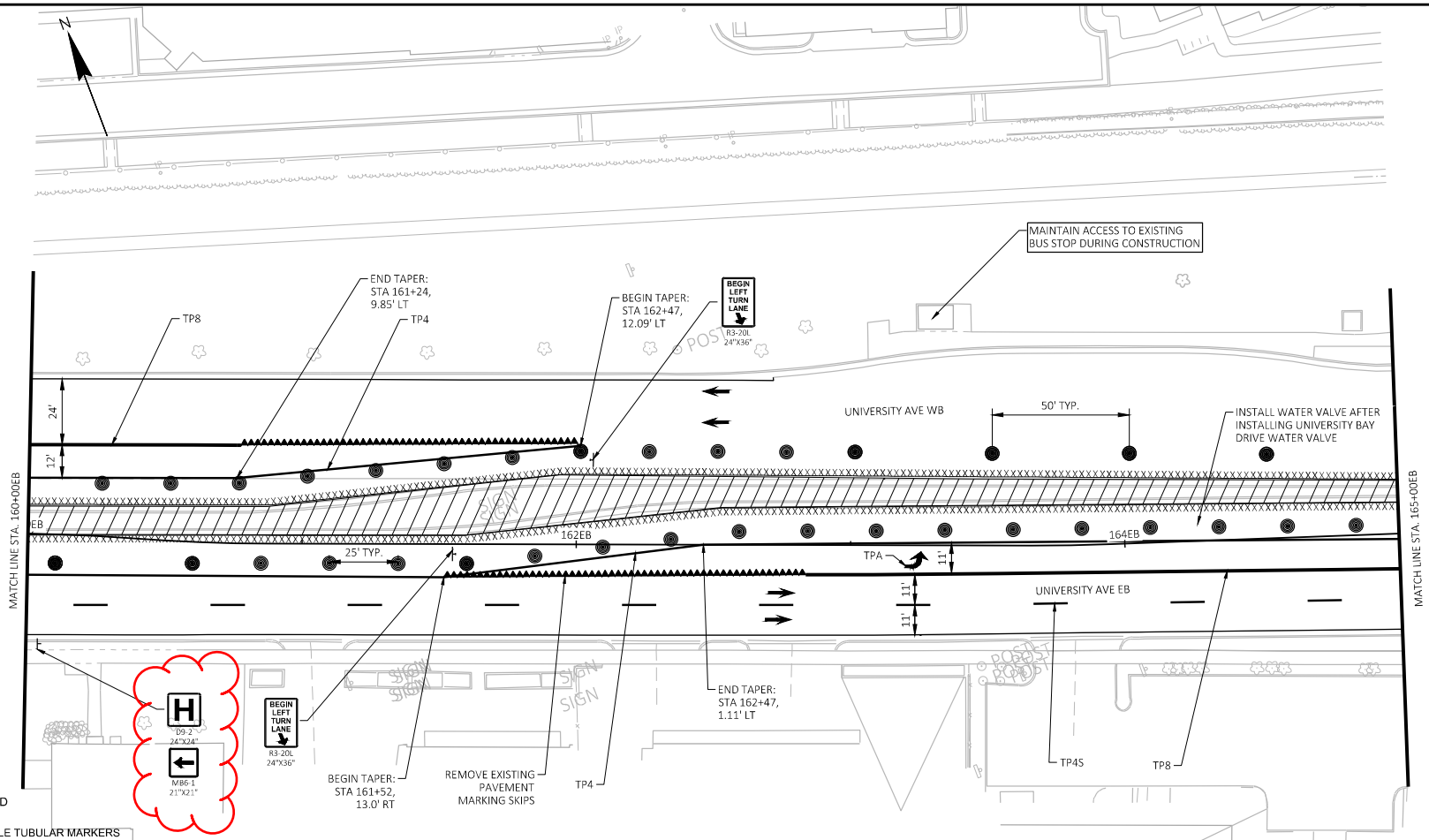
TRT4 - TEMPORARY MARKING LINE, REMOVABLE TAPE 4-INCH
TRT4S - TEMPORARY MARKING LINE, REMOVABLE TAPE 4-INCH (12,5 FT SKIPS)
TRT8 - TEMPORARY MARKING LINE, REMOVABLE TAPE 8-INCH
TRT18 - TEMPORARY MARKING LINE, REMOVABLE TAPE 18-INCH
TRTA - TEMPORARY MARKING ARROW, REMOVABLE TAPE
TP4 - TEMPORARY MARKING LINE PAINT 4-INCH
TP4S - TEMPORARY MARKING LINE PAINT 4-INCH (12,5 FT SKIPS)
TP6 - TEMPORARY MARKING LINE PAINT 6-INCH (PAID FOR AS 8-INCH)
TP8 - TEMPORARY MARKING LINE PAINT 8-INCH (WHITE)
TP8S - TEMPORARY MARKING LINE PAINT 8-INCH (3-FT SKIPS/9FT GAP-WHITE)
TP18 - TEMPORARY MARKING LINE PAINT 18-INCH (WHITE)
TPA - TEMPORARY MARKING ARROW, PAINT

Addendum No. 01
ID 5992-11-31/32/33
Revised Sheet 238
February 25, 2022

PROJECT NO: 5992-11-31	HWY: UNIVERSITY AVENUE	COUNTY: DANE	TRAFFIC CONTROL STAGE 1	SHEET 238	E

FILE NAME : G:\MADISON\18026-001 UNIV AVE (SHOREWOOD - UNIVERSITY BAY)\CIVIL 3D\SHEETSPLAN\06 TRAFFIC CONTROL\026101-TC- STAGE 1.DWG
LAYOUT NAME - Sheet - (4)
PLOT DATE : 2/17/2022 11:23 AM
PLOT BY : KL ENGINEERING
PLOT NAME :
PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42



LEGEND

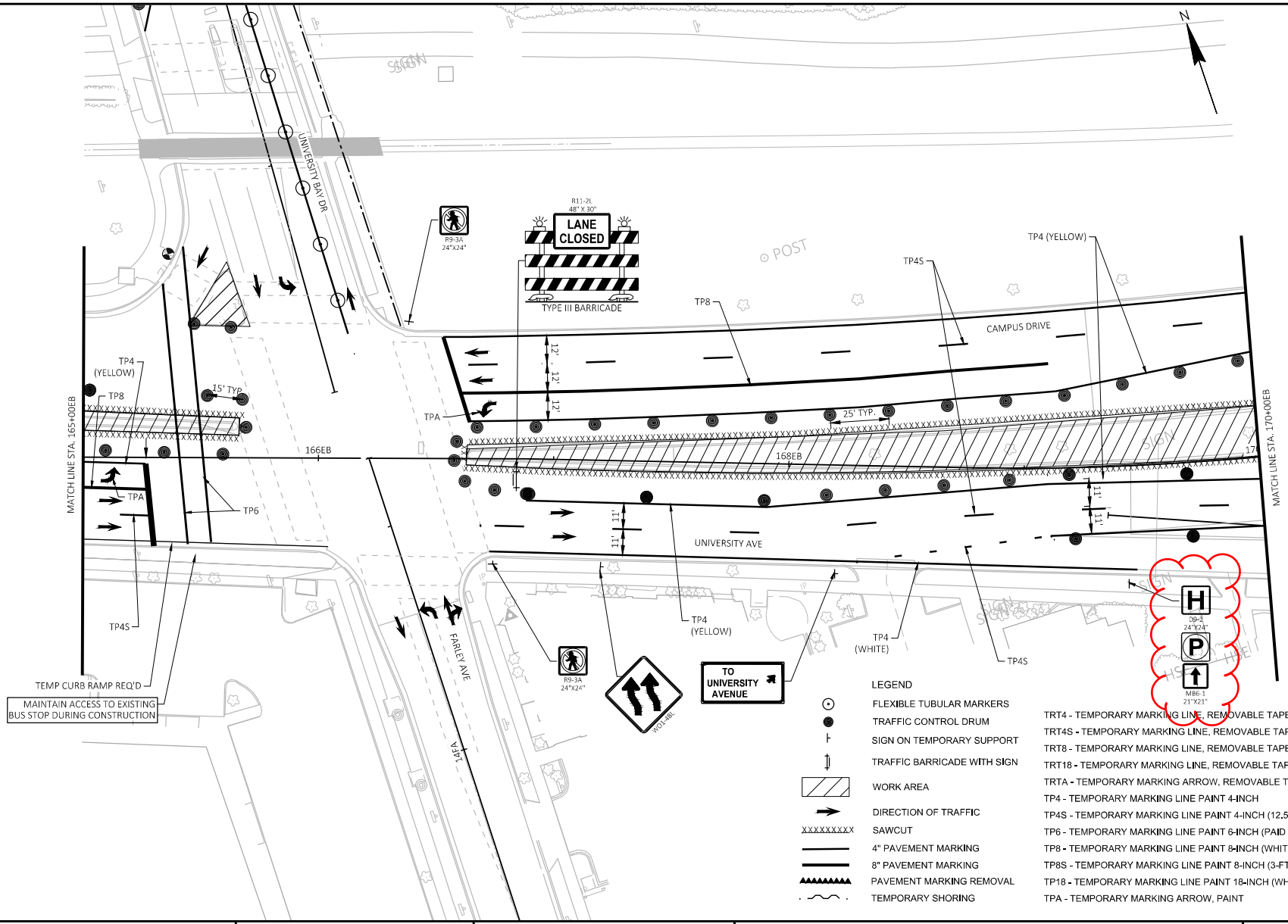
- FLEXIBLE TUBULAR MARKERS
- TRAFFIC CONTROL DRUM
- SIGN ON TEMPORARY SUPPORT
- TRAFFIC BARRICADE WITH SIGN
- WORK AREA
- DIRECTION OF TRAFFIC
- XXXXXXXXX SAWCUT
- 4" PAVEMENT MARKING
- 8" PAVEMENT MARKING
- PAVEMENT MARKING REMOVAL
- TEMPORARY SHORING

TRT4 - TEMPORARY MARKING LINE, REMOVABLE TAPE 4-INCH
TRT4S - TEMPORARY MARKING LINE, REMOVABLE TAPE 4-INCH (12.5 FT SKIPS)
TRT8 - TEMPORARY MARKING LINE, REMOVABLE TAPE 8-INCH
TRT18 - TEMPORARY MARKING LINE, REMOVABLE TAPE 18-INCH
TRTA - TEMPORARY MARKING ARROW, REMOVABLE TAPE
TP4 - TEMPORARY MARKING LINE PAINT 4-INCH
TP4S - TEMPORARY MARKING LINE PAINT 4-INCH (12.5 FT SKIPS)
TP6 - TEMPORARY MARKING LINE PAINT 6-INCH (PAID FOR AS 8-INCH)
TP8 - TEMPORARY MARKING LINE PAINT 8-INCH (WHITE)
TP8S - TEMPORARY MARKING LINE PAINT 8-INCH (3-FT SKIPS/9FT GAP-WHITE)
TP18 - TEMPORARY MARKING LINE PAINT 18-INCH (WHITE)
TPA - TEMPORARY MARKING ARROW, PAINT

Addendum No. 01
ID 5992-11-31/32/33
Revised Sheet 240
February 25, 2022

PROJECT NO: 5992-11-31	HWY: UNIVERSITY AVENUE	COUNTY: DANE	TRAFFIC CONTROL STAGE 1	SHEET 240	E

FILE NAME : G:\MADISON\18026-001 UNIV AVE (SHOREWOOD - UNIVERSITY BAY)\CIVIL 3D\SHEETSPLAN\06 TRAFFIC CONTROL\026101-TC- STAGE 1.DWG
LAYOUT NAME - Sheet - (6)
PLOT DATE : 2/17/2022 11:24 AM
PLOT BY : KL ENGINEERING
PLOT NAME :
PLOT SCALE : 1 IN:40 FT

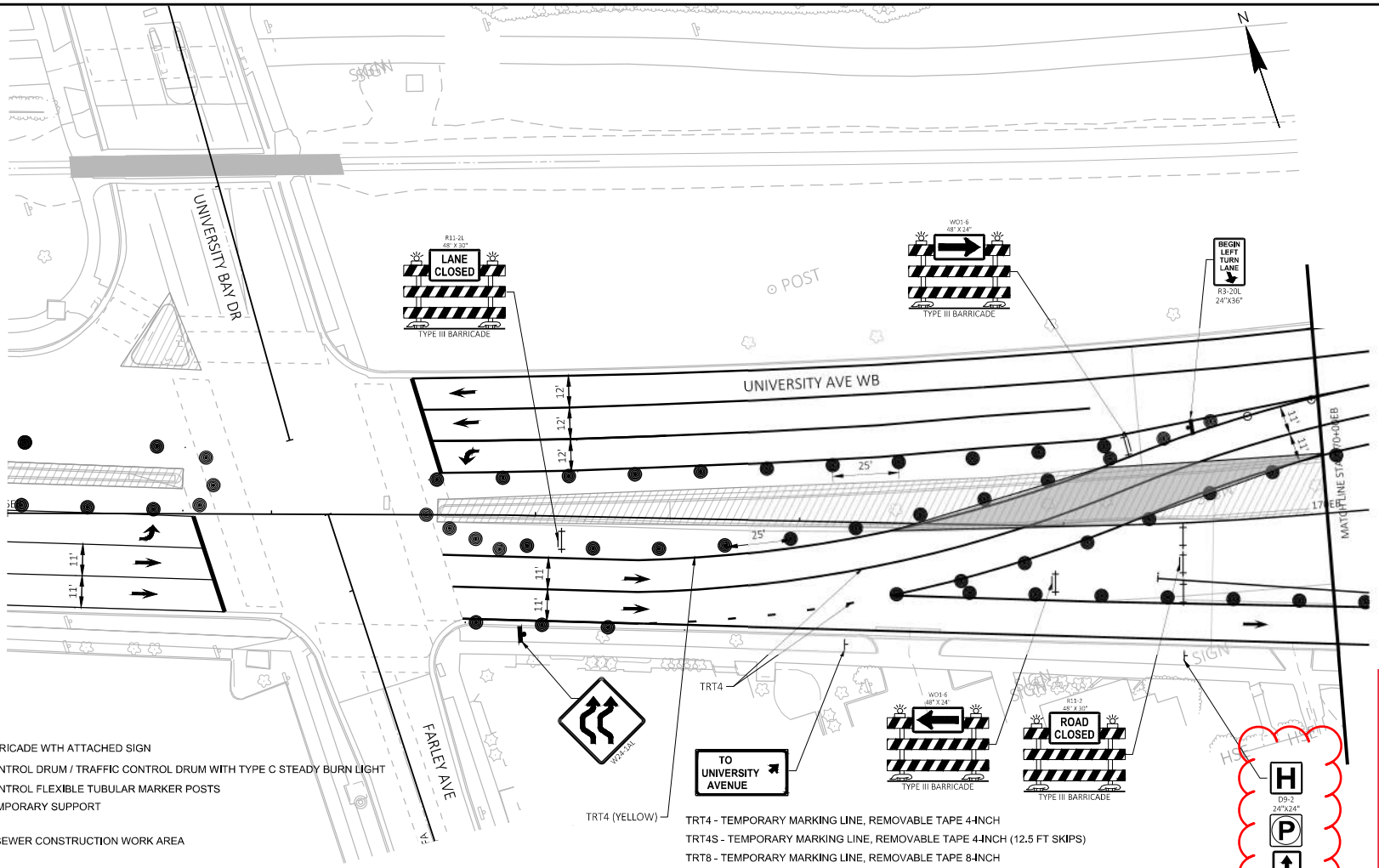


Addendum No. 01
ID 5992-11-31/32/33
Revised Sheet 241
February 25, 2022

PROJECT NO: 5992-11-31	HWY: UNIVERSITY AVENUE	COUNTY: DANE	TRAFFIC CONTROL STAGE 1	SHEET 241	E

FILE NAME : G:\MADISON\18026-001 UNIV AVE (SHOREWOOD - UNIVERSITY BAY)\CIVIL 3D\SHEETSPLAN\06 TRAFFIC CONTROL\026101-TC- STAGE 1.DWG
LAYOUT NAME - Sheet - (7)
PLOT DATE : 2/17/2022 11:24 AM
PLOT BY : KL ENGINEERING
PLOT NAME :
PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42



LEGEND

- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM / TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS
- SIGN ON TEMPORARY SUPPORT
- 96" STORM SEWER CONSTRUCTION WORK AREA
- WORK ZONE
- TEMPORARY ASPHALTIC PAVEMENT
- DIRECTION OF TRAFFIC
- SAWCUT
- 4" PAVEMENT MARKING
- 8" PAVEMENT MARKING

TRT4 - TEMPORARY MARKING LINE, REMOVABLE TAPE 4-INCH
TRT4S - TEMPORARY MARKING LINE, REMOVABLE TAPE 4-INCH (12.5 FT SKIPS)
TRT8 - TEMPORARY MARKING LINE, REMOVABLE TAPE 8-INCH
TRT18 - TEMPORARY MARKING LINE, REMOVABLE TAPE 18-INCH
TRTA - TEMPORARY MARKING ARROW, REMOVABLE TAPE
TP4 - TEMPORARY MARKING LINE PAINT 4-INCH
TP4S - TEMPORARY MARKING LINE PAINT 4-INCH (12.5 FT SKIPS)
TP6 - TEMPORARY MARKING LINE PAINT 6-INCH (PAID FOR AS 8-INCH)
TP8 - TEMPORARY MARKING LINE PAINT 8-INCH (WHITE)
TP8S - TEMPORARY MARKING LINE PAINT 8-INCH (3-FT SKIPS/9FT GAP-WHITE)
TP18 - TEMPORARY MARKING LINE PAINT 18-INCH (WHITE)
TPA - TEMPORARY MARKING ARROW, PAINT

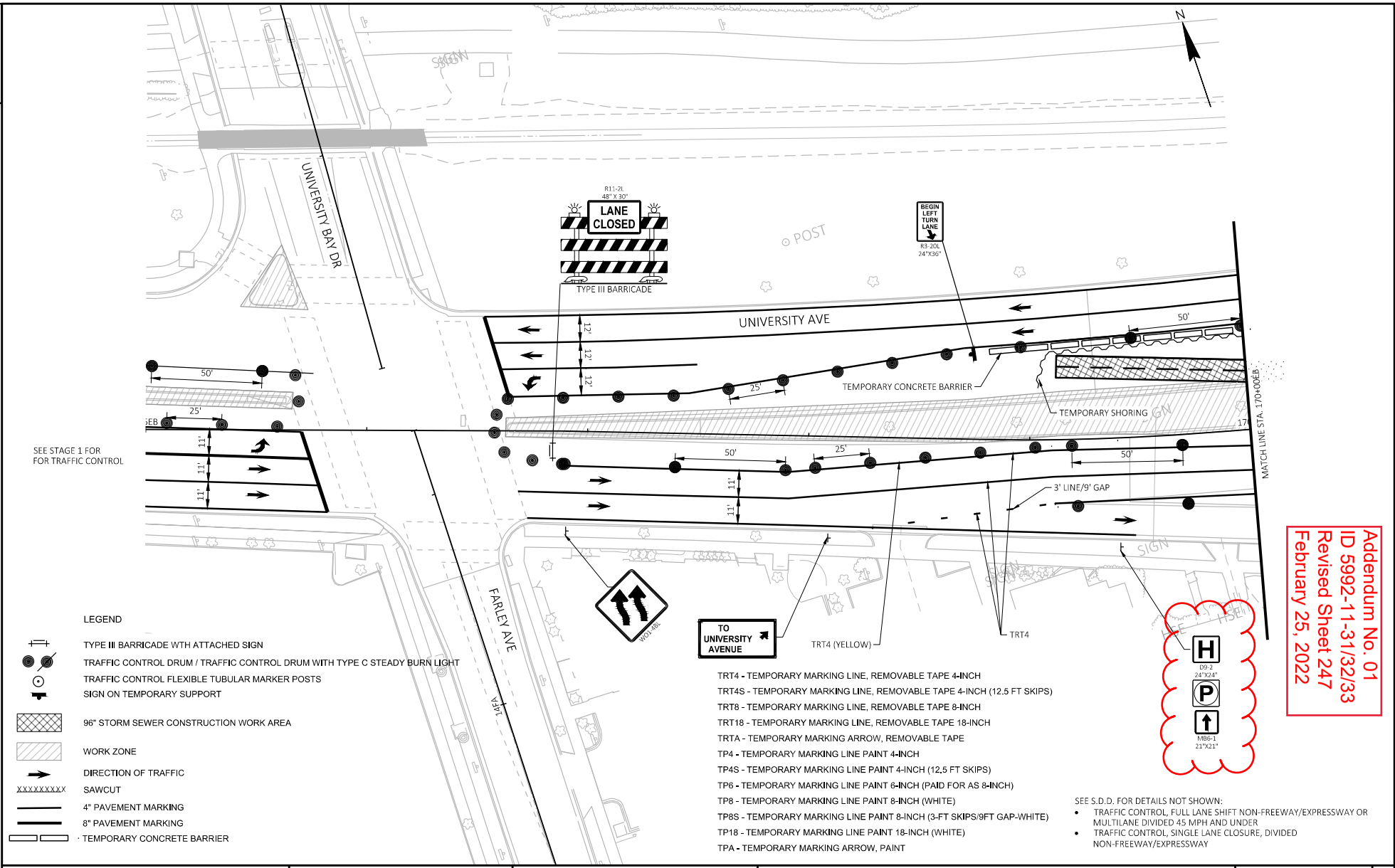
SEE S.D.D. FOR DETAILS NOT SHOWN:

- TRAFFIC CONTROL, FULL LANE SHIFT NON-FREEWAY/EXPRESSWAY OR MULTILANE DIVIDED 45 MPH AND UNDER
- TRAFFIC CONTROL, SINGLE LANE CLOSURE, DIVIDED NON-FREEWAY/EXPRESSWAY

Addendum No. 01
ID 5992-11-31/32/33
Revised Sheet 245
February 25, 2022

PROJECT NO: 5992-11-31	HWY: UNIVERSITY AVENUE	COUNTY: DANE	TRAFFIC CONTROL - STAGE 1A	SHEET 245	E

FILE NAME : G:\MADISON\18026-001 UNIV AVE (SHOREWOOD - UNIVERSITY BAY)\CIVIL 3D\SHEETSPLAN\06 TRAFFIC CONTROL\026101-TC- STAGE 1A.DWG
LAYOUT NAME - STAGE 1A -1
PLOT DATE : 2/17/2022 11:26 AM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:40 FT



LEGEND

- TYPE III BARRICADE WTH ATTACHED SIGN
- TRAFFIC CONTROL DRUM / TRAFFIC CONTROL DRUM WITH TYPE C STEADY BURN LIGHT
- TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS
- SIGN ON TEMPORARY SUPPORT
- 96" STORM SEWER CONSTRUCTION WORK AREA
- WORK ZONE
- DIRECTION OF TRAFFIC
- XXXXXXXXX SAWCUT
- 4" PAVEMENT MARKING
- 8" PAVEMENT MARKING
- TEMPORARY CONCRETE BARRIER

TRT4 - TEMPORARY MARKING LINE, REMOVABLE TAPE 4-INCH
TRT4S - TEMPORARY MARKING LINE, REMOVABLE TAPE 4-INCH (12.5 FT SKIPS)
TRT8 - TEMPORARY MARKING LINE, REMOVABLE TAPE 8-INCH
TRT18 - TEMPORARY MARKING LINE, REMOVABLE TAPE 18-INCH
TRTA - TEMPORARY MARKING ARROW, REMOVABLE TAPE
TP4 - TEMPORARY MARKING LINE PAINT 4-INCH
TP4S - TEMPORARY MARKING LINE PAINT 4-INCH (12.5 FT SKIPS)
TP6 - TEMPORARY MARKING LINE PAINT 6-INCH (PAID FOR AS 8-INCH)
TP8 - TEMPORARY MARKING LINE PAINT 8-INCH (WHITE)
TP8S - TEMPORARY MARKING LINE PAINT 8-INCH (3-FT SKIPS/9FT GAP-WHITE)
TP18 - TEMPORARY MARKING LINE PAINT 18-INCH (WHITE)
TPA - TEMPORARY MARKING ARROW, PAINT

SEE S.D.D. FOR DETAILS NOT SHOWN:

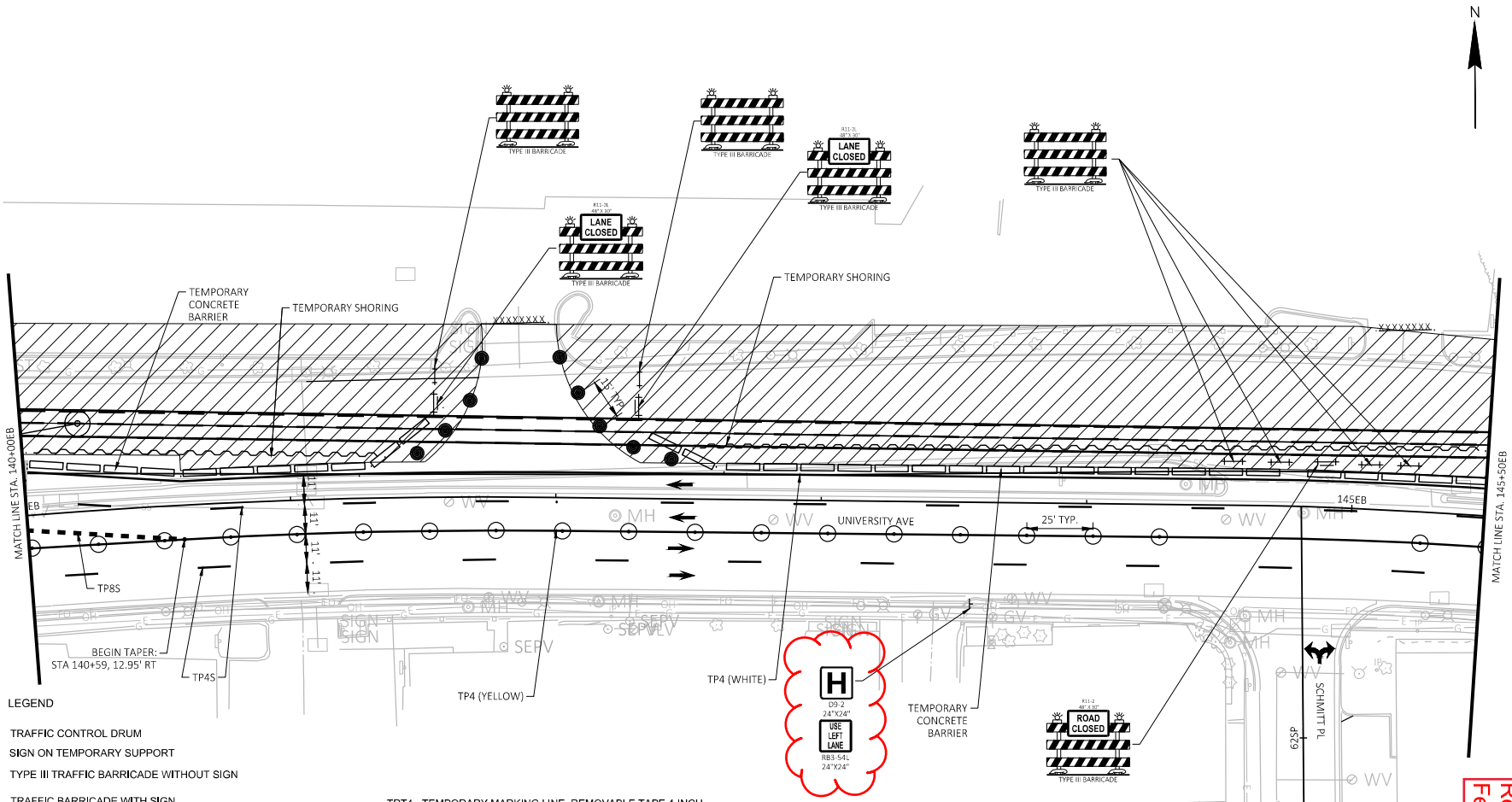
- TRAFFIC CONTROL, FULL LANE SHIFT NON-FREEWAY/EXPRESSWAY OR MULTILANE DIVIDED 45 MPH AND UNDER
- TRAFFIC CONTROL, SINGLE LANE CLOSURE, DIVIDED NON-FREEWAY/EXPRESSWAY

Addendum No. 01
ID 5992-11-31/32/33
Revised Sheet 247
February 25, 2022

PROJECT NO: 5992-11-31	HWY: UNIVERSITY AVENUE	COUNTY: DANE	TRAFFIC CONTROL - STAGE 1B	SHEET 247	E

FILE NAME : G:\MADISON\18026-001 UNIV AVE (SHOREWOOD - UNIVERSITY BAY)\CIVIL 3D\SHEETSPLAN\06 TRAFFIC CONTROL\026101-TC- STAGE 1B.DWG
LAYOUT NAME - STAGE 1B -1
PLOT DATE : 2/17/2022 11:28 AM
PLOT BY : KL ENGINEERING
PLOT NAME :
PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42



LEGEND

- TRAFFIC CONTROL DRUM
- SIGN ON TEMPORARY SUPPORT
- TYPE III TRAFFIC BARRICADE WITHOUT SIGN
- TRAFFIC BARRICADE WITH SIGN
- WORK AREA
- ASPHALTIC SURFACE TEMPORARY
- TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS AND BASES
- DIRECTION OF TRAFFIC
- XXXXXXXXX SAWCUT
- TEMPORARY SHORING
- PEDESTRIAN ROUTE
- TEMPORARY PEDESTRIAN BARRICADE
- TEMPORARY CONCRETE BARRIER

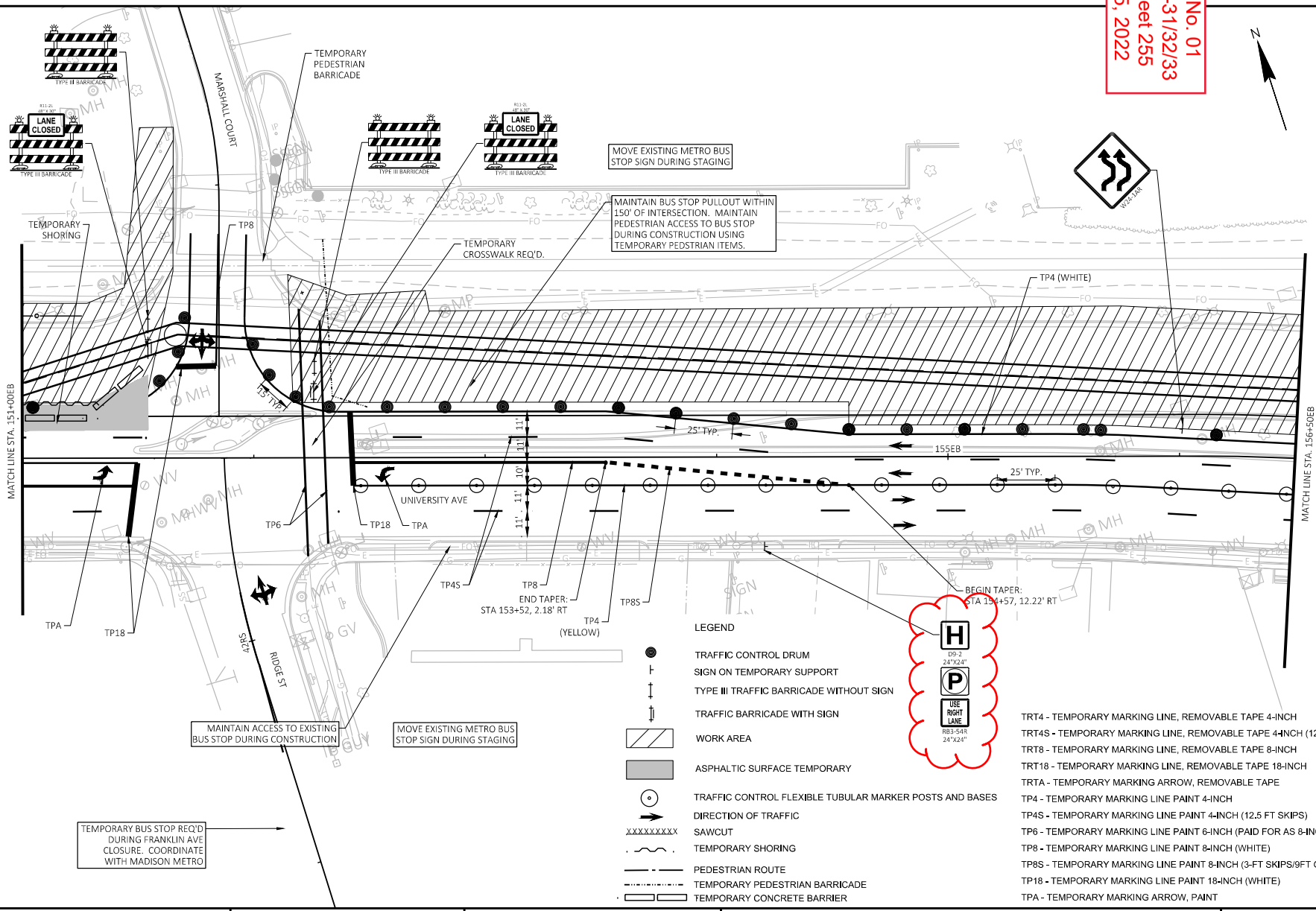
TRT4 - TEMPORARY MARKING LINE, REMOVABLE TAPE 4-INCH
TRT4S - TEMPORARY MARKING LINE, REMOVABLE TAPE 4-INCH (12.5 FT SKIPS)
TRT8 - TEMPORARY MARKING LINE, REMOVABLE TAPE 8-INCH
TRT18 - TEMPORARY MARKING LINE, REMOVABLE TAPE 18-INCH
TRTA - TEMPORARY MARKING ARROW, REMOVABLE TAPE
TP4 - TEMPORARY MARKING LINE PAINT 4-INCH
TP4S - TEMPORARY MARKING LINE PAINT 4-INCH (12.5 FT SKIPS)
TP6 - TEMPORARY MARKING LINE PAINT 6-INCH (PAID FOR AS 8-INCH)
TP8 - TEMPORARY MARKING LINE PAINT 8-INCH (WHITE)
TP8S - TEMPORARY MARKING LINE PAINT 8-INCH (3-FT SKIPS/9FT GAP-WHITE)
TP18 - TEMPORARY MARKING LINE PAINT 18-INCH (WHITE)
TPA - TEMPORARY MARKING ARROW, PAINT

Addendum No. 01
ID 5992-11-31/32/33
Revised Sheet 253
February 25, 2022

PROJECT NO: 5992-11-31	HWY: UNIVERSITY AVENUE	COUNTY: DANE	TRAFFIC CONTROL STAGE 2	SHEET 253	E

FILE NAME : G:\MADISON\18026-001 UNIV AVE (SHOREWOOD - UNIVERSITY BAY)\CIVIL 3D\SHEETSPLAN\06 TRAFFIC CONTROL\026101-TC- STAGE 2.DWG
LAYOUT NAME - Sheet - (2)
PLOT DATE : 2/17/2022 11:30 AM
PLOT BY : KL ENGINEERING
PLOT NAME :
PLOT SCALE : 1 IN:40 FT

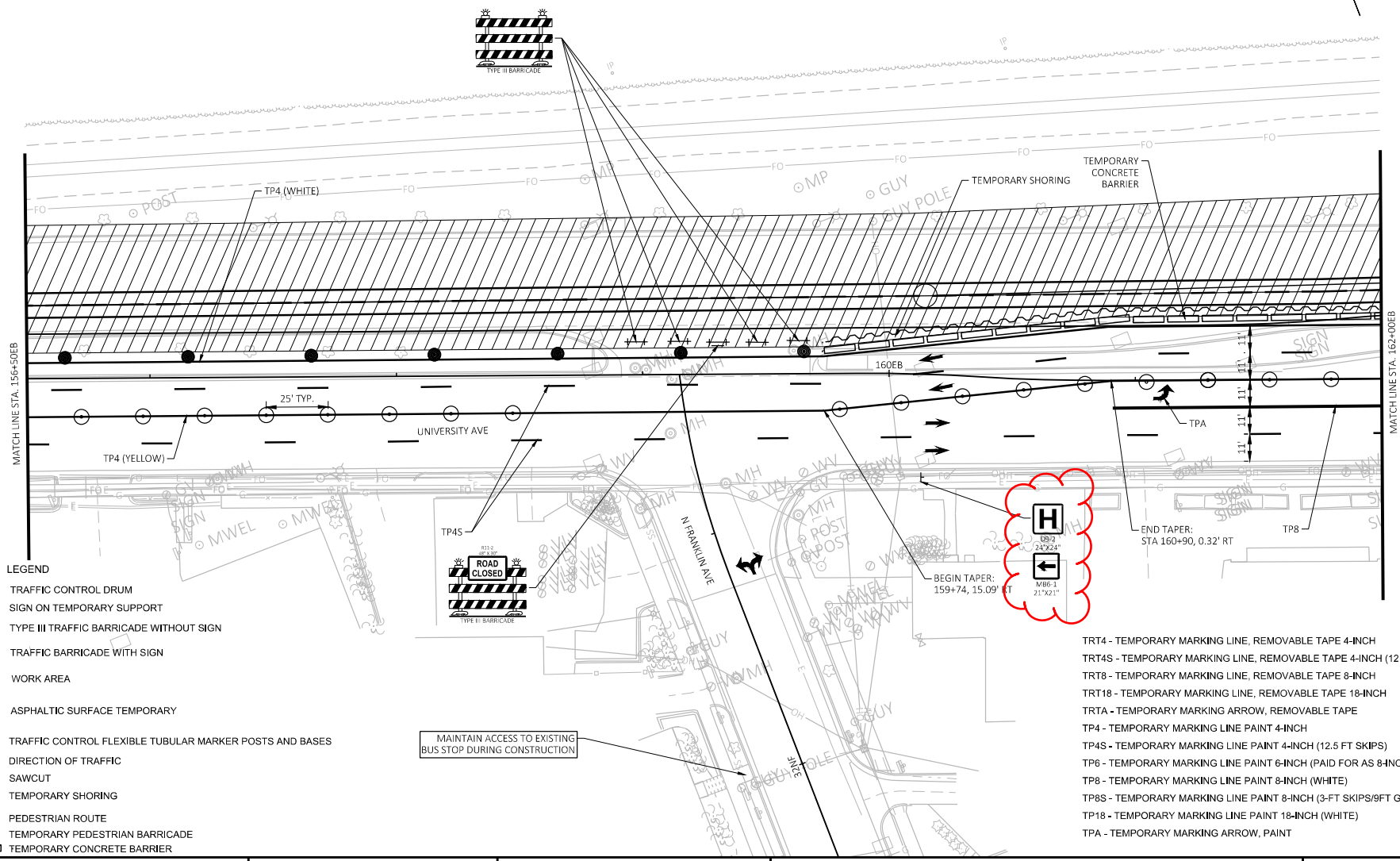
Addendum No. 01
ID 5992-11-31/32/33
Revised Sheet 255
February 25, 2022



PROJECT NO: 5992-11-31	HWY: UNIVERSITY AVENUE	COUNTY: DANE	TRAFFIC CONTROL STAGE 2	SHEET 255	E

FILE NAME : G:\MADISON\18026-001 UNIV AVE (SHOREWOOD - UNIVERSITY BAY)\CIVIL 3D\SHEETSPLAN\06 TRAFFIC CONTROL\026101-TC- STAGE 2.DWG
LAYOUT NAME - Sheet - (4)
PLOT DATE : 2/17/2022 11:32 AM
PLOT BY : KL ENGINEERING
PLOT NAME :
PLOT SCALE : 1 IN:40 FT

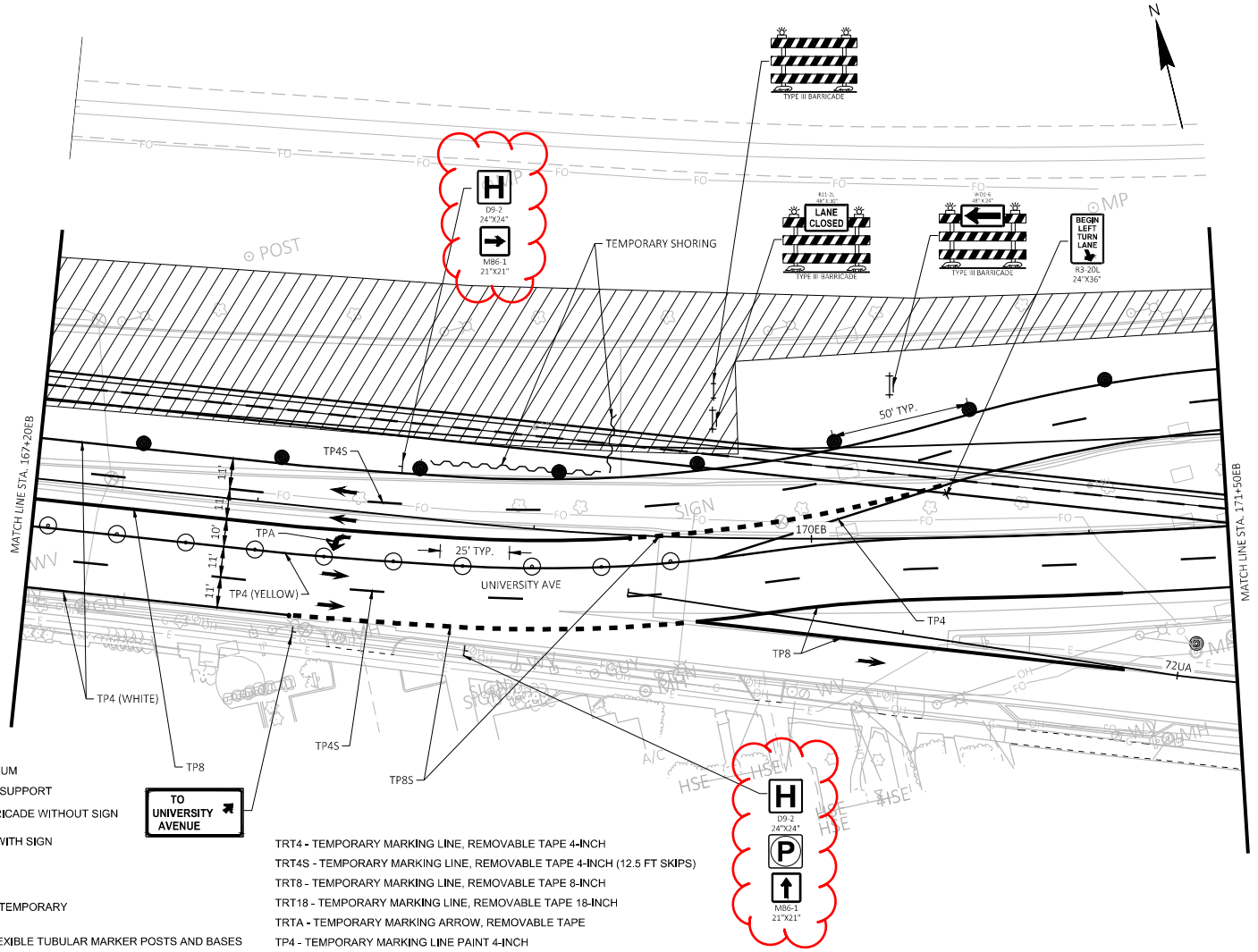
Addendum No. 01
ID 5992-11-31/32/33
Revised Sheet 256
February 25, 2022



TRT4 - TEMPORARY MARKING LINE, REMOVABLE TAPE 4-INCH
TRT4S - TEMPORARY MARKING LINE, REMOVABLE TAPE 4-INCH (12.5 FT SKIPS)
TRT8 - TEMPORARY MARKING LINE, REMOVABLE TAPE 8-INCH
TRT18 - TEMPORARY MARKING LINE, REMOVABLE TAPE 18-INCH
TRTA - TEMPORARY MARKING ARROW, REMOVABLE TAPE
TP4 - TEMPORARY MARKING LINE PAINT 4-INCH
TP4S - TEMPORARY MARKING LINE PAINT 4-INCH (12.5 FT SKIPS)
TP6 - TEMPORARY MARKING LINE PAINT 6-INCH (PAID FOR AS 8-INCH)
TP8 - TEMPORARY MARKING LINE PAINT 8-INCH (WHITE)
TP8S - TEMPORARY MARKING LINE PAINT 8-INCH (3-FT SKIPS/9FT GAP-WHITE)
TP18 - TEMPORARY MARKING LINE PAINT 18-INCH (WHITE)
TPA - TEMPORARY MARKING ARROW, PAINT

PROJECT NO: 5992-11-31	HWY: UNIVERSITY AVENUE	COUNTY: DANE	TRAFFIC CONTROL STAGE 2	SHEET 256	E

FILE NAME : G:\MADISON\18026-001 UNIV AVE (SHOREWOOD - UNIVERSITY BAY)\CIVIL 3D\SHEETSPLAN\06 TRAFFIC CONTROL\026101-TC- STAGE 2.DWG
LAYOUT NAME - Sheet - (5)
PLOT DATE : 2/17/2022 11:34 AM
PLOT BY : KL ENGINEERING
PLOT NAME :
PLOT SCALE : 1 IN:40 FT



LEGEND

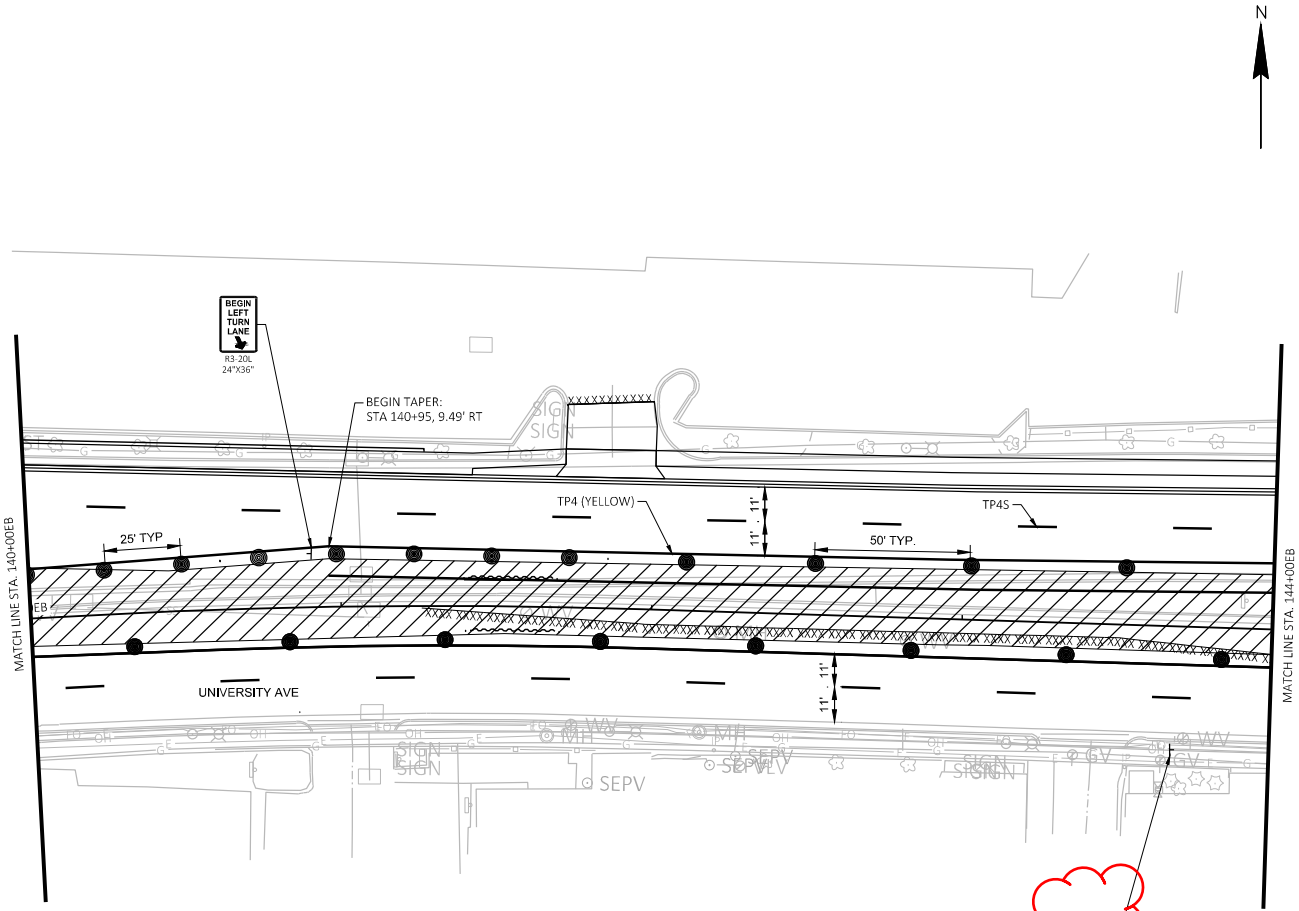
- TRAFFIC CONTROL DRUM
- SIGN ON TEMPORARY SUPPORT
- TYPE III TRAFFIC BARRICADE WITHOUT SIGN
- TRAFFIC BARRICADE WITH SIGN
- WORK AREA
- ASPHALTIC SURFACE TEMPORARY
- TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS AND BASES
- DIRECTION OF TRAFFIC
- XXXXXXXXX SAWCUT
- TEMPORARY SHORING
- PEDESTRIAN ROUTE
- TEMPORARY PEDESTRIAN BARRICADE
- TEMPORARY CONCRETE BARRIER

TRT4 - TEMPORARY MARKING LINE, REMOVABLE TAPE 4-INCH
TRT4S - TEMPORARY MARKING LINE, REMOVABLE TAPE 4-INCH (12.5 FT SKIPS)
TRT8 - TEMPORARY MARKING LINE, REMOVABLE TAPE 8-INCH
TRT18 - TEMPORARY MARKING LINE, REMOVABLE TAPE 18-INCH
TRTA - TEMPORARY MARKING ARROW, REMOVABLE TAPE
TP4 - TEMPORARY MARKING LINE PAINT 4-INCH
TP4S - TEMPORARY MARKING LINE PAINT 4-INCH (12.5 FT SKIPS)
TP6 - TEMPORARY MARKING LINE PAINT 6-INCH (PAID FOR AS 8-INCH)
TP8 - TEMPORARY MARKING LINE PAINT 8-INCH (WHITE)
TP8S - TEMPORARY MARKING LINE PAINT 8-INCH (3-FT SKIPS/9FT GAP-WHITE)
TP18 - TEMPORARY MARKING LINE PAINT 18-INCH (WHITE)
TPA - TEMPORARY MARKING ARROW, PAINT

Addendum No. 01
ID 5992-11-31/32/33
Revised Sheet 258
February 25, 2022

PROJECT NO: 5992-11-31	HWY: UNIVERSITY AVENUE	COUNTY: DANE	TRAFFIC CONTROL STAGE 2	SHEET 258	E

FILE NAME : G:\MADISON\18026-001 UNIV AVE (SHOREWOOD - UNIVERSITY BAY)\CIVIL 3D\SHEETSPLAN\06 TRAFFIC CONTROL\026101-TC- STAGE 2.DWG
LAYOUT NAME - Sheet - (7)
PLOT DATE : 2/17/2022 11:36 AM
PLOT BY : KL ENGINEERING
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42



LEGEND

- TRAFFIC CONTROL DRUM
- SIGN ON TEMPORARY SUPPORT
- TYPE III TRAFFIC BARRICADE WITHOUT SIGN
- TRAFFIC BARRICADE WITH SIGN
- WORK AREA
- ASPHALTIC SURFACE TEMPORARY
- TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS AND BASES
- DIRECTION OF TRAFFIC
- SAWCUT
- TEMPORARY SHORING

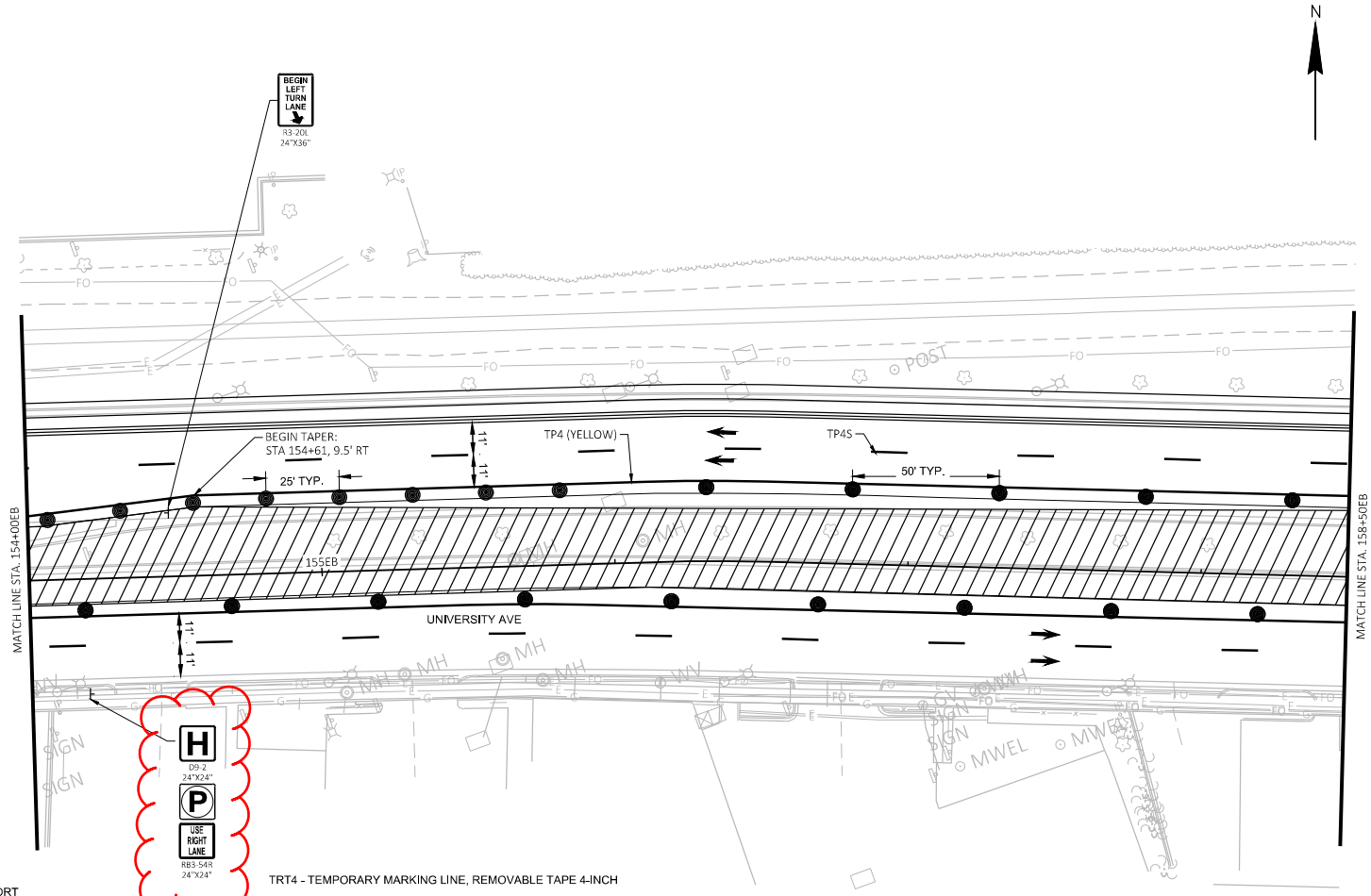
TRT4 - TEMPORARY MARKING LINE, REMOVABLE TAPE 4-INCH
TRT4S - TEMPORARY MARKING LINE, REMOVABLE TAPE 4-INCH (12.5 FT SKIPS)
TRT8 - TEMPORARY MARKING LINE, REMOVABLE TAPE 8-INCH
TRT18 - TEMPORARY MARKING LINE, REMOVABLE TAPE 18-INCH
TRTA - TEMPORARY MARKING ARROW, REMOVABLE TAPE
TP4 - TEMPORARY MARKING LINE PAINT 4-INCH
TP4S - TEMPORARY MARKING LINE PAINT 4-INCH (12.5 FT SKIPS)
TP6 - TEMPORARY MARKING LINE PAINT 6-INCH (PAID FOR AS 8-INCH)
TP8 - TEMPORARY MARKING LINE PAINT 8-INCH (WHITE)
TP8S - TEMPORARY MARKING LINE PAINT 8-INCH (3-FT SKIPS/9FT GAP-WHITE)
TP18 - TEMPORARY MARKING LINE PAINT 18-INCH (WHITE)
TPA - TEMPORARY MARKING ARROW, PAINT

Addendum No. 01
ID 5992-11-31/32/33
Revised Sheet 268
February 25, 2022

PROJECT NO: 5992-11-31	HWY: UNIVERSITY AVENUE	COUNTY: DANE	TRAFFIC CONTROL STAGE 3	SHEET 268	E

FILE NAME : G:\MADISON\18026-001 UNIV AVE (SHOREWOOD - UNIVERSITY BAY)\CIVIL 3D\SHEETSPLAN\06 TRAFFIC CONTROL\026101-TC- STAGE 3.DWG
LAYOUT NAME - Sheet - (2)
PLOT DATE : 2/17/2022 11:40 AM
PLOT BY : KL ENGINEERING
PLOT NAME :
PLOT SCALE : 1 IN:40 FT

2



LEGEND

- TRAFFIC CONTROL DRUM
- SIGN ON TEMPORARY SUPPORT
- TYPE III TRAFFIC BARRICADE WITHOUT SIGN
- TRAFFIC BARRICADE WITH SIGN
- WORK AREA
- ASPHALTIC SURFACE TEMPORARY
- TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS AND BASES
- DIRECTION OF TRAFFIC
- XXXXXXXXX SAWCUT
- TEMPORARY SHORING

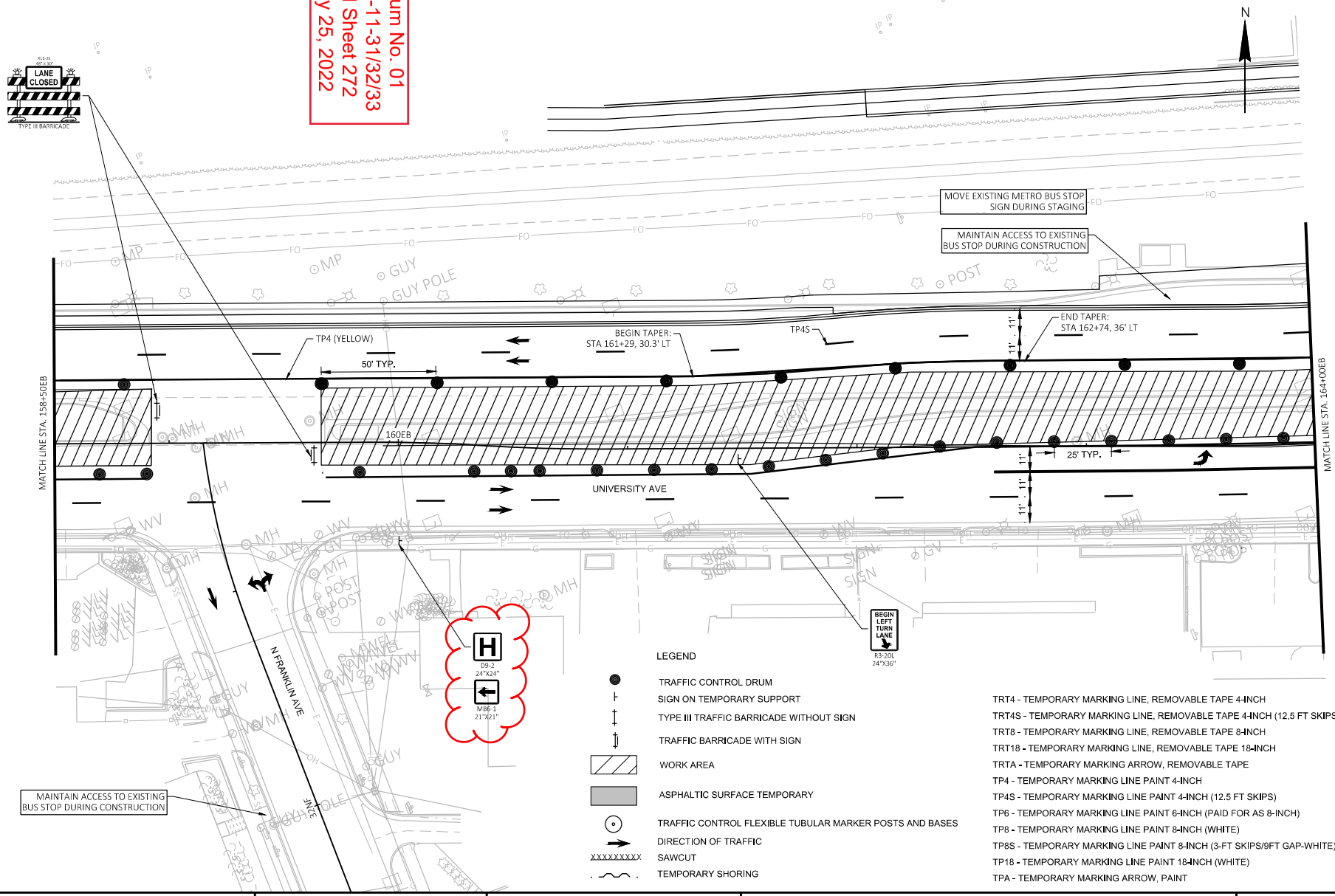
TRT4 - TEMPORARY MARKING LINE, REMOVABLE TAPE 4-INCH
TRT4S - TEMPORARY MARKING LINE, REMOVABLE TAPE 4-INCH (12.5 FT SKIPS)
TRT8 - TEMPORARY MARKING LINE, REMOVABLE TAPE 8-INCH
TRT18 - TEMPORARY MARKING LINE, REMOVABLE TAPE 18-INCH
TRTA - TEMPORARY MARKING ARROW, REMOVABLE TAPE
TP4 - TEMPORARY MARKING LINE PAINT 4-INCH
TP4S - TEMPORARY MARKING LINE PAINT 4-INCH (12.5 FT SKIPS)
TP6 - TEMPORARY MARKING LINE PAINT 6-INCH (PAID FOR AS 8-INCH)
TP8 - TEMPORARY MARKING LINE PAINT 8-INCH (WHITE)
TP8S - TEMPORARY MARKING LINE PAINT 8-INCH (3-FT SKIPS/9FT GAP-WHITE)
TP18 - TEMPORARY MARKING LINE PAINT 18-INCH (WHITE)
TPA - TEMPORARY MARKING ARROW, PAINT

Addendum No. 01
ID 5992-11-31/32/33
Revised Sheet 271
February 25, 2022

PROJECT NO: 5992-11-31	HWY: UNIVERSITY AVENUE	COUNTY: DANE	TRAFFIC CONTROL STAGE 3	SHEET 271	E

FILE NAME : G:\MADISON\18026-001 UNIV AVE (SHOREWOOD - UNIVERSITY BAY)\CIVIL 3D\SHEETSPLAN\06 TRAFFIC CONTROL\026101-TC- STAGE 3.DWG
LAYOUT NAME - Sheet - (5)
PLOT DATE : 2/17/2022 11:41 AM
PLOT BY : KL ENGINEERING
PLOT NAME :
PLOT SCALE : 1 IN:40 FT

Addendum No. 01
ID 5992-11-31/32/33
Revised Sheet 272
February 25, 2022



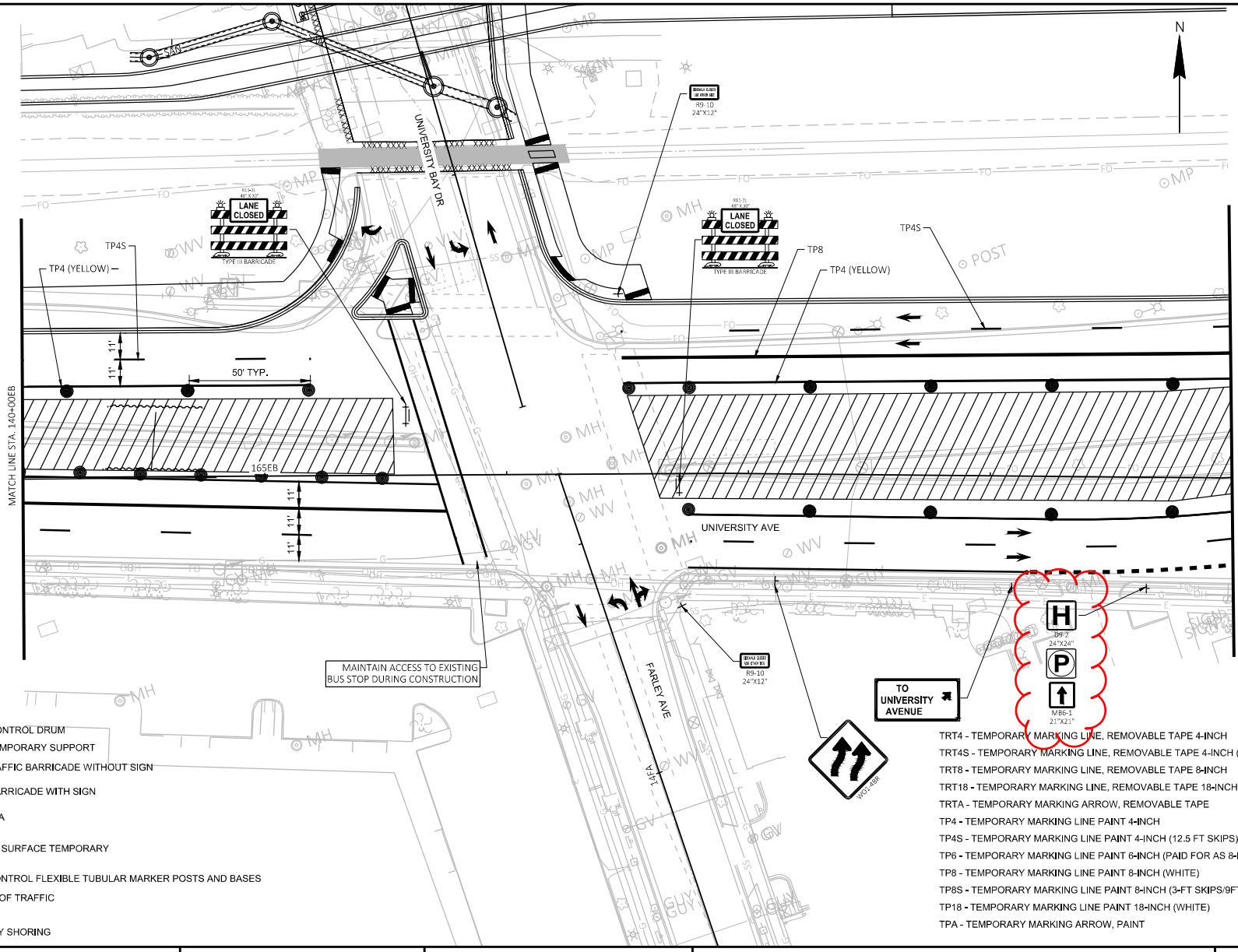
LEGEND

- TRAFFIC CONTROL DRUM
- SIGN ON TEMPORARY SUPPORT
- TYPE III TRAFFIC BARRICADE WITHOUT SIGN
- TRAFFIC BARRICADE WITH SIGN
- WORK AREA
- ASPHALTIC SURFACE TEMPORARY
- TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS AND BASES
- DIRECTION OF TRAFFIC
- XXXXXXXXX SAWCUT
- TEMPORARY SHORING

- TRT4 - TEMPORARY MARKING LINE, REMOVABLE TAPE 4-INCH
- TRT4S - TEMPORARY MARKING LINE, REMOVABLE TAPE 4-INCH (12,5 FT SKIPS)
- TRT8 - TEMPORARY MARKING LINE, REMOVABLE TAPE 8-INCH
- TRT18 - TEMPORARY MARKING LINE, REMOVABLE TAPE 18-INCH
- TRTA - TEMPORARY MARKING ARROW, REMOVABLE TAPE
- TP4 - TEMPORARY MARKING LINE PAINT 4-INCH
- TP4S - TEMPORARY MARKING LINE PAINT 4-INCH (12.5 FT SKIPS)
- TP6 - TEMPORARY MARKING LINE PAINT 6-INCH (PAID FOR AS 8-INCH)
- TP8 - TEMPORARY MARKING LINE PAINT 8-INCH (WHITE)
- TP8S - TEMPORARY MARKING LINE PAINT 8-INCH (3-FT SKIPS/9FT GAP-WHITE)
- TP18 - TEMPORARY MARKING LINE PAINT 18-INCH (WHITE)
- TPA - TEMPORARY MARKING ARROW, PAINT

PROJECT NO: 5992-11-31	HWY: UNIVERSITY AVENUE	COUNTY: DANE	TRAFFIC CONTROL STAGE 3	SHEET 272 E

FILE NAME : G:\MADISON\18026-001 UNIV AVE (SHOREWOOD - UNIVERSITY BAY)\CIVIL 3D\SHEETSPLAN\06 TRAFFIC CONTROL\026101-TC- STAGE 3.DWG
LAYOUT NAME - Sheet - (6)
PLOT DATE : 2/17/2022 11:45 AM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : 1 IN:40 FT



LEGEND

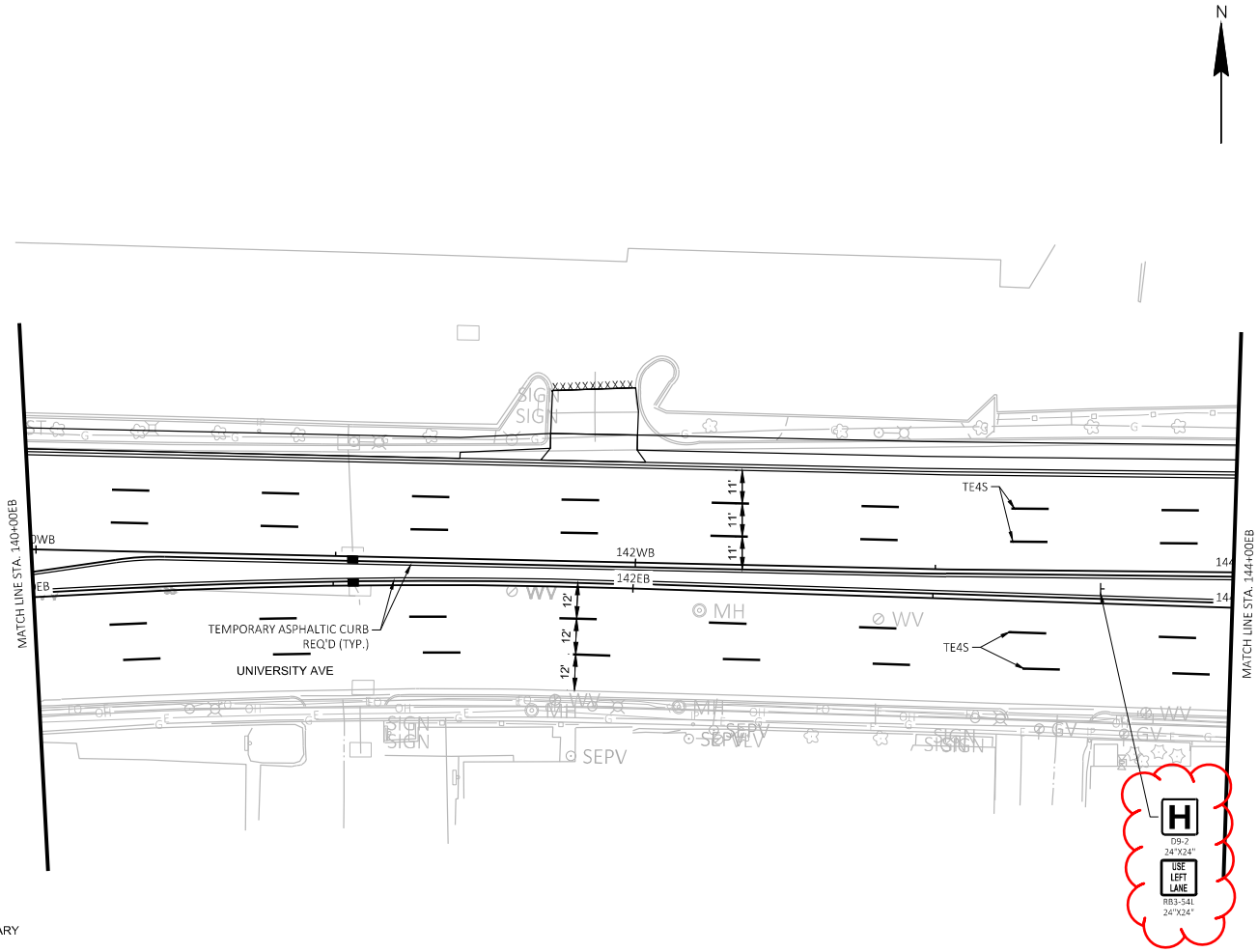
- TRAFFIC CONTROL DRUM
- SIGN ON TEMPORARY SUPPORT
- TYPE III TRAFFIC BARRICADE WITHOUT SIGN
- TRAFFIC BARRICADE WITH SIGN
- WORK AREA
- ASPHALTIC SURFACE TEMPORARY
- TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS AND BASES
- DIRECTION OF TRAFFIC
- XXXXXXXXX SAWCUT
- TEMPORARY SHORING

TRT4 - TEMPORARY MARKING LINE, REMOVABLE TAPE 4-INCH
TRT4S - TEMPORARY MARKING LINE, REMOVABLE TAPE 4-INCH (12.5 FT SKIPS)
TRT8 - TEMPORARY MARKING LINE, REMOVABLE TAPE 8-INCH
TRT18 - TEMPORARY MARKING LINE, REMOVABLE TAPE 18-INCH
TRTA - TEMPORARY MARKING ARROW, REMOVABLE TAPE
TP4 - TEMPORARY MARKING LINE PAINT 4-INCH
TP4S - TEMPORARY MARKING LINE PAINT 4-INCH (12.5 FT SKIPS)
TP6 - TEMPORARY MARKING LINE PAINT 6-INCH (PAID FOR AS 8-INCH)
TP8 - TEMPORARY MARKING LINE PAINT 8-INCH (WHITE)
TP8S - TEMPORARY MARKING LINE PAINT 8-INCH (3-FT SKIPS/9FT GAP-WHITE)
TP18 - TEMPORARY MARKING LINE PAINT 18-INCH (WHITE)
TPA - TEMPORARY MARKING ARROW, PAINT

Addendum No. 01
ID 5992-11-31/32/33
Revised Sheet 273
February 25, 2022

PROJECT NO: 5992-11-31	HWY: UNIVERSITY AVENUE	COUNTY: DANE	TRAFFIC CONTROL STAGE 3	SHEET 273	E

FILE NAME : G:\MADISON\18026-001 UNIV AVE (SHOREWOOD - UNIVERSITY BAY)\CIVIL 3D\SHEETSPLAN\06 TRAFFIC CONTROL\026101-TC- STAGE 3.DWG
LAYOUT NAME - Sheet - (7)
PLOT DATE : 2/17/2022 11:44 AM
PLOT BY : KL ENGINEERING
PLOT NAME :
PLOT SCALE : 1 IN:40 FT



LEGEND

ASPHALTIC SURFACE TEMPORARY

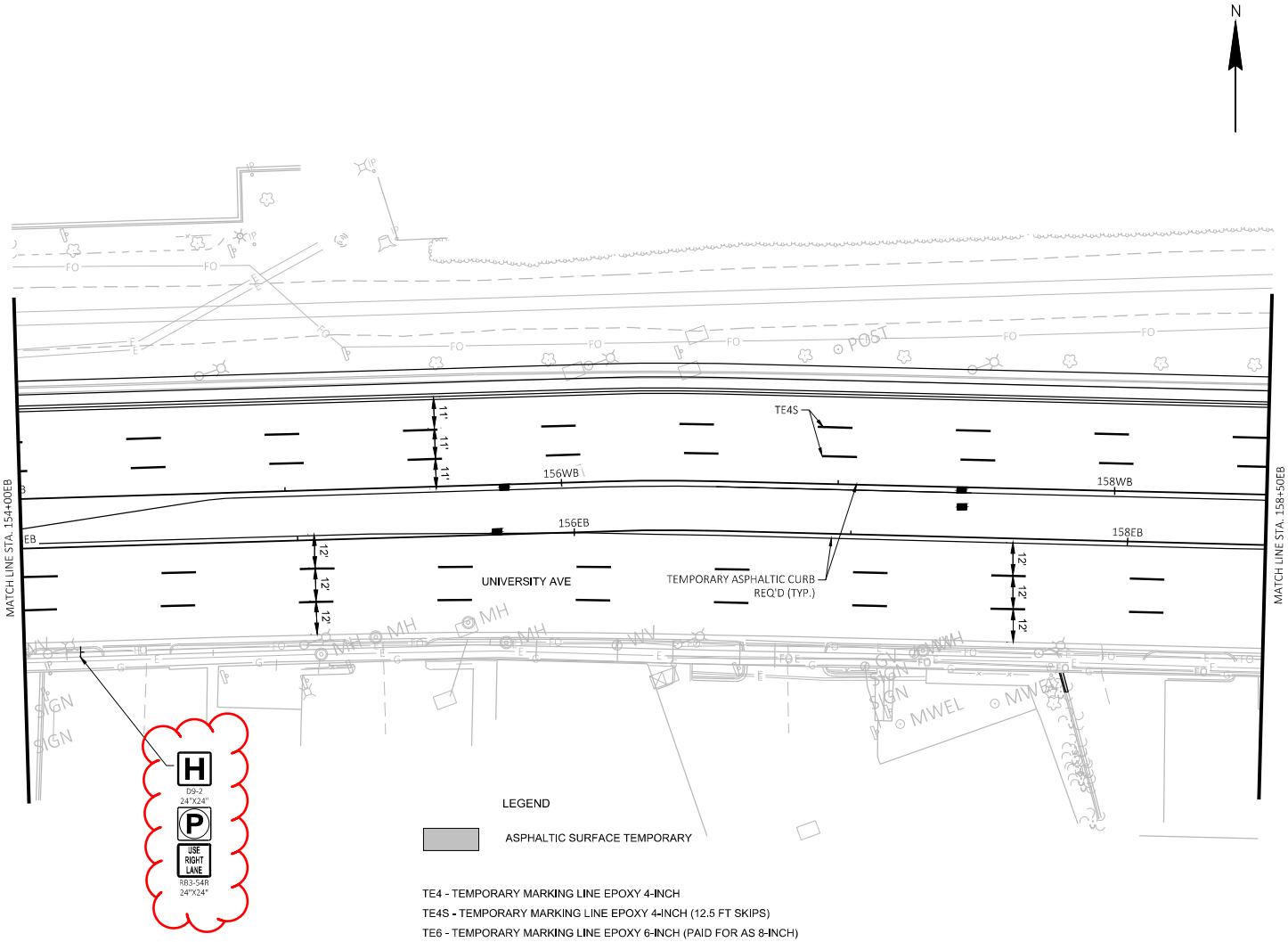
TE4 - TEMPORARY MARKING LINE EPOXY 4-INCH
TE4S - TEMPORARY MARKING LINE EPOXY 4-INCH (12.5 FT SKIPS)
TE6 - TEMPORARY MARKING LINE EPOXY 6-INCH (PAID FOR AS 8-INCH)
TE8 - TEMPORARY MARKING LINE EPOXY 8-INCH
TE8S - TEMPORARY MARKING EPOXY 8-INCH (3 FT SKIPS)
TE18 - TEMPORARY MARKING LINE EPOXY 18-INCH
TEA - TEMPORARY MARKING ARROW
TEW - TEMPORARY MARKING WORD

Addendum No. 01
ID 5992-11-31/32/33
Revised Sheet 278
February 25, 2022

PROJECT NO: 5992-11-31	HWY: UNIVERSITY AVENUE	COUNTY: DANE	TRAFFIC CONTROL STAGE 3A	SHEET 278	E

FILE NAME : G:\MADISON\18026-001 UNIV AVE (SHOREWOOD - UNIVERSITY BAY)\CIVIL 3D\SHEETSPLAN\06 TRAFFIC CONTROL\026101-TC- STAGE 3A.DWG
LAYOUT NAME - Sheet - (2)
PLOT DATE : 2/17/2022 11:52 AM
PLOT BY : KL ENGINEERING
PLOT NAME :
PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

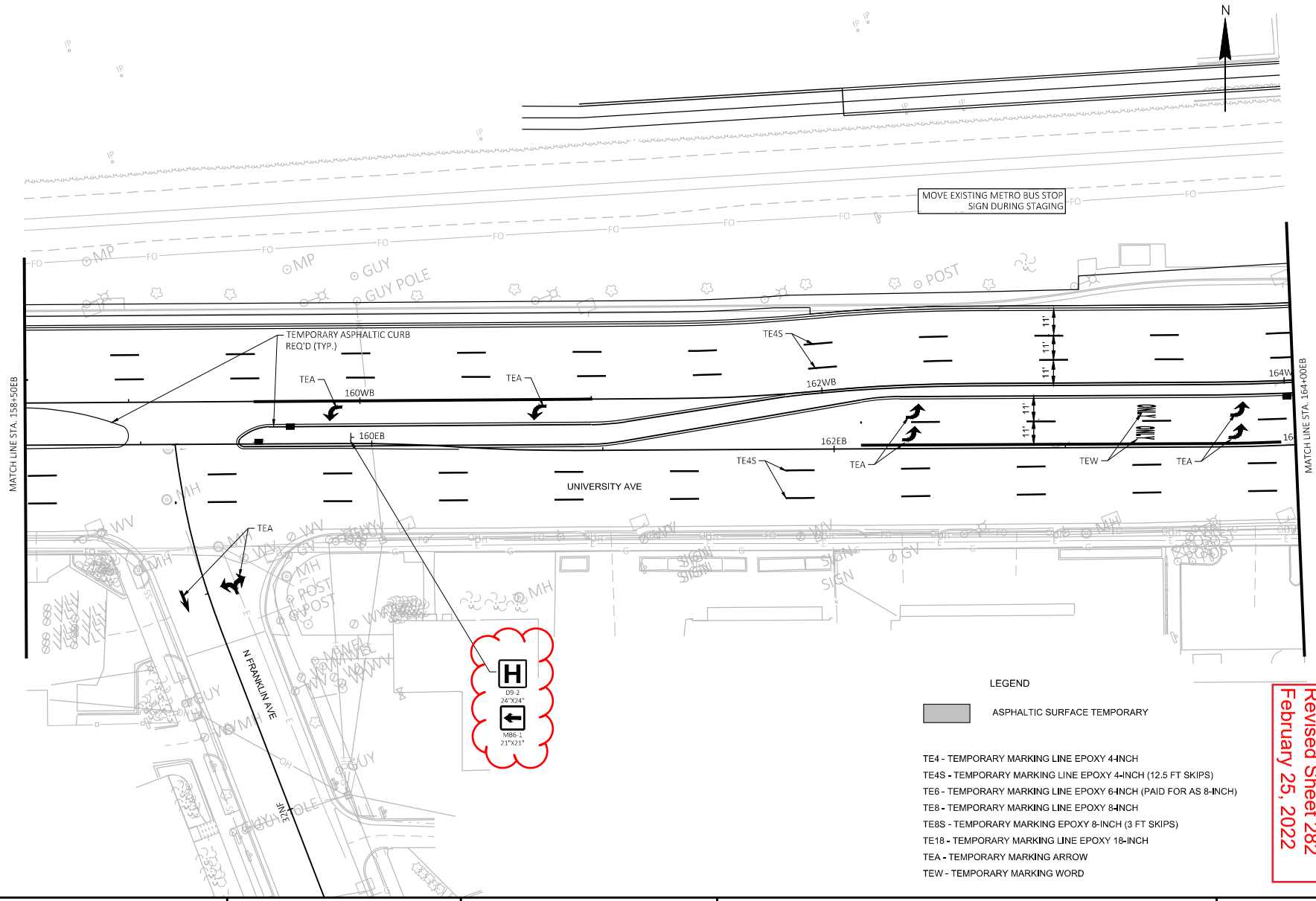


TE4 - TEMPORARY MARKING LINE EPOXY 4-INCH
TE4S - TEMPORARY MARKING LINE EPOXY 4-INCH (12.5 FT SKIPS)
TE6 - TEMPORARY MARKING LINE EPOXY 6-INCH (PAID FOR AS 8-INCH)
TE8 - TEMPORARY MARKING LINE EPOXY 8-INCH
TE8S - TEMPORARY MARKING EPOXY 8-INCH (3 FT SKIPS)
TE18 - TEMPORARY MARKING LINE EPOXY 18-INCH
TEA - TEMPORARY MARKING ARROW
TEW - TEMPORARY MARKING WORD

Addendum No. 01
ID 5992-11-31/32/33
Revised Sheet 281
February 25, 2022

PROJECT NO: 5992-11-31	HWY: UNIVERSITY AVENUE	COUNTY: DANE	TRAFFIC CONTROL STAGE 3A	SHEET 281	E

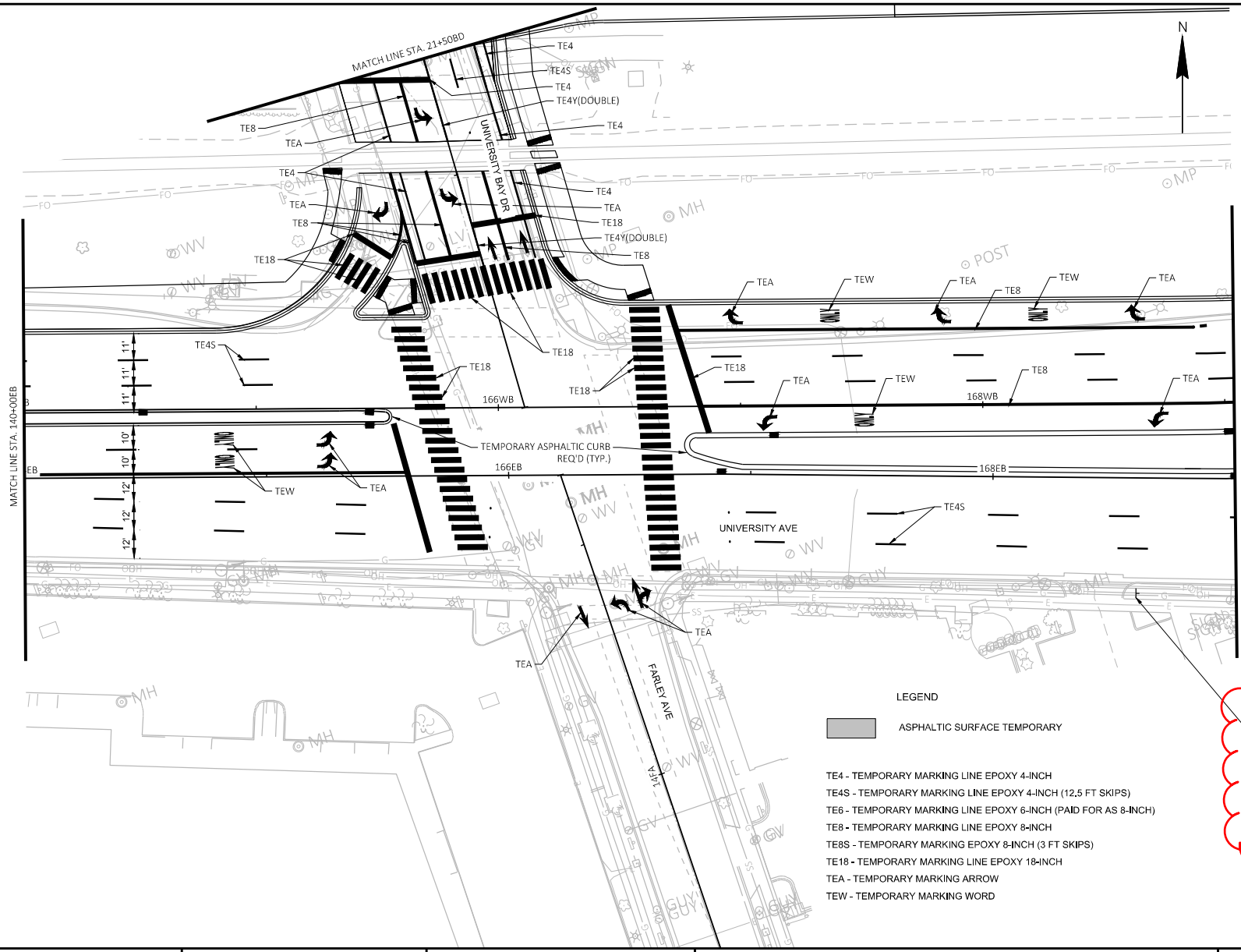
FILE NAME : G:\MADISON\18026-001 UNIV AVE (SHOREWOOD - UNIVERSITY BAY)\CIVIL 3D\SHEETSPLAN\06 TRAFFIC CONTROL\026101-TC- STAGE 3A.DWG
LAYOUT NAME - Sheet - (5)
PLOT DATE : 2/17/2022 11:55 AM
PLOT BY : KL ENGINEERING
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42



Addendum No. 01
ID 5992-11-31/32/33
Revised Sheet 282
February 25, 2022

PROJECT NO: 5992-11-31	HWY: UNIVERSITY AVENUE	COUNTY: DANE	TRAFFIC CONTROL STAGE 3A	SHEET 282	E

FILE NAME : G:\MADISON\18026-001 UNIV AVE (SHOREWOOD - UNIVERSITY BAY)\CIVIL 3D\SHEETSPLAN\06 TRAFFIC CONTROL\026101-TC- STAGE 3A.DWG
LAYOUT NAME - Sheet - (6)
PLOT DATE : 2/17/2022 11:58 AM
PLOT BY : KL ENGINEERING
PLOT NAME :
PLOT SCALE : 1 IN:40 FT

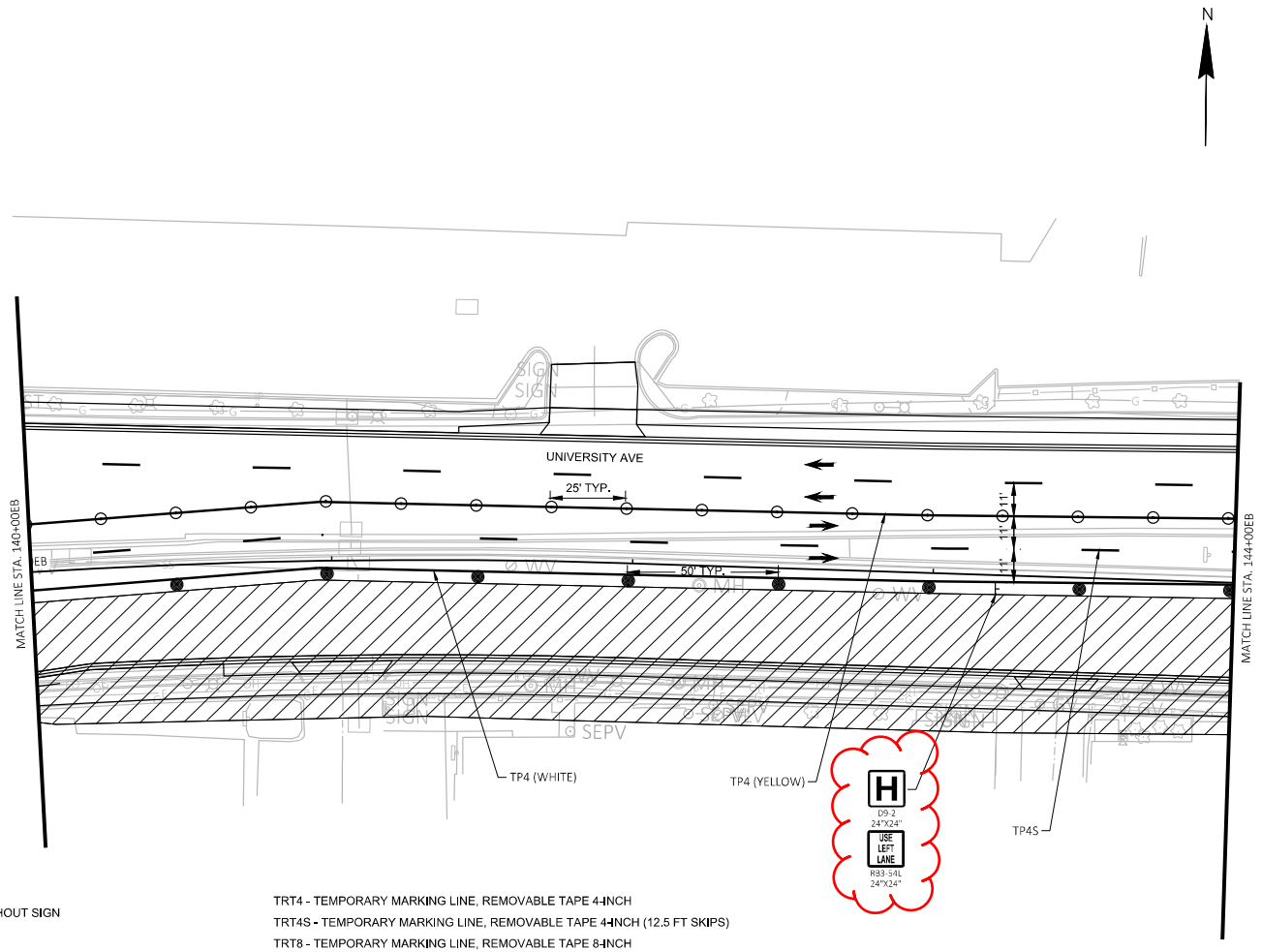


Addendum No. 01
ID 5992-11-31/32/33
Revised Sheet 283
February 25, 2022

PROJECT NO: 5992-11-31	HWY: UNIVERSITY AVENUE	COUNTY: DANE	TRAFFIC CONTROL STAGE 3A	SHEET 283	E

FILE NAME : G:\MADISON\18026-001 UNIV AVE (SHOREWOOD - UNIVERSITY BAY)\CIVIL 3D\SHEETSPLAN\06 TRAFFIC CONTROL\026101-TC- STAGE 3A.DWG
LAYOUT NAME - Sheet - (7)
PLOT DATE : 2/17/2022 12:00 PM
PLOT BY : KL ENGINEERING
PLOT NAME :
PLOT SCALE : 1 IN:40 FT

2



LEGEND

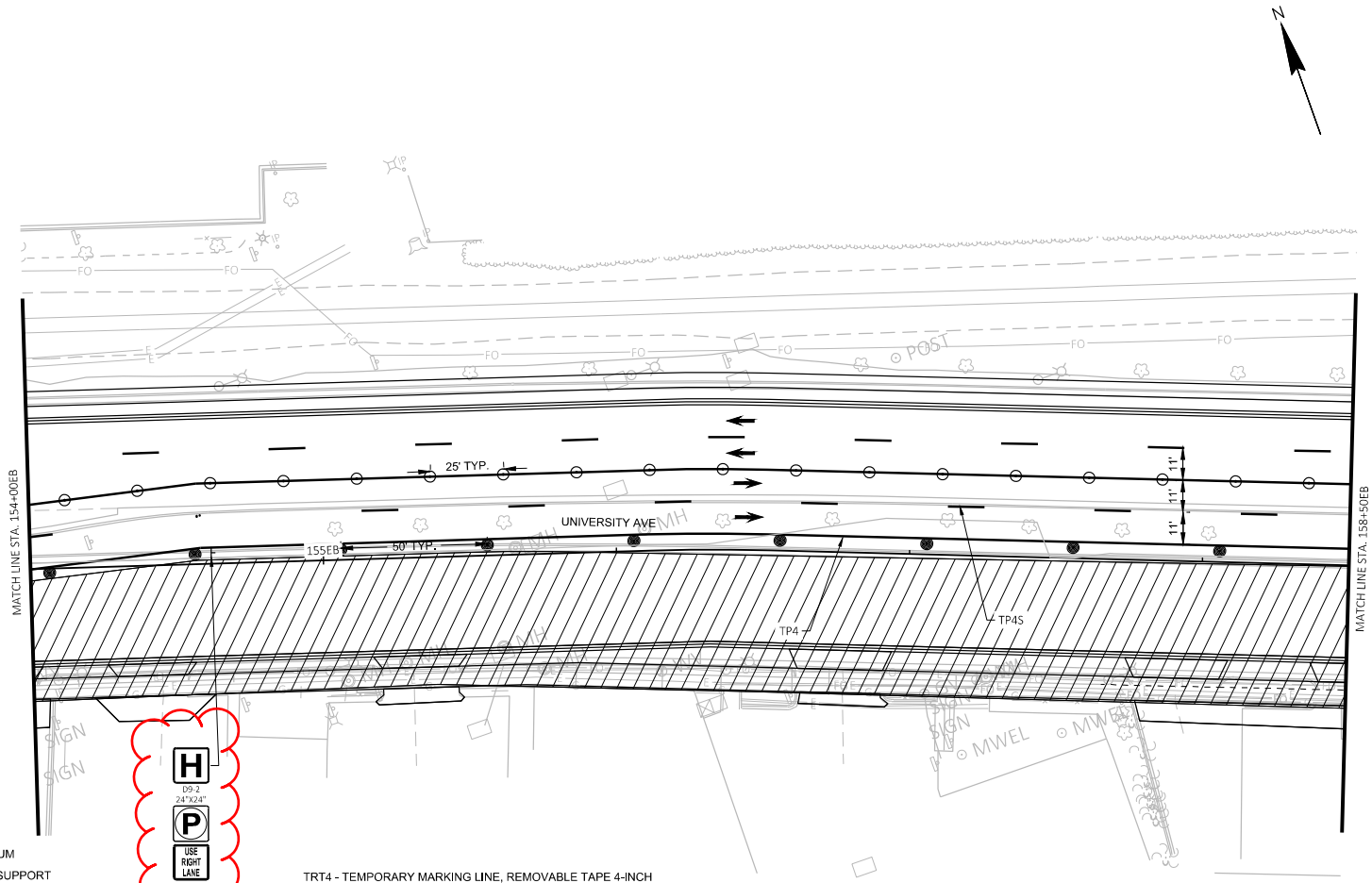
- TRAFFIC CONTROL DRUM
- SIGN ON TEMPORARY SUPPORT
- TYPE III TRAFFIC BARRICADE WITHOUT SIGN
- TRAFFIC BARRICADE WITH SIGN
- WORK AREA
- ASPHALTIC SURFACE TEMPORARY
- TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS AND BASES
- DIRECTION OF TRAFFIC
- XXXXXXXXX SAWCUT
- PEDESTRIAN ROUTE
- TEMPORARY PEDESTRIAN BARRICADE

TRT4 - TEMPORARY MARKING LINE, REMOVABLE TAPE 4-INCH
TRT4S - TEMPORARY MARKING LINE, REMOVABLE TAPE 4-INCH (12.5 FT SKIPS)
TRT8 - TEMPORARY MARKING LINE, REMOVABLE TAPE 8-INCH
TRT18 - TEMPORARY MARKING LINE, REMOVABLE TAPE 18-INCH
TRTA - TEMPORARY MARKING ARROW, REMOVABLE TAPE
TP4 - TEMPORARY MARKING LINE PAINT 4-INCH
TP4S - TEMPORARY MARKING LINE PAINT 4-INCH (12.5 FT SKIPS)
TP6 - TEMPORARY MARKING LINE PAINT 6-INCH (PAID FOR AS 8-INCH)
TP8 - TEMPORARY MARKING LINE PAINT 8-INCH (WHITE)
TP8S - TEMPORARY MARKING LINE PAINT 8-INCH (3-FT SKIPS/9FT GAP-WHITE)
TP18 - TEMPORARY MARKING LINE PAINT 18-INCH (WHITE)
TPA - TEMPORARY MARKING ARROW, PAINT

Addendum No. 01
ID 5992-11-31/32/33
Revised Sheet 289
February 25, 2022

PROJECT NO: 5992-11-31	HWY: UNIVERSITY AVENUE	COUNTY: DANE	TRAFFIC CONTROL STAGE 4	SHEET 289	E

FILE NAME : G:\MADISON\18026-001 UNIV AVE (SHOREWOOD - UNIVERSITY BAY)\CIVIL 3D\SHEETSPLAN\06 TRAFFIC CONTROL\026101-TC- STAGE 4.DWG
LAYOUT NAME - Sheet - (2)
PLOT DATE : 2/17/2022 12:38 PM
PLOT BY : KL ENGINEERING
PLOT NAME :
PLOT SCALE : 1 IN:40 FT



LEGEND

- TRAFFIC CONTROL DRUM
- SIGN ON TEMPORARY SUPPORT
- TYPE III TRAFFIC BARRICADE WITHOUT SIGN
- TRAFFIC BARRICADE WITH SIGN
- WORK AREA
- ASPHALTIC SURFACE TEMPORARY
- TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS AND BASES
- DIRECTION OF TRAFFIC
- XXXXXXXXX SAWCUT
- PEDESTRIAN ROUTE
- TEMPORARY PEDESTRIAN BARRICADE

TRT4 - TEMPORARY MARKING LINE, REMOVABLE TAPE 4-INCH
TRT4S - TEMPORARY MARKING LINE, REMOVABLE TAPE 4-INCH (12.5 FT SKIPS)
TRT8 - TEMPORARY MARKING LINE, REMOVABLE TAPE 8-INCH
TRT18 - TEMPORARY MARKING LINE, REMOVABLE TAPE 18-INCH
TRTA - TEMPORARY MARKING ARROW, REMOVABLE TAPE
TP4 - TEMPORARY MARKING LINE PAINT 4-INCH
TP4S - TEMPORARY MARKING LINE PAINT 4-INCH (12.5 FT SKIPS)
TP6 - TEMPORARY MARKING LINE PAINT 6-INCH (PAID FOR AS 8-INCH)
TP8 - TEMPORARY MARKING LINE PAINT 8-INCH (WHITE)
TP8S - TEMPORARY MARKING LINE PAINT 8-INCH (3-FT SKIPS/9FT GAP-WHITE)
TP18 - TEMPORARY MARKING LINE PAINT 18-INCH (WHITE)
TPA - TEMPORARY MARKING ARROW, PAINT

Addendum No. 01
ID 5992-11-31/32/33
Revised Sheet 292
February 25, 2022

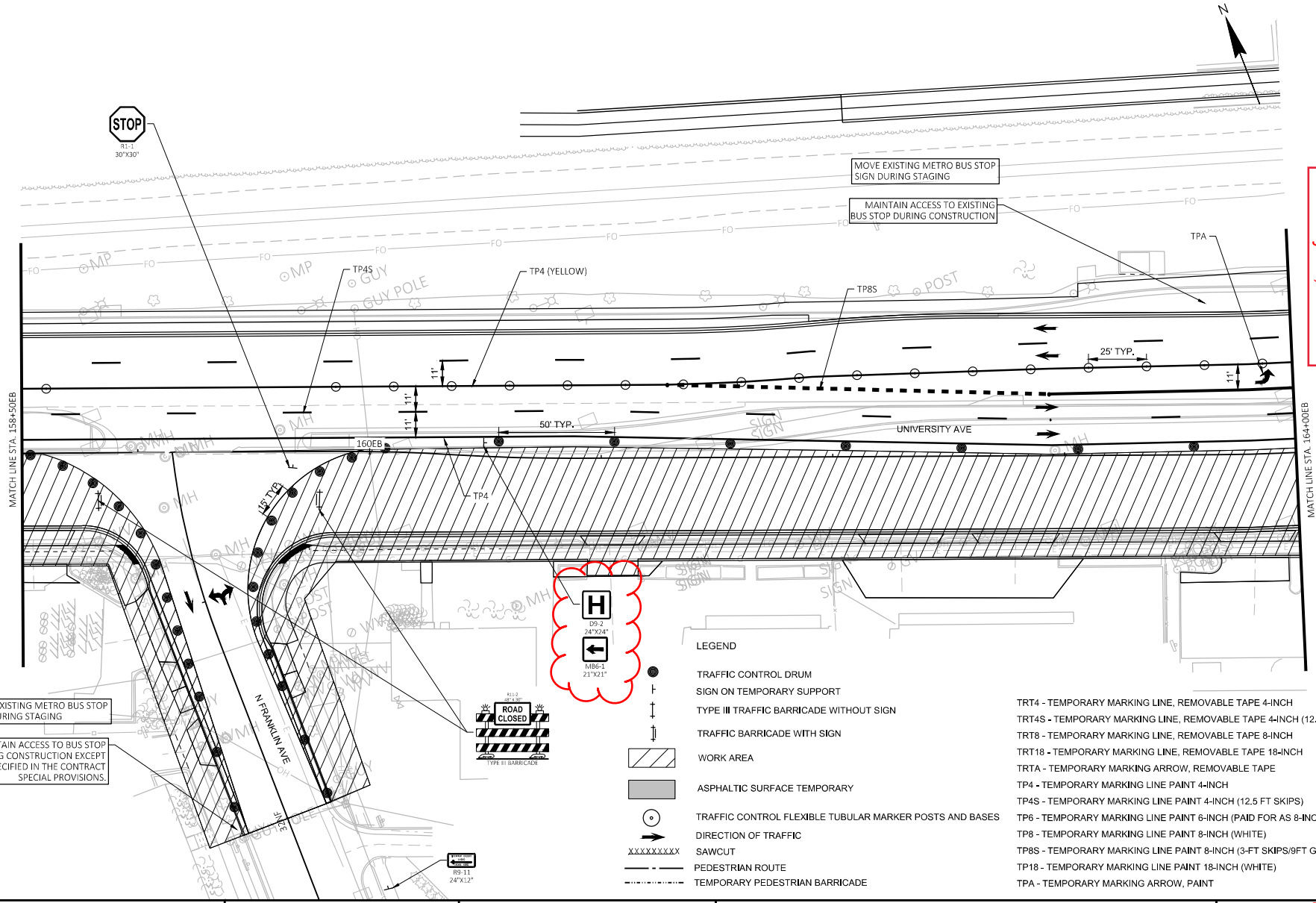
PROJECT NO: 5992-11-31	HWY: UNIVERSITY AVENUE	COUNTY: DANE	TRAFFIC CONTROL STAGE 4	SHEET 292	E

FILE NAME : G:\MADISON\18026-001 UNIV AVE (SHOREWOOD - UNIVERSITY BAY)\CIVIL 3D\SHEETSPLAN\06 TRAFFIC CONTROL\026101-TC- STAGE 4.DWG
LAYOUT NAME - Sheet - (5)
PLOT DATE : 2/17/2022 12:40 PM
PLOT BY : KL ENGINEERING
PLOT NAME :
PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

2

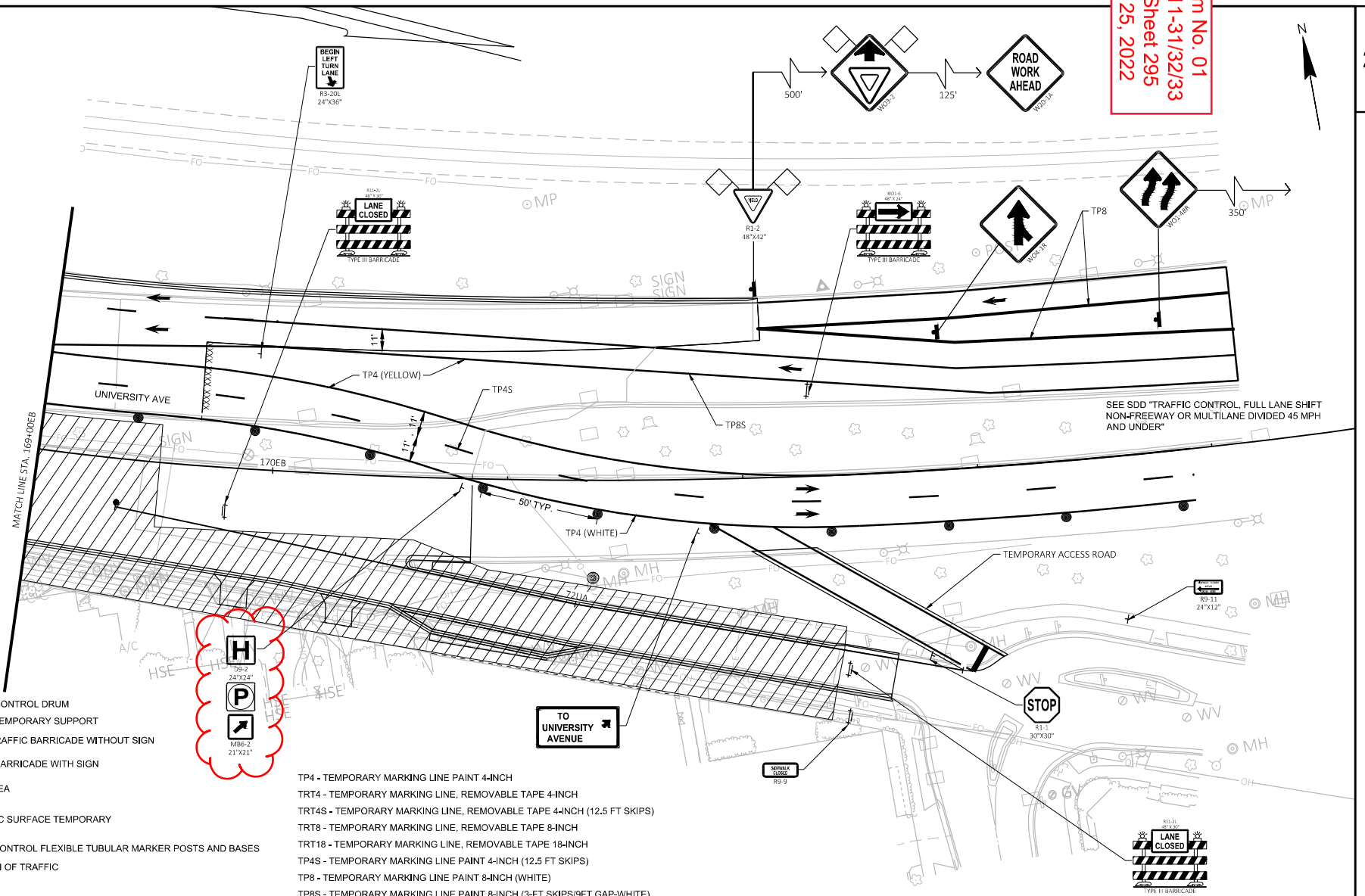
Addendum No. 01
ID 5992-11-31/32/33
Revised Sheet 293
February 25, 2022



PROJECT NO: 5992-11-31	HWY: UNIVERSITY AVENUE	COUNTY: DANE	TRAFFIC CONTROL STAGE 4	SHEET 293	E

FILE NAME : G:\MADISON\18026-001 UNIV AVE (SHOREWOOD - UNIVERSITY BAY)\CIVIL 3D\SHEETSPLAN\06 TRAFFIC CONTROL\026101-TC- STAGE 4.DWG
LAYOUT NAME - Sheet - (6)
PLOT DATE : 2/17/2022 12:41 PM
PLOT BY : KL ENGINEERING
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

Addendum No. 01
ID 5992-11-31/32/33
Revised Sheet 295
February 25, 2022



LEGEND

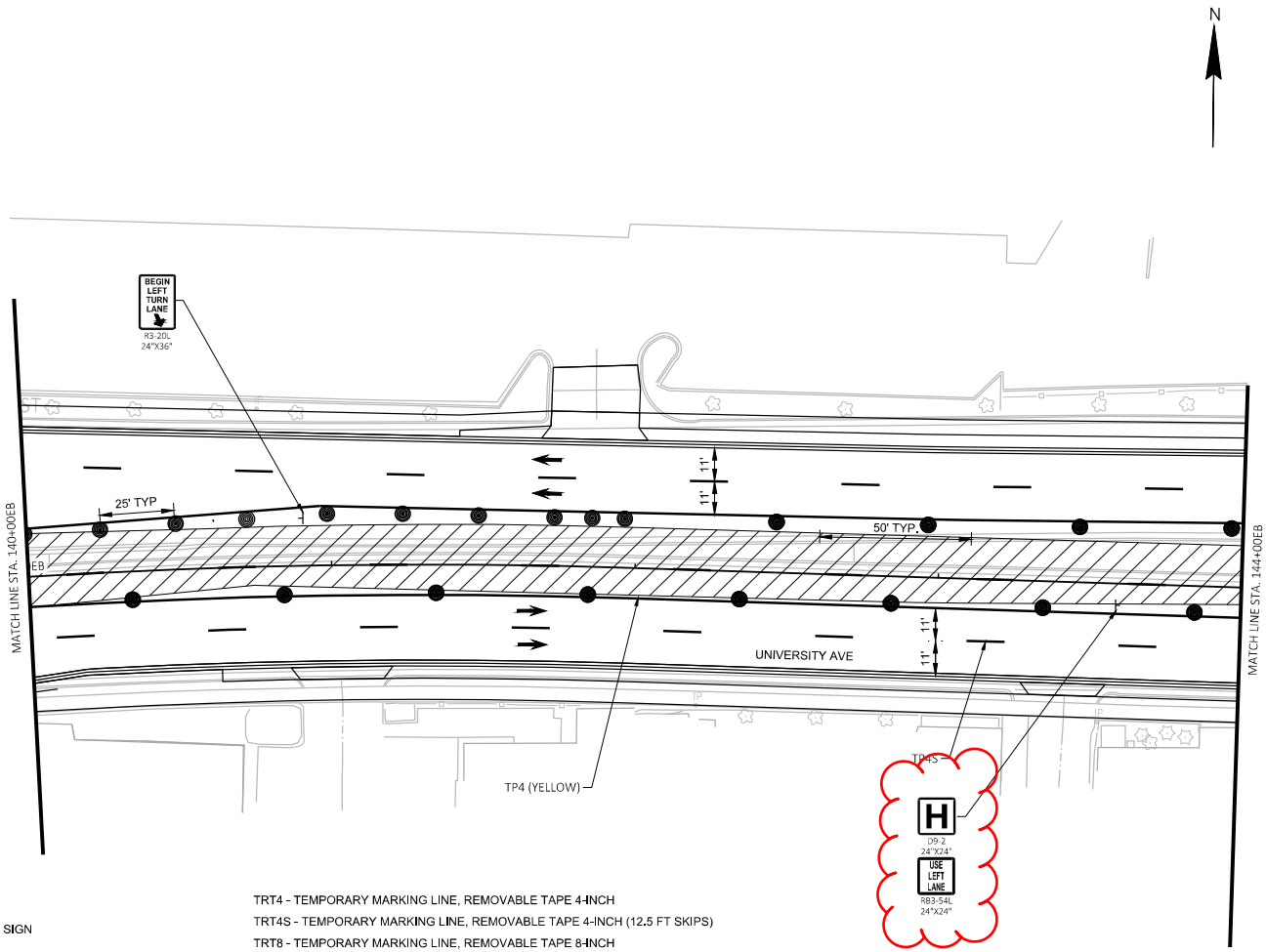
- TRAFFIC CONTROL DRUM
- SIGN ON TEMPORARY SUPPORT
- TYPE III TRAFFIC BARRICADE WITHOUT SIGN
- TRAFFIC BARRICADE WITH SIGN
- WORK AREA
- ASPHALTIC SURFACE TEMPORARY
- TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS AND BASES
- DIRECTION OF TRAFFIC
- XXXXXXXXX SAWCUT
- PEDESTRIAN ROUTE
- TEMPORARY PEDESTRIAN BARRICADE

TP4 - TEMPORARY MARKING LINE PAINT 4-INCH
TRT4 - TEMPORARY MARKING LINE, REMOVABLE TAPE 4-INCH
TRT4S - TEMPORARY MARKING LINE, REMOVABLE TAPE 4-INCH (12.5 FT SKIPS)
TRT8 - TEMPORARY MARKING LINE, REMOVABLE TAPE 8-INCH
TRT18 - TEMPORARY MARKING LINE, REMOVABLE TAPE 18-INCH
TP4S - TEMPORARY MARKING LINE PAINT 4-INCH (12.5 FT SKIPS)
TP8 - TEMPORARY MARKING LINE PAINT 8-INCH (WHITE)
TP8S - TEMPORARY MARKING LINE PAINT 8-INCH (3-FT SKIPS/9FT GAP-WHITE)
TP18 - TEMPORARY MARKING LINE PAINT 18-INCH (WHITE)

PROJECT NO: 5992-11-31	HWY: UNIVERSITY AVENUE	COUNTY: DANE	TRAFFIC CONTROL STAGE 4	SHEET 295	E

FILE NAME : G:\MADISON\18026-001 UNIV AVE (SHOREWOOD - UNIVERSITY BAY)\CIVIL 3D\SHEETSPLAN\06 TRAFFIC CONTROL\026101-TC- STAGE 4.DWG
LAYOUT NAME - Sheet - (8)
PLOT DATE : 2/17/2022 1:00 PM
PLOT BY : KL ENGINEERING
PLOT NAME :
PLOT SCALE : 1 IN:40 FT

2



LEGEND

- TRAFFIC CONTROL DRUM
- SIGN ON TEMPORARY SUPPORT
- TYPE III TRAFFIC BARRICADE WITHOUT SIGN
- TRAFFIC BARRICADE WITH SIGN
- WORK AREA
- ASPHALTIC SURFACE TEMPORARY
- TRAFFIC CONTROL FLEXIBLE TUBULAR MARKER POSTS AND BASES
- DIRECTION OF TRAFFIC
- XXXXXXXXX SAWCUT
- PEDESTRIAN ROUTE
- TEMPORARY PEDESTRIAN BARRICADE

TRT4 - TEMPORARY MARKING LINE, REMOVABLE TAPE 4-INCH
TRT4S - TEMPORARY MARKING LINE, REMOVABLE TAPE 4-INCH (12.5 FT SKIPS)
TRT8 - TEMPORARY MARKING LINE, REMOVABLE TAPE 8-INCH
TRT18 - TEMPORARY MARKING LINE, REMOVABLE TAPE 18-INCH
TRTA - TEMPORARY MARKING ARROW, REMOVABLE TAPE
TP4 - TEMPORARY MARKING LINE PAINT 4-INCH
TP4S - TEMPORARY MARKING LINE PAINT 4-INCH (12.5 FT SKIPS)
TP6 - TEMPORARY MARKING LINE PAINT 6-INCH (PAID FOR AS 8-INCH)
TP8 - TEMPORARY MARKING LINE PAINT 8-INCH (WHITE)
TP8S - TEMPORARY MARKING LINE PAINT 8-INCH (3-FT SKIPS/9FT GAP-WHITE)
TP18 - TEMPORARY MARKING LINE PAINT 18-INCH (WHITE)
TPA - TEMPORARY MARKING ARROW, PAINT

Addendum No. 01
ID 5992-11-31/32/33
Revised Sheet 299
February 25, 2022

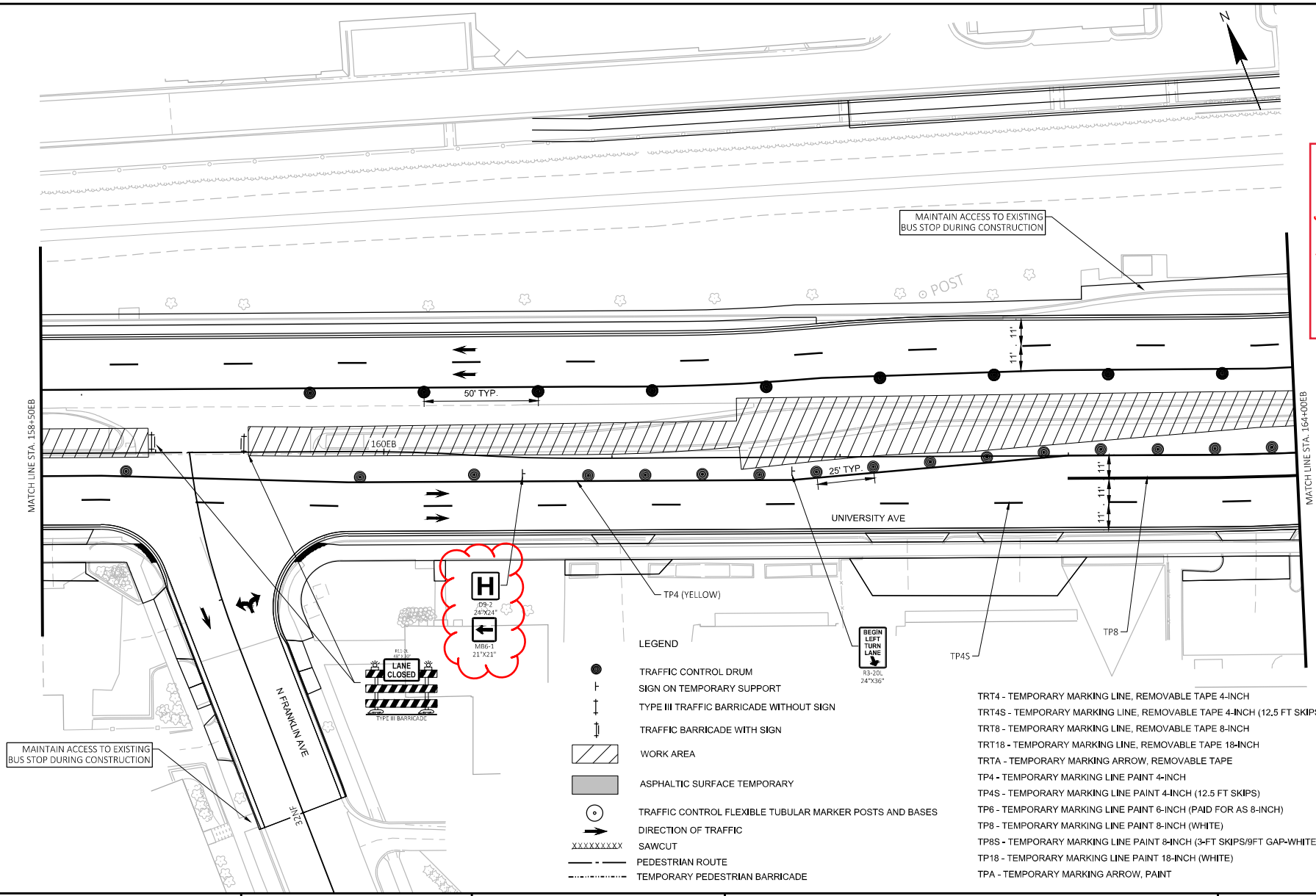
PROJECT NO: 5992-11-31	HWY: UNIVERSITY AVENUE	COUNTY: DANE	TRAFFIC CONTROL STAGE 5	SHEET 299	E

FILE NAME : G:\MADISON\18026-001 UNIV AVE (SHOREWOOD - UNIVERSITY BAY)\CIVIL 3D\SHEETSPLAN\06 TRAFFIC CONTROL\026101-TC- STAGE 5.DWG
LAYOUT NAME - Sheet - (2)
PLOT DATE : 2/17/2022 1:02 PM
PLOT BY : KL ENGINEERING
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2

2

Addendum No. 01
ID 5992-11-31/32/33
Revised Sheet 303
February 25, 2022



PROJECT NO: 5992-11-31	HWY: UNIVERSITY AVENUE	COUNTY: DANE	TRAFFIC CONTROL STAGE 5	SHEET 303	E

FILE NAME : G:\MADISON\18026-001 UNIV AVE (SHOREWOOD - UNIVERSITY BAY)\CIVIL 3D\SHEETSPLAN\06 TRAFFIC CONTROL\026101-TC- STAGE 5.DWG
LAYOUT NAME - Sheet - (6)
PLOT DATE : 2/17/2022 1:04 PM
PLOT BY : KL ENGINEERING
PLOT NAME :
PLOT SCALE : 1 IN:40 FT

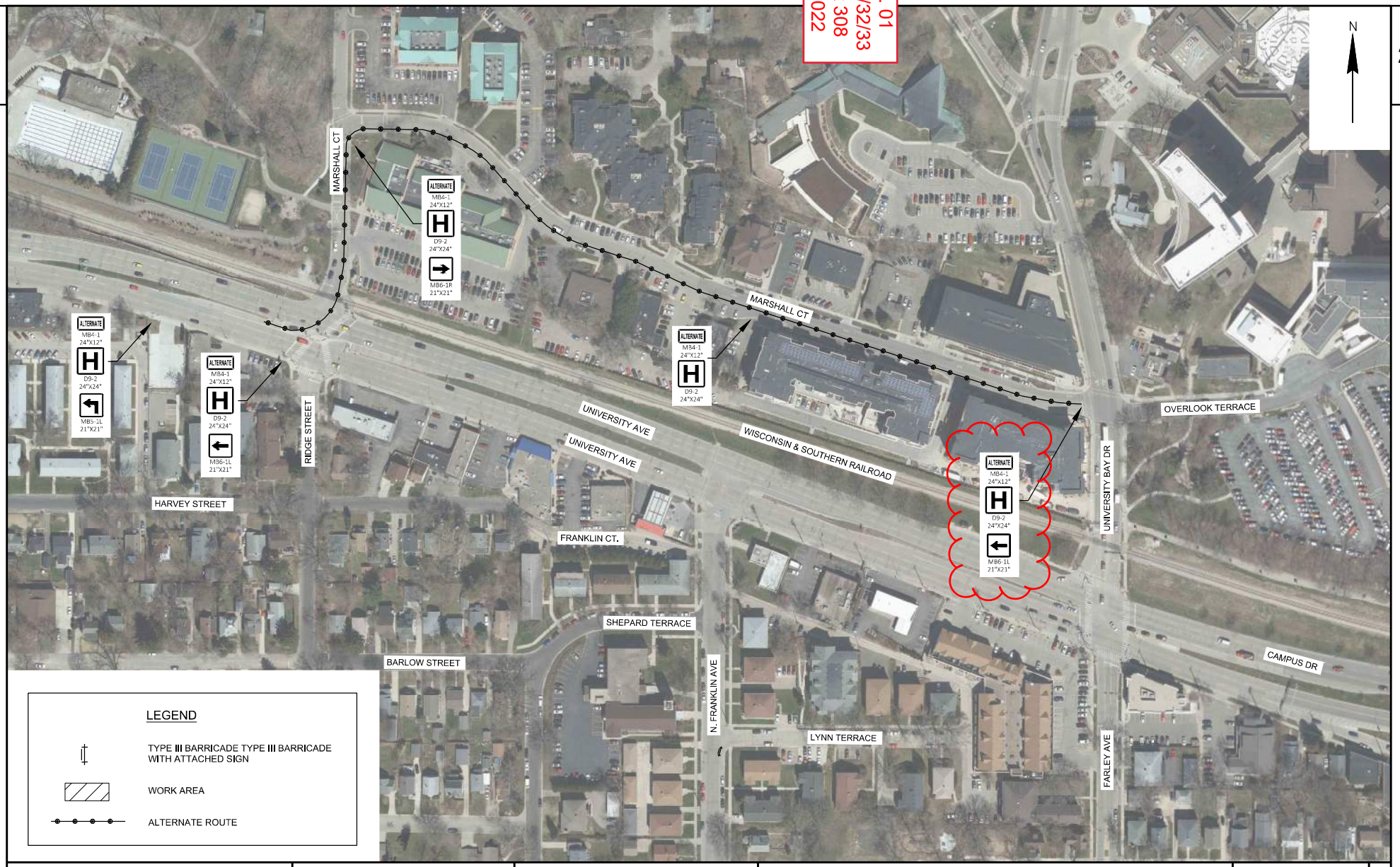
Addendum No. 01
ID 5992-11-31/32/33
Added Sheet 307A
February 25, 2022

PROJECT NO: 5992-11-31	HWY: UNIVERSITY AVENUE	COUNTY: DANE	UNIVERSITY BAY DRIVE DETOUR ROUTE	SHEET 307A	E

FILE NAME : G:\MADISON\18026-001 UNIV AVE (SHOREWOOD - UNIVERSITY BAY)\CIVIL 3D\SHEETSPLAN\06 TRAFFIC CONTROL\027001-DT.DWG
LAYOUT NAME - UNIV BAY DR DETOUR(3)
PLOT DATE : 2/17/2022 1:49 PM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 42

Addendum No. 01
ID 5992-11-31/32/33
Revised Sheet 308
February 25, 2022



PROJECT NO: 5992-11-31	HWY: UNIVERSITY AVENUE	COUNTY: DANE	HOSPITAL EASTBOUND ALTERNATE ROUTE	SHEET 308	E

FILE NAME : G:\MADISON\18026-001 UNIV AVE (SHOREWOOD - UNIVERSITY BAY)\CIVIL 3D\SHEETSPLAN\06 TRAFFIC CONTROL\027001-DT.DWG
LAYOUT NAME - HOSPITAL EB ALT ROUTE
PLOT DATE : 2/17/2022 1:52 PM PLOT BY : KL ENGINEERING PLOT NAME : PLOT SCALE : ##########

WISDOT/CADDS SHEET 42

Addendum No. 01
ID 5992-11-31/32/33
Revised Sheet 328
February 25, 2022

3

REMOVING MANHOLES & INLETS

STATION		OFFSET	204.0210 REMOVING MANHOLES (EACH)	204.0220 REMOVING INLETS (EACH)	SPV.0060.020 CLOSE STORM SEWER CONNECTION (EACH)
5992-11-31					
CATEGORY 0040					
STAGE 1A					
171+35	EB	1' LT	–	1	–
171+35	EB	18' LT	–	1	–
171+51	EB	1' LT	–	1	–
STAGE 1A SUBTOTAL			0	3	0
STAGE 1B					
170+13	EB	0' RT	–	1	1
170+14	EB	21' LT	–	1	–
STAGE 1B SUBTOTAL			0	2	1
STAGE 2					
139+02	WB	36' LT	–	1	–
141+03	WB	36' LT	–	1	–
149+04	WB	35' LT	–	1	–
156+06	WB	39' LT	–	1	–
158+85	WB	39' LT	–	1	–
160+99	WB	39' LT	–	1	–
164+01	WB	43' LT	–	1	–
166+50	WB	25' LT	–	1	–
170+15	WB	39' LT	–	1	–
171+49	WB	41' LT	–	1	–
50+50	MC	31' LT	–	1	–
50+50	MC	47' LT	–	1	–
50+50	MC	32' RT	–	1	–
50+50	MC	11' RT	–	1	–
STAGE 2 SUBTOTAL			0	14	0
STAGE 3					
139+04	WB	4' RT	–	1	–
139+75	EB	3' LT	–	1	–
139+83	EB	3' LT	–	1	–
140+16	EB	3' LT	–	1	–
141+06	WB	2' RT	–	1	–
141+09	EB	3' LT	–	1	–
141+09	EB	3' RT	–	1	–
144+27	WB	4' LT	–	1	–
145+41	EB	7' LT	–	1	–
149+05	WB	0' RT	–	1	–
149+07	EB	4' LT	–	1	–
151+09	WB	1' LT	–	1	–
151+09	WB	5' RT	–	1	–
152+55	EB	8' LT	–	1	–
152+55	EB	3' LT	–	1	–
155+72	EB	2' LT	–	1	–
156+05	WB	0' RT	–	1	1
158+80	EB	11' LT	–	1	–
158+80	EB	0' LT	–	1	–
160+15	EB	11' LT	–	1	–
160+95	EB	13' LT	–	1	1
161+46	EB	5' LT	–	1	1
163+97	EB	12' LT	–	1	–
164+01	WB	6' RT	–	1	–
164+96	EB	12' LT	–	1	1
166+71	EB	2' RT	–	1	1
166+71	EB	5' LT	–	1	1
STAGE 3 SUBTOTAL			0	27	6
CATEGORY 0040 SUBTOTAL			0	46	7

REMOVING MANHOLES & INLETS

STATION		OFFSET	204.0210 REMOVING MANHOLES (EACH)	204.0220 REMOVING INLETS (EACH)	SPV.0060.020 CLOSE STORM SEWER CONNECTION (EACH)
STAGE 4					
141+09	EB	36' RT	–	1	–
144+26	EB	36' RT	–	1	–
145+35	EB	35' RT	–	1	–
149+05	EB	35' RT	–	1	–
149+14	EB	35' RT	–	1	–
151+39	EB	36' RT	–	1	–
160+17	EB	38' RT	–	1	–
161+16	EB	35' RT	–	1	–
163+20	EB	34' RT	–	1	–
163+95	EB	34' RT	–	1	1
62+38	SP	15' RT	–	1	–
62+40	SP	24' LT	–	1	–
42+35	RS	42' RT	–	1	–
42+22	RS	19' LT	–	1	–
42+55	RS	29' LT	1	--	–
33+04	NF	33' RT	–	1	–
33+35	NF	40' LT	–	1	–
14+71	FA	20' LT	–	1	–
14+55	FA	19' RT	–	1	–
14+73	FA	41' RT	–	1	–
STAGE 4 SUBTOTAL			1	19	1
CATEGORY 0040 TOTAL			**1**	**65**	**8**
5992-11-31					
CATEGORY 0100					
STAGE 2					
20+61	BD	22' RT	–	1	–
23+69	BD	18' RT	–	1	–
20+53	BD	63' RT	–	1	–
23+48	BD	37' RT	–	1	–
23+20	BD	35' RT	–	1	–
STAGE 2 SUBTOTAL			0	5	0
STAGE 2A					
20+71	BD	46' LT	–	1	–
20+72	BD	51' LT	–	1	–
STAGE 2A SUBTOTAL			0	2	0
CATEGORY 0100 TOTAL			**0**	**7**	**0**
PROJECT 5992-11-31 TOTAL			**1**	**72**	**8**

REMOVING CURB & GUTTER

LOCATION	STATION - STATION	204.0150 REMOVING CURB & GUTTER (LF)
5992-11-31		
CATEGORY 0010		
STAGE 1		
BEGIN PROJECT - SHOREWOOD BLVD	135+68 'EB' - 138+00 'EB'	450
SHOREWOOD BLVD - SCHMITT PL	138+00 'EB' - 144+80 'EB'	1120
SCHMITT PL - MARSHALL CT	144+80 'EB' - 151+87 'EB'	1200
MARSHALL CT - FRANKLIN AVE	151+87 'EB' - 159+15 'EB'	1300
FRANKLIN AVE - UNIVERSITY BAY DR	159+15 'EB' - 166+21 'EB'	1280
UNIVERSITY BAY DR - END PROJECT	166+21 'EB' - 172+00 'EB'	1820
STAGE 1 SUBTOTAL		7170
STAGE 2		
SHOREWOOD BLVD - SCHMITT PL	138+00 'EB' - 144+80 'EB'	80
UNIVERSITY BAY DR - END PROJECT	166+21 'EB' - 172+00 'EB'	280
CATAFALQUE CT	50+00 - 54+00	390
STAGE 2 SUBTOTAL		750
STAGE 4		
UNIVERSITY BAY DR - END PROJECT	166+21 'EB' - 172+00 'EB'	190
SCHMITT PL	62+16 'SP' - 62+57'SP'	20
RIDGE ST	41+94 'RS' - 42+48 'RS'	50
FRANKLIN AVE	32+00 'NF' - 33+34 'NF'	160
FARLEY AVE	12+85 'FA' - 14+94 'FA'	360
UNIVERSITY AVE	71+00 'UA' - 73+40 'UA'	50
STAGE 4 SUBTOTAL		830
CATEGORY 0010 TOTAL		**8750**
5992-11-31		
CATEGORY 0080		
STAGE 2		
UNIVERSITY AVE - HIGHLAND AVE	20+30'BD' - 28+35'BD'	750
STAGE 2 SUBTOTAL		750
STAGE 2A		
UNIVERSITY AVE - HIGHLAND AVE	20+30'BD' - 28+35'BD'	60
STAGE 2A SUBTOTAL		60
CATEGORY 0080 TOTAL		**810**
PROJECT 5992-11-31 TOTAL		**9560**

REMOVING ASPHALTIC SURFACE MILLING

LOCATION	STATION - STATION	204.0120 REMOVING ASPHALTIC SURFACE MILLING (SY)
5992-11-31		
CATEGORY 0010		
STAGE 6		
BEGIN PROJECT - SHOREWOOD BLVD	135+68 'EB' - 138+00 'EB'	300
SHOREWOOD BLVD - SCHMITT PL	138+00 'EB' - 144+80 'EB'	1230
SCHMITT PL - MARSHALL CT	144+80 'EB' - 151+87 'EB'	1007
MARSHALL CT - FRANKLIN AVE	151+87 'EB' - 159+15 'EB'	1138
FRANKLIN AVE - UNIVERSITY BAY DR	159+15 'EB' - 166+21 'EB'	1175
UNIVERSITY BAY DR - END PROJECT	166+21 'EB' - 172+00 'EB'	1070
STAGE 6 SUBTOTAL		5920
CATEGORY 0010 TOTAL		**5920**
5992-11-31		
CATEGORY 0080		
STAGE 6		
UNIVERSITY AVE - HIGHLAND AVE	20+30'BD' - 28+35'BD'	2740
STAGE 6 SUBTOTAL		2740
CATEGORY 0080 TOTAL		**2740**
PROJECT 5992-11-31 TOTAL		**8660**

STORM SEWER PIPE

FROM	-	TO	608.0312 SSPRC CLASS III 12-INCH LF	608.0315 SSPRC CLASS III 15-INCH LF	608.0318 SSPRC CLASS III 18-INCH LF	608.0324 SSPRC CLASS III 24-INCH LF	608.0412 SSPRC CLASS IV 12-INCH LF	608.0415 SSPRC CLASS IV 15-INCH LF	608.0418 SSPRC CLASS IV 18-INCH LF	608.0430 SSPRC CLASS IV 30-INCH LF	612.0108 PIPE UNDERDRAIN 8-INCH LF	612.0110 PIPE UNDERDRAIN 10-INCH LF	612.0112 PIPE UNDERDRAIN 12-INCH LF	INLET ELEV	DISCHARGE ELEV	SLOPE FT/FT
5992-11-31																
CATEGORY 0040																
STAGE 1A																
72	-	74	16	–	–	–	–	–	–	–	–	–	–	871.50	871.10	0.0250
72	-	72A	11	–	–	–	–	–	–	–	–	–	–	871.07	871.07①	0.0000
73	-	72	15	–	–	–	–	–	–	–	–	–	–	872.49	872.34	0.0100
389	-	388	36	–	–	–	–	–	–	–	–	–	–	871.34①	870.22①	0.0311
91.1	-	91	12	–	–	–	–	–	–	–	–	–	–	870.60	870.50	0.0083
91	-	91A	20	–	–	–	–	–	–	–	–	–	–	870.50	870.06	0.0220
STAGE 1A SUBTOTAL			110	–	–	–	–	–	–	--	–	–	–			
STAGE 1B																
69A	-	69	20	–	–	–	–	–	–	–	–	–	–	873.50①	873.50	0.0000
69	-	69B	8	–	–	–	–	–	–	–	–	–	–	873.50	873.50①	0.0000
STAGE 1B SUBTOTAL			28	0	0	0	0	0	0	0	0	0	0			
STAGE 2																
B	-	BA	35	–	–	–	–	–	–	–	–	–	–	874.12	873.87①	0.0071
C	-	B	31	–	–	–	–	–	–	–	–	–	–	874.50	874.12	0.0123
141.1	-	141.1B	12	–	–	–	–	–	–	–	–	–	–	875.83	874.18	0.1375
141.1A	-	141.1	6	–	–	–	–	–	–	–	–	–	–	878.63①	875.80	0.4717
141.2	-	141.2A	10	–	–	–	–	–	–	–	–	–	–	875.11	874.07	0.1040
02	-	02A	19	–	–	–	–	–	–	–	–	–	–	884.60	875.00①	0.5053
03	-	02	–	–	–	–	–	62	–	–	–	–	–	886.32	884.95	0.0221
09	-	15	–	–	–	–	–	–	24	–	–	–	–	882.84	882.45	0.0162
16	-	16A	7	–	–	–	–	–	–	–	–	–	–	875.63	873.92①	0.2443
17	-	17A	22	–	–	–	–	–	–	–	–	–	–	876.62	873.73①	0.1314
26.1	-	26	–	–	–	–	44	–	–	–	–	–	–	875.77	875.30	0.0107
26	-	26A	–	–	–	–	34	–	–	–	–	–	–	875.30	873.79①	0.0444
23	-	23A	–	–	–	–	–	11	–	–	–	–	–	874.75	873.69①	0.0964
27	-	27A	–	–	–	–	28	–	–	–	–	–	–	874.38	873.12①	0.0450
32.1	-	32A	–	–	–	–	33	–	–	–	–	–	–	872.06	871.75①	0.0094
32.2	-	32.1	44	–	–	–	–	–	–	–	–	–	–	872.43	872.06	0.0084
41	-	41A	–	–	–	–	36	–	–	–	–	–	–	871.58	871.41①	0.0047
47	-	46	–	–	–	–	42	–	–	–	–	–	–	871.29	870.95	0.0081
500.1A	-	500.1	–	10	–	–	–	–	–	–	–	–	–	871.50①	871.30	0.0200
500.1	-	500.2	–	–	–	54	–	–	–	–	–	–	–	868.17	868.00	0.0031
500.2	-	500X	–	–	–	34	–	–	–	–	–	–	–	868.00	867.89	0.0031
70	-	70A	5	–	–	–	–	–	–	–	–	–	–	873.53	873.51	0.0040
71	-	70	21	–	–	–	–	–	–	–	–	–	–	874.00	873.53	0.0224
STAGE 2 SUBTOTAL			212	10	0	88	217	73	24	0	0	0	0			
STAGE 3																
E	-	D	7	–	–	–	–	–	–	–	–	–	–	875.20	875.00	0.0286
D	-	DA	23	–	–	–	–	–	–	–	–	–	–	875.00	873.70	0.0565
F	-	E	11	–	–	–	–	–	–	–	–	–	–	875.46	875.20	0.0236
141.2	-	141.3	8	–	–	–	–	–	–	–	–	–	–	876.62	875.84	0.0975
141.2	-	141.2A	7	–	–	–	–	–	–	–	–	–	–	875.84	875.11	0.1043
141.4	-	141.3	–	–	–	–	–	10	–	–	–	–	–	876.79	876.62	0.0170
02	-	02A	19	–	–	–	–	–	–	–	–	–	–	884.60	876.25	0.4395
03	-	02	–	–	–	–	–	15	–	–	–	–	–	884.95	884.60	0.0233
04	-	03	–	–	–	–	114	–	–	–	–	–	–	887.49	886.65	0.0074
05	-	04	9	–	–	–	–	–	–	–	–	–	–	887.57	887.49	0.0089
06	-	03	–	–	–	–	–	20	–	–	–	–	–	886.60	886.37	0.0115
09	-	15	–	–	–	–	–	–	10	–	–	–	–	883.00	882.84	0.0160
10	-	09	–	–	15	–	–	–	–	–	–	–	–	883.25	883.00	0.0167
11	-	10	–	–	–	–	–	–	10	–	–	–	–	883.42	883.25	0.0170
18	-	17	6	–	–	–	–	–	–	–	–	–	–	876.77	876.62	0.0250
100	-	100A	–	–	–	–	–	–	–	35	–	–	–	873.22	872.96	0.0074
20	-	20A	–	–	–	–	–	17	–	–	–	–	–	874.53	873.96①	0.0335
21	-	20	–	6	–	–	–	–	–	–	–	–	–	874.58	874.53	0.0083
22	-	21	–	–	–	–	–	10	–	–	–	–	–	874.62	874.57	0.0050
29	-	29A	–	–	8	–	–	–	–	–	–	–	–	871.50	871.43①	0.0088
30	-	29	–	–	10	–	–	–	–	–	–	–	–	871.55	871.50	0.0050
37	-	37A	–	–	–	20	–	–	–	–	–	–	–	869.63	869.49①	0.0070
40	-	40A	–	–	–	–	15	–	–	–	–	–	–	872.27	872.18①	0.0060
43	-	43A	–	–	–	–	10	–	–	–	–	–	–	871.63	871.60①	0.0030
48	-	48A	–	–	–	–	–	–	10	–	–	–	–	870.62	870.58①	0.0040
46	-	46A	8	–	–	–	–	–	–	–	–	–	–	870.95	870.80	0.0188
54	-	54A	6	–	–	–	–	–	–	–	–	–	–	871.90	871.58	0.0533
55	-	54	5	–	–	–	–	–	–	–	–	–	–	872.11	871.90	0.0420
56	-	56A	–	–	–	–	–	–	–	–	–	–	4	872.80	871.90	0.2250
500.2	-	500X	–	–	–	28	–	–	–	–	–	–	–	867.89	867.81①	0.0029
64	-	64A	–	–	–	–	12	–	–	–	–	–	–	873.99	871.21	0.2317
STAGE 3 SUBTOTAL			109	6	33	48	151	72	30	35	0	0	4			

STORM SEWER PIPE TRUNK LINE

FROM	-	TO	504.2000.S.001 PRECAST CONCRETE BOX CULVERT (12 FT X 4 FT) LF	504.2000.S.002 PRECAST CONCRETE BOX CULVERT (15 FT X 6 FT) LF	608.0005 STORM SEWER ROCK EXCAVATION CY	608.0436 SSPRC CLASS IV 36-INCH LF	608.0396 SSPRC CLASS III 96-INCH LF	SPV.0090.011 SSPRC CLASS IV 96-INCH LF	SPV.0090.012 SSPRC CLASS IV 96-INCH ROCK CUT LF	INLET ELEV	DISCHARGE ELEV	SLOPE FT/FT
5992-11-31												
CATEGORY 0030												
STAGE 1A												
171+00'EB'	-	909	–	--	–	–	141	–	–	859.20	859.20	0.000
909	-	910	–	--	–	–	117	–	–	859.20	859.20	0.000
910	-	911	–	--	–	–	74	–	–	859.20	859.20	0.000
STAGE 1A SUBTOTAL			0	0	0	0	332	0	0			
STAGE 1B												
169+00'EB'	-	171+00'EB'	–	--	–	–	201	–	–	859.20	859.20	0.000
STAGE 1B SUBTOTAL			0	0	--	0	201	0	0			
STAGE 2												
898	-	899	–	--	–	16	–	–	–	870.81	870.81	0.012
900E	-	900	107	--	–	–	–	–	–	*870.81	870.81	0.000
900	-	901	–	--	–	–	87	–	–	866.81	866.81	0.000
901	-	902	–	--	–	–	–	–	632	866.81	866.81	0.000
902	-	903	–	--	–	–	–	–	268	866.81	866.81	0.000
903	-	904	–	--	–	–	95	–	–	866.81	866.81	0.000
904	-	905	–	--	–	–	37	–	–	866.81	859.20	0.211
905	-	906	–	--	–	–	38	–	–	859.20	859.20	0.000
906	-	907	–	--	–	–	–	92	–	859.20	859.20	0.000
907	-	908	–	--	–	–	851	–	–	859.20	859.20	0.000
908	-	169+00'EB'	–	--	–	–	881	–	–	859.20	859.20	0.000
STAGE 2 SUBTOTAL			107	–	--	16	1989	92	900			
PROJECT			–	50	150	–	–	–	–			
PROJECT 5992-11-31 TOTAL			**107**	**50**	**150**	**16**	**2522**	**92**	**900**			

*MATCH EXISTING ELEVATION, FIELD VERIFY

STORM SEWER 96-INCH TRUNK LINE ITEMS

STRUCTURE	STATION	RL	OFFSET*	SPV.0060.014 STORM SEWER PIPE 96-INCH BEND EACH	SPV.0060.017 MANHOLE SPECIAL EACH	DESCRIPTION
5992-11-31						
CATEGORY 0030						
STAGE 1A						
909	172+39.10	EB	10.5' RT	1	–	11.25° HORIZ BEND
910	173+29.91	EB	51.7' RT	1	–	11.25° HORIZ BEND
STAGE 1A SUBTOTAL				2	0	
STAGE 2						
900	139+33.8	WB	3.1' LT**	–	1	SPECIAL CONNECT TO 12X4 BOX CULVERT
901	139+81.76	WB	19.4' LT	1	–	11.25° BEND
902	146+49.31	WB	19.4' LT	1	–	11.25° BEND
903	149+13.84	WB	15.2' LT	1	–	7.5° BEND
904	150+08.37	WB	10.8' LT	1	–	11.25° BEND
905	150+52.18	WB	9.0' LT	1	–	11.25° BEND
906	150+82.08	WB	7.8' LT	1	–	19.5° BEND
907	151+70.33	WB	35.1' LT	1	–	20.25° BEND
STAGE 2 SUBTOTAL				7	1	
CATEGORY 0030 SUBTOTAL				**9**	**1**	
PROJECT 5992-11-31 TOTAL				**9**	**1**	

* TO BEND JUNCTION
** TO CENTER OF STRUCTURE

Addendum No. 01
ID 5992-11-31/32/33
Revised Sheet 335
February 25, 2022

STORM SEWER STRUCTURES

STRUCTURE	STATION	OFFSET*	LOCATION	522.1012 AEW FOR CPRC 12-INCH EACH	611.0420 RECONSTRUCTING MANHOLES EACH	611.0430 INLETS EACH	SPV.0060.012 MANHOLE COVERS TYPE J SPECIAL EACH	SPV.0060.010 INLET COVERS TYPE H SPECIAL EACH	SPV.0060.011 INLET COVERS TYPE H-S SPECIAL EACH	611.0642 INLET COVERS TYPE MS EACH	611.2004 MANHOLES 4-FT DIAMETER EACH	611.2005 MANHOLES 5-FT DIAMETER EACH	611.2006 MANHOLES 6-FT DIAMETER EACH	611.3004 INLETS 4-FT DIAMETER EACH	611.3230 INLETS 2X3-FT EACH	611.3901 INLETS MEDIAN 1 GRATE EACH	SPV.0060.016 INLETS 2X3-FT SPECIAL EACH	611.8115 ADJUSTING INLET COVERS EACH	SPV.0060.018 STORM SEWER TAP EACH	520.8000 CONCRETE COLLARS FOR PIPE EACH	RIM ELEVATION	INVERT** ELEVATION	DEPTH*** FT
STAGE 3																							
D	139+63.85	10.9' RT	WB	–	–	–	–	1	–	--	–	–	–	–	1	–	–	–	–	–	879.11	875.00	3.28
E	139+64.56	1' LT	EB	–	–	–	–	–	1	–	–	–	–	–	1	–	–	–	–	–	878.69	875.20	2.66
141.2	141+05.72	1' RT	WB	–	–	–	–	1	–	–	--	–	–	–	1	–	–	–	–	–	880.68	875.84	4.01
141.3	141+06.61	1' LT	EB	–	–	–	–	1	–	–	--	–	–	–	1	–	–	–	–	–	880.58	876.62	3.12
3	145+40.41	4.3' RT	WB	–	–	–	1	–	–	–	–	–	1	–	–	--	–	–	–	–	892.51	886.37	5.09
4	144+26.09	2.6' RT	WB	–	–	–	–	1	–	–	–	–	–	–	1	--	–	–	–	–	890.60	887.49	2.28
5	144+26.30	1' LT	EB	–	–	–	–	1	–	–	–	–	–	–	1	--	–	–	–	–	890.80	887.57	2.40
9	149+05.18	1' RT	WB	–	–	–	–	1	–	–	–	–	–	–	1	--	–	–	–	–	886.88	883.00	3.09
10	149+06.69	2.8' LT	EB	–	–	–	–	1	–	–	–	–	–	–	1	–	–	–	–	–	887.46	883.25	3.42
17	151+25.00	1' RT	WB	–	–	–	–	1	–	–	–	–	–	1	–	–	–	–	–	–	880.87	876.62	3.41
18	151+20.82	11' LT	EB	–	–	–	–	1	–	–	–	–	–	–	1	–	–	–	–	–	880.37	876.77	2.77
20	152+58.80	11' RT	WB	–	–	–	–	1	–	–	–	–	–	–	1	–	–	–	–	–	879.12	874.53	3.78
21	152+53.89	1' LT	EB	–	–	–	–	1	–	–	–	–	–	–	1	–	–	–	–	–	878.88	874.57	3.50
28	155+79.32	1' RT	WB	–	–	–	–	1	–	–	–	–	–	–	–	–	1	–	–	–	877.72	–	–
29	155+72.14	1' LT	EB	–	–	–	–	1	–	–	–	–	–	–	1	–	–	–	–	–	877.22	871.50	4.93
31.1	157+39.87	11' LT	EB	–	–	–	–	1	–	–	--	–	–	–	--	–	1	–	–	–	876.16	–	–
31.2	157+44.69	1' RT	WB	–	–	–	–	1	–	–	--	–	–	–	--	–	1	–	–	–	876.89	–	–
33,1	158+85,43	5,4' RT	WB	–	–	1	–	1	–	–	--	–	–	–	--	–	–	–	–	–	876.11	–	–
33,2	158+80,56	1' LT	EB	–	–	1	–	1	–	–	--	–	–	–	--	–	–	–	–	–	875.55	–	–
35	159+69.79	11' RT	WB	–	–	–	–	1	–	–	–	–	–	–	–	–	1	–	–	–	875.98	–	–
36	159+51.00	1' LT	EB	–	–	–	–	1	–	–	–	–	–	–	1	–	1	–	–	–	875.90	–	–
27A	156+05,33	4,8' LT	WB	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–
29A	155+77.77	9' RT	WB	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–
32A	158+85,32	0' RT	WB	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–
37A	159+62.87	1.2' LT	EB	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–
40A	160+16.96	3.2' LT	EB	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–
41A	160+99.79	3.8' RT	WB	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–
43A	161+16,74	3,8' LT	EB	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–
45	163+96.81	21' LT	EB	–	–	–	–	1	–	–	–	–	–	–	–	–	1	–	–	–	875.45	–	–
48A	163+96.29	3.2' LT	EB	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	872.38	–	–
46	164+53.24	1' RT	WB	–	–	–	–	1	–	–	–	–	–	–	1	–	–	–	–	–	874.96	870.95	3.18
46A	164+48.94	19.3' LT	EB	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	872.03	–	–
54	165+42.80	21' LT	EB	–	–	–	–	1	–	–	–	–	–	–	1	–	–	–	–	–	875.84	871.90	3.11
54A	165+42.78	15' LT	EB	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	872.81	–	–
55	165+46.75	1.5' RT	WB	–	–	–	–	1	–	–	–	–	–	–	1	–	–	–	–	–	875.42	872.11	2.48
56	167+13.80	12' RT	WB	–	–	–	–	–	1	–	–	–	–	–	1	–	–	–	–	–	875.95	872.80	2.16
500X	166+45.10	12,5' LT	EB	–	–	–	–	–	–	–	–	–	–	–	--	–	–	–	1	–	–	–	–
56A	167+14.80	16' RT	WB	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–
57	166+87.91	1' LT	EB	–	–	–	–	1	–	–	–	–	–	–	–	–	1	–	–	–	876.47	–	–
64	169+01.28	12' RT	WB	–	–	–	–	1	–	–	–	–	–	–	1	–	–	–	–	–	877.03	873.99	2.20
64A	168+99.13	7.6' LT	EB	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	871.21	–
65	169+00.00	1' LT	EB	–	–	–	–	1	–	–	–	–	–	–	–	–	1	–	–	–	877.49	–	–
STAGE 3 SUBTOTAL				0	0	2	1	26	2	0	0	0	0	1	16	0	8	0	13	0			

PRIVATE STORM SEWER CONNECTIONS

STAGE	LOCATION	STATION - STATION	SPV.0060.047 PRIVATE STORM SEWER CONNECTION (EA)
5992-11-31			
CATEGORY 0040			
STAGE 4			
	SHOREWOOD BLVD - SCHMITT PL	138+00 'EB' - 144+80 'EB'	2
	SCHMITT PL - MARSHALL CT	144+80 'EB' - 151+87 'EB'	1
	MARSHALL CT - FRANKLIN AVE	151+87 'EB' - 159+15 'EB'	2
	FRANKLIN AVE - UNIVERSITY BAY DR	159+15 'EB' - 166+21 'EB'	1
	UNIVERSITY BAY DR - END PROJECT	166+21 'EB' - 172+00 'EB'	-
	SCHMITT PL	62+16 'SP' - 62+57'SP'	-
	RIDGE ST	41+94 'RS' - 42+48 'RS'	1
	FRANKLIN AVE	32+00 'NF' - 33+34 'NF'	-
	FARLEY AVE	12+85 'FA' - 14+94 'FA'	1
	UNIVERSITY AVE	70+00 'UA' - 73+40 'UA'	-
	STAGE 4 SUBTOTAL		8
	CATEGORY 0040 TOTAL		**8**
	PROJECT 5992-11-31 TOTAL		**8**

Addendum No. 01
ID 5992-11-31/32/33
Revised Sheet 338
February 25, 2022

LANDSCAPING ITEMS

STAGE	LOCATION	STATION - STATION	625.0100 TOPSOIL (SY)	628.2008 EROSION MAT URBAN CLASS I TYPE B (SY)	629.0210 FERTILIZER TYPE B (CWT)	630.0140 SEEDING MIXTURE NO. 40 (LB)	630.0200 SEEDING TEMPORARY (LB)	631.0300 SOD WATER (MGAL)	630.0500 SEED WATER (MGAL)	631.1000 SOD LAWN (SY)
5992-11-31										
CATEGORY 0010										
STAGE 2										
	SHOREWOOD BLVD - SCHMITT PL	138+00 'EB' - 144+80 'EB'	348	348	0.3	6.3	9.4	3	6	164
	SCHMITT PL - MARSHALL CT	144+80 'EB' - 151+87 'EB'	772	772	0.6	13.9	20.8	4	15	260
	MARSHALL CT - FRANKLIN AVE	151+87 'EB' - 159+15 'EB'	627	627	0.6	11.3	16.9	6	11	331
	FRANKLIN AVE - UNIVERSITY BAY DR	159+15 'EB' - 166+21 'EB'	568	568	0.5	10.2	15.3	3	10	150
	UNIVERSITY BAY DR - END PROJECT	166+21 'EB' - 172+00 'EB'	71	71	0.3	1.3	1.9	12	1	454
	MARSHALL CT	50+33 'MC' - 50+61 'MC'	52	52	0.1	0.9	1.4	1	1	89
	STAGE 2 SUBTOTAL		2438	2438	2.4	43.9	65.8	28	43	1447
STAGE 4										
	SHOREWOOD BLVD - SCHMITT PL	138+00 'EB' - 144+80 'EB'	-	-	0.1	-	-	2	-	140
	SCHMITT PL - MARSHALL CT	144+80 'EB' - 151+87 'EB'	310	310	0.4	5.6	8.4	5	5	316
	MARSHALL CT - FRANKLIN AVE	151+87 'EB' - 159+15 'EB'	33	33	0.2	0.6	0.9	4	1	213
	FRANKLIN AVE - UNIVERSITY BAY DR	159+15 'EB' - 166+21 'EB'	208	208	0.2	3.7	5.6	2	3	129
	UNIVERSITY BAY DR - END PROJECT	166+21 'EB' - 172+00 'EB'	50	50	0.2	0.9	1.4	7	1	335
	RIDGE ST	41+94 'RS' - 42+48 'RS'	60	60	0.1	1.1	1.6	2	1	100
	FRANKLIN AVE	32+00 'NF' - 33+34 'NF'	-	-	0.1	-	-	2	-	95
	FARLEY AVE	12+85 'FA' - 14+94 'FA'	80	80	0.1	1.4	2.2	3	1	153
	UNIVERSITY AVE	70+00 'UA' - 73+40 'UA'	-	-	0.2	-	-	5	-	324
	STAGE 4 SUBTOTAL		741	741	1.6	13.3	20.0	32	12	1817
STAGE 5										
	SCHMITT PL - MARSHALL CT	144+80 'EB' - 151+87 'EB'	-	-	0.2	-	-	4	-	363
	MARSHALL CT - FRANKLIN AVE	151+87 'EB' - 159+15 'EB'	-	-	0.4	-	-	6	-	578
	UNIVERSITY BAY DR - END PROJECT	166+21 'EB' - 172+00 'EB'	-	-	0.5	-	-	8	-	725
	STAGE 5 SUBTOTAL				1.0			19		1665
	CATEGORY 0010 TOTAL		**3180**	**3180**	**5.0**	**57.2**	**85.8**	**79**	**55**	**4930**
5992-11-31										
CATEGORY 0080										
STAGE 2A										
	UNIVERSITY AVE - HIGHLAND AVE	20+30'BD' - 28+35'BD'	2578	2578	1.7	46.4	69.6	1	30	127
	STAGE 2A SUBTOTAL		2578	2578	1.7	46.4	69.6	1	30	127
STAGE 2B										
	UNIVERSITY AVE - HIGHLAND AVE	20+30'BD' - 28+35'BD'	22	22	0.1	0.4	0.6	1	0	18
	STAGE 2B SUBTOTAL		22	22	0.1	0.4	0.6	1	0	18
	CATEGORY 0080 TOTAL		**2600**	**2600**	**1.8**	**46.8**	**70.2**	**2**	**30**	**145**
	PROJECT 5992-11-31 TOTAL		**5780**	**5780**	**6.8**	**104.0**	**156.0**	**80**	**85**	**5075**

TRACKING PADS

LOCATION	628.7560 TRACKING PADS (EA)
5992-11-31	
CATEGORY 0010	
STAGE 2	
PROJECT WIDE	4
STAGE 2 SUBTOTAL	4
STAGE 4	
PROJECT WIDE	4
STAGE 4 SUBTOTAL	4
CATEGORY 0010 TOTAL	**8**
PROJECT 5992-11-31 TOTAL	**8**

TEMPORARY INLET COVER

LOCATION	STATION	611.8120.S COVER PLATE TEMPORARY (EACH)	SPV.0060.013 TEMPORARY INLET COVER (EACH)
5992-11-31			
CATEGORY 0040			
STAGE 1			
BEGIN PROJECT - SHOREWOOD BLVD	135+50'EB' - 1138+00'EB'	–	3
SHOREWOOD BLVD - SCHMITT PL	138+00 'EB' - 144+80 'EB'	–	6
SCHMITT PL - MARSHALL CT	144+80 'EB' - 151+87 'EB'	–	3
MARSHALL CT - FRANKLIN AVE	151+87 'EB' - 159+15 'EB'	–	4
FRANKLIN AVE - UNIVERSITY BAY DR	159+15 'EB' - 166+21 'EB'	–	5
UNIVERSITY BAY DR - END PROJECT	166+21 'EB' - 172+00 'EB'	–	4
STAGE 1 SUBTOTAL		0	25
STAGE 3			
SHOREWOOD BLVD - SCHMITT PL	138+00 'EB' - 144+80 'EB'	–	7
SCHMITT PL - MARSHALL CT	144+80 'EB' - 151+87 'EB'	–	4
MARSHALL CT - FRANKLIN AVE	151+87 'EB' - 159+15 'EB'	–	6
FRANKLIN AVE - UNIVERSITY BAY DR	159+15 'EB' - 166+21 'EB'	–	6
UNIVERSITY BAY DR - END PROJECT	166+21 'EB' - 172+00 'EB'	–	7
STAGE 3 SUBTOTAL		0	30
PROJECT		20	0
CATEGORY 0040 TOTAL		**20**	**55**
PROJECT 5992-11-31 TOTAL		**20**	**55**

ADJUST MMSD SPECIAL

LOCATION	STATION - STATION	SPV.0060.059 ADJUST MMSD SPECIAL (EA)
5992-11-31		
CATEGORY 0010		
STAGE 2		
CATAFALQUE CT	50+00 - 54+00	2
STAGE 2 SUBTOTAL		2
CATEGORY 0010 TOTAL		**2**
PROJECT 5992-11-31 TOTAL		**2**

Addendum No. 01
ID 5992-11-31/32/33
Revised Sheet 342
February 25, 2022

WATER

STAGE	LOCATION	STATION - STATION	624.0100 WATER BASE COMPACTION (MGAL)	624.0100 WATER DUST CONTROL (MGAL)
5992-11-31				
CATEGORY 0010				
STAGE 1				
	SHOREWOOD BLVD - SCHMITT PL	138+00 'EB' - 144+80 'EB'	22	25
	SCHMITT PL - MARSHALL CT	144+80 'EB' - 151+87 'EB'	19	21
	MARSHALL CT - FRANKLIN AVE	151+87 'EB' - 159+15 'EB'	13	14
	FRANKLIN AVE - UNIVERSITY BAY DR	159+15 'EB' - 166+21 'EB'	7	8
	UNIVERSITY BAY DR - END PROJECT	166+21 'EB' - 172+00 'EB'	7	7
	STAGE 1 SUBTOTAL		68	76
STAGE 1A				
	UNIVERSITY BAY DR - END PROJECT	166+21 'EB' - 172+00 'EB'	16	18
	STAGE 1A SUBTOTAL		16	18
STAGE 1B				
	UNIVERSITY BAY DR - END PROJECT	166+21 'EB' - 172+00 'EB'	16	18
	STAGE 1B SUBTOTAL		16	18
STAGE 2				
	SHOREWOOD BLVD - SCHMITT PL	138+00 'EB' - 144+80 'EB'	44	50
	SCHMITT PL - MARSHALL CT	144+80 'EB' - 151+87 'EB'	43	49
	MARSHALL CT - FRANKLIN AVE	151+87 'EB' - 159+15 'EB'	43	48
	FRANKLIN AVE - UNIVERSITY BAY DR	159+15 'EB' - 166+21 'EB'	45	50
	UNIVERSITY BAY DR - END PROJECT	166+21 'EB' - 172+00 'EB'	51	57
	MARSHALL CT	50+33 'MC' - 50+61 'MC'	3	3
	CATAFALQUE CT	50+10 - 53+80	11	12
	PEDESTRIAN PATH	50+10 - 53+05	2	3
	PEDESTRIAN PATH	56+56 - 60+50	4	5
	STAGE 2 SUBTOTAL		247	276
STAGE 3				
	SHOREWOOD BLVD - SCHMITT PL	138+00 'EB' - 144+80 'EB'	5	5
	SCHMITT PL - MARSHALL CT	144+80 'EB' - 151+87 'EB'	5	5
	MARSHALL CT - FRANKLIN AVE	151+87 'EB' - 159+15 'EB'	3	4
	FRANKLIN AVE - UNIVERSITY BAY DR	159+15 'EB' - 166+21 'EB'	2	2
	UNIVERSITY BAY DR - END PROJECT	166+21 'EB' - 172+00 'EB'	2	2
	STAGE 3 SUBTOTAL		16	18
STAGE 4				
	SHOREWOOD BLVD - SCHMITT PL	138+00 'EB' - 144+80 'EB'	36	41
	SCHMITT PL - MARSHALL CT	144+80 'EB' - 151+87 'EB'	39	44
	MARSHALL CT - FRANKLIN AVE	151+87 'EB' - 159+15 'EB'	42	47
	FRANKLIN AVE - UNIVERSITY BAY DR	159+15 'EB' - 166+21 'EB'	44	50
	UNIVERSITY BAY DR - END PROJECT	166+21 'EB' - 172+00 'EB'	26	29
	SCHMITT PL	62+16 'SP' - 62+57'SP'	4	4
	RIDGE ST	41+94 'RS' - 42+48 'RS'	6	6
	FRANKLIN AVE	32+00 'NF' - 33+34 'NF'	10	11
	FARLEY AVE	12+85 'FA' - 14+94 'FA'	14	16
	UNIVERSITY AVE	71+00 'UA' - 73+40 'UA'	13	14
	STAGE 4 SUBTOTAL		234	262
STAGE 5				
	BEGIN PROJECT - SHOREWOOD BLVD	135+50'EB' - 138+00'EB'	3	3
	SHOREWOOD BLVD - SCHMITT PL	138+00 'EB' - 144+80 'EB'	22	24
	SCHMITT PL - MARSHALL CT	144+80 'EB' - 151+87 'EB'	27	30
	MARSHALL CT - FRANKLIN AVE	151+87 'EB' - 159+15 'EB'	29	32
	FRANKLIN AVE - UNIVERSITY BAY DR	159+15 'EB' - 166+21 'EB'	36	40
	UNIVERSITY BAY DR - END PROJECT	166+21 'EB' - 172+00 'EB'	31	26
	STAGE 5 SUBTOTAL		146	156
	CATEGORY SUBTOTAL		660	730
	CATEGORY 0010 TOTAL			**1390**
5992-11-31				
CATEGORY 0080				
STAGE 2				
	UNIVERSITY AVE - HIGHLAND AVE	20+30'BD' - 28+35'BD'	27	31
	STAGE 2 SUBTOTAL		27	31
STAGE 2A				
	UNIVERSITY AVE - HIGHLAND AVE	20+30'BD' - 28+35'BD'	13	14
	STAGE 2A SUBTOTAL		13	14
	CATEGORY SUBTOTAL		40	45
	CATEGORY 0080 TOTAL			**85**
	PROJECT 5992-11-31 TOTAL			**1475**

TEMPORARY PEDESTRIAN ACCOMODATIONS

STAGE	LOCATION	STATION - STATION	644.1410 TEMPORARY PEDESTRIAN SURFACE ASPHALT (SF)	644.1420 TEMPORARY PEDESTRIAN SURFACE PLYWOOD (SF)	644.1604 TEMPORARY PEDESTRIAN CURB RAMP (DAY)	644.1810 TEMPORARY PEDESTRIAN BARRICADE (LF)
5992-11-31						
CATEGORY 0010						
STAGE 1						
	SHOREWOOD BLVD - SCHMITT PL	138+00 'EB' - 144+80 'EB'	–	160	–	–
	MARSHALL CT - FRANKLIN AVE	151+87 'EB' - 159+15 'EB'	–	25	45	–
	FRANKLIN AVE - UNIVERSITY BAY DR	159+15 'EB' - 166+21 'EB'	–	80	–	–
	STAGE 1 SUBTOTAL		0	265	45	0
STAGE 2						
	MARSHALL CT - FRANKLIN AVE	151+87 'EB' - 159+15 'EB'	100	300	75	100
	FRANKLIN AVE - UNIVERSITY BAY DR	159+15 'EB' - 166+21 'EB'	100	–	75	–
	STAGE 2 SUBTOTAL		200	300	150	100
STAGE 3A						
	SHOREWOOD BLVD - SCHMITT PL	138+00 'EB' - 144+80 'EB'	–	–	360	–
	SCHMITT PL - MARSHALL CT	144+80 'EB' - 151+87 'EB'	–	–	180	–
	MARSHALL CT - FRANKLIN AVE	151+87 'EB' - 159+15 'EB'	–	–	180	–
	STAGE 3A SUBTOTAL		0	0	720	0
STAGE 4						
	MARSHALL CT - FRANKLIN AVE	151+87 'EB' - 159+15 'EB'	100	375	140	100
	UNIVERSITY BAY DR - END PROJECT	166+21 'EB' - 172+00 'EB'	100	--	70	–
	STAGE 4 SUBTOTAL		200	375	210	100
	UNDISTRIBUTED		–	–	–	400
	CATEGORY 0010 TOTAL		**400**	**940**	**1125**	**600**
5992-11-31						
CATEGORY 0080						
STAGE 2						
	UNIVERSITY AVE - HIGHLAND AVE	20+30'BD' - 28+35'BD'	–	425	40	150
	STAGE 2 SUBTOTAL		0	425	40	150
STAGE 2A						
	UNIVERSITY AVE - HIGHLAND AVE	20+30'BD' - 28+35'BD'	–	–	30	50
	STAGE 2A SUBTOTAL		0	0	30	50
	CATEGORY 0080 TOTAL		**0**	**425**	**70**	**200**
	PROJECT 5992-11-31 TOTAL		**400**	**1365**	**1195**	**800**

FIXED MESSAGE SIGNING

	SIGN SIZE W (IN)	X	H (IN)	643.1000 TRAFFIC CONTROL SIGNS FIXED MESSAGE (SF)	NOTES
5992-11-31					
CATEGORY 0010					
ROAD WORK BEGINS XX/XX TO UNIVERSITY AVE	78	X	24	13.00	IN PLACE FOR PROJECT DURATION
	78	X	12	6.50	IN PLACE FOR PROJECT DURATION
	60	X	36	15.00	IN PLACE FOR PROJECT DURATION
CATEGORY 0010 TOTAL				**34.50**	
PROJECT 5992-11-31 TOTAL				**34.50**	

Addendum No. 01
ID 5992-11-31/32/33
Revised Sheet 343
February 25, 2022

TRAFFIC CONTROL ITEMS

STAGE	LOCATION	DAYS	643.0300 TRAFFIC CONTROL DRUMS (DAY)	643.0410 TRAFFIC CONTROL BARRICADES TYPE II (DAY)	643.0420 TRAFFIC CONTROL BARRICADES TYPE III (DAY)	643.0500 TRAFFIC CONTROL TUBULAR MARKERS POSTS (EACH)	643.0600 TRAFFIC CONTROL TUBULAR MARKERS BASES (EACH)	643.0705 TRAFFIC CONTROL WARNING LIGHTS TYPE A (DAY)	643.0715 TRAFFIC CONTROL WARNING LIGHTS TYPE C (DAY)	643.0800 TRAFFIC CONTROL ARROW BOARDS (DAY)	643.0900 TRAFFIC CONTROL SIGNS (DAY)	643.1050 TRAFFIC CONTROL PCMS (DAY)	SPV.0045.001 TEMPORARY CROSSWALK ACCESS SHOREWOOD BLVD/ HILL STREET (DAY)	SPV.0045.002 TEMPORARY CROSSWALK ACCESS MARSHALL CT/ RIDGE ST (DAY)	SPV.0045.003 TEMPORARY CROSSWALK ACCESS UNIVERSITY BAY DRIVE/FARLEY AVE (DAY)
5992-11-31															
CATEGORY 0010															
	STAGE 1	14	3864	–	196	--	–	196	280	28	1064	42	14	14	14
	STAGE 1A	16	1576	–	112	22	22	224	320	32	352	48	16	16	16
	STAGE 1B	12	1020	–	72	--	–	144	240	24	264	36	12	12	12
	STAGE 2	80	11399	645	2568	106	106	4,362	800	168	6640	652	80	80	80
	STAGE 2 PED DETOUR	75	–	300	–	--	–	–	–	--	1275	–	–	–	--
	STAGE 3	25	4400	75	400	12	12	800	250	50	1975	75	25	25	25
	STAGE 3A	14*	2436	–	112	--	–	224	140	28	420	42	–	–	--
	STAGE 4	70	9240	700	1120	115	115	630	700	140	6320	210	70	70	70
	STAGE 4 PED DETOUR	70	–	490	–	--	–	–	–	--	490	–	–	–	--
	STAGE 5	30	5640	60	390	--	–	780	300	60	1920	90	30	30	30
	STAGE 6	10	1700	–	120	--	–	240	200	20	640	30	–	–	--
	HOSPITAL ALT ROUTE	10	–	–	–	–	–	–	--	–	140	–	–	–	--
	CATEGORY 0010 TOTAL		**41275**	**2270**	**5090**	**255**	**255**	**7600**	**3230**	**550**	**21500**	**1225**	**247**	**247**	**247**
5992-11-31															
CATEGORY 0080															
	STAGE 2	50	1650	100	250	14	14	500	--	--	400	50	–	–	--
	STAGE 2A	25	475	50	100	11	11	200	–	--	150	25	–	–	--
	CATEGORY 0080 TOTAL		**2125**	**150**	**350**	**25**	**25**	**700**	**0**	**0**	**550**	**75**	**0**	**0**	**0**
	PROJECT 5992-11-31 TOTAL		**43400**	**2420**	**5440**	**280**	**280**	**8300**	**3230**	**550**	**22050**	**1300**	**247**	**247**	**247**

*14 DAYS TO BE USED TO COMPLETE WORK PRIOR TO STAGE 4

FENCE SAFETY

STAGE	LOCATION	STATION - STATION	616.0700.S FENCE SAFETY (LF)
5992-11-31			
CATEGORY 0010			
PROJECT			
	PROJECT	138+00 'EB' - 172+00 'EB'	5000
	PROJECT SUBTOTAL		5000
	CATEGORY 0010 TOTAL		**5000**
	PROJECT 5992-11-31 TOTAL		**5000**

SAWING

STAGE	LOCATION	STATION - STATION	690.0150 SAWING ASPHALT (LF)	690.0250 SAWING CONCRETE (LF)
5992-11-31				
CATEGORY 0010				
STAGE 1				
	BEGIN PROJECT - SHOREWOOD BLVD	135+68 'EB' - 138+00 'EB'	491	0
	SHOREWOOD BLVD - SCHMITT PL	138+00 'EB' - 144+80 'EB'	0	1158
	SCHMITT PL - MARSHALL CT	144+80 'EB' - 151+87 'EB'	0	1296
	MARSHALL CT - FRANKLIN AVE	151+87 'EB' - 159+15 'EB'	0	1428
	FRANKLIN AVE - UNIVERSITY BAY DR	159+15 'EB' - 166+21 'EB'	0	1217
	UNIVERSITY BAY DR - END PROJECT	166+21 'EB' - 172+00 'EB'	0	753
	STAGE 1 SUBTOTAL		491	5852
STAGE 2				
	SHOREWOOD BLVD - SCHMITT PL	138+00 'EB' - 144+80 'EB'	225	14
	SCHMITT PL - MARSHALL CT	144+80 'EB' - 151+87 'EB'	57	0
	MARSHALL CT - FRANKLIN AVE	151+87 'EB' - 159+15 'EB'	20	6
	FRANKLIN AVE - UNIVERSITY BAY DR	159+15 'EB' - 166+21 'EB'	33	0
	UNIVERSITY BAY DR - END PROJECT	166+21 'EB' - 172+00 'EB'	306	0
	MARSHALL CT	50+33 'MC' - 50+61 'MC'	0	5
	CATAFALQUE CT	50+10 - 53+80	180	5
	STAGE 2 SUBTOTAL		821	30
STAGE 3				
	SHOREWOOD BLVD - SCHMITT PL	138+00 'EB' - 144+80 'EB'	1240	0
	SCHMITT PL - MARSHALL CT	144+80 'EB' - 151+87 'EB'	1465	0
	MARSHALL CT - FRANKLIN AVE	151+87 'EB' - 159+15 'EB'	1516	0
	FRANKLIN AVE - UNIVERSITY BAY DR	159+15 'EB' - 166+21 'EB'	1474	0
	UNIVERSITY BAY DR - END PROJECT	166+21 'EB' - 172+00 'EB'	845	0
	STAGE 3 SUBTOTAL		6540	0
STAGE 4				
	SHOREWOOD BLVD - SCHMITT PL	138+00 'EB' - 144+80 'EB'	139	184
	SCHMITT PL - MARSHALL CT	144+80 'EB' - 151+87 'EB'	0	69
	MARSHALL CT - FRANKLIN AVE	151+87 'EB' - 159+15 'EB'	330	93
	FRANKLIN AVE - UNIVERSITY BAY DR	159+15 'EB' - 166+21 'EB'	140	125
	UNIVERSITY BAY DR - END PROJECT	166+21 'EB' - 172+00 'EB'	110	0
	SCHMITT PL	62+16 'SP' - 62+57'SP'	44	8
	RIDGE ST	41+94 'RS' - 42+48 'RS'	32	37
	FRANKLIN AVE	32+00 'NF' - 33+34 'NF'	36	214
	FARLEY AVE	12+85 'FA' - 14+94 'FA'	32	68
	UNIVERSITY AVE	71+00 'UA' - 73+40 'UA'	15	5
	STAGE 4 SUBTOTAL		878	803
STAGE 5				
	SHOREWOOD BLVD - SCHMITT PL	138+00 'EB' - 144+80 'EB'	0	--
	SCHMITT PL - MARSHALL CT	144+80 'EB' - 151+87 'EB'	0	–
	MARSHALL CT - FRANKLIN AVE	151+87 'EB' - 159+15 'EB'	0	–
	FRANKLIN AVE - UNIVERSITY BAY DR	159+15 'EB' - 166+21 'EB'	0	–
	UNIVERSITY BAY DR - END PROJECT	166+21 'EB' - 172+00 'EB'	0	--
	STAGE 5 SUBTOTAL		0	0
	CATEGORY 0010 TOTAL		**8730**	**6685**
5992-11-31				
CATEGORY 0080				
STAGE 2A				
	UNIVERSITY AVE - HIGHLAND AVE	20+30'BD' - 28+35'BD'	600	30
	STAGE 2A SUBTOTAL		600	30
STAGE 2B				
	UNIVERSITY AVE - HIGHLAND AVE	20+30'BD' - 28+35'BD'	285	5
	STAGE 2B SUBTOTAL		285	5
	CATEGORY 0080 TOTAL		**885**	**35**
	PROJECT 5992-11-31 TOTAL		**9615**	**6720**

Addendum No. 01
ID 5992-11-31/32/33
Revised Sheet 344
February 25, 2022

SANITARY SEWER STRUCTURES SUMMARY

STRUCTURE NO.	STATION	LOCATION (OFFSET)	RIM ELEV	EXISTING TOP OF CASTING	ESTIMATED BOTTOM OF STRUCTURE ELEV	IE	DEPTH	SPV.0060.033 SANITARY SEWER TAP (EACH)	SPV.0060.034 SANITARY SEWER ACCESS STRUCTURE 4-FT DIAMETER (EACH)	SPV.0060.035 SANITARY SEWER ACCESS STRUCTURE 5-FT DIAMETER (EACH)	SPV.0060.012 MANHOLE COVER TYPE J SPECIAL (EACH)	SPV.0060.036 SANITARY SEWER INTERNAL CHIMNEY SEAL (EACH)	SPV.0060.039 ABANDON SANITARY SEWER ACCESS STRUCTURE (EACH)	SPV.0060.040 ABANDON SANITARY SEWER PIPE PLUG (EACH)	SPV.0060.037 REMOVE SANITARY SEWER ACCESS STRUCTURE (EACH)	SPV.0060.038 EXTERNAL SEWER ACCESS STRUCTURE JOINT SEAL (EACH)	6.1.8110 ADJUSTING MANHOLE COVERS (EACH)	SPV.0060.113 RECONSTRUCT BENCH AND FLOWLINES (EACH)	SPV.0200.001 CONSTRUCT INSIDE DROP 10-INCH (VP)
5992-11-32																			
CATEGORY 0020																			
EX. SAS 3850-022	138+22.51	17.69' RT	--	879.51	871.53	872.03	7.98	1	–	–	–	--	–	--	–	--	1	1	–
EX. SAS 3859-005	138+21.83	2.78' LT	–	879.49	871.77	872.27	7.72	–	–	–	–	--	1	--	–	--	–	–	–
SAS 1A	138+95.33	55.14' RT	879.25	–	872.07	872.57	7.18	–	–	1	1	1	–	--	–	--	–	–	–
SAS 1	138+81.60	16.24' RT	879.36	–	871.89	872.39	7.47	–	–	1	1	1	–	--	–	--	–	–	–
SAS 2	139+65.75	20.70' RT	879.12	–	872.28	872.78	6.84	1	–	1	1	1	–	–	–	--	–	–	–
EX. SAS 3950-004	139+66.97	0.87' LT	–	878.99	872.38	872.88	6.61	–	–	–	–	--	1	--	–	--	–	–	–
SAS 3	142+00.36	27.07' RT	883.51	–	873.27	873.77	10.24	–	1	–	1	--	–	--	–	--	–	–	–
EX. SAS 3950-003	142+22.35	6.59' RT	–	884.29	873.52	874.02	10.77	–	–	–	–	--	1	--	–	--	–	–	–
EX. SAS 3950-002	144+81.88	2.41' RT	–	892.67	883.53	884.03	9.14	–	–	–	–	--	1	--	–	--	–	–	–
SAS 4	144+82.96	27.51' RT	892.13	–	882.15	882.65	9.98	–	1	–	1	--	–	1	–	--	–	–	–
EX. SAS 3950-001	146+05.14	2.22' LT	–	893.78	884.15	884.65	9.63	–	–	–	–	--	1	--	–	--	–	–	–
SAS 5	144+84.83	69.73' RT	892.70	–	883.20	883.70	9.50	1	1	–	1	--	–	--	–	--	–	–	–
SAS 6	146+08.14	27.01' RT	893.20	–	883.50	884.00	9.70	1	1	–	1	--	–	1	–	--	–	–	–
SAS 12	148+26.76	26.55' RT	890.26	–	878.50	879.00	11.76	1	1	–	1	--	–	1	–	--	–	–	–
EX. SAS 3950-012	148+31.80	5.69' LT	–	890.79	878.90	879.40	11.89	–	–	–	–	--	1	--	–	--	–	–	–
SAS 9	149+19.45	27.02' RT	887.24	–	875.50	876.00	11.74	–	1	–	1	--	–	--	–	--	–	–	–
EX. SAS 3950-013	149+80.99	7.71' RT	–	885.45	873.71	874.21	11.74	–	–	–	–	--	1	--	–	--	–	–	–
EX. SAS MH02-042	151+66.30	24.51' LT	–	880.27	867.60	868.10	12.67	–	–	–	–	--	–	--	–	--	1	–	–
EX. SAS 3950-014	151+80.29	17.99' RT	–	879.85	870.07	870.57	9.78	–	–	–	–	--	1	--	–	--	–	–	–
SAS 8	151+82.96	27.18' RT	879.88	–	869.00	869.50	10.88	–	1	–	1	--	–	1	–	--	–	–	–
SAS 10	152+01.51	86.48' RT	879.30	–	870.50	871.00	8.80	1	1	–	1	--	–	--	–	--	–	–	–
SAS 11	155+54.79	27.55' RT	877.35	–	866.75	867.25	10.60	–	–	1	1	--	–	--	–	--	–	–	–
EX. SAS 4050-001	155+27.12	35.78' RT	–	877.36	868.04	868.54	9.32	1	–	–	–	--	–	--	–	--	–	1	–
SAS 7	155+27.30	27.03' RT	877.52	–	866.89	867.39	10.63	–	–	1	1	--	–	--	–	--	–	–	–
EX. SAS 4050-002	157+27.09	41.31' RT	–	876.72	868.97	869.47	7.75	–	–	–	–	--	1	–	–	--	–	–	–
EX. MMSD MH02-041	155+65.59	2.26' LT	–	877.54	866.47	866.97	11.07	1	–	–	–	--	–	–	–	--	1	1	–
SAS 13	157+28.31	26.94' RT	876.44	–	867.95	868.45	8.49	–	–	1	1	--	–	–	–	--	–	–	–
SAS 14	33+15.03 'NF'	3.56' LT	875.15	–	868.35	868.85	6.80	–	–	1	1	--	–	–	–	1	–	–	–
EX MMSD MH02-040	159+11.76	1.92' RT	–	875.99	868.15	868.65	7.84	1	–	–	–	--	–	–	–	--	–	–	–
EX. MMSD MH02-039	162+95.88	2.18' LT	–	875.55	865.79	866.29	9.76	–	–	–	–	--	–	–	–	--	1	–	–
EX. MMSD MH02-038	166+25.65	11.43' RT	–	876.15	865.31	865.81	10.84	–	–	–	–	--	–	–	–	--	1	–	–
EX. SAS 4050-007	32+41.84 'NF'	12.50' LT	–	876.93	869.03	869.53	7.90	–	–	–	–	--	–	–	1	--	–	–	–
SAS 15	31+27.88 'NF'	0.83' LT	883.11	–	872.00	872.50	11.11	–	–	1	1	--	–	–	–	1	–	–	2.3
EX. SAS 4050-008	31+27.75 'NF'	16.15' LT	–	882.77	874.63	875.13	8.14	1	–	–	–	--	–	–	–	--	–	1	–
EX. SAS. 4051-001	12+86.00 'FA'	0.00' LT	–	881.99	873.60	874.10	8.39	–	–	–	–	--	–	–	1	--	–	–	–
EX SAS 4150-010	14+84.98 'FA'	1.29' LT	–	876.12	866.62	867.12	9.50	1	–	–	–	--	–	–	–	--	1	1	–
SAS 16	12+86.00 'FA'	0.00' LT	881.99	–	872.50	873.00	9.49	2	1	–	1	--	–	–	–	--	–	–	–
PROJECT 5992-11-32 TOTALS								**13**	**9**	**8**	**17**	**3**	**9**	**4**	**2**	**2**	**6**	**5**	**2.3**

SANITARY SEWER ABANDONMENT SUMMARY

5992-11-32
CATEGORY 0020

LOCATION (DOWNSTREAM)	LOCATION (UPSTREAM)	PIPE SIZE (INCH DIAMETER)	MATERIAL	PIPE LENGTH (FT)	SPV.0035.001 ABANDON SANITARY SEWER-SLURRY (CY)	SPV.0060.040 ABANDON SANITARY SEWER PIPE PLUG (EACH)
SAS 3850-022	SAS 3850-005	12	VP	21	0.61	–
SAS 3850-005	SAS 3950-004	12	VP	145	4.22	–
SAS 3950-004	SAS 3950-003	12	VP	256	7.45	–
SAS 3950-003	SAS 3950-002	6	VP	260	1.89	–
SAS 3950-002	SAS 3950-001	6	VP	125	0.91	–
SAS 14 (STA. 33+15.03, 3.56' LT)	SAS 4050-007	10	CI	74	1.49	–
SAS 4050-007	SAS 4050-008	8	VP	114	1.47	–
SAS 3950-002	SAS 4 (STA. 144+82.96, 27.51' RT)	6	VP	25	0.18	–
SAS 4050-001	STA 154+27, 35' RT	10	VP	104	2.10	–
SAS 3950-014	SAS 3950-013	6	VP	199	1.45	–
SAS 3950-013	SAS 3950-012	6	VP	150	1.09	–
STA. 139+66, 20.7' RT	–	10	VP	–	–	1
MISCELLANEOUS	–	–	--	–	–	9
PROJECT 5992-11-32 TOTALS					**22.86**	**10**

Addendum No. 01
ID 5992-11-31/32/33
Revised Sheet 364
February 25, 2022

SANITARY SEWER PIPE SUMMARY

LOCATION (DOWNSTREAM)	LOCATION (UPSTREAM)	IE (DOWNSTREAM)	IE (UPSTREAM)	SLOPE (%)	SPV.0090.021 SANITARY SEWER PVC 8-INCH (LF)	SPV.0090.022 SANITARY SEWER PVC 10-INCH (LF)	SPV.0090.023 SANITARY SEWER PVC 12-INCH (LF)	SPV.0035.002 ROCK EXCAVATION FOR SANITARY SEWER (CY)	SPV.0090.024 SELECT FILL FOR SANITARY SEWER (LF)	SPV.0090.037 SANITARY SEWER PRESSURE PIPE (C900) 10-INCH (LF)	SPV.0090.038 SANITARY SEWER PRESSURE PIPE (C900) 12-INCH (LF)	NOTES
5992-11-32												
CATEGORY 0020												
EX. SAS 3850-022	SAS 1	872.15	872.39	0.40%	--	--	59	--	59	--	--	HILL STREET
SAS 1	SAS 1A	872.44	872.57	0.31%	--	42	--	--	42	--	--	
SAS 1	SAS 2	872.44	872.78	0.40%	--	86	--	--	86	--	--	
SAS 2	SAS 3	872.83	873.77	0.40%	--	233	--	--	233	--	--	
SAS 3	SAS 4	873.87	882.65	3.11%	--	282	--	40	282	--	--	
SAS 4	SAS 5	883.00	883.70	1.66%	42	--	--	--	42	--	--	SCHMITT PLACE
SAS 4	SAS 6	883.00	884.00	0.81%	123	--	--	10	123	--	--	
SAS 9	SAS 12	876.10	879.00	3.18%	--	91	--	--	91	--	--	
SAS 12	--	879.40	879.50	0.53%	18				18	--	--	
SAS 8	SAS 9	869.60	876.00	2.43%	--	263	--	--	263	--	--	
SAS 8	SAS 10	869.60	871.00	2.25%	--	62	--	--	62	--	--	RIDGE STREET
SAS 7	SAS 8	867.60	869.50	0.55%	--	--	344	--	344	--	--	
SAS 7	EX. SAS 4050-001	868.49	868.54	0.50%	9	--	--	--	9	--	--	
SAS 11	SAS 7	867.25	867.39	0.50%	--	--	27	--	27	--	--	
EX MMSD MH02-041	SAS 11	867.13	867.25	0.50%	--	--	30	--	30	--	--	2825 UNIVERSITY AVE
SAS 11	SAS 13	867.60	868.45	0.49%	172	--	--	--	172	--	--	
EX MH 02-040	SAS 14	868.65	868.85	0.40%	--	--	--	--	50	--	50	FRANKLIN AVE. AWWA C900 DR18
SAS 14	SAS 15	868.94	872.50	1.90%	--	--	--	--	187	--	187	FRANKLIN AVE. AWWA C900 DR18
SAS 15	EX. SAS 4050-008	875.29	875.55	2.00%	--	--	--	--	13	13	--	FRANKLIN AVE. AWWA C900 DR18
EX SAS 4150-010	SAS 16	867.22	873.00	2.90%	199	--	--	--	199	--	--	FARLEY AVE
PROJECT 5992-11-32 TOTALS					**563**	**1059**	**460**	**50**	**2332**	**13**	**237**	

Addendum No. 01
ID 5992-11-31/32/33
Revised Sheet 365
February 25, 2022

REMOVE SANITARY SEWER PIPE

FROM STRUCTURE (DOWNSTREAM)	TO STRUCTURE (UPSTREAM)	LENGTH (FT)	PAID (Y/N)	SIZE (IN)	PIPE MATERIAL	SPV.0090.019 REMOVE PIPE SANITARY (LF)	NOTES
5992-11-32							
CATEGORY 0020							
3950-014	SAS 8 (STA. 151+82.96, 27.18' RT)	9	Y	10	VP	9	RIDGE STREET
STA. 154+27, 35' RT	3950-14	245	Y	10	VP	135	REMOVE PIPE WITHIN 3' INCIDENTAL TO NEW
SAS 4 (STA. 144+82.96, 27.18' RT)	SAS 5 (STA 144+84.83, 69.73' RT)	42	N	6	VP	--	SCHMITT PL (SAME TRENCH PIPE REMOVAL)
MH 02-040	SAS 14 (STA. 33+15.03, 3.56' LT)	50	N	10	CI	--	FRANKLIN AVE. (SAME TRENCH PIPE REMOVAL)
4150-010	4051-001	199	N	8	VP	--	FARLEY AVE. (SAME TRENCH PIPE REMOVAL)
PROJECT 5992-11-32 TOTALS						**144**	

*ALL SANITARY SEWER PIPE REMOVALS CALLED OUT ABOVE THAT ARE NOT CALLED OUT FOR PAYMENT LOCATED WITHIN 3' OF THE PROPOSED SEWER ARE CONSIDERED INCIDENTAL TO THE INSTALLATION OF THE NEW SANITARY SEWER PIPE IN ACCORDANCE WITH ARTICLE 203.2 OF THE CITY'S STANDARD SPECIFICATIONS

SANITARY SEWER LATERALS

STATION	OFFSET AT MAIN CONNECTION	SPV.0060.031 SEWER ELECTRONIC MARKERS (EACH)	SPV.0060.032 SANITARY LATERAL RECONNECT (EACH)	SPV.0090.020 SANITARY SEWER LATERAL (LF)	SPV.0090.024 SELECT FILL FOR SANITARY SEWER (LF)	305.0110 BASE AGGREGATE DENSE 3/4-INCH (TON)	602.0410 CONCRETE SIDEWALK 5-INCH (SF)
5992-11-32							
CATEGORY 0020							
141+52.99	27.69' RT	2	1	13	13	--	--
141+78.49	27.45' RT	2	1	14	14	--	--
142+20.39	27.00' RT	2	1	14	14	--	--
142+28.17	27.07' RT	2	1	14	14	--	--
143+26.89	27.36' RT	2	1	14	14	--	--
143+60.09	27.44' RT	2	1	14	14	--	--
146+08.06	27.02' RT	2	1	19	19	--	--
149+51.55	27.13' RT	2	1	13	13	--	--
151+12.57	27.23' RT	2	1	19	19	--	--
153+42.78	27.21' RT	2	1	14	14	--	--
154+97.85	27.04' RT	2	1	13	13	--	--
156+19.90	29.31' RT	2	1	15	15	--	--
156+35.98	29.40' RT	2	1	14	14	--	--
157+23.98	27.13' RT	2	1	16	16	--	--
160+61.48	0.56' LT	2	1	41	41	--	--
161+27.22	1.36' LT	2	1	41	41	--	--
161+90.60	1.88' LT	2	1	41	41	--	--
163+59.14	1.17' LT	2	1	41	41	--	--
32+45.88 'NF'	1.41' LT	2	1	28	28	3	100
32+60.08 'NF'	1.41' LT	2	1	25	25	3	100
14+04'NF'	0.5' LT	1	1	--	--	--	--
PROJECT 5992-11-32 TOTALS		**41**	**21**	**423**	**423**	**6**	**200**

FURNISH AND INSTALL WATERMAIN PIPE & FITTINGS

STATION - STATION	SPV.0090.025 6-INCH (LF)	SPV.0090.026 8-INCH (LF)	SPV.0090.029 10-INCH (LF)	SPV.0090.027 12-INCH (LF)	SPV.0090.028 16-INCH (LF)	SPV.0090.030 SELECT FILL FOR WATER MAIN (LF)	SPV.0060.053 FURNISH AND INSTALL INSULATION (EACH)	SPV.0035.003 ROCK EXCAVATION FOR WATER MAIN (CY)	SPV.0060.056 CLAY TRENCH PLUG (EACH)	SPV.0060.024 FLUOROCARBON GASKET 6-INCH (EACH)	SPV.0060.025 FLUOROCARBON GASKET 8-INCH (EACH)	SPV.0060.026 FLUOROCARBON GASKET 12-INCH (EACH)	SPV.0060.027 FLUOROCARBON GASKET 16-INCH (EACH)
5992-11-32													
CATEGORY 0010													
UNIVERSITY AVENUE													
139+91'EB' - 144+83'EB'	95	--	--	--	492	587	--	30	2	1	--	4	13
144+83'EB' - 151+94'EB'	15	--	--	--	711	726	2	--	--	--	--	--	--
151+94'EB' - 159+34'EB'	--	--	--	--	740	740	1	--	2	--	--	--	16
159+34'EB' - 166+20'EB'	--	--	--	--	210	210	6	--	--	--	--	--	--
166+20'EB' - 173+30'EB'	30	--	--	--	--	30	--	--	--	--	--	--	--
SCHMITT PLACE	25	50	--	--	--	75	1	--	--	--	--	--	--
RIDGE STREET	55	65	--	--	--	120	--	--	--	--	--	--	--
FRANKLIN AVE	--	--	--	191	--	191	1	0	--	--	--	--	--
FARLEY AVE	30	225	--	--	--	255	--	--	--	--	--	--	--
UNDISTRIBUTED	--	--	--	--	--	--	--	--	--	--	3	--	--
CATEGORY 0010 TOTAL	**250**	**340**	**0**	**191**	**2153**	**2934**	**11**	**30**	**4**	**1**	**3**	**4**	**29**
CATEGORY 0030													
UNIVERSITY BAY DRIVE	22	--	160	25	115	322	--	--	3	4	--	8	7
UNDISTRIBUTED	--	--	--	--	--	--	--	--	--	--	2	--	--
CATEGORY 0030 TOTAL	**22**	**0**	**160**	**25**	**115**	**322**	**0**	**0**	**3**	**4**	**2**	**8**	**7**
PROJECT 5992-11-32 TOTALS	**272**	**340**	**160**	**216**	**2268**	**3256**	**11**	**30**	**7**	**5**	**5**	**12**	**36**

WATER MAIN

STATION	SPV.0060.049 CUT-IN OR CONNECT-TO EXISTING WATER SYSTEM (EACH)	SPV.0060.046 RECONNECT WATER SERVICE LATERAL 1-INCH (EACH)	SPV.0060.048 RECONNECT WATER SERVICE LATERAL 2-INCH (EACH)	SPV.0060.052 ABANDON WATER VALVE ACCESS STRUCTURE (EACH)
5992-11-32				
CATEGORY 0010				
139+91'EB' - 144+83'EB'	7	2	--	--
144+83'EB' - 151+94'EB'	--	1	1	--
151+94'EB' - 159+34'EB'	--	4	--	--
159+34'EB' - 166+20'EB'	5	2	--	--
166+20'EB' - 173+30'EB'	1	--	1	1
SCHMITT PLACE	1	--	--	--
RIDGE STREET	1	--	--	--
FRANKLIN AVE	2	2	--	--
FARLEY	2	1	--	1
OLD UNIVERSITY AVE	1	5	--	--
CATEGORY 0010 TOTAL	**20**	**17**	**2**	**2**
CATEGORY 0030				
UNIVERSITY BAY DRIVE	6	--	--	--
CATEGORY 0030 TOTAL	**6**	--	--	--
PROJECT 5992-11-32 TOTALS	**26**	**17**	**2**	**2**

CONSTUCTION STAKING

STATION	SPV.0060.008 SANITARY SEWER (EACH)	SPV.0060.009 WATER MAIN (EACH)
5992-11-32		
CATEGORY 0010		
UNDISTRIBUTED	--	1
CATEGORY 0010 TOTAL	**0**	**1**
CATEGORY 0020		
UNDISTRIBUTED	1	--
CATEGORY 0020 TOTAL	**1**	--
PROJECT 5992-11-32 TOTALS	**1**	**1**

FURNISH & INSTALL WATER VALVE

STATION	OFFSET	SPV.0060.041 6-INCH VALVE (EACH)	SPV.0060.042 8-INCH VALVE (EACH)	SPV.0060.043 12-INCH VALVE (EACH)	SPV.0060.044 16-INCH VALVE (EACH)	SPV.0060.055 ANODE (EACH)	SPV.0060.054 ADJUST WATER VALVE BOX SECTIONS (EACH)	SPV.0060.051 ABANDON WATER VALVE BOX (EACH)
5992-11-32								
CATEGORY 0010								
138+50'EB' - 144+83'EB'		3	--	--	3	--	1	4
144+83'EB' - 151+94'EB'		1	2	--	3	--	--	2
151+94'EB' - 159+34'EB'		1	4	--	2	--	--	--
159+34'EB' - 166+20'EB'		1	2	--	7	--	1	1
166+20'EB' - 173+30'EB'		1	--	--	1	--	1	3
SCHMITT PLACE		2	--	--	--	--	--	1
RIDGE STREET		2	--	--	--	--	--	1
FRANKLIN AVE		1	--	2	--	--	--	2
FARLEY		2	1	--	--	1	1	1
OLD UNIVERSITY AVE		--	--	--	--	--	--	1
CATEGORY 0010 TOTAL		**14**	**9**	**2**	**16**	**1**	**4**	**16**
CATGEORY 0030								
UNIVERSITY BAY DRIVE		1	--	2	1	--	--	--
CATEGORY 0030 TOTAL		**1**	**0**	**2**	**1**	**0**	**0**	**0**
PROJECT 5992-11-32 TOTALS		**15**	**9**	**4**	**17**	**1**	**4**	**16**

FURNISH & INSTALL HYDRANT/SALVAGE EXISTING HYDRANT

STATION	OFFSET	SPV.0060.045 HYDRANT (EACH)	SPV.0060.115 ABANDON HYDRANT (EACH)
5992-11-32			
CATEGORY 0010			
141+59 'EB'	LT	--	--
141+64 'EB'	LT	1	1
146+95 'EB'	RT	1	--
156+24 'EB'	RT	1	--
167+02 'EB'	RT	1	--
167+16 'EB'	RT	--	1
SCHMITT PLACE	RT	1	1
RIDGE STREET	LT	1	1
CATEGORY 0010 TOTAL		**6**	**4**
CATEGORY 0030			
UNIVERSITY BAY DRIVE	LT	1	--
CATEGORY 0030 TOTAL		**1**	--
PROJECT 5992-11-32 TOTALS		**7**	**4**

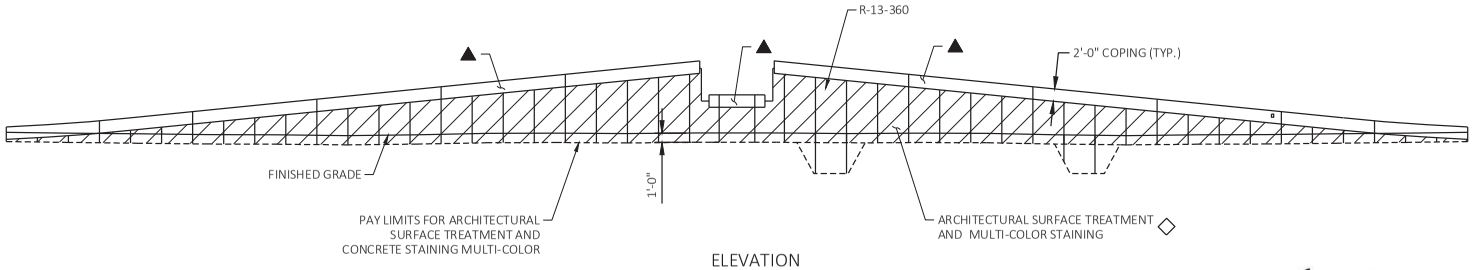
Addendum No. 01
ID 5992-11-31/32/33
Revised Sheet 366
February 25, 2022

PROJECT NO: 5992-11-32	HWY: UNIVERSITY AVENUE	COUNTY: DANE	MISCELLANEOUS QUANTITIES	SHEET 366	E

FILE NAME: ORIGINATOR: KL ENGINEERING, INC. ORIG. DATE: REV. DATE: PRINT DATE: February 22, 2022

STATE PROJECT NUMBER
5992–11–31

Addendum No. 01
ID 5992-11-31/32/33
Revised Sheet 617
February 25, 2022



ELEVATION

SDR
02/23/22

WISCONSIN
CHAD D. HALVERSON
E-34364
MADISON, WI
PROFESSIONAL ENGINEER

February 23, 2022

LEGEND

- ▲ CIP CONCRETE, RUBBER FINISH ON ALL SIDES EXCEPT TOP, TYP. STAIN COLOR NUMBER AMS-STD 23448.
- ◇ CUSTOM-ROCK FORMLINER NUMBER #2411 "RANDOM CUT STONE (12" COURSING)" OR APPROVED EQUAL (INCLUDING 15" COURSING). SPLIT FACE FINISH ALL EXPOSED SURFACES AND EDGES UNLESS NOTED OTHERWISE. MULTI-STAIN COLOR NUMBERS AMS-STD 20400, 23564 AND 23722.
- ▽ COURSE HEIGHT TO BE 1'.
- ◆ MORTAR STAIN COLOR NUMBER AMS-STD 23564.

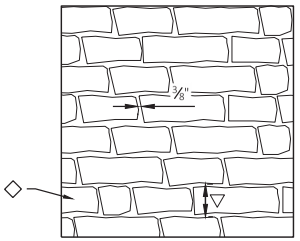
NOTES

FORMLINER PATTERN SHALL BE LEVEL AND CONTINUOUS AROUND ALL CORNERS.

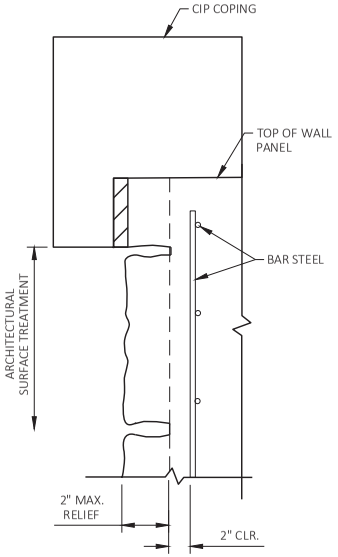
THE COST OF FORMLINER TREATMENTS IS PAID FOR UNDER SPECIAL PROVISIONS "ARCHITECTURAL SURFACE TREATMENT". MAX. ALLOWED RELIEF IS 2".

ARCHITECTURAL SURFACE TREATMENT AND STAIN SHALL EXTEND 1'-0" BELOW FINISHED GRADE.

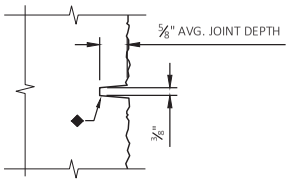
CONTRACTOR TO PROVIDE FULL HEIGHT MOCK-UP FOR REVIEW OF AESTHETIC DETAILS AND CONCRETE COLOR STAINING SELECTION.



FORMLINER DETAIL



SECTION THRU FORMLINER



"MORTAR JOINT" DETAIL

APPLIES TO HORIZONTAL & VERTICAL JOINTS

NO.	DATE	REVISION	BY
1	2/23/2022	INCREASE COURSING SIZE	CDH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION
STRUCTURE R–13–360

DRAWN BY	STD	PLANS CK'D.	CAH

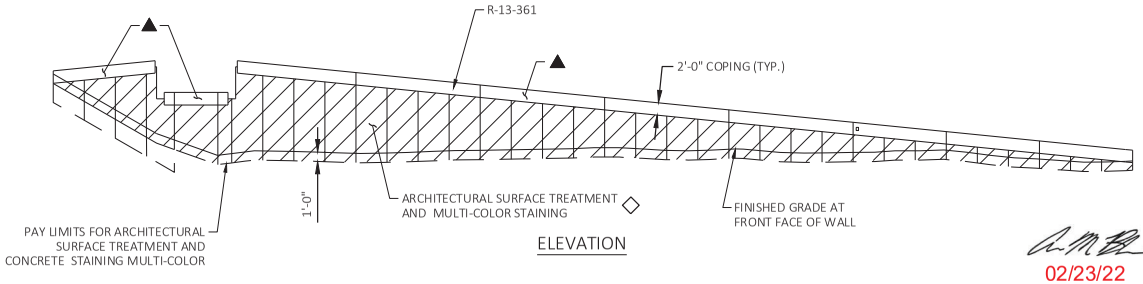
AESTHETIC DETAILS

SHEET 8 OF 9

617

STATE PROJECT NUMBER
5992-11-31

Addendum No. 01
ID 5992-11-31/32/33
Revised Sheet 625
February 25, 2022



ELEVATION

SDR
02/23/22

WISCONSIN
CHAD D. HALVERSON
E-34364
MADISON, WI
PROFESSIONAL ENGINEER

February 23, 2022

LEGEND

- ▲ CIP CONCRETE, RUBBER FINISH ON ALL SIDES EXCEPT TOP, TYP. STAIN COLOR NUMBER AMS-STD 23448.
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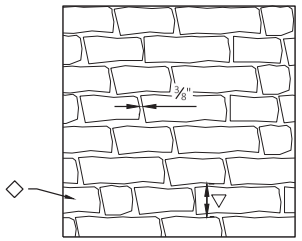
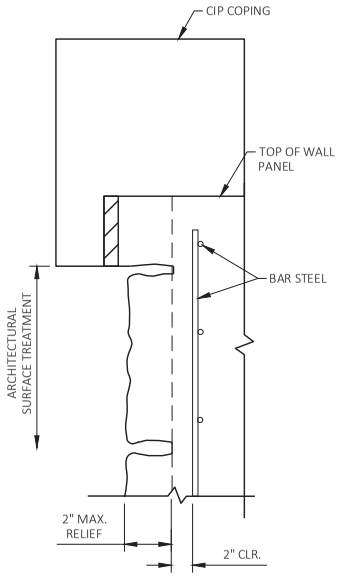
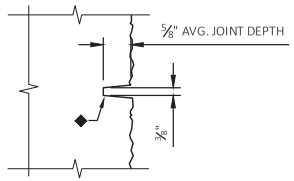


FORMLINER DETAIL



SECTION THRU FORMLINER



"MORTAR JOINT" DETAIL

APPLIES TO HORIZONTAL & VERTICAL JOINTS

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ARCHITECTURAL SURFACE TREATMENT AND STAIN SHALL EXTEND TO 1'-0" BELOW FINISHED GRADE.

CONTRACTOR TO PROVIDE FULL HEIGHT MOCK-UP FOR REVIEW OF AESTHETIC DETAILS AND CONCRETE COLOR STAINING SELECTION.

NO.	DATE	REVISION	BY
1	2/23/2022	INCREASE COURSING SIZE	CDH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION
STRUCTURE R-13-361

DRAWN BY STD | PLANS CK'D. CAH

AESTHETIC DETAILS

SHEET 7 OF 8

625

8

FILE NAME : G:\MADISON\18026-001 UNIV AVE (SHOREWOOD - UNIVERSITY BAY)\CIVIL 3D\STRUCTURE CAD\R-13-361\080307-AD.DWG PLOT DATE : 2/23/2022 9:53 AM PLOT BY : KL ENGINEERING

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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	201.0105 Clearing	19.000 STA	_____.____	_____.____
0004	201.0120 Clearing	45.000 ID	_____.____	_____.____
0006	201.0205 Grubbing	19.000 STA	_____.____	_____.____
0008	201.0220 Grubbing	45.000 ID	_____.____	_____.____
0010	204.0100 Removing Concrete Pavement	29,835.000 SY	_____.____	_____.____
0014	204.0150 Removing Curb & Gutter	9,560.000 LF	_____.____	_____.____
0016	204.0155 Removing Concrete Sidewalk	3,370.000 SY	_____.____	_____.____
0018	204.0165 Removing Guardrail	240.000 LF	_____.____	_____.____
0020	204.0195 Removing Concrete Bases	82.000 EACH	_____.____	_____.____
0022	204.0210 Removing Manholes	2.000 EACH	_____.____	_____.____
0024	204.0220 Removing Inlets	72.000 EACH	_____.____	_____.____
0026	204.0245 Removing Storm Sewer (size) 001. 12'X4' Box	44.000 LF	_____.____	_____.____
0028	204.0245 Removing Storm Sewer (size) 002. 12-Inch	1,360.000 LF	_____.____	_____.____
0030	204.0245 Removing Storm Sewer (size) 003. 15-Inch	408.000 LF	_____.____	_____.____
0032	204.0245 Removing Storm Sewer (size) 004. 18-Inch	172.000 LF	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0034	204.0245 Removing Storm Sewer (size) 005. 24-Inch	111.000 LF	_____.____	_____.____
0036	204.0245 Removing Storm Sewer (size) 006. 30-Inch	118.000 LF	_____.____	_____.____
0038	204.0246 Removing Ancillary Structure (structure) 001. Sta 147+70	1.000 EACH	_____.____	_____.____
0040	204.0246 Removing Ancillary Structure (structure) 002. Sta 154+20	1.000 EACH	_____.____	_____.____
0042	204.0246 Removing Ancillary Structure (structure) 003. Sta 161+20	1.000 EACH	_____.____	_____.____
0044	204.0246 Removing Ancillary Structure (structure) 004. Sta 169+55	1.000 EACH	_____.____	_____.____
0046	204.9060.S Removing (item description) 001. Removing Street Light Assembly	66.000 EACH	_____.____	_____.____
0048	204.9060.S Removing (item description) 002. Traffic Signal	49.000 EACH	_____.____	_____.____
0050	204.9090.S Removing (item description) 001. Railing	425.000 LF	_____.____	_____.____
0052	205.0100 Excavation Common	43,698.000 CY	_____.____	_____.____
0054	206.1000 Excavation for Structures Bridges (structure) 001. B-13-891	LS	LUMP SUM	_____.____
0056	213.0100 Finishing Roadway (project) 001. 5992-11-31	1.000 EACH	_____.____	_____.____
0058	305.0110 Base Aggregate Dense 3/4-Inch	1,711.000 TON	_____.____	_____.____
0060	305.0120 Base Aggregate Dense 1 1/4-Inch	29,165.000 TON	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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	305.0130 Base Aggregate Dense 3-Inch	20,100.000 TON	_____.____	_____.____
0064	310.0110 Base Aggregate Open-Graded	56.000 TON	_____.____	_____.____
0066	312.0110 Select Crushed Material	7,349.000 TON	_____.____	_____.____
0068	371.2000.S QMP Base Aggregate Dense 1 1/4-Inch Compaction	10.000 EACH	_____.____	_____.____
0070	405.0100 Coloring Concrete WisDOT Red	155.000 CY	_____.____	_____.____
0072	405.1000 Stamping Colored Concrete	155.000 CY	_____.____	_____.____
0074	415.0090 Concrete Pavement 9-Inch	120.000 SY	_____.____	_____.____
0076	416.0170 Concrete Driveway 7-Inch	540.000 SY	_____.____	_____.____
0078	416.0270 Concrete Driveway HES 7-Inch	320.000 SY	_____.____	_____.____
0080	455.0605 Tack Coat	4,749.000 GAL	_____.____	_____.____
0082	460.2000 Incentive Density HMA Pavement	8,700.000 DOL	1.00000	8,700.00
0084	460.6223 HMA Pavement 3 MT 58-28 S	9,891.000 TON	_____.____	_____.____
0086	460.6424 HMA Pavement 4 MT 58-28 H	3,695.000 TON	_____.____	_____.____
0088	465.0105 Asphaltic Surface	140.000 TON	_____.____	_____.____
0090	465.0120 Asphaltic Surface Driveways and Field Entrances	75.000 TON	_____.____	_____.____
0092	465.0125 Asphaltic Surface Temporary	3,930.000 TON	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0094	465.0315 Asphaltic Flumes	18.000 SY	_____.____	_____.____
0096	502.0100 Concrete Masonry Bridges	427.000 CY	_____.____	_____.____
0098	502.3101 Expansion Device	28.000 LF	_____.____	_____.____
0100	502.3200 Protective Surface Treatment	629.000 SY	_____.____	_____.____
0102	504.2000.S Precast Concrete Box Culvert (ft X ft) 001. 12 FT X 4 FT	107.000 LF	_____.____	_____.____
0106	505.0400 Bar Steel Reinforcement HS Structures	6,580.000 LB	_____.____	_____.____
0108	505.0600 Bar Steel Reinforcement HS Coated Structures	64,720.000 LB	_____.____	_____.____
0110	506.2605 Bearing Pads Elastomeric Non-Laminated	3.000 EACH	_____.____	_____.____
0112	506.8006.S Prefabricated Steel Truss Pedestrian Bridge LRFD (structure) 001. B-13-891	1.000 EACH	_____.____	_____.____
0114	511.1100 Temporary Shoring	19,642.000 SF	_____.____	_____.____
0116	511.2300 Temp Shoring Left in Place (location) 001. Stage 2	2,000.000 SF	_____.____	_____.____
0118	513.8016 Railing Steel Pedestrian Type C3	1,182.000 LF	_____.____	_____.____
0120	516.0500 Rubberized Membrane Waterproofing	7.000 SY	_____.____	_____.____
0122	517.1000 Painting Epoxy System Steel Truss (structure) 001. B-13-891	 LS	LUMP SUM	_____.____
0124	517.1010.S Concrete Staining (structure) 001. B-13-891	3,072.000 SF	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0126	517.1010.S Concrete Staining (structure) 002. R-13-360	1,142.000 SF	_____.____	_____.____
0128	517.1010.S Concrete Staining (structure) 003. R-13-361	849.000 SF	_____.____	_____.____
0130	517.1015.S Concrete Staining Multi-Color (structure) 001. B-13-891	829.000 SF	_____.____	_____.____
0132	517.1015.S Concrete Staining Multi-Color (structure) 002. R-13-360	2,470.000 SF	_____.____	_____.____
0134	517.1015.S Concrete Staining Multi-Color (structure) 003. R-13-061	2,680.000 SF	_____.____	_____.____
0136	517.1050.S Architectural Surface Treatment (structure) 001. B-13-891	1,521.000 SF	_____.____	_____.____
0138	517.1050.S Architectural Surface Treatment (structure) 002. R-13-360	2,470.000 SF	_____.____	_____.____
0140	517.1050.S Architectural Surface Treatment (structure) 003. R-13-361	2,680.000 SF	_____.____	_____.____
0142	520.8000 Concrete Collars for Pipe	19.000 EACH	_____.____	_____.____
0144	522.1012 Apron Endwalls for Culvert Pipe Reinforced Concrete 12-Inch	1.000 EACH	_____.____	_____.____
0146	531.2030 Drilling Shaft 30-Inch	26.000 LF	_____.____	_____.____
0148	531.5220 Foundation Single-Shaft Type MF-II (structure) 001. S-13-586	2.000 EACH	_____.____	_____.____
0150	532.5120 Monotube Cantilever Type II (structure) 001. Sta. 143+10	1.000 EACH	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0152	532.5120 Monotube Cantilever Type II (structure) 002. Sta. 142+63	1.000 EACH	_____.____	_____.____
0154	532.5120 Monotube Cantilever Type II (structure) 003. Sta. 153+40	1.000 EACH	_____.____	_____.____
0156	532.5120 Monotube Cantilever Type II (structure) 004. Sta. 154+06	1.000 EACH	_____.____	_____.____
0158	532.5120 Monotube Cantilever Type II (structure) 005. Sta. 160+47	1.000 EACH	_____.____	_____.____
0160	532.5220 Monotube Full Span Type II (structure) 001. S-13-856	1.000 EACH	_____.____	_____.____
0162	550.1100 Piling Steel HP 10-Inch X 42 Lb	2,070.000 LF	_____.____	_____.____
0164	550.1120 Piling Steel HP 12-Inch X 53 Lb	360.000 LF	_____.____	_____.____
0166	601.0407 Concrete Curb & Gutter 18-Inch Type D	160.000 LF	_____.____	_____.____
0168	601.0411 Concrete Curb & Gutter 30-Inch Type D	1,200.000 LF	_____.____	_____.____
0170	601.0600 Concrete Curb Pedestrian	445.000 LF	_____.____	_____.____
0172	602.0410 Concrete Sidewalk 5-Inch	58,870.000 SF	_____.____	_____.____
0174	602.0415 Concrete Sidewalk 6-Inch	2,010.000 SF	_____.____	_____.____
0176	602.0515 Curb Ramp Detectable Warning Field Natural Patina	455.000 SF	_____.____	_____.____
0178	602.0615 Curb Ramp Detectable Warning Field Radial Natural Patina	275.000 SF	_____.____	_____.____
0180	603.8000 Concrete Barrier Temporary Precast Delivered	1,800.000 LF	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0182	603.8125 Concrete Barrier Temporary Precast Installed	2,100.000 LF	_____.____	_____.____
0184	604.0400 Slope Paving Concrete	10.000 SY	_____.____	_____.____
0186	608.0005 Storm Sewer Rock Excavation	150.000 CY	_____.____	_____.____
0188	608.0312 Storm Sewer Pipe Reinforced Concrete Class III 12-Inch	1,100.000 LF	_____.____	_____.____
0190	608.0315 Storm Sewer Pipe Reinforced Concrete Class III 15-Inch	22.000 LF	_____.____	_____.____
0192	608.0318 Storm Sewer Pipe Reinforced Concrete Class III 18-Inch	97.000 LF	_____.____	_____.____
0194	608.0324 Storm Sewer Pipe Reinforced Concrete Class III 24-Inch	190.000 LF	_____.____	_____.____
0196	608.0396 Storm Sewer Pipe Reinforced Concrete Class III 96-Inch	2,522.000 LF	_____.____	_____.____
0198	608.0412 Storm Sewer Pipe Reinforced Concrete Class IV 12-Inch	768.000 LF	_____.____	_____.____
0200	608.0415 Storm Sewer Pipe Reinforced Concrete Class IV 15-Inch	562.000 LF	_____.____	_____.____
0202	608.0418 Storm Sewer Pipe Reinforced Concrete Class IV 18-Inch	134.000 LF	_____.____	_____.____
0204	608.0430 Storm Sewer Pipe Reinforced Concrete Class IV 30-Inch	112.000 LF	_____.____	_____.____
0206	608.0436 Storm Sewer Pipe Reinforced Concrete Class IV 36-Inch	16.000 LF	_____.____	_____.____
0208	611.0420 Reconstructing Manholes	5.000 EACH	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0210	611.0430 Reconstructing Inlets	4.000 EACH	_____.____	_____.____
0212	611.0530 Manhole Covers Type J	2.000 EACH	_____.____	_____.____
0214	611.0642 Inlet Covers Type MS	3.000 EACH	_____.____	_____.____
0216	611.2004 Manholes 4-FT Diameter	3.000 EACH	_____.____	_____.____
0218	611.2005 Manholes 5-FT Diameter	8.000 EACH	_____.____	_____.____
0220	611.2006 Manholes 6-FT Diameter	3.000 EACH	_____.____	_____.____
0222	611.3004 Inlets 4-FT Diameter	8.000 EACH	_____.____	_____.____
0224	611.3230 Inlets 2x3-FT	66.000 EACH	_____.____	_____.____
0226	611.3901 Inlets Median 1 Grate	3.000 EACH	_____.____	_____.____
0228	611.8110 Adjusting Manhole Covers	6.000 EACH	_____.____	_____.____
0230	611.8115 Adjusting Inlet Covers	11.000 EACH	_____.____	_____.____
0232	611.8120.S Cover Plates Temporary	20.000 EACH	_____.____	_____.____
0234	612.0106 Pipe Underdrain 6-Inch	700.000 LF	_____.____	_____.____
0236	612.0108 Pipe Underdrain 8-Inch	18.000 LF	_____.____	_____.____
0238	612.0110 Pipe Underdrain 10-Inch	9.000 LF	_____.____	_____.____
0240	612.0112 Pipe Underdrain 12-Inch	333.000 LF	_____.____	_____.____
0242	612.0206 Pipe Underdrain Unperforated 6-Inch	15.000 LF	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0244	612.0406 Pipe Underdrain Wrapped 6-Inch	850.000 LF	_____.____	_____.____
0246	616.0700.S Fence Safety	5,000.000 LF	_____.____	_____.____
0248	618.0100 Maintenance And Repair of Haul Roads (project) 001. 5992-11-31	1.000 EACH	_____.____	_____.____
0250	619.1000 Mobilization	1.000 EACH	_____.____	_____.____
0252	620.0200 Concrete Median Blunt Nose	12.000 SF	_____.____	_____.____
0254	620.0300 Concrete Median Sloped Nose	669.000 SF	_____.____	_____.____
0256	624.0100 Water	1,475.000 MGAL	_____.____	_____.____
0258	625.0100 Topsoil	5,780.000 SY	_____.____	_____.____
0260	628.1504 Silt Fence	2,560.000 LF	_____.____	_____.____
0262	628.1520 Silt Fence Maintenance	4,570.000 LF	_____.____	_____.____
0264	628.1905 Mobilizations Erosion Control	21.000 EACH	_____.____	_____.____
0266	628.1910 Mobilizations Emergency Erosion Control	14.000 EACH	_____.____	_____.____
0268	628.2008 Erosion Mat Urban Class I Type B	5,780.000 SY	_____.____	_____.____
0270	628.7010 Inlet Protection Type B	61.000 EACH	_____.____	_____.____
0272	628.7015 Inlet Protection Type C	149.000 EACH	_____.____	_____.____
0274	629.0210 Fertilizer Type B	6.800 CWT	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0276	630.0140 Seeding Mixture No. 40	104.000 LB	_____.____	_____.____
0278	630.0200 Seeding Temporary	156.000 LB	_____.____	_____.____
0280	630.0500 Seed Water	85.000 MGAL	_____.____	_____.____
0282	631.0300 Sod Water	81.000 MGAL	_____.____	_____.____
0284	631.1000 Sod Lawn	5,075.000 SY	_____.____	_____.____
0286	637.1220 Signs Type I Reflective SH	410.000 SF	_____.____	_____.____
0288	637.2210 Signs Type II Reflective H	810.050 SF	_____.____	_____.____
0290	637.2215 Signs Type II Reflective H Folding	88.060 SF	_____.____	_____.____
0292	637.2230 Signs Type II Reflective F	55.250 SF	_____.____	_____.____
0294	638.2102 Moving Signs Type II	20.000 EACH	_____.____	_____.____
0296	638.2601 Removing Signs Type I	2.000 EACH	_____.____	_____.____
0298	638.2602 Removing Signs Type II	100.000 EACH	_____.____	_____.____
0300	638.3000 Removing Small Sign Supports	26.000 EACH	_____.____	_____.____
0302	638.4000 Moving Small Sign Supports	4.000 EACH	_____.____	_____.____
0306	643.0300 Traffic Control Drums	43,400.000 DAY	_____.____	_____.____
0308	643.0410 Traffic Control Barricades Type II	2,420.000 DAY	_____.____	_____.____
0310	643.0420 Traffic Control Barricades Type III	5,440.000 DAY	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0312	643.0500 Traffic Control Flexible Tubular Marker Posts	280.000 EACH	_____.____	_____.____
0314	643.0600 Traffic Control Flexible Tubular Marker Bases	280.000 EACH	_____.____	_____.____
0316	643.0705 Traffic Control Warning Lights Type A	8,300.000 DAY	_____.____	_____.____
0318	643.0715 Traffic Control Warning Lights Type C	3,230.000 DAY	_____.____	_____.____
0320	643.0800 Traffic Control Arrow Boards	550.000 DAY	_____.____	_____.____
0322	643.0900 Traffic Control Signs	22,050.000 DAY	_____.____	_____.____
0324	643.1000 Traffic Control Signs Fixed Message	34.500 SF	_____.____	_____.____
0326	643.1050 Traffic Control Signs PCMS	1,300.000 DAY	_____.____	_____.____
0328	643.5000 Traffic Control	1.000 EACH	_____.____	_____.____
0330	644.1410 Temporary Pedestrian Surface Asphalt	400.000 SF	_____.____	_____.____
0332	644.1601 Temporary Pedestrian Curb Ramp	1,195.000 DAY	_____.____	_____.____
0334	644.1810 Temporary Pedestrian Barricade	800.000 LF	_____.____	_____.____
0336	646.1020 Marking Line Epoxy 4-Inch	6,625.000 LF	_____.____	_____.____
0338	646.3020 Marking Line Epoxy 8-Inch	3,080.000 LF	_____.____	_____.____
0340	646.5020 Marking Arrow Epoxy	42.000 EACH	_____.____	_____.____
0342	646.5120 Marking Word Epoxy	12.000 EACH	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0344	646.5220 Marking Symbol Epoxy	13.000 EACH	_____.____	_____.____
0346	646.5320 Marking Railroad Crossings Epoxy	4.000 EACH	_____.____	_____.____
0348	646.6120 Marking Stop Line Epoxy 18-Inch	550.000 LF	_____.____	_____.____
0350	646.7420 Marking Crosswalk Epoxy Transverse Line 6-Inch	330.000 LF	_____.____	_____.____
0352	646.7520 Marking Crosswalk Epoxy Block Style 24-Inch	1,765.000 LF	_____.____	_____.____
0354	646.8120 Marking Curb Epoxy	240.000 LF	_____.____	_____.____
0356	646.8220 Marking Island Nose Epoxy	13.000 EACH	_____.____	_____.____
0358	646.9000 Marking Removal Line 4-Inch	3,065.000 LF	_____.____	_____.____
0360	646.9100 Marking Removal Line 8-Inch	790.000 LF	_____.____	_____.____
0362	646.9300 Marking Removal Special Marking	6.000 EACH	_____.____	_____.____
0364	649.0105 Temporary Marking Line Paint 4-Inch	23,855.000 LF	_____.____	_____.____
0366	649.0120 Temporary Marking Line Epoxy 4-Inch	5,950.000 LF	_____.____	_____.____
0368	649.0150 Temporary Marking Line Removable Tape 4-Inch	7,675.000 LF	_____.____	_____.____
0370	649.0205 Temporary Marking Line Paint 8-Inch	2,660.000 LF	_____.____	_____.____
0372	649.0220 Temporary Marking Line Epoxy 8-Inch	3,610.000 LF	_____.____	_____.____
0374	649.0250 Temporary Marking Line Removable Tape 8-Inch	1,060.000 LF	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0376	649.0505 Temporary Marking Arrow Paint	14.000 EACH	_____.____	_____.____
0378	649.0520 Temporary Marking Arrow Epoxy	52.000 EACH	_____.____	_____.____
0380	649.0550 Temporary Marking Arrow Removable Tape	10.000 EACH	_____.____	_____.____
0382	649.0620 Temporary Marking Word Epoxy	9.000 EACH	_____.____	_____.____
0384	649.0805 Temporary Marking Stop Line Paint 18-Inch	560.000 LF	_____.____	_____.____
0386	649.0820 Temporary Marking Stop Line Epoxy 18-Inch	1,620.000 LF	_____.____	_____.____
0388	649.0850 Temporary Marking Stop Line Removable Tape 18-Inch	70.000 LF	_____.____	_____.____
0390	652.0225 Conduit Rigid Nonmetallic Schedule 40 2-Inch	8,575.000 LF	_____.____	_____.____
0392	652.0235 Conduit Rigid Nonmetallic Schedule 40 3-Inch	6,050.000 LF	_____.____	_____.____
0394	652.0325 Conduit Rigid Nonmetallic Schedule 80 2-Inch	3,140.000 LF	_____.____	_____.____
0396	652.0335 Conduit Rigid Nonmetallic Schedule 80 3-Inch	2,850.000 LF	_____.____	_____.____
0398	652.0900 Loop Detector Slots	70.000 LF	_____.____	_____.____
0400	653.0900 Adjusting Pull Boxes	1.000 EACH	_____.____	_____.____
0402	653.0905 Removing Pull Boxes	24.000 EACH	_____.____	_____.____
0404	654.0110 Concrete Bases Type 10	5.000 EACH	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0406	655.0230 Cable Traffic Signal 5-14 AWG	1,975.000 LF	_____.____	_____.____
0408	655.0240 Cable Traffic Signal 7-14 AWG	4,615.000 LF	_____.____	_____.____
0410	655.0250 Cable Traffic Signal 9-14 AWG	2,029.000 LF	_____.____	_____.____
0412	655.0260 Cable Traffic Signal 12-14 AWG	1,910.000 LF	_____.____	_____.____
0414	655.0615 Electrical Wire Lighting 10 AWG	14,608.000 LF	_____.____	_____.____
0416	655.0620 Electrical Wire Lighting 8 AWG	24,420.000 LF	_____.____	_____.____
0418	655.0630 Electrical Wire Lighting 4 AWG	8,140.000 LF	_____.____	_____.____
0420	655.0800 Loop Detector Wire	9,292.000 LF	_____.____	_____.____
0422	656.0200 Electrical Service Meter Breaker Pedestal (location) 001. Ridge & University	LS	LUMP SUM	_____.____
0424	656.0200 Electrical Service Meter Breaker Pedestal (location) 002. University Bay & University	LS	LUMP SUM	_____.____
0426	656.0200 Electrical Service Meter Breaker Pedestal (location) 003. University Bay & Marshall	LS	LUMP SUM	_____.____
0428	656.0200 Electrical Service Meter Breaker Pedestal (location) 004. Ridge & University	LS	LUMP SUM	_____.____
0430	656.0200 Electrical Service Meter Breaker Pedestal (location) 005. University Bay & University	LS	LUMP SUM	_____.____
0432	657.0100 Pedestal Bases	21.000 EACH	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0434	657.0255 Transformer Bases Breakaway 11 1/2-Inch Bolt Circle	43.000 EACH	_____.____	_____.____
0436	657.0346 Poles Type 9-Over Height	1.000 EACH	_____.____	_____.____
0438	657.0420 Traffic Signal Standards Aluminum 13-FT	16.000 EACH	_____.____	_____.____
0440	657.0425 Traffic Signal Standards Aluminum 15-FT	2.000 EACH	_____.____	_____.____
0442	657.0430 Traffic Signal Standards Aluminum 10-FT	5.000 EACH	_____.____	_____.____
0444	657.0515 Monotube Arms 15-FT	2.000 EACH	_____.____	_____.____
0446	658.0500 Pedestrian Push Buttons	29.000 EACH	_____.____	_____.____
0448	658.5069 Signal Mounting Hardware (location) 001. Hill	LS	LUMP SUM	_____.____
0450	658.5069 Signal Mounting Hardware (location) 002. Ridge	LS	LUMP SUM	_____.____
0452	658.5069 Signal Mounting Hardware (location) 003. Farley	LS	LUMP SUM	_____.____
0454	658.5069 Signal Mounting Hardware (location) 004. Marshall	LS	LUMP SUM	_____.____
0456	690.0150 Sawing Asphalt	9,615.000 LF	_____.____	_____.____
0458	690.0250 Sawing Concrete	6,720.000 LF	_____.____	_____.____
0460	715.0502 Incentive Strength Concrete Structures	500.000 DOL	1.00000	500.00
0462	715.0720 Incentive Compressive Strength Concrete Pavement	500.000 DOL	1.00000	500.00

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0464	740.0440 Incentive IRI Ride	7,600.000 DOL	1.00000	7,600.00
0466	801.0117 Railroad Flagging Reimbursement	110,000.000 DOL	1.00000	110,000.00
0468	999.1001.S Seismograph	1.000 EACH	_____.____	_____.____
0470	999.1501.S Crack and Damage Survey	1.000 EACH	_____.____	_____.____
0472	ASP.1T0A On-the-Job Training Apprentice at $5.00/HR	2,100.000 HRS	5.00000	10,500.00
0474	ASP.1T0G On-the-Job Training Graduate at $5.00/HR	6,480.000 HRS	5.00000	32,400.00
0476	SPV.0035 Special 001. Abandon Sanitary Sewer-Slurry	22.860 CY	_____.____	_____.____
0478	SPV.0035 Special 002. Rock Excavation For Sanitary Sewer	50.000 CY	_____.____	_____.____
0480	SPV.0035 Special 003. Rock Excavation For Water Main	30.000 CY	_____.____	_____.____
0482	SPV.0060 Special 001. Settlement Monitoring	2.000 EACH	_____.____	_____.____
0484	SPV.0060 Special 002. Locate and Reference Property Corners	27.000 EACH	_____.____	_____.____
0486	SPV.0060 Special 003. Reset Property Corners	27.000 EACH	_____.____	_____.____
0488	SPV.0060 Special 004. Precast Sign Post Base	46.000 EACH	_____.____	_____.____
0490	SPV.0060 Special 005. Sign Post Base For Concrete Installation	7.000 EACH	_____.____	_____.____
0492	SPV.0060 Special 006. Project Dewatering	1.000 EACH	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0494	SPV.0060 Special 007. Wastewater Control	1.000 EACH	_____.____	_____.____
0500	SPV.0060 Special 010. Inlet Cover Type H Special	82.000 EACH	_____.____	_____.____
0502	SPV.0060 Special 011. Inlet Cover Type H-S Special	12.000 EACH	_____.____	_____.____
0504	SPV.0060 Special 012. Manhole Cover Type J Special	24.000 EACH	_____.____	_____.____
0506	SPV.0060 Special 013. Temporary Inlet Cover	55.000 EACH	_____.____	_____.____
0508	SPV.0060 Special 014. Storm Sewer Pipe 96-Inch Bend	9.000 EACH	_____.____	_____.____
0510	SPV.0060 Special 015. Wastewater Control MMSD	1.000 EACH	_____.____	_____.____
0512	SPV.0060 Special 016. Inlet 2x3-Ft Special	9.000 EACH	_____.____	_____.____
0514	SPV.0060 Special 017. Manhole Special	1.000 EACH	_____.____	_____.____
0516	SPV.0060 Special 018. Storm Sewer Tap	27.000 EACH	_____.____	_____.____
0518	SPV.0060 Special 019. MMSD Sanitary Sewer Bypassing	1.000 EACH	_____.____	_____.____
0520	SPV.0060 Special 020. Close Storm Sewer Connection	8.000 EACH	_____.____	_____.____
0522	SPV.0060 Special 021. Construction Staking Project 5992-11-31	1.000 EACH	_____.____	_____.____
0524	SPV.0060 Special 022. Construction Staking Project 5992-11-33	1.000 EACH	_____.____	_____.____
0526	SPV.0060 Special 023. Implement Tree Protection Plan	1.000 EACH	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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.0060 Special 024. Furnish and Install Fluorocarbon Gaskets, 6-Inch	5.000 EACH	_____.____	_____.____
0530	SPV.0060 Special 025. Furnish and Install Fluorocarbon Gaskets, 8-Inch	5.000 EACH	_____.____	_____.____
0532	SPV.0060 Special 026. Furnish and Install Fluorocarbon Gaskets, 12-Inch	12.000 EACH	_____.____	_____.____
0534	SPV.0060 Special 027. Furnish and Install Fluorocarbon Gaskets, 16-Inch	36.000 EACH	_____.____	_____.____
0536	SPV.0060 Special 028. MMSD Sanitary Sewer Manhole (6-Foot Diameter)	3.000 EACH	_____.____	_____.____
0538	SPV.0060 Special 029. MMSD Sanitary Sewer Manhole (7-Foot Diameter)	1.000 EACH	_____.____	_____.____
0540	SPV.0060 Special 030. Utility Line Opening (ULO)	42.000 EACH	_____.____	_____.____
0542	SPV.0060 Special 031. Sewer Electronic Markers	41.000 EACH	_____.____	_____.____
0544	SPV.0060 Special 032. Sanitary Lateral Reconnect	21.000 EACH	_____.____	_____.____
0546	SPV.0060 Special 033. Sanitary Sewer Tap	13.000 EACH	_____.____	_____.____
0548	SPV.0060 Special 034. Sanitary Sewer Access Structure (4-Foot Diameter)	9.000 EACH	_____.____	_____.____
0550	SPV.0060 Special 035. Sanitary Sewer Access Structure (5-Foot Diameter)	8.000 EACH	_____.____	_____.____
0552	SPV.0060 Special 036. Sanitary Sewer Internal Chimney Seal	3.000 EACH	_____.____	_____.____
0554	SPV.0060 Special 037. Remove Sanitary Sewer Access Structure	3.000 EACH	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0556	SPV.0060 Special 039. Abandon Sanitary Sewer Access Structure	9.000 EACH	_____.____	_____.____
0558	SPV.0060 Special 040. Abandon Sanitary Sewer-Pipe Plug	14.000 EACH	_____.____	_____.____
0560	SPV.0060 Special 041. Furnish & Install 6-Inch Water Valve, 6-Inch	15.000 EACH	_____.____	_____.____
0562	SPV.0060 Special 042. Furnish & Install 8-Inch Water Valve, 8-Inch	9.000 EACH	_____.____	_____.____
0564	SPV.0060 Special 043. Furnish & Install 12-Inch Water Valve, 12-Inch	4.000 EACH	_____.____	_____.____
0566	SPV.0060 Special 044. Furnish & Install 16-Inch Water Valve, 16-Inch	17.000 EACH	_____.____	_____.____
0568	SPV.0060 Special 045. Furnish And Install Hydrant / Salvage Existing Hydrant	6.000 EACH	_____.____	_____.____
0570	SPV.0060 Special 045. Furnish And Install Hydrant/Salvage Existing Hydrant	1.000 EACH	_____.____	_____.____
0572	SPV.0060 Special 046. Reconnect Water Service Lateral, 1-Inch	17.000 EACH	_____.____	_____.____
0574	SPV.0060 Special 048. Reconnect Water Service Lateral, 2-Inch	2.000 EACH	_____.____	_____.____
0576	SPV.0060 Special 049. Cut-In Or Connect-To Existing Water System	26.000 EACH	_____.____	_____.____
0578	SPV.0060 Special 051. Abandon Water Valve Box	16.000 EACH	_____.____	_____.____
0580	SPV.0060 Special 052. Abandon Water Valve Access Structure	2.000 EACH	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0582	SPV.0060 Special 053. Furnish and Install Insulation	11.000 EACH	_____.____	_____.____
0584	SPV.0060 Special 054. Adjust Water Valve Box Sections	4.000 EACH	_____.____	_____.____
0586	SPV.0060 Special 055. Furnish And Install Anode	1.000 EACH	_____.____	_____.____
0588	SPV.0060 Special 056. Clay Trench Plug	7.000 EACH	_____.____	_____.____
0590	SPV.0060 Special 057. Interceptor Sewer Manhole, (6-Foot Diameter)	5.000 EACH	_____.____	_____.____
0592	SPV.0060 Special 058. Interceptor Manhole Lining System	5.000 EACH	_____.____	_____.____
0594	SPV.0060 Special 059. Adjust MMSD Special	2.000 EACH	_____.____	_____.____
0596	SPV.0060 Special 060. MMSD Manhole 02-048 Flat Top Replacement	1.000 EACH	_____.____	_____.____
0598	SPV.0060 Special 061. Rock Excavation for Concrete Bases	6.000 EACH	_____.____	_____.____
0600	SPV.0060 Special 062. Electrical Pull Box Type I	34.000 EACH	_____.____	_____.____
0602	SPV.0060 Special 063. Electrical Pull Box Type III	5.000 EACH	_____.____	_____.____
0604	SPV.0060 Special 064. Electrical Pull Box Type V	19.000 EACH	_____.____	_____.____
0606	SPV.0060 Special 065. Electrical Pull Box Type VII	12.000 EACH	_____.____	_____.____
0608	SPV.0060 Special 066. Concrete Bases Type G	16.000 EACH	_____.____	_____.____
0610	SPV.0060 Special 067. Concrete Bases Type LB-3	39.000 EACH	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0612	SPV.0060 Special 068. Concrete Bases Type LB-8	15.000 EACH	_____.____	_____.____
0614	SPV.0060 Special 069. Concrete Bases Type P	5.000 EACH	_____.____	_____.____
0616	SPV.0060 Special 070. Concrete Bases Type G Spread Footing	1.000 EACH	_____.____	_____.____
0618	SPV.0060 Special 071. Transformer Base 16-Inch Steel	13.000 EACH	_____.____	_____.____
0620	SPV.0060 Special 072. Pole 20-Ft 7 Gauge	6.000 EACH	_____.____	_____.____
0622	SPV.0060 Special 073. Pole 30-Foot, 7 Gauge Single Mount	2.000 EACH	_____.____	_____.____
0624	SPV.0060 Special 074. Pole 30-Foot, 7 Gauge Twin Mount	3.000 EACH	_____.____	_____.____
0626	SPV.0060 Special 075. Pole 30-Foot, 11 Gauge Single Mount	37.000 EACH	_____.____	_____.____
0628	SPV.0060 Special 076. Pole 30-Foot, 11 Gauge Twin Mount	9.000 EACH	_____.____	_____.____
0630	SPV.0060 Special 077. Monotube Pole, Type 9	4.000 EACH	_____.____	_____.____
0632	SPV.0060 Special 079. LED Luminaire and Mounting Bracket Type V	5.000 EACH	_____.____	_____.____
0634	SPV.0060 Special 080. Monotube Arm, 25-Foot	2.000 EACH	_____.____	_____.____
0636	SPV.0060 Special 081. Monotube Arm, 30-Foot	2.000 EACH	_____.____	_____.____
0638	SPV.0060 Special 082. LED Luminaire And Mounting Bracket Type I	17.000 EACH	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0640	SPV.0060 Special 083. LED Luminaire And Mounting Bracket Type II	24.000 EACH	_____.____	_____.____
0642	SPV.0060 Special 084. LED Luminaire And Mounting Bracket Type III	8.000 EACH	_____.____	_____.____
0644	SPV.0060 Special 085. LED Luminaire And Mounting Bracket Type IV	11.000 EACH	_____.____	_____.____
0646	SPV.0060 Special 086. Traffic Signal Trombone Arm Aluminum 12-Foot	1.000 EACH	_____.____	_____.____
0648	SPV.0060 Special 087. Traffic Signal Trombone Arm Aluminum 15-Foot	3.000 EACH	_____.____	_____.____
0650	SPV.0060 Special 088. Traffic Signal Trombone Arm Aluminum 18-Foot	2.000 EACH	_____.____	_____.____
0652	SPV.0060 Special 089. Traffic Signal Trombone Arm Aluminum 20-Foot	3.000 EACH	_____.____	_____.____
0654	SPV.0060 Special 090. Traffic Signal Trombone Arm Aluminum 22-Foot	2.000 EACH	_____.____	_____.____
0656	SPV.0060 Special 091. Traffic Signal Heads 12-Inch, 3-Section Vertical	71.000 EACH	_____.____	_____.____
0658	SPV.0060 Special 092. Traffic Signal Heads 12-Inch, 4-Section Vertical	7.000 EACH	_____.____	_____.____
0660	SPV.0060 Special 093. Traffic Signal Heads 12-Inch, 5-Section Vertical	2.000 EACH	_____.____	_____.____
0662	SPV.0060 Special 094. Traffic Signal Heads 16-Inch Pedestrian with Countdown	39.000 EACH	_____.____	_____.____
0664	SPV.0060 Special 095. Backplates Signal Face, 3-Section 12-Inch	71.000 EACH	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0666	SPV.0060 Special 096. Backplates Signal Face, 4-Section 12-Inch	7.000 EACH	_____.____	_____.____
0668	SPV.0060 Special 097. Backplates Signal Face, 5-Section 12-Inch	2.000 EACH	_____.____	_____.____
0670	SPV.0060 Special 098. NEMA TS2 Type 1 Traffic Signal Control Cabinet	4.000 EACH	_____.____	_____.____
0672	SPV.0060 Special 099. Traffic Signal Controller	4.000 EACH	_____.____	_____.____
0674	SPV.0060 Special 100. Optical Signal Preempt	4.000 EACH	_____.____	_____.____
0676	SPV.0060 Special 101. Traffic Signal Ethernet Switch	4.000 EACH	_____.____	_____.____
0678	SPV.0060 Special 102. Malfunction Management Unit (MMU)	4.000 EACH	_____.____	_____.____
0680	SPV.0060 Special 103. Lighting Control Cabinet	2.000 EACH	_____.____	_____.____
0682	SPV.0060 Special 104. Vehicular Detection System Programming Unit	4.000 EACH	_____.____	_____.____
0684	SPV.0060 Special 105. No Right Turn Blank Out Signal	4.000 EACH	_____.____	_____.____
0686	SPV.0060 Special 106. Temporary Traffic Signals (Hill)	1.000 EACH	_____.____	_____.____
0688	SPV.0060 Special 107. Temporary Traffic Signals (Ridge)	1.000 EACH	_____.____	_____.____
0690	SPV.0060 Special 108. Temporary Traffic Signals (Farley)	1.000 EACH	_____.____	_____.____
0692	SPV.0060 Special 109. Temporary Street Lighting System Maintenance and Operations	1.000 EACH	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0694	SPV.0060 Special 110. Temporary Wood Poles	37.000 EACH	_____.____	_____.____
0696	SPV.0060 Special 111. Temporary Lighting Arms	18.000 EACH	_____.____	_____.____
0698	SPV.0060 Special 112. Temporary Luminaires Utility	18.000 EACH	_____.____	_____.____
0700	SPV.0060 Special 113. Reconstruct Bench And Flowlines	5.000 EACH	_____.____	_____.____
0702	SPV.0060 Special 115. Salvage Hydrant	4.000 EACH	_____.____	_____.____
0704	SPV.0090 Special 001. Concrete Curb And Gutter 24-Inch Type D Special	14,010.000 LF	_____.____	_____.____
0706	SPV.0090 Special 002. Concrete Curb 24-Inch Type D Special	205.000 LF	_____.____	_____.____
0708	SPV.0090 Special 003. Pedestrian Railing	550.000 LF	_____.____	_____.____
0710	SPV.0090 Special 004. Sign Post	276.000 LF	_____.____	_____.____
0712	SPV.0090 Special 005. Reflective Sign Post	238.000 LF	_____.____	_____.____
0714	SPV.0090 Special 006. Loop Detector Lead-In Cable Special	8,886.000 LF	_____.____	_____.____
0716	SPV.0090 Special 007. Concrete Curb and Gutter 24-Inch Type A Special	240.000 LF	_____.____	_____.____
0718	SPV.0090 Special 008. Temporary Asphaltic Curb	6,800.000 LF	_____.____	_____.____
0720	SPV.0090 Special 011. Storm Sewer Pipe Reinforced Concrete Class IV 96-Inch	92.000 LF	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0722	SPV.0090 Special 012. Storm Sewer Pipe Reinforced Concrete Class IV 96-Inch Rock Cut	900.000 LF	_____.____	_____.____
0724	SPV.0090 Special 019. Remove Pipe Sanitary	144.000 LF	_____.____	_____.____
0726	SPV.0090 Special 020. Sanitary Sewer Lateral	423.000 LF	_____.____	_____.____
0728	SPV.0090 Special 021. Sanitary Sewer Pipe PVC, 8-Inch	563.000 LF	_____.____	_____.____
0730	SPV.0090 Special 022. Sanitary Sewer Pipe PVC, 10-Inch	1,079.000 LF	_____.____	_____.____
0732	SPV.0090 Special 023. Sanitary Sewer Pipe PVC, 12-Inch	460.000 LF	_____.____	_____.____
0734	SPV.0090 Special 024. Select Fill for Sanitary Sewer	2,755.000 LF	_____.____	_____.____
0736	SPV.0090 Special 025. Furnish And Install Watermain Pipe & Fittings, 6-Inch	272.000 LF	_____.____	_____.____
0738	SPV.0090 Special 026. Furnish And Install Watermain Pipe & Fittings, 8-Inch	340.000 LF	_____.____	_____.____
0740	SPV.0090 Special 027. Furnish And Install Watermain Pipe & Fittings, 12-Inch	216.000 LF	_____.____	_____.____
0742	SPV.0090 Special 028. Furnish And Install Watermain Pipe & Fittings, 16-Inch	2,268.000 LF	_____.____	_____.____
0744	SPV.0090 Special 029. Furnish And Install Watermain Pipe & Fittings, 10-Inch	160.000 LF	_____.____	_____.____
0746	SPV.0090 Special 030. Select Fill For Water Main	3,256.000 LF	_____.____	_____.____
0748	SPV.0090 Special 031. Interceptor Sewer, 30-Inch	1,363.000 LF	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0750	SPV.0090 Special 032. Trenchless Casing Pipe, 48-Inch Steel Minimum	45.000 LF	_____.____	_____.____
0752	SPV.0090 Special 033. Fiber Optic Cable 12-Count	3,867.000 LF	_____.____	_____.____
0754	SPV.0090 Special 034. Fiber Optic Cable 288-Count	2,923.000 LF	_____.____	_____.____
0756	SPV.0090 Special 035. Electrical Wire Lighting, 14-3 Grounded	2,079.000 LF	_____.____	_____.____
0758	SPV.0090 Special 036. Temporary Overhead Span Wire	3,769.000 LF	_____.____	_____.____
0760	SPV.0090 Special 037. MMSD Sanitary Sewer, 36-Inch	167.600 LF	_____.____	_____.____
0762	SPV.0090 Special 041. Railing Steel Pedestrian Ornamental	311.000 LF	_____.____	_____.____
0764	SPV.0165 Special 001. Wall Concrete Panel Mechanically Stabilized Earth R-13-360	3,810.000 SF	_____.____	_____.____
0766	SPV.0165 Special 002. Wall Concrete Panel Mechanically Stabilized Earth R-13-361	3,610.000 SF	_____.____	_____.____
0768	SPV.0165 Special 003. Wall Modular Block Gravity Landscape	435.000 SF	_____.____	_____.____
0770	SPV.0165 Special 004. High Friction Colored Surface - Bike Box Green	710.000 SF	_____.____	_____.____
0772	SPV.0170 Special 001. Pavement Cleanup Project 5992-11-31	82.000 STA	_____.____	_____.____
0774	SPV.0195 Special 001. Stabilization Clear Stone, 3-Inch	100.000 TON	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0776	SPV.0195 Special 002. Granular Backfill, Interceptor Sewer	4,000.000 TON	_____.____	_____.____
0778	SPV.0195 Special 003. Excavation, Hauling, and Disposal of Petroleum Contaminated Soil	4,250.000 TON	_____.____	_____.____
0780	SPV.0195 Special 004. Excavating, Loading, Hauling, and Landfill Disposal of Cinder-Cntmated Soil	2,125.000 TON	_____.____	_____.____
0784	204.0120 Removing Asphaltic Surface Milling	8,660.000 SY	_____.____	_____.____
0786	504.2000.S Precast Concrete Box Culvert (ft X ft) 003. 15FT X 6 FT	50.000 LF	_____.____	_____.____
0788	628.7560 Tracking Pads	8.000 EACH	_____.____	_____.____
0790	642.5401 Field Office Type D	1.000 EACH	_____.____	_____.____
0792	644.1420 Temporary Pedestrian Surface Plywood	1,365.000 SF	_____.____	_____.____
0794	SPV.0045 Special 001. Temporary Crosswalk Access Shorewood Blvd/Hill Street	247.000 DAY	_____.____	_____.____
0796	SPV.0045 Special 002. Temporary Crosswalk Access Marshall Ct/Ridge St	247.000 DAY	_____.____	_____.____
0798	SPV.0045 Special 003. Temporary Crosswalk Access University Bay Drive/Farley Ave	247.000 DAY	_____.____	_____.____
0800	SPV.0060 Special 008. Construction Staking Project 5992-11-32	1.000 EACH	_____.____	_____.____
0802	SPV.0060 Special 038. External Sewer Access Structure Joint Seal	2.000 EACH	_____.____	_____.____
0804	SPV.0060 Special 047. Private Storm Sewer Connection	8.000 EACH	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0806	SPV.0090 Special 037. Sanitary Sewer Pressure Pipe (C900), 10-Inch	13.000 LF	_____.____	_____.____
0808	SPV.0090 Special 038. Sanitary Sewer Pressure Pipe (C900), 12-Inch	237.000 LF	_____.____	_____.____
0810	SPV.0200 Special 002. Construct Inside Drop 10-Inch	2.300 VF	_____.____	_____.____
	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

March 3, 2022

NOTICE TO ALL CONTRACTORS:

Proposal #09: **5992-11-31/32/33, WISC 2022233**
City of Madison, University Avenue
Shorewood Blvd to University Bay Drive
Local Street
Dane County

5992-11-32
City of Madison, University Avenue
Shorewood Blvd to University Bay Drive
Local Street
Dane County

5992-11-33
City of Madison, University Avenue
Shorewood Blvd to University Bay Drive
Local Street
Dane County

Letting of March 8, 2022

This is Addendum No. 02, which provides for the following:

Special Provisions:

Revised Special Provisions	
Article No.	Description
30	Trenchless Installation of 96-Inch Storm Sewer Pipe.
103	LED Luminaire and Mounting Bracket Type V, Item SPV.0060.079; LED Luminaire and Mounting Bracket Type I, Item SPV.0060.082; LED Luminaire and Mounting Bracket Type II, Item SPV.0060.083; LED Luminaire and Mounting Bracket Type III, Item SPV.0060.084; LED Luminaire and Mounting Bracket Type IV, Item SPV.0060.085.

Schedule of Items:

Added Bid Item Quantities					
Bid Item	Item Description	Unit	Old Quantity	Revised Quantity	Proposal Total
531.2036	Drilling Shaft 36-Inch	LF	0	90	90
531.5310.001	Foundation Single-Shaft Type TC-I Structure S-13-589	EACH	0	1	1
531.5310.002	Foundation Single-Shaft Type TC-I Structure S-13-590	EACH	0	1	1
531.5310.003	Foundation Single-Shaft Type TC-I Structure S-13-591	EACH	0	1	1
531.5310.004	Foundation Single-Shaft Type TC-I Structure S-13-592	EACH	0	1	1
531.5310.005	Foundation Single-Shaft Type TC-I Structure S-13-593	EACH	0	1	1
532.5310.001	Truss Cantilever 2-Chord Type I Structure S-13-589	EACH	0	1	1
532.5310.002	Truss Cantilever 2-Chord Type I Structure S-13-590	EACH	0	1	1
532.5310.003	Truss Cantilever 2-Chord Type I Structure S-13-591	EACH	0	1	1
532.5310.004	Truss Cantilever 2-Chord Type I Structure S-13-592	EACH	0	1	1
532.5310.005	Truss Cantilever 2-Chord Type I Structure S-13-593	EACH	0	1	1

Deleted Bid Item Quantities					
Bid Item	Item Description	Unit	Old Quantity	Revised Quantity	Proposal Total
532.5120.001	Monotube Cantilever Type II Sta. 143+10	EACH	1	-1	0
532.5120.002	Monotube Cantilever Type II Sta. 142+63	EACH	1	-1	0
532.5120.003	Monotube Cantilever Type II Sta. 153+40	EACH	1	-1	0
532.5120.004	Monotube Cantilever Type II Sta. 154+06	EACH	1	-1	0
532.5120.005	Monotube Cantilever Type II Sta. 160+47	EACH	1	-1	0

Plan Sheets:

Revised Plan Sheets	
Plan Sheet	Plan Sheet Title (brief description of changes to sheet)
3	Project Overview. Add sign structures
166, 168-169	Permanent Signing. Add sign structure label
351	Remove Monotube Cantilever Table. Quantity now included on sign structure plans.
379, 383	Plan and Profile. Detail. Add sign structure label

Added Plan Sheets	
Plan Sheet	Plan Sheet Title (brief description of why sheet was added)
632A-632J	Sign Structure Plans S-13-589/590/591/592/593

Full size structure plans can be found at the following location:

https://wisdot.box.com/s/zqci595or7wz6hodjh2tw6xbaxcxo5ka

Deleted Plan Sheets	
Plan Sheet	Plan Sheet Title (brief description of why sheet was deleted)
57-61	Monotube Sign Details. Replaced with sign structure plans.

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. 02

PROJECT ID 5992-11-31/32/33

March 3, 2022

Special Provisions

30. Trenchless Installation of 96-Inch Storm Sewer Pipe.

Replace paragraph one under section titled **B.1 Project Superintendent** *with the following*:

The Project Superintendent shall have completed a minimum of five tunnel installations, each with a minimum drive length of 500 linear feet of installed pipe with a minimum of 48-inch diameter. One documented drive shall be equal to or greater than the longest drive length proposed for this project. The Project Superintendent shall be able to document experience with tunneling equipment similar to that proposed for this project. All documented experience shall have occurred within the past 8 years. At least one of the referenced projects shall include installation and use of an Intermediate Jacking Station, if an Intermediate Jacking Station is proposed for this project.

Replace entire section titled **B2 Tunnel Boring Machine (TBM) Operator** *with the following:*

B2 Tunnel Boring Machine (TBM) Operator

The TBM Operator shall have successfully completed a minimum of seven installation projects, each with a minimum drive of 500 linear feet of installed pipe with a minimum of 48-inch diameter. The TBM Operator shall be able to document experience with tunneling equipment similar to that proposed for this project. All documented experience shall have occurred within the past 10 years. Additionally, the TBM Operator shall have experience installing the same pipe material and size as proposed for this project and shall have successfully completed one drive length equal to or greater than the longest drive length proposed for this project. The TBM Operator shall have successfully completed a project in similar subsurface ground conditions. If an Intermediary Jacking Station is proposed, the TBM Operator shall document applicable experience.

103. LED Luminaire and Mounting Bracket Type V, Item SPV.0060.079; LED Luminaire and Mounting Bracket Type I, Item SPV.0060.082; LED Luminaire and Mounting Bracket Type II, Item SPV.0060.083; LED Luminaire and Mounting Bracket Type III, Item SPV.0060.084; LED Luminaire and Mounting Bracket Type IV, Item SPV.0060.085.

Replace paragraph three under section titled **B.1 Material Qualifications** *with the following:*

The LED Luminaire and Mounting Bracket Type V shall consist of WisDOT standard bid item 657.0806 “Luminaire Arms Steel 6-FT” and 659.1120 “Luminaires Utility LED B” as described in the standard specs, standard details, and as found on the qualified products list.

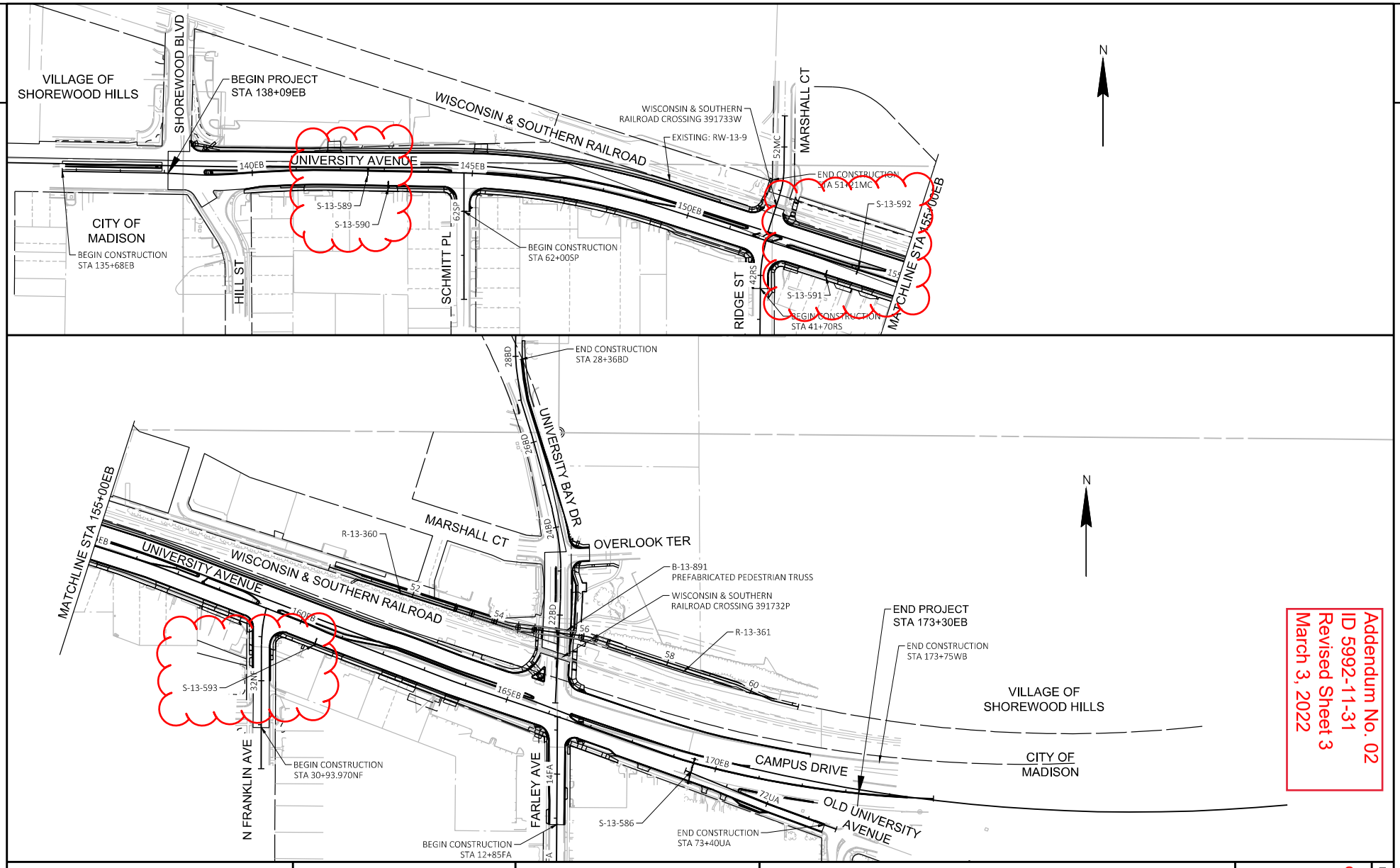
Replace last paragraph under section titled **E Payment** *with the following:*

Payment is full compensation for furnishing all materials, including all luminaires, luminaire fusing, luminaire arms, fittings, brackets, mounting hardware and leveling shims.

Schedule of Items
Attached, dated March 3, 2022, are the revised Schedule of Items Pages 1 - 28.

Plan Sheets
The following 8½ x 11-inch sheets are attached and made part of the plans for this proposal:
Revised: 3, 166, 168-169, 351, 379 and 383.
Added: 632A-632J.
Deleted: 57-61.

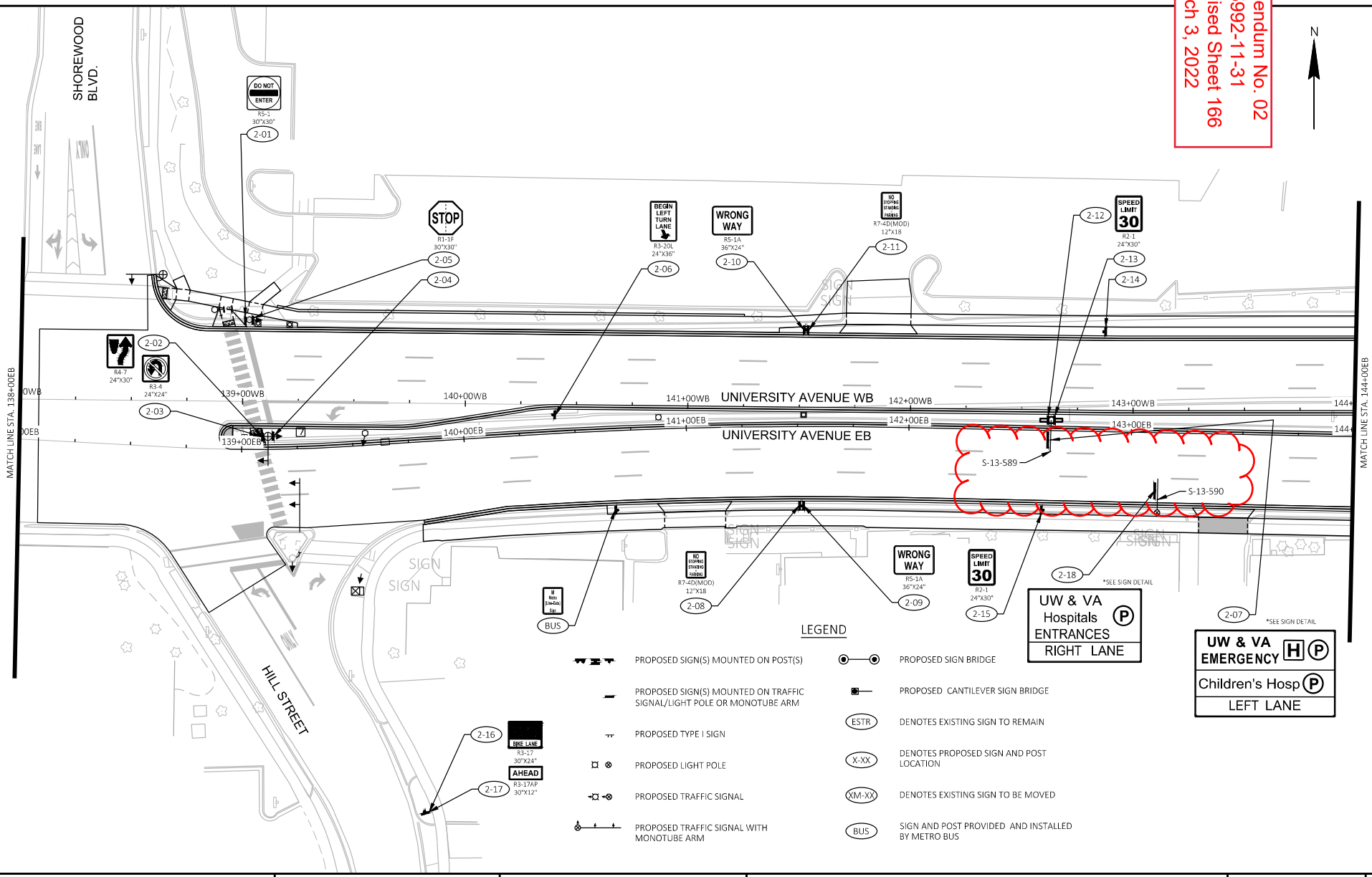
END OF ADDENDUM



PROJECT NO: 5992-11-31	HWY: UNIVERSITY AVENUE	COUNTY: DANE	PROJECT OVERVIEW	SHEET 3 E

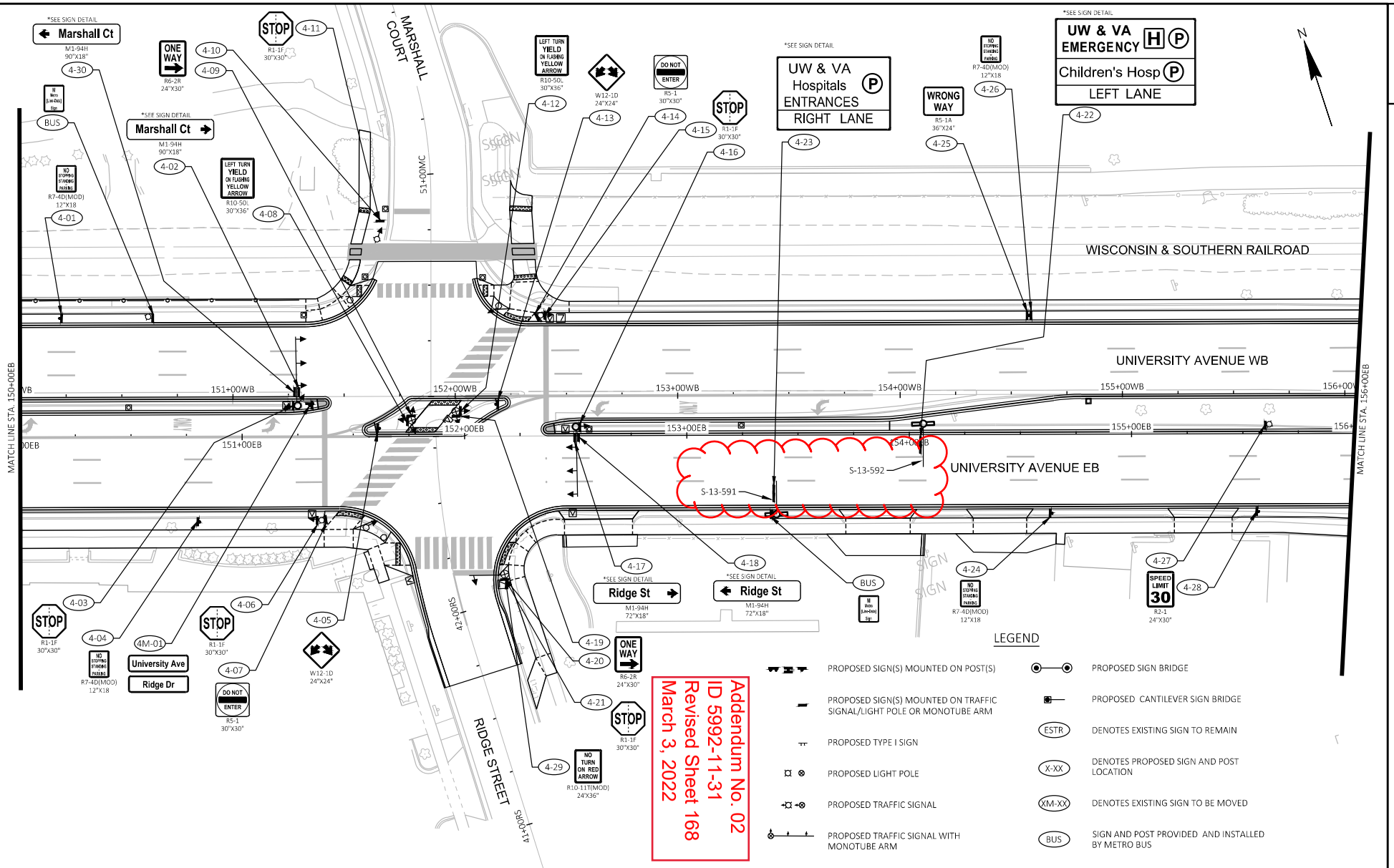
FILE NAME : G:\MADISON\18026-001 UNIV AVE (SHOREWOOD - UNIVERSITY BAY)\CIVIL 3D\SHEETSPLAN\020201-PO.DWG
LAYOUT NAME - OVERVIEW
PLOT DATE : 3/1/2022 8:43 AM
PLOT BY : KL ENGINEERING
PLOT NAME :
PLOT SCALE : 1 IN:400 FT

Addendum No. 02
ID 5992-11-31
Revised Sheet 166
March 3, 2022



PROJECT NO: 5992-11-31	HWY: UNIVERSITY AVENUE	COUNTY: DANE	PERMANENT SIGNING - UNIVERSITY AVENUE	SHEET 166 E

FILE NAME : G:\MADISON\18026-001 UNIV AVE (SHOREWOOD - UNIVERSITY BAY)\CIVIL 3D\SHEETSPLAN\05 PLAN DETAILS\023203-PS.DWG
LAYOUT NAME - ps 2
PLOT DATE : 3/1/2022 8:47 AM
PLOT BY : KL ENGINEERING
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

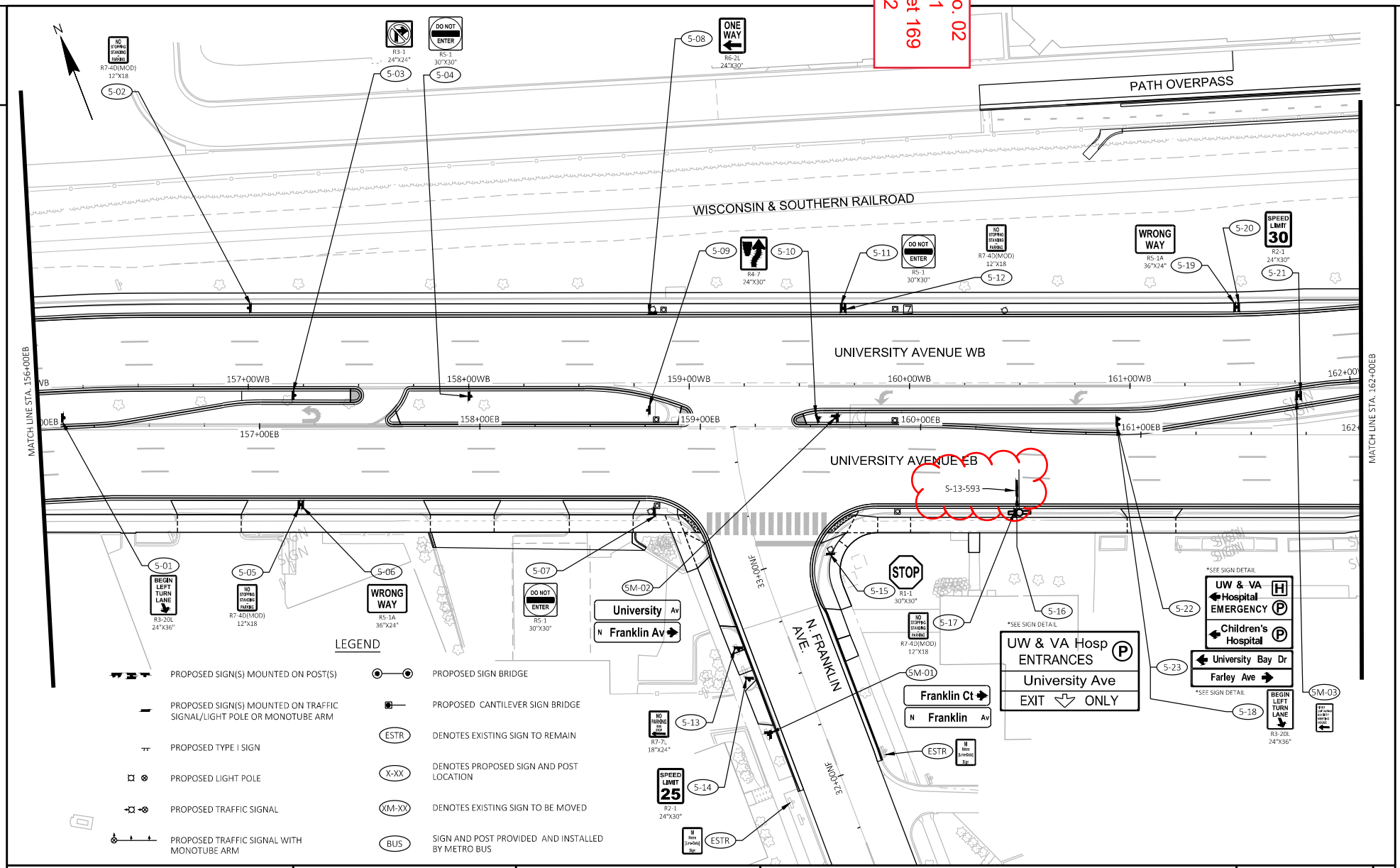


PROJECT NO: 5992-11-31	HWY: UNIVERSITY AVENUE	COUNTY: DANE	PERMANENT SIGNING - UNIVERSITY AVENUE	SHEET 168 E

FILE NAME : G:\MADISON\18026-001 UNIV AVE (SHOREWOOD - UNIVERSITY BAY)\CIVIL 3D\SHEETSPLAN\05 PLAN DETAILS\023203-PS.DWG
LAYOUT NAME - ps 4
PLOT DATE : 3/1/2022 8:48 AM
PLOT BY : KL ENGINEERING
PLOT NAME :
PLOT SCALE : 1 IN:40 FT

WISDOT/CADDS SHEET 42

Addendum No. 02
ID 5992-11-31
Revised Sheet 169
March 3, 2022



PROJECT NO: 5992-11-31	HWY: UNIVERSITY AVENUE	COUNTY: DANE	PERMANENT SIGNING - UNIVERSITY AVENUE	SHEET 169 E

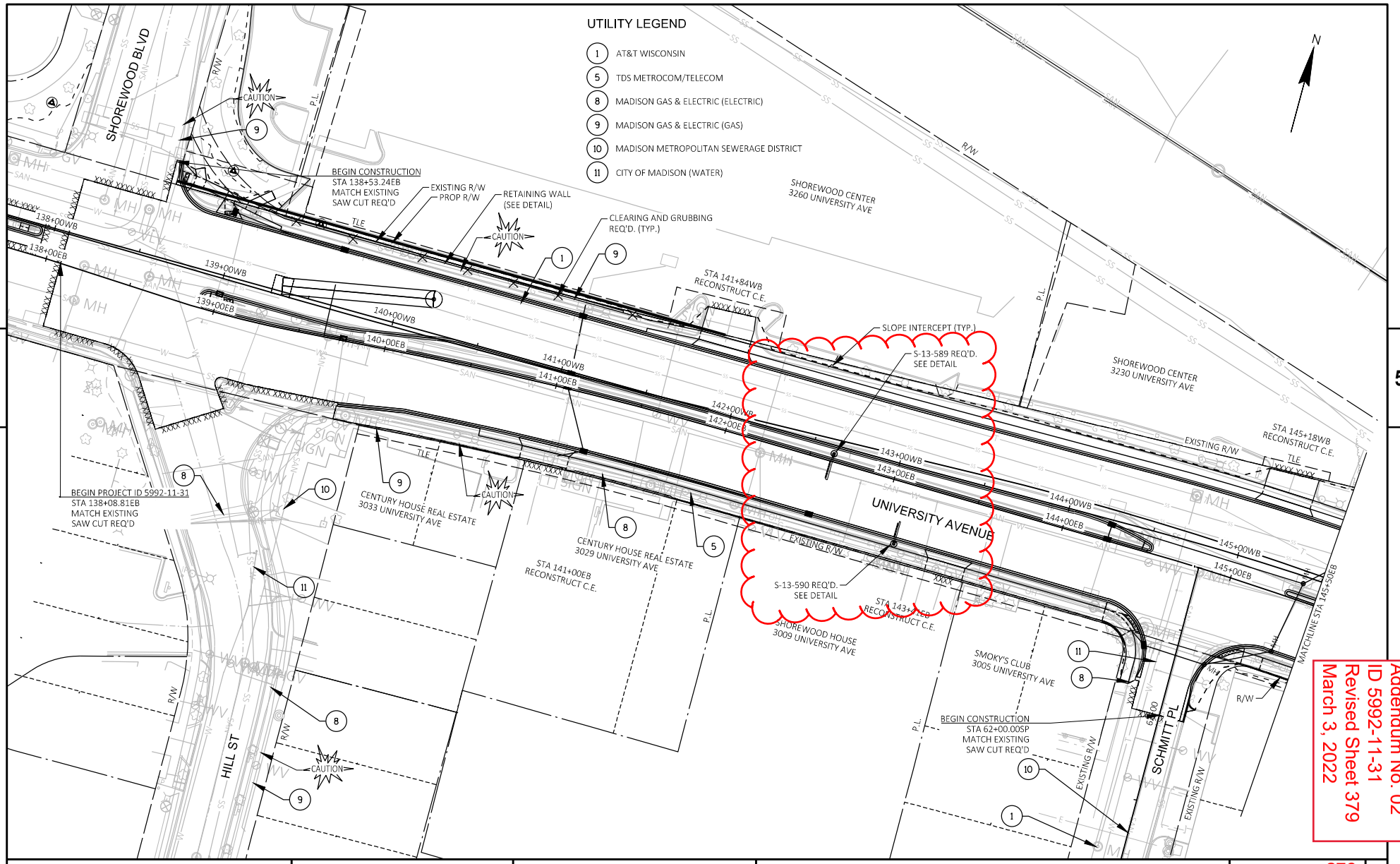
FILE NAME : G:\MADISON\18026-001 UNIV AVE (SHOREWOOD - UNIVERSITY BAY)\CIVIL 3D\SHEETSPLAN\05 PLAN DETAILS\023203-PS.DWG
LAYOUT NAME - ps 5
PLOT DATE : 3/1/2022 8:48 AM
PLOT BY : KL ENGINEERING
PLOT NAME :
PLOT SCALE : 1 IN:40 FT

3

PERMANENT SIGNING

SIGN #	SIGN CODE	SIGN SIZE	SIGN SIZE WXH IN	637.1220 SIGNS TYPE I REFLECTIVE TYPE SH (SF)	637.2210 SIGNS TYPE II REFLECTIVE H FOLDING SF	637.2215 SIGNS TYPE II REFLECTIVE H FOLDING SF	637.2230 SIGNS TYPE II REFLECTIVE F SF	654.0110 CONCRETE BASES TYPE 10 (EACH)	657.0346 POLES TYPE 9 OVER HEIGHT (EACH)	657.0515 MONOTUBE ARMS 15-FT (EACH)	SPV.0060.004 PRECAST SIGN POST BASE (EACH)	SPV.0060.005 SIGN POST BASE FOR CONCRETE INSTALLATION (EACH)	SPV.0090.004 SIGN POST (LF)	SPV.0090.005 REFLECTIVE SIGN POST (LF)	SIGN MOUNTED ON/SAME POST AS	REMARKS
8-14	R3-17B	2S	30X12	---	2.50	---	---	---	---	---	---	---	---	---	POLE	BIKE LANE ENDS (PLAQUE)
8-15	R7-4D	2S	18X24	---	3.00	---	---	---	---	---	---	---	---	---	POLE	NO STOPPING OR STANDING(DOUBLE ARROW)
8-16	R3-1	2S	24X24	---	4.00	---	---	---	---	---	1	---	10	---	---	NO RIGHT TURN SYMBOL
8-17	R3-1	2S	24X24	---	4.00	---	---	---	---	---	1	---	10	---	---	NO RIGHT TURN SYMBOL
8-18	R5-1	2S	30X30	---	6.25	---	---	---	---	---	---	---	---	---	8-16	DO NOT ENTER
8-19	R5-1	2S	30X30	---	6.25	---	---	---	---	---	---	---	---	---	8-17	DO NOT ENTER
CATEGORY 0010 TOTAL				**410.00**	**751.48**	**72.52**	**35.00**	**1**	**1**	**2**	**44**	**7**	**256**	**238**		
5992-11-31																
CATEGORY 0080																
7-01	W4-2R	2S	36X36	---	---	---	9.00	---	---	---	---	---	---	---	POLE	LANE REDUCTION TRANSITION SYMBOL (RIGHT)
7-03	R1-1F	2S	36X36	---	7.07	---	---	---	---	---	---	---	---	---	POLE	STOP SIGN (FOLDING)
7-04	W10-1	2S	36X36	---	---	---	3.00	---	---	---	1	---	10	---	---	RAILROAD CROSSING
7-05	R7-1D	2S	18X24	---	---	---	---	---	---	---	---	---	---	---	7-04	NO PARKING ANY TIME (DOUBLE ARROW)
7-06	M1-94H	Custom	90X18	---	11.25	---	---	---	---	---	---	---	---	---	POLE ARM	MARSHALL CT
7-07	M1-94H	Custom	90X18	---	11.25	---	---	---	---	---	---	---	---	---	POLE ARM	MARSHALL CT
7-08	R1-1F	2S	30X30	---	---	5.18	---	---	---	---	---	---	---	---	POLE	STOP SIGN (FOLDING)
7-09	R1-1F	2S	30X30	---	---	5.18	---	---	---	---	---	---	---	---	POLE	STOP SIGN (FOLDING)
7-10	M1-94H	Custom	96X18	---	12.00	---	---	---	---	---	---	---	---	---	POLE ARM	OVERLOOK TER
7-11	M1-94H	Custom	96X18	---	12.00	---	---	---	---	---	---	---	---	---	POLE ARM	OVERLOOK TER
7-12	R3-17	2S	30X24	---	5.00	---	---	---	---	---	---	---	---	---	POLE	BIKE LANE (BIKE SYMBOL)
7-13	R1-1F	2S	30X30	---	---	5.18	---	---	---	---	---	---	---	---	POLE	STOP SIGN (FOLDING)
7-14	W11-2	2S	30X30	---	---	---	6.25	---	---	---	1	---	10	---	---	PEDESTRIAN CROSSING SYMBOL
7-15	W16-7L	2S	24X12	---	---	---	2.00	---	---	---	---	---	---	---	7-14	LEFT DIAGONAL DOWNWARD POINTING ARROW (YELLOW)
CATEGORY 0080 TOTAL				**0**	**58.57**	**15.54**	**20.25**	**0**	**0**	**0**	**2**	**0**	**20**	**0**		
PROJECT 5992-11-31 TOTAL				**410.00**	**810.05**	**88.06**	**55.25**	**1**	**1**	**2**	**46**	**7**	**276**	**238**		

Addendum No. 02
ID 5992-11-31
Revised Sheet 351
March 3, 2022

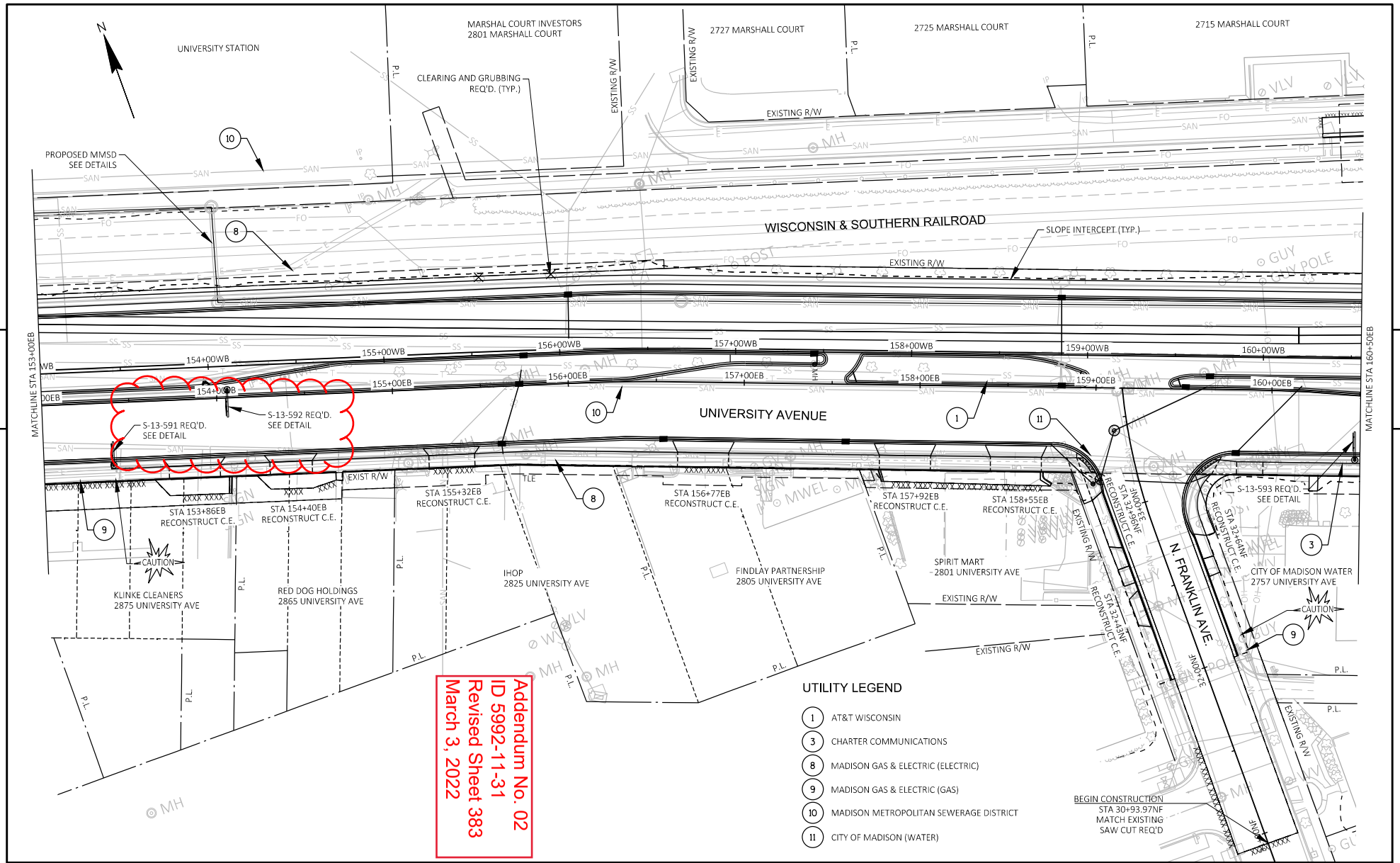


Addendum No. 02
ID 5992-11-31
Revised Sheet 379
March 3, 2022

PROJECT NO: 5992-11-31	HWY: UNIVERSITY AVENUE	COUNTY: DANE	PLAN AND PROFILE - UNIVERSITY AVENUE	SHEET 379	E

FILE NAME : G:\MADISON\18026-001 UNIV AVE (SHOREWOOD - UNIVERSITY BAY)\CIVIL 3D\SHEETSPLAN\08 PLAN AND PROFILES\050101-PP-UNIVERSITY AVE EB.DWG
LAYOUT NAME - PP - (1)
PLOT DATE : 3/1/2022 8:58 AM
PLOT BY : KL ENGINEERING
PLOT NAME :
PLOT SCALE : 1 IN:50 FT

WISDOT/CADDS SHEET 42



PROJECT NO: 5992-11-31	HWY: UNIVERSITY AVENUE	COUNTY: DANE	PLAN AND PROFILE - UNIVERSITY AVENUE	SHEET 383 E

FILE NAME : G:\MADISON\18026-001 UNIV AVE (SHOREWOOD - UNIVERSITY BAY)\CIVIL 3D\SHEETSPLAN\08 PLAN AND PROFILES\050101-PP-UNIVERSITY AVE EB.DWG
LAYOUT NAME - PP - (3)
PLOT DATE : 3/1/2022 9:00 AM
PLOT BY : KL ENGINEERING
PLOT NAME :
PLOT SCALE : 1 IN:50 FT

DESIGN DATA

CONTRACTOR DESIGNED OVERHEAD SIGN STRUCTURES SHALL BE DESIGNED ACCORDING TO THE AASHTO "LRFD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS", 1ST EDITION AND INTERIM SPECIFICATIONS, AND THE WISDOT BRIDGE MANUAL.

STANDARD FOUNDATIONS DESIGNED ACCORDING TO THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, 8TH EDITION.

DEAD LOAD: WT. OF SIGN AND SUPPORTING STRUCTURE.
ICE LOAD: 3 PSF TO ONE FACE OF SIGN & SURFACE OF MEMBERS.
WIND PRESSURE: 115 MPH (3-SEC. GUST SPEED) TO SIGN AREA & EXPOSED MEMBERS. (700 YEAR MEAN RECURRENCE INTERVAL)

WIND COMPONENTS	NORMAL	TRANSVERSE
LOAD CASE 1:	1.00	0.00
LOAD CASE 2:	0.00	1.00
LOAD CASE 3:	0.75	0.75

LOAD COMBINATIONS

STRENGTH I:	1.25 DC + 1.6 LL
EXTREME I (MAX DC):	1.1 DC + 1.0 W + 1.0 ICE
EXTERME I (MIN DC):	0.9 DC + 1.0 W
SERVICE I:	1.0 DC + 1.0 W
FATIGUE I:	1.0 NWG (NATURAL WIND GUST VIBRATION)
	1.0 TRG (TRUCK INDUCED GUST VIBRATION)
	1.0 GVW (GALLOPING - CANTILEVER ONLY)

MATERIAL PROPERTIES

CONCRETE MASONRY ..... f'c = 3,500 psi

HIGH STRENGTH STEEL
REINFORCEMENT, GRADE 60 ..... fy = 60,000 psi

HIGH STRENGTH BOLTS - A325 ..... fy = 92,000 psi

ANCHOR RODS - ASTM F1554 GRADE 55 ..... fy = 55,000 psi

HEAVY HEX NUTS FOR ANCHOR RODS - ASTM A563A

WASHERS FOR ANCHOR RODS - ASTM F436

FOUNDATION DATA

SIGN STRUCTURE FOUNDATIONS ARE SUPPORTED ON DRILLED SHAFTS THAT HAVE BEEN DESIGNED FOR SITES WHERE SOILS EXHIBIT A PHI-ANGLE GREATER THAN OR EQUAL TO 24° (GRANULAR SOILS), OR A COHESION VALUE GREATER THAN OR EQUAL TO 750 PSF (COHESIVE SOILS) AND A UNIT WEIGHT OF 125 PCF. THE GROUND WATER TABLE FOR DESIGN IS ASSUMED TO BE AT A DEPTH OF 10'-0" BELOW THE GROUND SURFACE, ACTUAL WATER LEVEL AT SITE MAY VARY. THE REGION GEOTECHNICAL ENGINEER SHALL VISUALLY INSPECT THE SUBSURFACE SOILS DURING DRILLING OF THE SHAFT HOLE TO CONFIRM THESE PROPERTIES PRIOR TO PLACEMENT OF THE DRILLED SHAFT CONCRETE.

GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.

ALTERNATE DESIGNS ARE NOT ALLOWED.

COORDINATES ON THIS PLAN ARE REFERENCED TO THE WISCONSIN COUNTY COORDINATE SYSTEM (WCCS), DANE COUNTY ZONE, NAD 83 (2007). ALL STATIONS AND ELEVATIONS ARE IN FEET. ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM NAVD 88 (1991).

ALL REINFORCING BARS ARE IN ENGLISH UNITS. THE FIRST DIGIT OF A THREE-DIGIT BAR MARK OR THE FIRST TWO DIGITS OF A FOUR-DIGIT BAR MARK SIGNIFIES THE BAR SIZE.

SIGN BRIDGE ID PLAQUES SHALL BE CONSIDERED INCIDENTAL TO THE truss or monotube BID ITEMs FOR EACH APPLICABLE SIGN STRUCTURE IN THE PLAN SET. LOCATE THE ID PLAQUE ON THE FREEWAY SIDE OF THE SUPPORT COLUMN SO THAT IT CAN BE SEEN FROM THE ROADWAY. FABRICATE AND INSTALL THE ID PLAQUE IN ACCORDANCE WITH S.D.D. 12 A 4-3.

UNLESS DETAILED OTHERWISE IN THE PLANS, ALL H.S. BOLTED CONNECTIONS SHALL BE MADE WITH ¾" DIA A325 GALVANIZED BOLTS. FIELD CONNECTIONS SHALL BE INSTALLED WITH DTI WASHERS.

WELDED CONNECTIONS CAN BE USED IN LIEU OF BOLTED CONNECTIONS, IF A TRUSS UNIT CAN BE GALVANIZED IN ONE PIECE.

WELD TEST AS PER AWS D1.1.

SEE SIGN PLATE NO. a4-6, A4-7A & A4-7B OF THE SIGN PLATE MANUAL FOR INSTRUCTIONS ON CENTERING SIGNS VERTICALLY ON THE TRUSS.

SIGNS OR BLANKS SHALL BE INSTALLED ON TRUSS AT TIME OF ERECTION. BLANKS SHALL BE 1/4 THE LENGTH OF THE CANTILEVER SPAN, 2'-0" DEEPER THAN THE C/L TO C/L OF CHORDS, AND SHALL BE CENTERED ON THE BRIDGE. SIGNS SHALL BE AS DESIGNATED ON THE PLANS.

THE INFORMATION SHOWN ON THESE DRAWINGS CONCERNING TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL-INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION OF THE TYPE AND LOCATION OF UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE.

CONTRACTOR SHALL SUBMIT SHOP DRAWINGS PER THE REQUIREMENTS IN THE STANDARD SPECIFICATIONS PRIOR TO FABRICATION OF THE STRUCTURE. CONTRACTOR SHALL SHOW SIGNS ON THE SHOP DRAWINGS.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR DRILLING OR EXCAVATING AND MAINTAINING A STABLE AND OPEN HOLE FOR SUBSEQUENT INSTALLATION OF CONCRETE MASONRY FOR THE DRILLED SHAFTS. PARTIAL OR FULL DEPTH TEMPORARY CASING MAY BE REQUIRED TO MAINTAIN THE STABILITY OF THE EXCAVATED HOLE FOR THE SIGN SUPPORT PRIOR TO FILLING THE HOLE WITH CONCRETE. PERMANENT CASING MADE FROM STEEL OR CORRUGATED METAL PIPE MAY BE USED IN LIEU OF TEMPORARY CASING. TEMPORARY/PERMANENT CASING, IF USED, SHALL BE INCIDENTAL TO THE BID ITEM "DRILLING shaft (dia.)".

STRUCTURE DATA

SIGN STR	ACTUAL SIGN AREA	ACTUAL SIGN DEPTH	STANDARD TYPE
S-13-589	71.25 SF	6'-6"	TC-I
S-13-590	46.75 SF	5'-6"	TC-I
S-13-591	48.25 SF	5'-6"	TC-I
S-13-592	71.25 SF	6'-6"	TC-I
S-13-593	64.50 SF	6'-0"	TC-I

LIST OF DRAWINGS

1. GENERAL NOTES & DESIGN DATA
2. GENERAL LAYOUT S-13-589
3. GENERAL LAYOUT S-13-590
4. GENERAL LAYOUT S-13-591
5. GENERAL LAYOUT S-13-592
6. GENERAL LAYOUT S-13-593

LIST OF OSS STANDARD DESIGN DRAWINGS

7. I. MONOTUBE & 2-CHORD TRUSS DETAILS 1
8. II. MONOTUBE & 2-CHORD TRUSS DETAILS 2
9. III. 2-CHORD TRUSS STANDARD ELECTRICAL DETAILS
10. IV. MONOTUBE & 2-CHORD TRUSS FOUNDATION DETAILS

TOTAL ESTIMATED QUANTITIES

BID ITEM NO.	BID ITEM	UNIT	S-13-589	S-13-590	S-13-591	S-13-592	S-13-593
531.2036	DRILLING SHAFT 36-INCH	LF	18	18	18	18	18
531.5310.001	FOUNDATION SINGLE-SHAFT TYPE TC-I S-13-589	EA	1	--	--	--	--
531.5310.002	FOUNDATION SINGLE-SHAFT TYPE TC-I S-13-590	EA	--	1	--	--	--
531.5310.003	FOUNDATION SINGLE-SHAFT TYPE TC-I S-13-591	EA	--	--	1	--	--
531.5310.004	FOUNDATION SINGLE-SHAFT TYPE TC-I S-13-592	EA	--	--	--	1	--
531.5310.005	FOUNDATION SINGLE-SHAFT TYPE TC-I S-13-593	EA	--	--	--	--	1
532.5310.001	TRUSS CANTILEVER TWO-CHORD TYPE I S-13-589	EA	1	--	--	--	--
532.5310.002	TRUSS CANTILEVER TWO-CHORD TYPE I S-13-590	EA	--	1	--	--	--
532.5310.003	TRUSS CANTILEVER TWO-CHORD TYPE I S-13-591	EA	--	--	1	--	--
532.5310.004	TRUSS CANTILEVER TWO-CHORD TYPE I S-13-592	EA	--	--	--	1	--
532.5310.005	TRUSS CANTILEVER TWO-CHORD TYPE I S-13-593	EA	--	--	--	--	1

STATE PROJECT NUMBER

5992-11-31

TRAFFIC VOLUME

A.D.T. (2042) = 54,765
R.D.S. = 40 MPH

Addendum No. 02
ID 5992-11-31
Added Sheet 632A
March 3, 2022

STRUCTURE DESIGN CONTACTS:
AARON BONK (608) 261-0261
CHAD HALVERSON (608) 663-1218

NO.	DATE	REVISION	BY
2	3/2/22	NEW 2-CHORD TRUSS PLANS	CDH

THESE ARE STANDARD DESIGN PLANS, DEVELOPED AND MAINTAINED BY THE WISCONSIN DEPARTMENT OF TRANSPORTATION. THE DESIGNER CERTIFIES THAT THE DESIGN AND PLAN DETAILS CHOSEN ARE CONSISTENT WITH THE GUIDANCE PROVIDED IN THE CURRENT WISCONSIN BRIDGE MANUAL CHAPTER 39.

March 1, 2022

KL Engineering
[A] Better Experience

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

ACCEPTED SDR 03/02/22
CHIEF STRUCTURES DESIGN ENGINEER DATE

MONOTUBE AND
2-CHORD TRUSS PLANS

Description

COUNTY	CITY
DANE	MADISON

DESIGN SPEC.

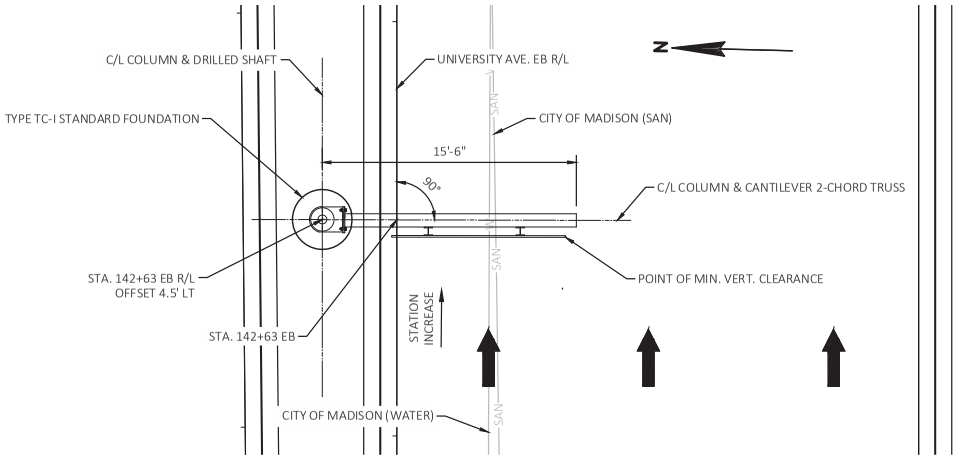
DESIGNED BY	DESIGNED CK'D.	DRAWN BY	PLANS CK'D.
BOS	BOS	STD	BOS

GENERAL NOTES & DESIGN DATA

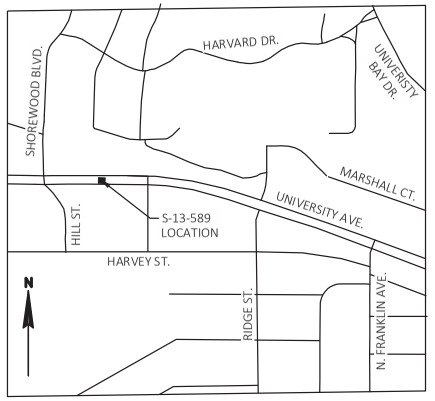
SHEET 1 OF 10

632A

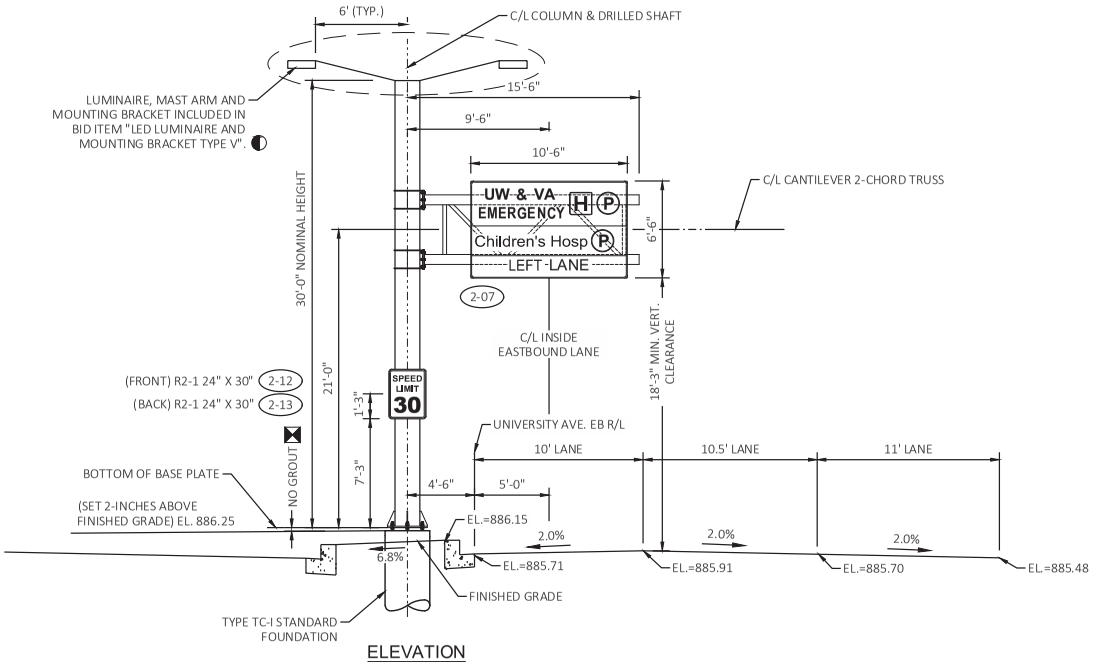
STATE PROJECT NUMBER
5992–11–31



PLAN



LOCATION MAP



ELEVATION
STA. 142+63EB

Addendum No. 02
ID 5992-11-31
Added Sheet 632B
March 3, 2022

NOTE

POINT OF MIN. VERTICAL CLEARANCE
STA. 142+63'EB', 10'-0" RT
EL. = 885.91

LEGEND

- ☆ ELEVATIONS GIVEN ALONG C/L CANTILEVER 2-CHORD TRUSS.
- (X-XX) SIGN NUMBER (PERMANENT SIGNING PLAN)
- ⧓ STANDOFF DIMENSION IS ASSUMED TO BE 2 ½", BUT IS A MAXIMUM OF 2 X ANCHOR DIMENSION. SEE FOUNDATION DETAILS SHEET AND SHOP DRAWINGS FOR MORE INFORMATION.
- ◐ SEE SDD "TYPE 13 POLE 35'-55' MONOTUBE ARM" AND "GENERAL NOTES AND HARDWARE FOR TYPES 9, 10, 9/10 SPECIAL, 12, AND 13 POLES WITH MONOTUBE ARMS" FOR ADDITIONAL DETAILS.

NO.	DATE	REVISION	BY
2	3/2/22	NEW 2–CHORD TRUSS PLANS	CDH

STRUCTURE S–13–589

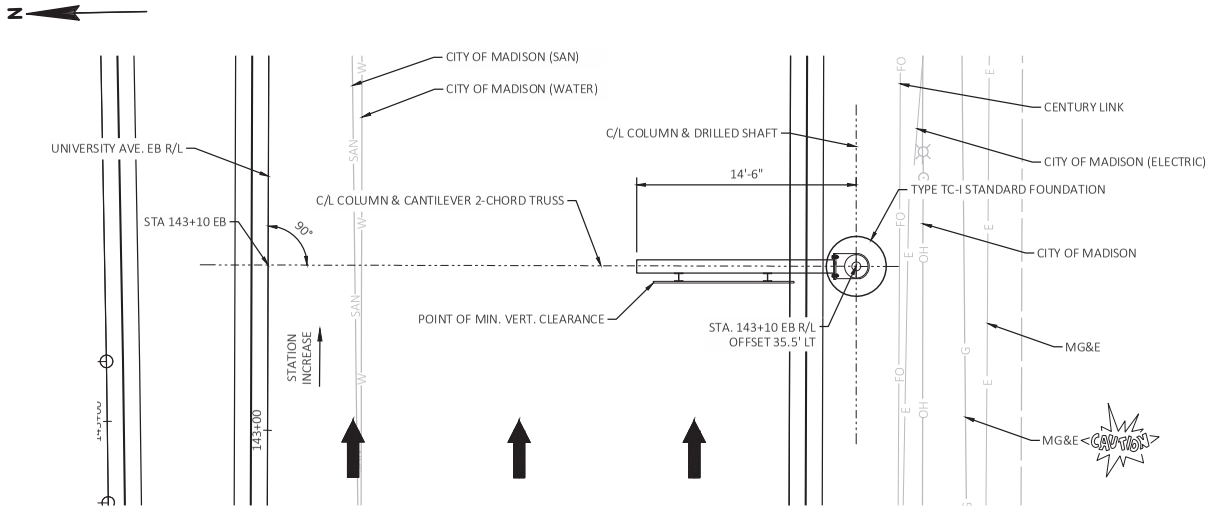
DRAWN BY	STD	PLANS CK'D.	CAH

GENERAL LAYOUT
S–13–589

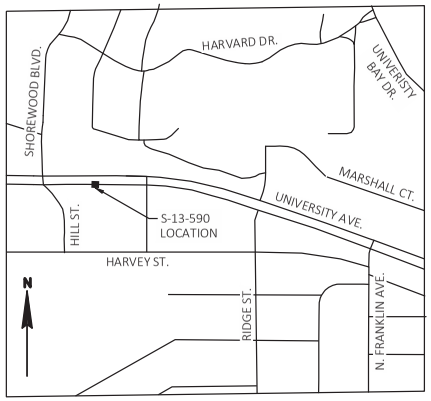
SHEET 2 OF 10

632B

STATE PROJECT NUMBER
5992-11-31

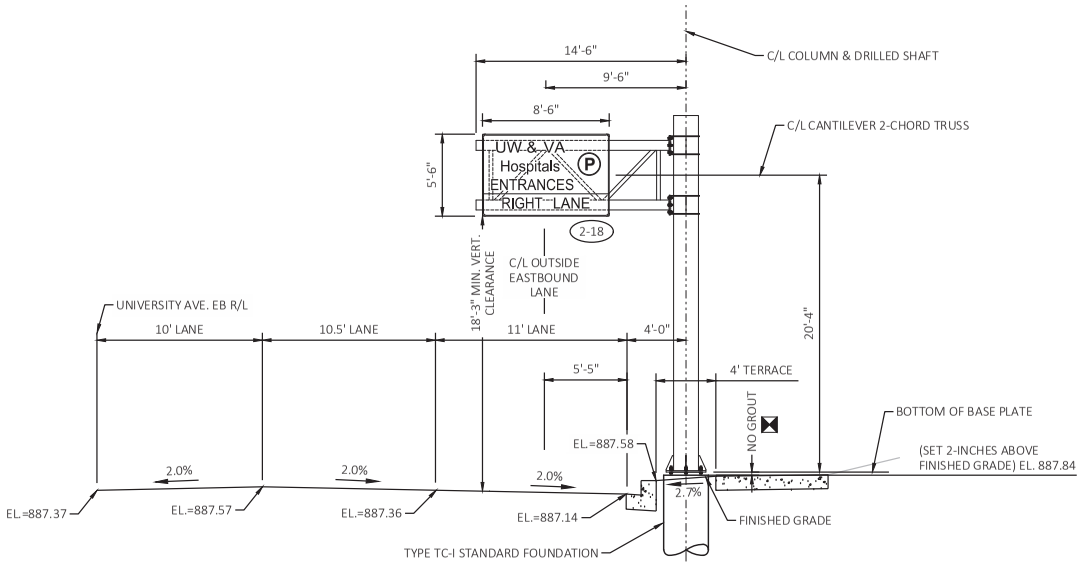


PLAN



LOCATION MAP

Addendum No. 02
ID 5992-11-31
Added Sheet 632C
March 3, 2022



ELEVATION
STA. 143+10EB

NOTE

POINT OF MIN. VERTICAL CLEARANCE
STA. 143+10'EB', 21'-9" RT
EL. = 887.34

LEGEND

☆ ELEVATIONS GIVEN ALONG C/L CANTILEVER 2-CHORD TRUSS.

(X-XX) SIGN NUMBER (PERMANENT SIGNING PLAN)

⧓ STANDOFF DIMENSION IS ASSUMED TO BE 2 ½", BUT IS A MAXIMUM OF 2 X ANCHOR DIMENSION. SEE FOUNDATION DETAILS SHEET AND SHOP DRAWINGS FOR MORE INFORMATION.

NO.	DATE	REVISION	BY
2	3/2/22	NEW 2-CHORD TRUSS PLANS	CDH

STRUCTURE S-13-590

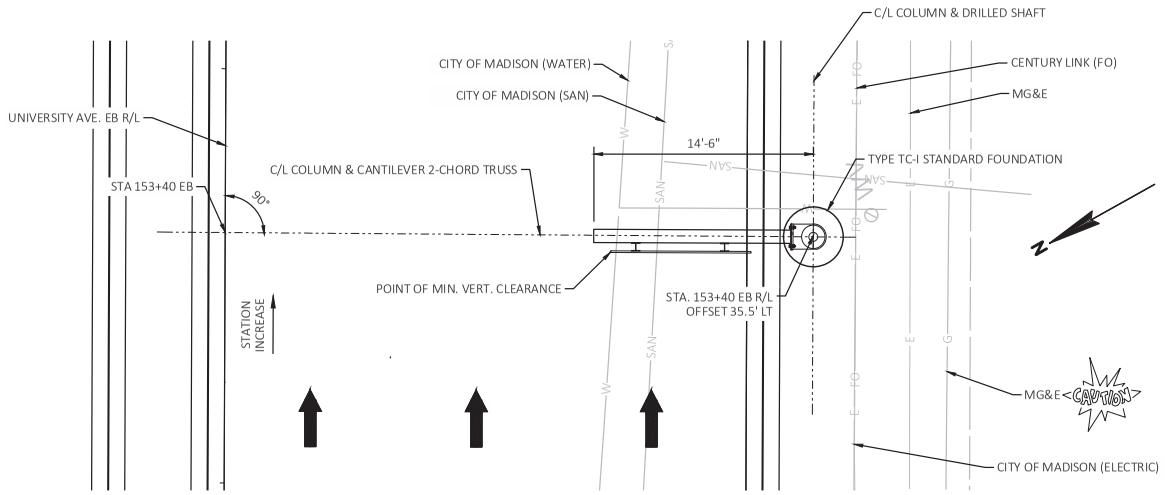
DRAWN BY	STD	PLANS CK'D.	CAH

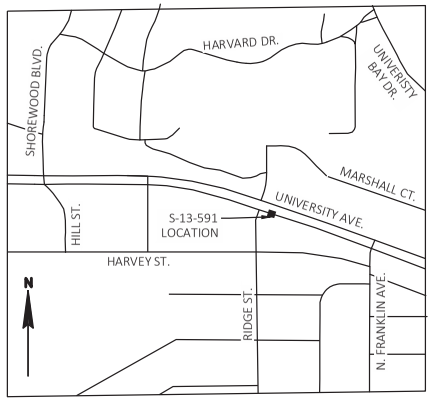
GENERAL LAYOUT
S-13-590

SHEET 3 OF 10

632C

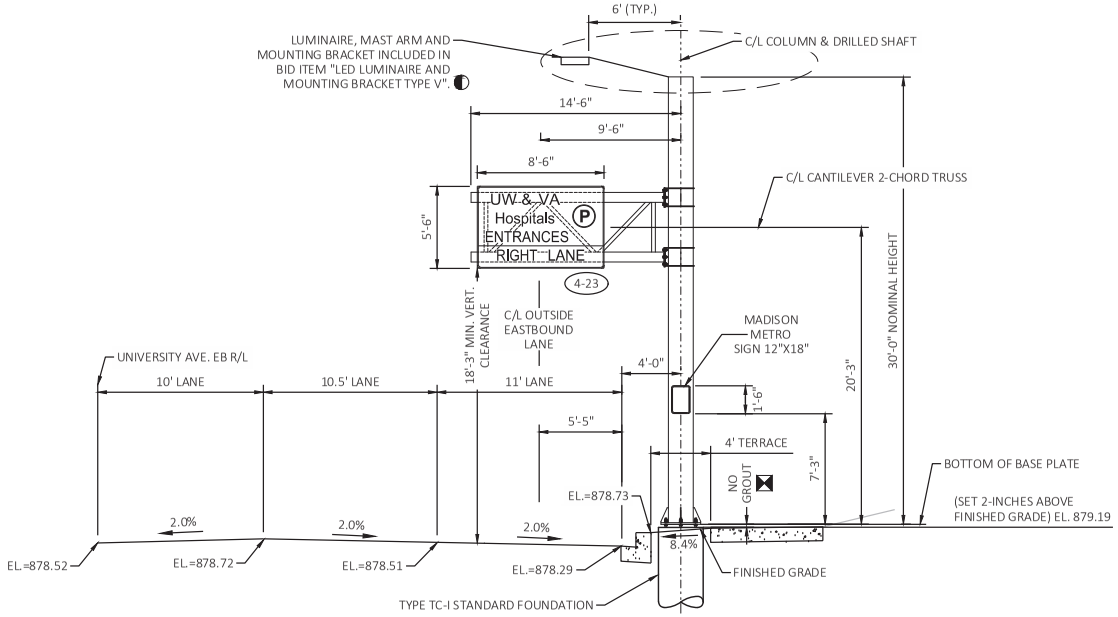
STATE PROJECT NUMBER
5992–11–31





LOCATION MAP

PLAN



ELEVATION
STA. 153+40EB

Addendum No. 02
ID 5992-11-31
Added Sheet 632D
March 3, 2022

NOTE

POINT OF MIN. VERTICAL CLEARANCE
STA. 153+40 'EB', 21'-9" RT
EL. = 878.48

LEGEND

- ☆ ELEVATIONS GIVEN ALONG C/L CANTILEVER 2-CHORD TRUSS.
- (X-XX) SIGN NUMBER (PERMANENT SIGNING PLAN)
- ⧓ STANDOFF DIMENSION IS ASSUMED TO BE 2 ½", BUT IS A MAXIMUM OF 2 X ANCHOR DIMENSION. SEE FOUNDATION DETAILS SHEET AND SHOP DRAWINGS FOR MORE INFORMATION.
- ◐ SEE SDD "TYPE 13 POLE 35'-55' MONOTUBE ARM" AND "GENERAL NOTES AND HARDWARE FOR TYPES 9, 10, 9/10 SPECIAL, 12, AND 13 POLES WITH MONOTUBE ARMS" FOR ADDITIONAL DETAILS.

NO.	DATE	REVISION	BY
2	3/2/22	NEW 2–CHORD TRUSS PLANS	CDH

STRUCTURE S–13–591

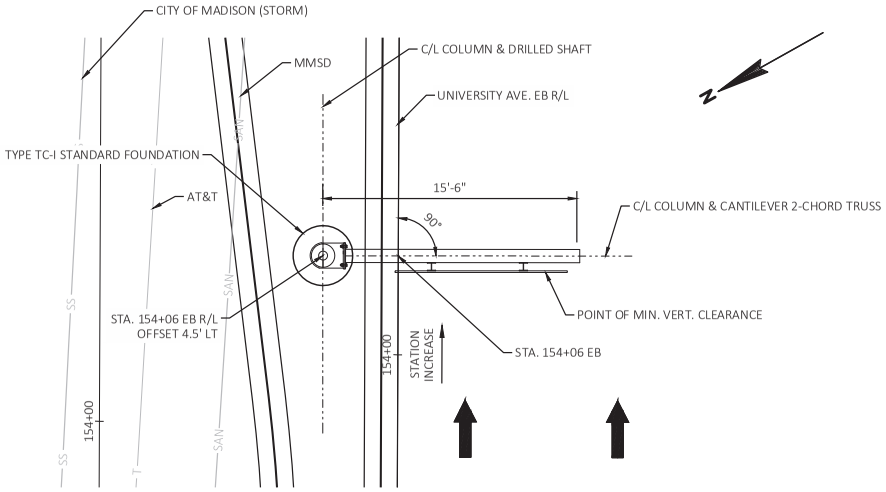
DRAWN BY	STD	PLANS CK'D.	CAH

GENERAL LAYOUT
S–13–591

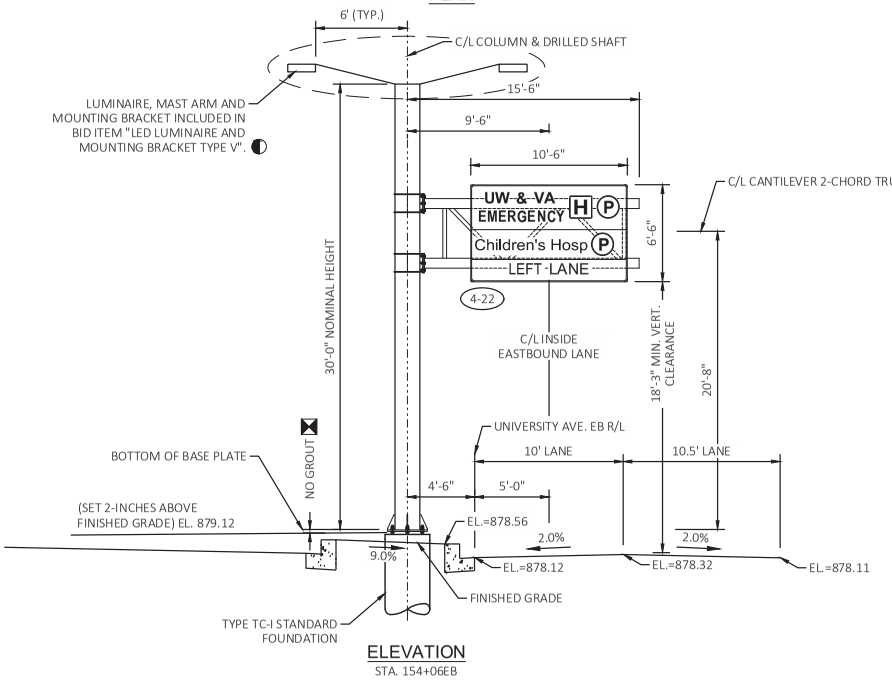
SHEET 4 OF 10

632D

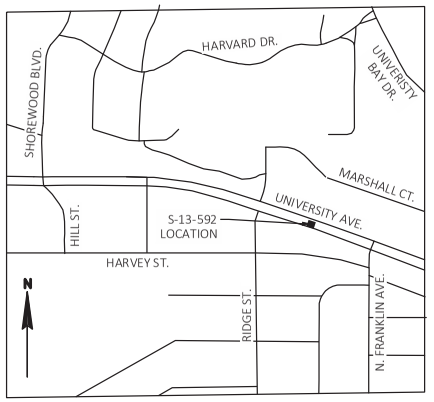
STATE PROJECT NUMBER
5992–11–31



PLAN



ELEVATION
STA. 154+06EB



LOCATION MAP

Addendum No. 02
ID 5992-11-31
Added Sheet 632E
March 3, 2022

NOTE

POINT OF MIN. VERTICAL CLEARANCE
STA. 154+06'EB', 10'-0" RT
EL. = 878.32

LEGEND

☆ ELEVATIONS GIVEN ALONG C/L CANTILEVER 2-CHORD TRUSS.

(X-XX) SIGN NUMBER (PERMANENT SIGNING PLAN)

STANDOFF DIMENSION IS ASSUMED TO BE 2 ½", BUT IS A MAXIMUM OF 2 X ANCHOR DIMENSION. SEE FOUNDATION DETAILS SHEET AND SHOP DRAWINGS FOR MORE INFORMATION.

SEE SDD "TYPE 13 POLE 35'-55' MONOTUBE ARM" AND "GENERAL NOTES AND HARDWARE FOR TYPES 9, 10, 9/10 SPECIAL, 12, AND 13 POLES WITH MONOTUBE ARMS" FOR ADDITIONAL DETAILS.

NO.	DATE	REVISION	BY
2	3/2/22	NEW 2–CHORD TRUSS PLANS	CDH

STRUCTURE S–13–592

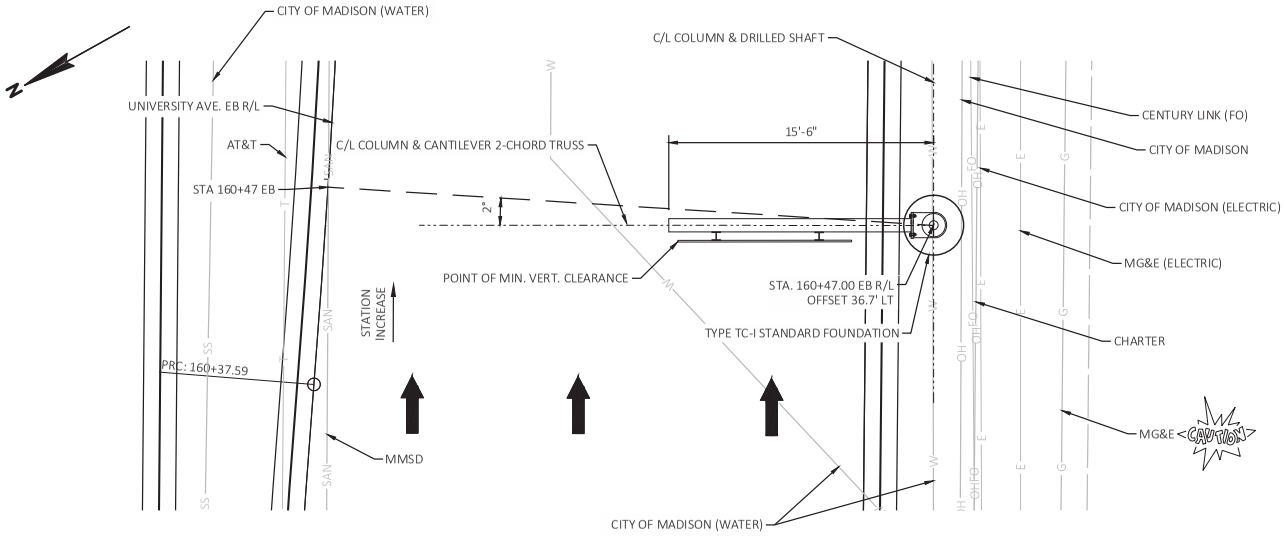
DRAWN BY STD | PLANS CK'D. CAH

GENERAL LAYOUT
S–13–592

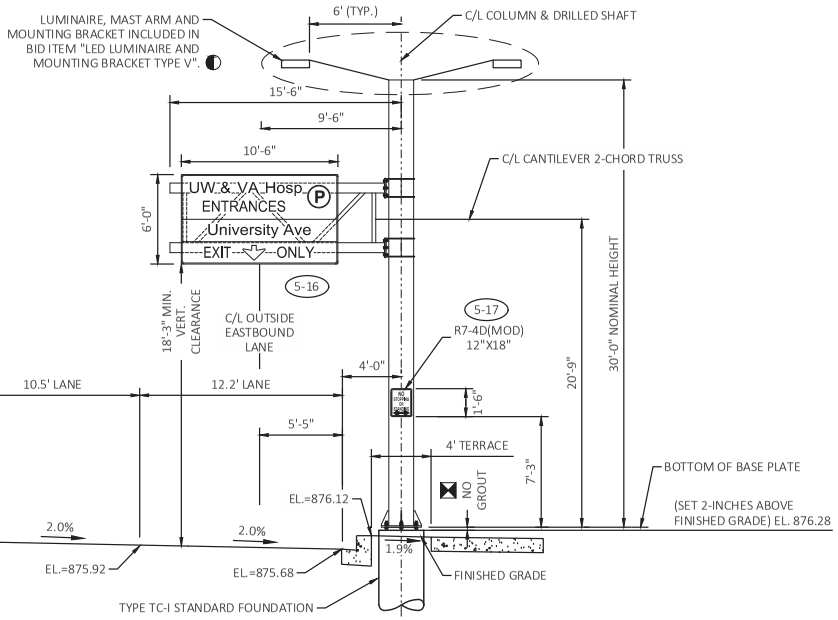
SHEET 5 OF 10

632E

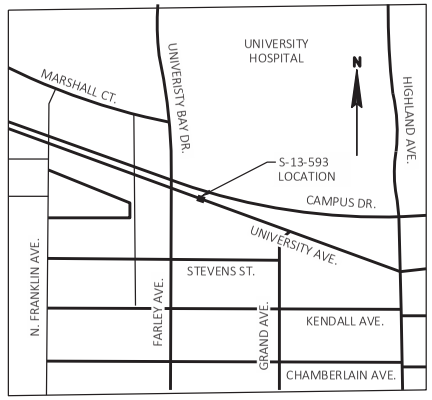
STATE PROJECT NUMBER
5992–11–31



PLAN



ELEVATION
STA. 160+47EB



LOCATION MAP

Addendum No. 02
ID 5992-11-31
Added Sheet 632F
March 3, 2022

NOTE

POINT OF MIN. VERTICAL CLEARANCE
STA. 160+46.49'EB', 22.2' RT
EL. = 875.89

LEGEND

- ☆ ELEVATIONS GIVEN ALONG C/L CANTILEVER 2-CHORD TRUSS.
- (X-XX) SIGN NUMBER (PERMANENT SIGNING PLAN)
- STANDOFF DIMENSION IS ASSUMED TO BE 2 ½", BUT IS A MAXIMUM OF 2 X ANCHOR DIMENSION. SEE FOUNDATION DETAILS SHEET AND SHOP DRAWINGS FOR MORE INFORMATION.
- SEE SDD "TYPE 13 POLE 35'-55' MONOTUBE ARM" AND "GENERAL NOTES AND HARDWARE FOR TYPES 9, 10, 9/10 SPECIAL, 12, AND 13 POLES WITH MONOTUBE ARMS" FOR ADDITIONAL DETAILS.

NO.	DATE	REVISION	BY
2	3/2/22	NEW 2–CHORD TRUSS PLANS	CDH

STRUCTURE S–13–593

DRAWN BY	STD	PLANS CK'D.	CAH

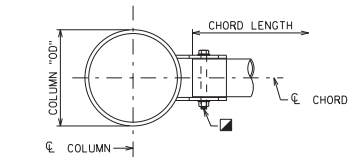
GENERAL LAYOUT
S–13–593

SHEET 6 OF 10

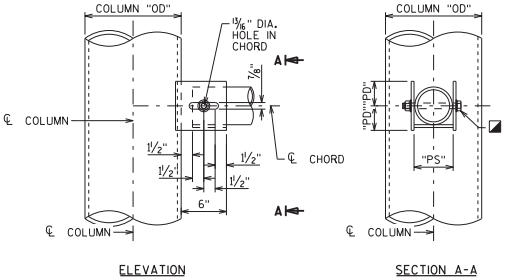
632F

STATE PROJECT NUMBER

STANDARD



PLAN



ELEVATION SECTION A-A

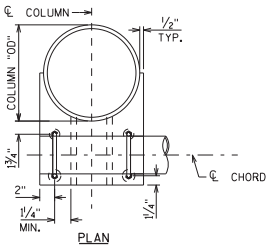
FULL SPAN SADDLE CONNECTION

PREFERRED

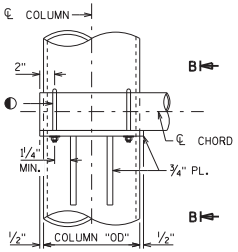
¾" GALVANIZED A325 OR A449 HEAVY HEX BOLT, NUT, WASHER

"PD" = (CHORD "OD")/2 + ¾"

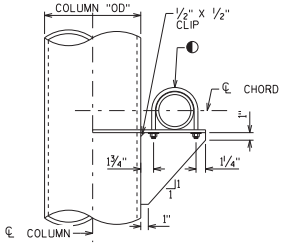
"PS" = CHORD "OD" + 3⅛"



PLAN



ELEVATION

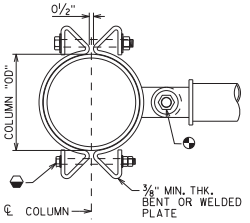


SECTION B-B

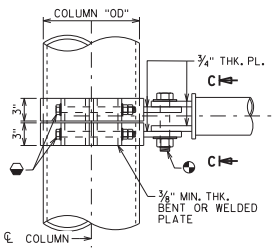
FULL SPAN STIFFENED BEARING CONNECTION

ALTERNATE 1

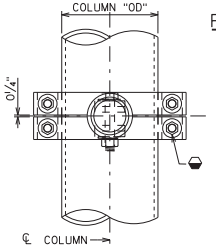
◐ (2) - ½" MIN. GALVANIZED U-BOLT, NUT, WASHER AND LOCK WASHER



PLAN



ELEVATION



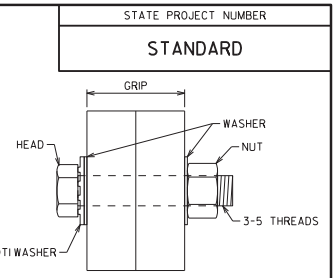
SECTION C-C

FULL SPAN CLAMP CONNECTION

ALTERNATE 2 - TAPERED COLUMNS ONLY

◒ 1¼" GALVANIZED A325 HEAVY HEX BOLT, NUT AND WASHER

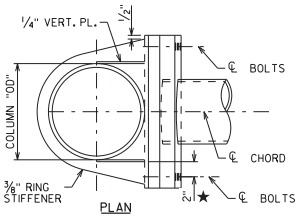
◒ 1" GALVANIZED A449 HEAVY HEX BOLT, NUT AND WASHER



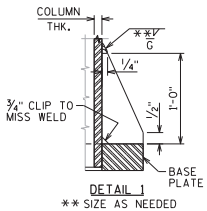
RECOMMENDED BOLT DETAIL WITH DTI

NUT IS THE TURNED ELEMENT

Addendum No. 02
ID 5992-11-31
Added Sheet 632G
March 3, 2022

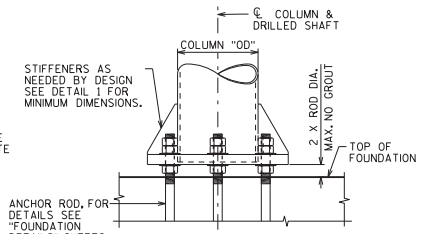


PLAN



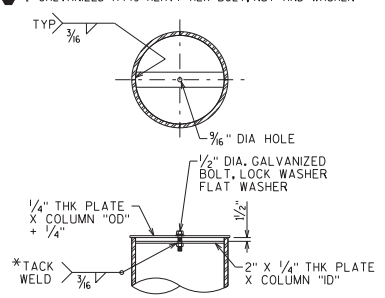
DETAIL 1

** SIZE AS NEEDED



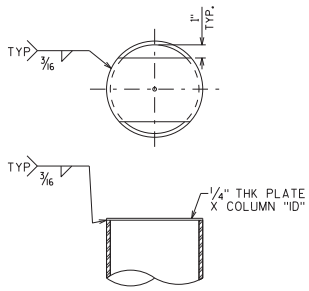
BASE PLATE & COLUMN DETAIL

LOOKING AT FRONT FACE OF STRUCTURE



COLUMN/CHORD CAP DETAIL

* PLACE TACK EVERY OTHER FLAT TO SECURE NUT OR USE ½" THICK PLATE AND TAP HOLE FOR BOLT THREADS

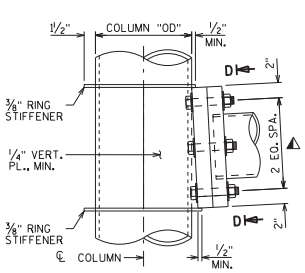


CHORD CAP DETAIL

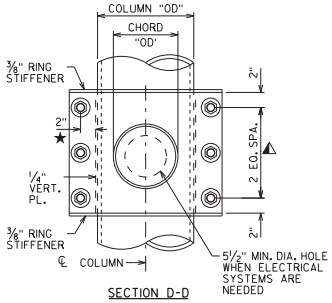
NOTES:

MINIMUM VALUES SHOWN

ALL CONNETIONS ARE TO BE DESIGNED FOR ACTUAL STRUCTURE LOADS.



ELEVATION

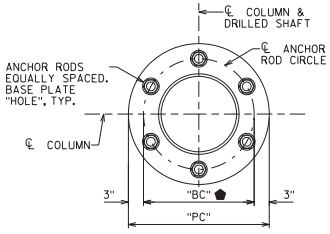


SECTION D-D

CANTILEVER POST TO CHORD CONNECTION

⚠ MIN. CONNECTION = (6) - 1" GALVANIZED F3125 GRADE A325 BOLTS, NUT, WASHER AND DTI

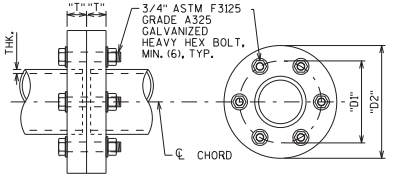
★ MIN. DIMENSION MEASURED FROM EXT. FACE OF VERT. PLATE



BASE PLATE

PLAN

⬟ "BC" = POLE OD + 6"



CHORD SPLICE DETAIL

"D1" = CHORD "OD" + 3"

"D2" = CHORD "OD" + 6"

"T" = BY DESIGN

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

UPDATED: MARCH 2021

DRAWN BY: BOS | PLANS CK'D.: BOS

MONOTUBE & 2-CHORD TRUSS DETAILS 1

SHEET 1 OF IV

632G

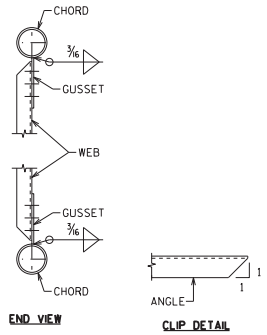
SCALE = 1.00

8

8

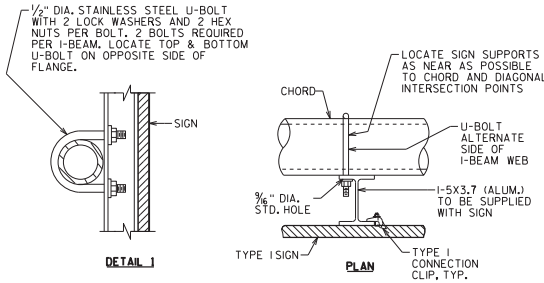
STATE PROJECT NUMBER

STANDARD



TRUSS CONNECTION DETAILS

BOLTED CONNECTIONS SHOWN, NUMBER OF BOLTS BY DESIGN
WELDED CONNECTIONS SIMILAR

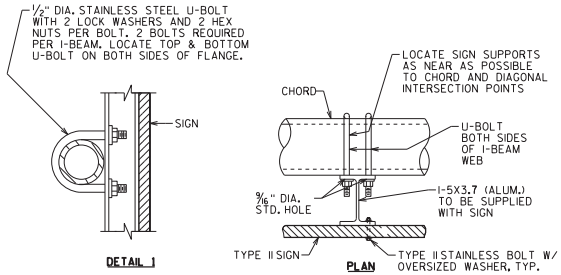


2-CHORD TRUSS SIGN CONNECTION

SEE SIGN PLATE MANUAL A4-7A FOR DETAILS

ALUMINUM I-5X3.7 I-BEAMS ARE TO BE SUPPLIED WITH THE SIGN PANEL

HARDWARE TO BE SUPPLIED BY THE CONTRACTOR



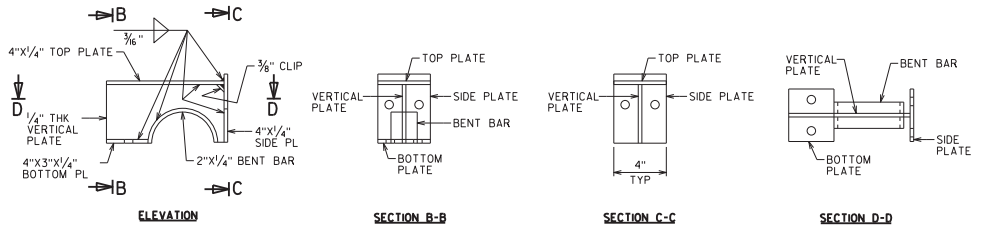
MONOTUBE SIGN CONNECTION

SEE SIGN PLATE MANUAL A4-7B FOR DETAILS

ALUMINUM I-5X3.7 I-BEAMS ARE TO BE SUPPLIED WITH THE SIGN PANEL

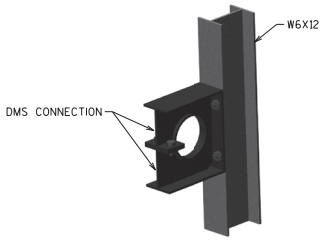
HARDWARE TO BE SUPPLIED BY THE CONTRACTOR

Addendum No. 02
ID 5992-11-31
Added Sheet 632H
March 3, 2022



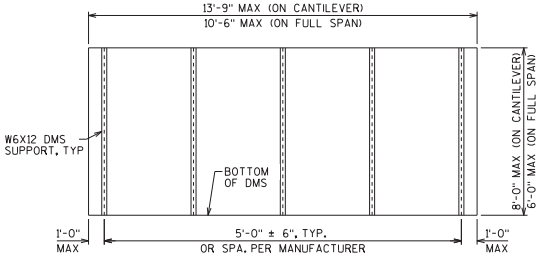
DMS WELDED PLATE CONNECTION DETAILS

TOP PLATE CLAMP SHOWN
BOTTOM PLATE CLAMP SIMILAR



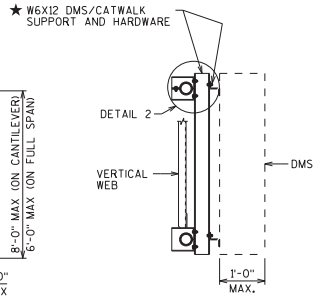
3-D VIEW DMS CONNECTION

CHORD NOT SHOWN FOR CLARITY



DMS MOUNTING POST SPACING DETAIL

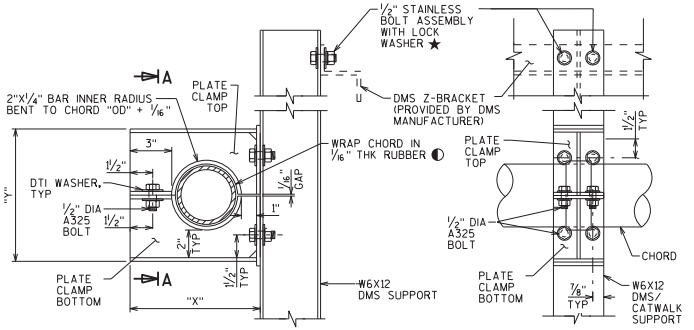
POST SPACING MAY BE ADJUSTED AS REQUIRED IF CONFLICT WITH TRUSS IS ENCOUNTERED.



SECTION THRU TRUSS

FOR DMS/CATWALK CONNECTION

★ W6X12 SUPPORTS AND HARDWARE ARE TO BE SUPPLIED BY THE CONTRACTOR. 1/2" STAINLESS BOLT, NUT, WASHER AND LOCK WASHER REQUIRED, 4 PER W6X12.



CHORD OUTER DIA	"X"	"Y"
"OD"	"OD"+4 3/16"	"OD"+5 1/16"

TYPICAL DMS CONNECTION

◐ NEOPRENE, GRADE 45±5, OTHERWISE MEETING THE REQUIREMENTS OF STD SPEC 506.2.6.1

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

UPDATED: APRIL 2021

DRAWN BY BOS | PLANS CK'D. BOS

MONOTUBE & 2-CHORD TRUSS DETAILS 2

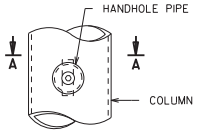
SHEET II OF IV

632H

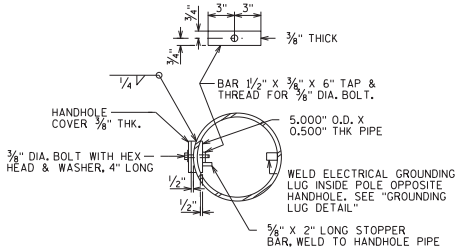
SCALE = 2.00

STATE PROJECT NUMBER

STANDARD



HANDHOLE DETAILS

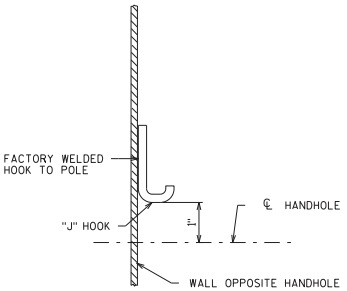


SECTION A-A

HANDHOLE NOTES

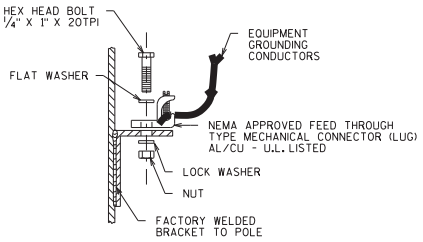
HANDHOLES SHALL BE LOCATED IN ONE COLUMN OF THE SIGN STRUCTURE IF ELECTRICALLY OPERATED DEVICES ARE INSTALLED ON/IN THE STRUCTURE. COLUMNS WITH HANDHOLES SHALL BE NEAR THE ELECTRICAL SERVICE. THE CONTRACTOR SHALL VERIFY THE LOCATION OF THE ELECTRICAL SERVICE ENTRANCE WITH THE REGION TRAFFIC SECTION PRIOR TO FABRICATION OF THE SIGN COLUMNS AND MEMBERS. CONDUIT (AS REQ'D.) SHALL BE LOCATED, PLACED AND SIZED AS SHOWN ON THE ELECTRICAL PLAN DETAIL SHEETS.

UNLESS NOTED OTHERWISE, ALL HANDHOLE ELEMENTS TO BE GALVANIZED PER THE WISDOT STANDARD SPECIFICATIONS.



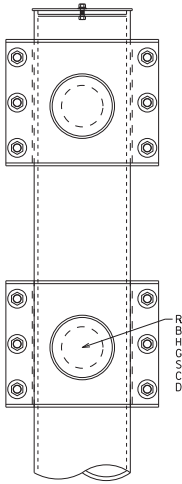
TYPICAL "J" HOOK LOCATION

THE "J" HOOK SHALL BE FACTORY WELDED TO THE INSIDE OF ALL COLUMNS CONTAINING ELECTRICAL WIRING. THE "J" HOOK SHALL BE ATTACHED ABOVE THE CENTERLINE OF THE UPPER HANDHOLE AND MOUNTED DIRECTLY OPPOSITE THE HANDHOLE AS SHOWN IN THE DRAWING.



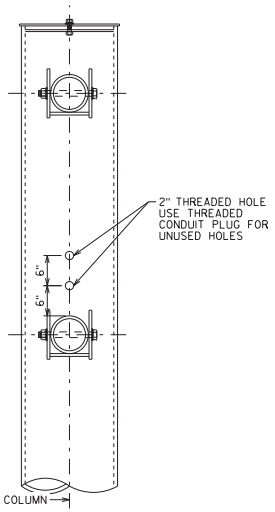
GROUNDING LUG DETAIL

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



RUN WIRES THROUGH BOTTOM CHORD, DRILL 1 3/8" HOLES AND PROVIDE 1" I.D. GROMMETS IN CHORD AT SIGN LOCATIONS. HOLES IN CHORDS TO BE FIELD DRILLED.

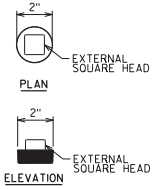
2-CHORD CANTILEVER



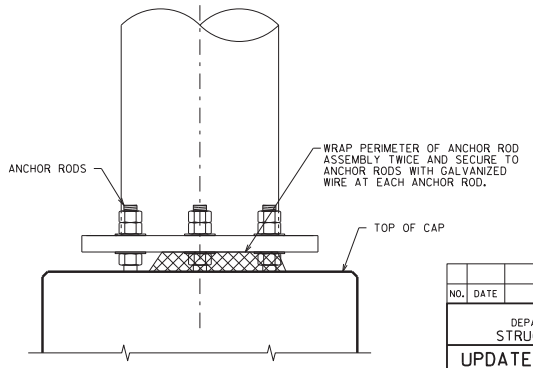
2-CHORD FULL SPAN

SADDLE CONNECTIONS SHOWN, BEARING AND CLAMP CONNECTIONS SIMILAR

CONDUIT HOLE LOCATIONS



CONDUIT PLUG DETAILS



RODENT SCREEN

(ONLY REQ'D. WHEN ELECTRICAL DEVICES ARE INSTALLED)

Addendum No. 02
ID 5992-11-31
Added Sheet 6321
March 3, 2022

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

UPDATED: MARCH 2021

DRAWN BY: BOS | PLANS CK'D.: BOS

MONOTUBE & 2-CHORD TRUSS ELECTRICAL DETAILS

SHEET III OF IV

6321

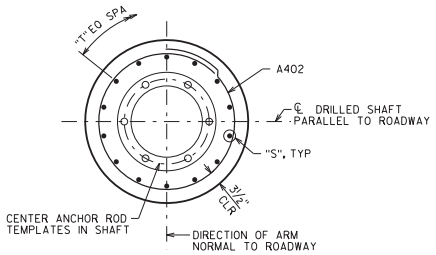
SCALE = 1.00

8

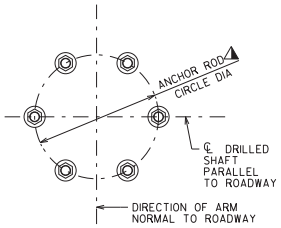
8

FOUNDATION & REINFORCING DATA

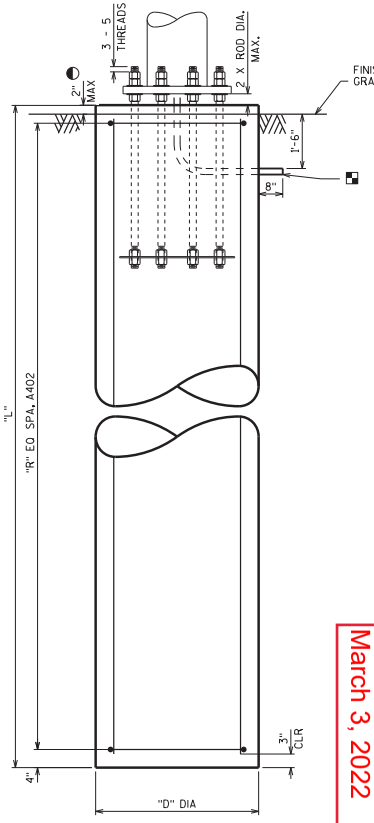
STANDARD FOUNDATION TYPE	SHAFT VARIABLES					
	"D"	"L"	"R"	"S"	"T"	"BC" MAX
MFI	2'-0"	12'-0"	12	A801	6	12"
MFII	2'-6"	13'-0"	13	A801	10	17"
MCI/MCII/TFI	2'-6"	17'-0"	17	A801	10	17"
TCI	3'-0"	18'-0"	18	A801	14	22"
TFII	3'-0"	20'-0"	20	A801	14	22"
MCIII/TCII/TFIII	3'-6"	18'-0"	18	A901	14	28"
MCIV/TFIV	3'-6"	23'-0"	23	A901	14	28"
TCIII	4'-0"	23'-0"	23	A1001	14	34"
TCIV	4'-0"	28'-0"	28	A1001	14	34"



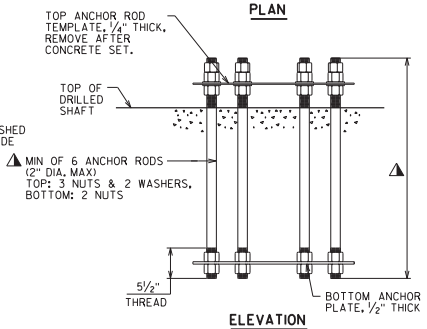
PLAN



PLAN



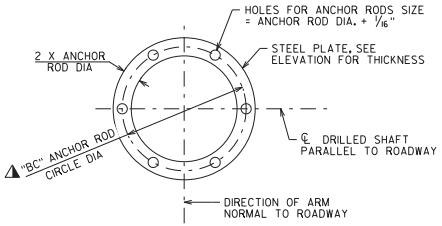
ELEVATION



ELEVATION

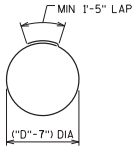
ANCHOR ROD ASSEMBLY DETAILS

⚠ ANCHOR ROD NUMBER, DIAMETER, LENGTH & ORIENTATION AS SHOWN ON FABRICATION DRAWING.



ANCHOR PLATE/TOP TEMPLATE

PLAN



A402

NOTE:
THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE

BILL OF BARS - STANDARD FOUNDATIONS

STANDARD FOUNDATION MFI

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A801		6	11'-7"			DRILLED SHAFT - VERTICAL
A402		13	5'-10"	X		DRILLED SHAFT - HORIZONTAL

STANDARD FOUNDATION MFII

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A801		10	12'-7"			DRILLED SHAFT - VERTICAL
A402		14	7'-5"	X		DRILLED SHAFT - HORIZONTAL

STANDARD FOUNDATION MCI/MCII/TFI

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A801		10	16'-7"			DRILLED SHAFT - VERTICAL
A402		18	7'-5"	X		DRILLED SHAFT - HORIZONTAL

STANDARD FOUNDATION TCI

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A801		14	17'-7"			DRILLED SHAFT - VERTICAL
A402		19	9'-0"	X		DRILLED SHAFT - HORIZONTAL

STANDARD FOUNDATION TFII

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A801		14	19'-7"			DRILLED SHAFT - VERTICAL
A402		21	9'-0"	X		DRILLED SHAFT - HORIZONTAL

STANDARD FOUNDATION MCIII/TCII/TFIII

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A901		14	17'-7"			DRILLED SHAFT - VERTICAL
A402		19	10'-6"	X		DRILLED SHAFT - HORIZONTAL

STANDARD FOUNDATION MCIV/TFIV

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A901		14	22'-7"			DRILLED SHAFT - VERTICAL
A402		24	10'-6"	X		DRILLED SHAFT - HORIZONTAL

STANDARD FOUNDATION TCIII

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A1001		14	22'-7"			DRILLED SHAFT - VERTICAL
A402		24	12'-2"	X		DRILLED SHAFT - HORIZONTAL

STANDARD FOUNDATION TCIV

BAR MARK	COAT	NO. REQ'D.	LENGTH	BENT	BAR SERIES	LOCATION
A1001		14	27'-7"			DRILLED SHAFT - VERTICAL
A402		29	12'-2"	X		DRILLED SHAFT - HORIZONTAL

ESTIMATED QUANTITIES - FOUNDATIONS

STANDARD FOUNDATION TYPE	CONCRETE MASONRY (CY)	STEEL REINFORCEMENT HS (LBS)	FOUNDATION DRILLING (LF)				
			24" DIA.	30" DIA.	36" DIA.	42" DIA.	48" DIA.
MFI	2	240	12				
MFII	3	410		13			
MCI/MCII/TFI	4	540		17			
TCI	5	780			18		
TFII	6	860			20		
MCIII/TCII/TFIII	7	970				18	
MCIV/TFIV	9	1,250				23	
TCIII	11	1,560					23
TCIV	13	1,900					28

** QUANTITIES ARE FOR INFORMATION ONLY AND ARE BASED ON STANDARD STRUCTURE DIMENSIONS

Addendum No. 02
ID 5992-11-31
Added Sheet 632J
March 3, 2022

NOTES

CENTER ANCHOR ROD ASSEMBLY ON DRILLED SHAFT AND MAKE SURE IT IS PLUMB. MAINTAIN ANCHOR ROD PROJECTION ABOVE FOOTING AS DETAILED. ANCHOR ROD ASSEMBLY SHALL BE RIGIDLY SECURED IN POSITION DURING AND AFTER CONCRETE PLACEMENT. DO NOT WELD THE ANCHOR RODS.

◐ FOR OVERHEAD SIGN STRUCTURES THAT ARE INSTALLED ADJACENT TO SIDEWALKS, THE TOP OF THE SHAFT SHALL BE POURED FLUSH WITH THE FINISHED GRADE.

◪ 2" DIA NONMETALLIC CONDUITS, INSTALL ONLY WITH DMS. EXTEND CONDUITS AS SHOWN AND CAP OR SEAL EACH END WITH A SUITABLE REMOVABLE PLUG. PLACE CONDUITS UNDER COLUMN ADJACENT TO THE DMS. CONDUITS INCIDENTAL TO THE FOUNDATION BID ITEMS.

STATE PROJECT NUMBER

STANDARD

NO.	DATE	REVISION	BY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
STRUCTURES DESIGN SECTION

UPDATED: MARCH 2021

DRAWN BY BOS | PLANS CK'D. BOS

MONOTUBE & 2-CHORD TRUSS FOUNDATIONS

SHEET IV OF IV

632J

SCALE = 1.67

8

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Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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	201.0105 Clearing	19.000 STA	_____.____	_____.____
0004	201.0120 Clearing	45.000 ID	_____.____	_____.____
0006	201.0205 Grubbing	19.000 STA	_____.____	_____.____
0008	201.0220 Grubbing	45.000 ID	_____.____	_____.____
0010	204.0100 Removing Concrete Pavement	29,835.000 SY	_____.____	_____.____
0014	204.0150 Removing Curb & Gutter	9,560.000 LF	_____.____	_____.____
0016	204.0155 Removing Concrete Sidewalk	3,370.000 SY	_____.____	_____.____
0018	204.0165 Removing Guardrail	240.000 LF	_____.____	_____.____
0020	204.0195 Removing Concrete Bases	82.000 EACH	_____.____	_____.____
0022	204.0210 Removing Manholes	2.000 EACH	_____.____	_____.____
0024	204.0220 Removing Inlets	72.000 EACH	_____.____	_____.____
0026	204.0245 Removing Storm Sewer (size) 001. 12'X4' Box	44.000 LF	_____.____	_____.____
0028	204.0245 Removing Storm Sewer (size) 002. 12-Inch	1,360.000 LF	_____.____	_____.____
0030	204.0245 Removing Storm Sewer (size) 003. 15-Inch	408.000 LF	_____.____	_____.____
0032	204.0245 Removing Storm Sewer (size) 004. 18-Inch	172.000 LF	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0034	204.0245 Removing Storm Sewer (size) 005. 24-Inch	111.000 LF	_____.____	_____.____
0036	204.0245 Removing Storm Sewer (size) 006. 30-Inch	118.000 LF	_____.____	_____.____
0038	204.0246 Removing Ancillary Structure (structure) 001. Sta 147+70	1.000 EACH	_____.____	_____.____
0040	204.0246 Removing Ancillary Structure (structure) 002. Sta 154+20	1.000 EACH	_____.____	_____.____
0042	204.0246 Removing Ancillary Structure (structure) 003. Sta 161+20	1.000 EACH	_____.____	_____.____
0044	204.0246 Removing Ancillary Structure (structure) 004. Sta 169+55	1.000 EACH	_____.____	_____.____
0046	204.9060.S Removing (item description) 001. Removing Street Light Assembly	66.000 EACH	_____.____	_____.____
0048	204.9060.S Removing (item description) 002. Traffic Signal	49.000 EACH	_____.____	_____.____
0050	204.9090.S Removing (item description) 001. Railing	425.000 LF	_____.____	_____.____
0052	205.0100 Excavation Common	43,698.000 CY	_____.____	_____.____
0054	206.1000 Excavation for Structures Bridges (structure) 001. B-13-891	LS	LUMP SUM	_____.____
0056	213.0100 Finishing Roadway (project) 001. 5992-11-31	1.000 EACH	_____.____	_____.____
0058	305.0110 Base Aggregate Dense 3/4-Inch	1,711.000 TON	_____.____	_____.____
0060	305.0120 Base Aggregate Dense 1 1/4-Inch	29,165.000 TON	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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	305.0130 Base Aggregate Dense 3-Inch	20,100.000 TON	_____.____	_____.____
0064	310.0110 Base Aggregate Open-Graded	56.000 TON	_____.____	_____.____
0066	312.0110 Select Crushed Material	7,349.000 TON	_____.____	_____.____
0068	371.2000.S QMP Base Aggregate Dense 1 1/4-Inch Compaction	10.000 EACH	_____.____	_____.____
0070	405.0100 Coloring Concrete WisDOT Red	155.000 CY	_____.____	_____.____
0072	405.1000 Stamping Colored Concrete	155.000 CY	_____.____	_____.____
0074	415.0090 Concrete Pavement 9-Inch	120.000 SY	_____.____	_____.____
0076	416.0170 Concrete Driveway 7-Inch	540.000 SY	_____.____	_____.____
0078	416.0270 Concrete Driveway HES 7-Inch	320.000 SY	_____.____	_____.____
0080	455.0605 Tack Coat	4,749.000 GAL	_____.____	_____.____
0082	460.2000 Incentive Density HMA Pavement	8,700.000 DOL	1.00000	8,700.00
0084	460.6223 HMA Pavement 3 MT 58-28 S	9,891.000 TON	_____.____	_____.____
0086	460.6424 HMA Pavement 4 MT 58-28 H	3,695.000 TON	_____.____	_____.____
0088	465.0105 Asphaltic Surface	140.000 TON	_____.____	_____.____
0090	465.0120 Asphaltic Surface Driveways and Field Entrances	75.000 TON	_____.____	_____.____
0092	465.0125 Asphaltic Surface Temporary	3,930.000 TON	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0094	465.0315 Asphaltic Flumes	18.000 SY	_____.____	_____.____
0096	502.0100 Concrete Masonry Bridges	427.000 CY	_____.____	_____.____
0098	502.3101 Expansion Device	28.000 LF	_____.____	_____.____
0100	502.3200 Protective Surface Treatment	629.000 SY	_____.____	_____.____
0102	504.2000.S Precast Concrete Box Culvert (ft X ft) 001. 12 FT X 4 FT	107.000 LF	_____.____	_____.____
0106	505.0400 Bar Steel Reinforcement HS Structures	6,580.000 LB	_____.____	_____.____
0108	505.0600 Bar Steel Reinforcement HS Coated Structures	64,720.000 LB	_____.____	_____.____
0110	506.2605 Bearing Pads Elastomeric Non-Laminated	3.000 EACH	_____.____	_____.____
0112	506.8006.S Prefabricated Steel Truss Pedestrian Bridge LRFD (structure) 001. B-13-891	1.000 EACH	_____.____	_____.____
0114	511.1100 Temporary Shoring	19,642.000 SF	_____.____	_____.____
0116	511.2300 Temp Shoring Left in Place (location) 001. Stage 2	2,000.000 SF	_____.____	_____.____
0118	513.8016 Railing Steel Pedestrian Type C3	1,182.000 LF	_____.____	_____.____
0120	516.0500 Rubberized Membrane Waterproofing	7.000 SY	_____.____	_____.____
0122	517.1000 Painting Epoxy System Steel Truss (structure) 001. B-13-891	 LS	LUMP SUM	_____.____
0124	517.1010.S Concrete Staining (structure) 001. B-13-891	3,072.000 SF	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0126	517.1010.S Concrete Staining (structure) 002. R-13-360	1,142.000 SF	_____.____	_____.____
0128	517.1010.S Concrete Staining (structure) 003. R-13-361	849.000 SF	_____.____	_____.____
0130	517.1015.S Concrete Staining Multi-Color (structure) 001. B-13-891	829.000 SF	_____.____	_____.____
0132	517.1015.S Concrete Staining Multi-Color (structure) 002. R-13-360	2,470.000 SF	_____.____	_____.____
0134	517.1015.S Concrete Staining Multi-Color (structure) 003. R-13-061	2,680.000 SF	_____.____	_____.____
0136	517.1050.S Architectural Surface Treatment (structure) 001. B-13-891	1,521.000 SF	_____.____	_____.____
0138	517.1050.S Architectural Surface Treatment (structure) 002. R-13-360	2,470.000 SF	_____.____	_____.____
0140	517.1050.S Architectural Surface Treatment (structure) 003. R-13-361	2,680.000 SF	_____.____	_____.____
0142	520.8000 Concrete Collars for Pipe	19.000 EACH	_____.____	_____.____
0144	522.1012 Apron Endwalls for Culvert Pipe Reinforced Concrete 12-Inch	1.000 EACH	_____.____	_____.____
0146	531.2030 Drilling Shaft 30-Inch	26.000 LF	_____.____	_____.____
0148	531.5220 Foundation Single-Shaft Type MF-II (structure) 001. S-13-586	2.000 EACH	_____.____	_____.____
0160	532.5220 Monotube Full Span Type II (structure) 001. S-13-856	1.000 EACH	_____.____	_____.____
0162	550.1100 Piling Steel HP 10-Inch X 42 Lb	2,070.000 LF	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0164	550.1120 Piling Steel HP 12-Inch X 53 Lb	360.000 LF	_____.____	_____.____
0166	601.0407 Concrete Curb & Gutter 18-Inch Type D	160.000 LF	_____.____	_____.____
0168	601.0411 Concrete Curb & Gutter 30-Inch Type D	1,200.000 LF	_____.____	_____.____
0170	601.0600 Concrete Curb Pedestrian	445.000 LF	_____.____	_____.____
0172	602.0410 Concrete Sidewalk 5-Inch	58,870.000 SF	_____.____	_____.____
0174	602.0415 Concrete Sidewalk 6-Inch	2,010.000 SF	_____.____	_____.____
0176	602.0515 Curb Ramp Detectable Warning Field Natural Patina	455.000 SF	_____.____	_____.____
0178	602.0615 Curb Ramp Detectable Warning Field Radial Natural Patina	275.000 SF	_____.____	_____.____
0180	603.8000 Concrete Barrier Temporary Precast Delivered	1,800.000 LF	_____.____	_____.____
0182	603.8125 Concrete Barrier Temporary Precast Installed	2,100.000 LF	_____.____	_____.____
0184	604.0400 Slope Paving Concrete	10.000 SY	_____.____	_____.____
0186	608.0005 Storm Sewer Rock Excavation	150.000 CY	_____.____	_____.____
0188	608.0312 Storm Sewer Pipe Reinforced Concrete Class III 12-Inch	1,100.000 LF	_____.____	_____.____
0190	608.0315 Storm Sewer Pipe Reinforced Concrete Class III 15-Inch	22.000 LF	_____.____	_____.____
0192	608.0318 Storm Sewer Pipe Reinforced Concrete Class III 18-Inch	97.000 LF	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0194	608.0324 Storm Sewer Pipe Reinforced Concrete Class III 24-Inch	190.000 LF	_____.____	_____.____
0196	608.0396 Storm Sewer Pipe Reinforced Concrete Class III 96-Inch	2,522.000 LF	_____.____	_____.____
0198	608.0412 Storm Sewer Pipe Reinforced Concrete Class IV 12-Inch	768.000 LF	_____.____	_____.____
0200	608.0415 Storm Sewer Pipe Reinforced Concrete Class IV 15-Inch	562.000 LF	_____.____	_____.____
0202	608.0418 Storm Sewer Pipe Reinforced Concrete Class IV 18-Inch	134.000 LF	_____.____	_____.____
0204	608.0430 Storm Sewer Pipe Reinforced Concrete Class IV 30-Inch	112.000 LF	_____.____	_____.____
0206	608.0436 Storm Sewer Pipe Reinforced Concrete Class IV 36-Inch	16.000 LF	_____.____	_____.____
0208	611.0420 Reconstructing Manholes	5.000 EACH	_____.____	_____.____
0210	611.0430 Reconstructing Inlets	4.000 EACH	_____.____	_____.____
0212	611.0530 Manhole Covers Type J	2.000 EACH	_____.____	_____.____
0214	611.0642 Inlet Covers Type MS	3.000 EACH	_____.____	_____.____
0216	611.2004 Manholes 4-FT Diameter	3.000 EACH	_____.____	_____.____
0218	611.2005 Manholes 5-FT Diameter	8.000 EACH	_____.____	_____.____
0220	611.2006 Manholes 6-FT Diameter	3.000 EACH	_____.____	_____.____
0222	611.3004 Inlets 4-FT Diameter	8.000 EACH	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0224	611.3230 Inlets 2x3-FT	66.000 EACH	_____.____	_____.____
0226	611.3901 Inlets Median 1 Grate	3.000 EACH	_____.____	_____.____
0228	611.8110 Adjusting Manhole Covers	6.000 EACH	_____.____	_____.____
0230	611.8115 Adjusting Inlet Covers	11.000 EACH	_____.____	_____.____
0232	611.8120.S Cover Plates Temporary	20.000 EACH	_____.____	_____.____
0234	612.0106 Pipe Underdrain 6-Inch	700.000 LF	_____.____	_____.____
0236	612.0108 Pipe Underdrain 8-Inch	18.000 LF	_____.____	_____.____
0238	612.0110 Pipe Underdrain 10-Inch	9.000 LF	_____.____	_____.____
0240	612.0112 Pipe Underdrain 12-Inch	333.000 LF	_____.____	_____.____
0242	612.0206 Pipe Underdrain Unperforated 6-Inch	15.000 LF	_____.____	_____.____
0244	612.0406 Pipe Underdrain Wrapped 6-Inch	850.000 LF	_____.____	_____.____
0246	616.0700.S Fence Safety	5,000.000 LF	_____.____	_____.____
0248	618.0100 Maintenance And Repair of Haul Roads (project) 001. 5992-11-31	1.000 EACH	_____.____	_____.____
0250	619.1000 Mobilization	1.000 EACH	_____.____	_____.____
0252	620.0200 Concrete Median Blunt Nose	12.000 SF	_____.____	_____.____
0254	620.0300 Concrete Median Sloped Nose	669.000 SF	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0256	624.0100 Water	1,475.000 MGAL	_____.____	_____.____
0258	625.0100 Topsoil	5,780.000 SY	_____.____	_____.____
0260	628.1504 Silt Fence	2,560.000 LF	_____.____	_____.____
0262	628.1520 Silt Fence Maintenance	4,570.000 LF	_____.____	_____.____
0264	628.1905 Mobilizations Erosion Control	21.000 EACH	_____.____	_____.____
0266	628.1910 Mobilizations Emergency Erosion Control	14.000 EACH	_____.____	_____.____
0268	628.2008 Erosion Mat Urban Class I Type B	5,780.000 SY	_____.____	_____.____
0270	628.7010 Inlet Protection Type B	61.000 EACH	_____.____	_____.____
0272	628.7015 Inlet Protection Type C	149.000 EACH	_____.____	_____.____
0274	629.0210 Fertilizer Type B	6.800 CWT	_____.____	_____.____
0276	630.0140 Seeding Mixture No. 40	104.000 LB	_____.____	_____.____
0278	630.0200 Seeding Temporary	156.000 LB	_____.____	_____.____
0280	630.0500 Seed Water	85.000 MGAL	_____.____	_____.____
0282	631.0300 Sod Water	81.000 MGAL	_____.____	_____.____
0284	631.1000 Sod Lawn	5,075.000 SY	_____.____	_____.____
0286	637.1220 Signs Type I Reflective SH	410.000 SF	_____.____	_____.____
0288	637.2210 Signs Type II Reflective H	810.050 SF	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0290	637.2215 Signs Type II Reflective H Folding	88.060 SF	_____.____	_____.____
0292	637.2230 Signs Type II Reflective F	55.250 SF	_____.____	_____.____
0294	638.2102 Moving Signs Type II	20.000 EACH	_____.____	_____.____
0296	638.2601 Removing Signs Type I	2.000 EACH	_____.____	_____.____
0298	638.2602 Removing Signs Type II	100.000 EACH	_____.____	_____.____
0300	638.3000 Removing Small Sign Supports	26.000 EACH	_____.____	_____.____
0302	638.4000 Moving Small Sign Supports	4.000 EACH	_____.____	_____.____
0306	643.0300 Traffic Control Drums	43,400.000 DAY	_____.____	_____.____
0308	643.0410 Traffic Control Barricades Type II	2,420.000 DAY	_____.____	_____.____
0310	643.0420 Traffic Control Barricades Type III	5,440.000 DAY	_____.____	_____.____
0312	643.0500 Traffic Control Flexible Tubular Marker Posts	280.000 EACH	_____.____	_____.____
0314	643.0600 Traffic Control Flexible Tubular Marker Bases	280.000 EACH	_____.____	_____.____
0316	643.0705 Traffic Control Warning Lights Type A	8,300.000 DAY	_____.____	_____.____
0318	643.0715 Traffic Control Warning Lights Type C	3,230.000 DAY	_____.____	_____.____
0320	643.0800 Traffic Control Arrow Boards	550.000 DAY	_____.____	_____.____
0322	643.0900 Traffic Control Signs	22,050.000 DAY	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0324	643.1000 Traffic Control Signs Fixed Message	34.500 SF	_____.____	_____.____
0326	643.1050 Traffic Control Signs PCMS	1,300.000 DAY	_____.____	_____.____
0328	643.5000 Traffic Control	1.000 EACH	_____.____	_____.____
0330	644.1410 Temporary Pedestrian Surface Asphalt	400.000 SF	_____.____	_____.____
0332	644.1601 Temporary Pedestrian Curb Ramp	1,195.000 DAY	_____.____	_____.____
0334	644.1810 Temporary Pedestrian Barricade	800.000 LF	_____.____	_____.____
0336	646.1020 Marking Line Epoxy 4-Inch	6,625.000 LF	_____.____	_____.____
0338	646.3020 Marking Line Epoxy 8-Inch	3,080.000 LF	_____.____	_____.____
0340	646.5020 Marking Arrow Epoxy	42.000 EACH	_____.____	_____.____
0342	646.5120 Marking Word Epoxy	12.000 EACH	_____.____	_____.____
0344	646.5220 Marking Symbol Epoxy	13.000 EACH	_____.____	_____.____
0346	646.5320 Marking Railroad Crossings Epoxy	4.000 EACH	_____.____	_____.____
0348	646.6120 Marking Stop Line Epoxy 18-Inch	550.000 LF	_____.____	_____.____
0350	646.7420 Marking Crosswalk Epoxy Transverse Line 6-Inch	330.000 LF	_____.____	_____.____
0352	646.7520 Marking Crosswalk Epoxy Block Style 24-Inch	1,765.000 LF	_____.____	_____.____
0354	646.8120 Marking Curb Epoxy	240.000 LF	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0356	646.8220 Marking Island Nose Epoxy	13.000 EACH	_____.____	_____.____
0358	646.9000 Marking Removal Line 4-Inch	3,065.000 LF	_____.____	_____.____
0360	646.9100 Marking Removal Line 8-Inch	790.000 LF	_____.____	_____.____
0362	646.9300 Marking Removal Special Marking	6.000 EACH	_____.____	_____.____
0364	649.0105 Temporary Marking Line Paint 4-Inch	23,855.000 LF	_____.____	_____.____
0366	649.0120 Temporary Marking Line Epoxy 4-Inch	5,950.000 LF	_____.____	_____.____
0368	649.0150 Temporary Marking Line Removable Tape 4-Inch	7,675.000 LF	_____.____	_____.____
0370	649.0205 Temporary Marking Line Paint 8-Inch	2,660.000 LF	_____.____	_____.____
0372	649.0220 Temporary Marking Line Epoxy 8-Inch	3,610.000 LF	_____.____	_____.____
0374	649.0250 Temporary Marking Line Removable Tape 8-Inch	1,060.000 LF	_____.____	_____.____
0376	649.0505 Temporary Marking Arrow Paint	14.000 EACH	_____.____	_____.____
0378	649.0520 Temporary Marking Arrow Epoxy	52.000 EACH	_____.____	_____.____
0380	649.0550 Temporary Marking Arrow Removable Tape	10.000 EACH	_____.____	_____.____
0382	649.0620 Temporary Marking Word Epoxy	9.000 EACH	_____.____	_____.____
0384	649.0805 Temporary Marking Stop Line Paint 18-Inch	560.000 LF	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0386	649.0820 Temporary Marking Stop Line Epoxy 18-Inch	1,620.000 LF	_____.____	_____.____
0388	649.0850 Temporary Marking Stop Line Removable Tape 18-Inch	70.000 LF	_____.____	_____.____
0390	652.0225 Conduit Rigid Nonmetallic Schedule 40 2-Inch	8,575.000 LF	_____.____	_____.____
0392	652.0235 Conduit Rigid Nonmetallic Schedule 40 3-Inch	6,050.000 LF	_____.____	_____.____
0394	652.0325 Conduit Rigid Nonmetallic Schedule 80 2-Inch	3,140.000 LF	_____.____	_____.____
0396	652.0335 Conduit Rigid Nonmetallic Schedule 80 3-Inch	2,850.000 LF	_____.____	_____.____
0398	652.0900 Loop Detector Slots	70.000 LF	_____.____	_____.____
0400	653.0900 Adjusting Pull Boxes	1.000 EACH	_____.____	_____.____
0402	653.0905 Removing Pull Boxes	24.000 EACH	_____.____	_____.____
0404	654.0110 Concrete Bases Type 10	5.000 EACH	_____.____	_____.____
0406	655.0230 Cable Traffic Signal 5-14 AWG	1,975.000 LF	_____.____	_____.____
0408	655.0240 Cable Traffic Signal 7-14 AWG	4,615.000 LF	_____.____	_____.____
0410	655.0250 Cable Traffic Signal 9-14 AWG	2,029.000 LF	_____.____	_____.____
0412	655.0260 Cable Traffic Signal 12-14 AWG	1,910.000 LF	_____.____	_____.____
0414	655.0615 Electrical Wire Lighting 10 AWG	14,608.000 LF	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0416	655.0620 Electrical Wire Lighting 8 AWG	24,420.000 LF	_____.____	_____.____
0418	655.0630 Electrical Wire Lighting 4 AWG	8,140.000 LF	_____.____	_____.____
0420	655.0800 Loop Detector Wire	9,292.000 LF	_____.____	_____.____
0422	656.0200 Electrical Service Meter Breaker Pedestal (location) 001. Ridge & University	LS	LUMP SUM	_____.____
0424	656.0200 Electrical Service Meter Breaker Pedestal (location) 002. University Bay & University	LS	LUMP SUM	_____.____
0426	656.0200 Electrical Service Meter Breaker Pedestal (location) 003. University Bay & Marshall	LS	LUMP SUM	_____.____
0428	656.0200 Electrical Service Meter Breaker Pedestal (location) 004. Ridge & University	LS	LUMP SUM	_____.____
0430	656.0200 Electrical Service Meter Breaker Pedestal (location) 005. University Bay & University	LS	LUMP SUM	_____.____
0432	657.0100 Pedestal Bases	21.000 EACH	_____.____	_____.____
0434	657.0255 Transformer Bases Breakaway 11 1/2-Inch Bolt Circle	43.000 EACH	_____.____	_____.____
0436	657.0346 Poles Type 9-Over Height	1.000 EACH	_____.____	_____.____
0438	657.0420 Traffic Signal Standards Aluminum 13-FT	16.000 EACH	_____.____	_____.____
0440	657.0425 Traffic Signal Standards Aluminum 15-FT	2.000 EACH	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0442	657.0430 Traffic Signal Standards Aluminum 10-FT	5.000 EACH	_____.____	_____.____
0444	657.0515 Monotube Arms 15-FT	2.000 EACH	_____.____	_____.____
0446	658.0500 Pedestrian Push Buttons	29.000 EACH	_____.____	_____.____
0448	658.5069 Signal Mounting Hardware (location) 001. Hill	LS	LUMP SUM	_____.____
0450	658.5069 Signal Mounting Hardware (location) 002. Ridge	LS	LUMP SUM	_____.____
0452	658.5069 Signal Mounting Hardware (location) 003. Farley	LS	LUMP SUM	_____.____
0454	658.5069 Signal Mounting Hardware (location) 004. Marshall	LS	LUMP SUM	_____.____
0456	690.0150 Sawing Asphalt	9,615.000 LF	_____.____	_____.____
0458	690.0250 Sawing Concrete	6,720.000 LF	_____.____	_____.____
0460	715.0502 Incentive Strength Concrete Structures	500.000 DOL	1.00000	500.00
0462	715.0720 Incentive Compressive Strength Concrete Pavement	500.000 DOL	1.00000	500.00
0464	740.0440 Incentive IRI Ride	7,600.000 DOL	1.00000	7,600.00
0466	801.0117 Railroad Flagging Reimbursement	110,000.000 DOL	1.00000	110,000.00
0468	999.1001.S Seismograph	1.000 EACH	_____.____	_____.____
0470	999.1501.S Crack and Damage Survey	1.000 EACH	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0472	ASP.1T0A On-the-Job Training Apprentice at $5.00/HR	2,100.000 HRS	5.00000	10,500.00
0474	ASP.1T0G On-the-Job Training Graduate at $5.00/HR	6,480.000 HRS	5.00000	32,400.00
0476	SPV.0035 Special 001. Abandon Sanitary Sewer-Slurry	22.860 CY	_____.____	_____.____
0478	SPV.0035 Special 002. Rock Excavation For Sanitary Sewer	50.000 CY	_____.____	_____.____
0480	SPV.0035 Special 003. Rock Excavation For Water Main	30.000 CY	_____.____	_____.____
0482	SPV.0060 Special 001. Settlement Monitoring	2.000 EACH	_____.____	_____.____
0484	SPV.0060 Special 002. Locate and Reference Property Corners	27.000 EACH	_____.____	_____.____
0486	SPV.0060 Special 003. Reset Property Corners	27.000 EACH	_____.____	_____.____
0488	SPV.0060 Special 004. Precast Sign Post Base	46.000 EACH	_____.____	_____.____
0490	SPV.0060 Special 005. Sign Post Base For Concrete Installation	7.000 EACH	_____.____	_____.____
0492	SPV.0060 Special 006. Project Dewatering	1.000 EACH	_____.____	_____.____
0494	SPV.0060 Special 007. Wastewater Control	1.000 EACH	_____.____	_____.____
0500	SPV.0060 Special 010. Inlet Cover Type H Special	82.000 EACH	_____.____	_____.____
0502	SPV.0060 Special 011. Inlet Cover Type H-S Special	12.000 EACH	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0504	SPV.0060 Special 012. Manhole Cover Type J Special	24.000 EACH	_____.____	_____.____
0506	SPV.0060 Special 013. Temporary Inlet Cover	55.000 EACH	_____.____	_____.____
0508	SPV.0060 Special 014. Storm Sewer Pipe 96-Inch Bend	9.000 EACH	_____.____	_____.____
0510	SPV.0060 Special 015. Wastewater Control MMSD	1.000 EACH	_____.____	_____.____
0512	SPV.0060 Special 016. Inlet 2x3-Ft Special	9.000 EACH	_____.____	_____.____
0514	SPV.0060 Special 017. Manhole Special	1.000 EACH	_____.____	_____.____
0516	SPV.0060 Special 018. Storm Sewer Tap	27.000 EACH	_____.____	_____.____
0518	SPV.0060 Special 019. MMSD Sanitary Sewer Bypassing	1.000 EACH	_____.____	_____.____
0520	SPV.0060 Special 020. Close Storm Sewer Connection	8.000 EACH	_____.____	_____.____
0522	SPV.0060 Special 021. Construction Staking Project 5992-11-31	1.000 EACH	_____.____	_____.____
0524	SPV.0060 Special 022. Construction Staking Project 5992-11-33	1.000 EACH	_____.____	_____.____
0526	SPV.0060 Special 023. Implement Tree Protection Plan	1.000 EACH	_____.____	_____.____
0528	SPV.0060 Special 024. Furnish and Install Fluorocarbon Gaskets, 6-Inch	5.000 EACH	_____.____	_____.____
0530	SPV.0060 Special 025. Furnish and Install Fluorocarbon Gaskets, 8-Inch	5.000 EACH	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0532	SPV.0060 Special 026. Furnish and Install Fluorocarbon Gaskets, 12-Inch	12.000 EACH	_____.____	_____.____
0534	SPV.0060 Special 027. Furnish and Install Fluorocarbon Gaskets, 16-Inch	36.000 EACH	_____.____	_____.____
0536	SPV.0060 Special 028. MMSD Sanitary Sewer Manhole (6-Foot Diameter)	3.000 EACH	_____.____	_____.____
0538	SPV.0060 Special 029. MMSD Sanitary Sewer Manhole (7-Foot Diameter)	1.000 EACH	_____.____	_____.____
0540	SPV.0060 Special 030. Utility Line Opening (ULO)	42.000 EACH	_____.____	_____.____
0542	SPV.0060 Special 031. Sewer Electronic Markers	41.000 EACH	_____.____	_____.____
0544	SPV.0060 Special 032. Sanitary Lateral Reconnect	21.000 EACH	_____.____	_____.____
0546	SPV.0060 Special 033. Sanitary Sewer Tap	13.000 EACH	_____.____	_____.____
0548	SPV.0060 Special 034. Sanitary Sewer Access Structure (4-Foot Diameter)	9.000 EACH	_____.____	_____.____
0550	SPV.0060 Special 035. Sanitary Sewer Access Structure (5-Foot Diameter)	8.000 EACH	_____.____	_____.____
0552	SPV.0060 Special 036. Sanitary Sewer Internal Chimney Seal	3.000 EACH	_____.____	_____.____
0554	SPV.0060 Special 037. Remove Sanitary Sewer Access Structure	3.000 EACH	_____.____	_____.____
0556	SPV.0060 Special 039. Abandon Sanitary Sewer Access Structure	9.000 EACH	_____.____	_____.____
0558	SPV.0060 Special 040. Abandon Sanitary Sewer-Pipe Plug	14.000 EACH	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0560	SPV.0060 Special 041. Furnish & Install 6-Inch Water Valve, 6-Inch	15.000 EACH	_____.____	_____.____
0562	SPV.0060 Special 042. Furnish & Install 8-Inch Water Valve, 8-Inch	9.000 EACH	_____.____	_____.____
0564	SPV.0060 Special 043. Furnish & Install 12-Inch Water Valve, 12-Inch	4.000 EACH	_____.____	_____.____
0566	SPV.0060 Special 044. Furnish & Install 16-Inch Water Valve, 16-Inch	17.000 EACH	_____.____	_____.____
0568	SPV.0060 Special 045. Furnish And Install Hydrant / Salvage Existing Hydrant	6.000 EACH	_____.____	_____.____
0570	SPV.0060 Special 045. Furnish And Install Hydrant/Salvage Existing Hydrant	1.000 EACH	_____.____	_____.____
0572	SPV.0060 Special 046. Reconnect Water Service Lateral, 1-Inch	17.000 EACH	_____.____	_____.____
0574	SPV.0060 Special 048. Reconnect Water Service Lateral, 2-Inch	2.000 EACH	_____.____	_____.____
0576	SPV.0060 Special 049. Cut-In Or Connect-To Existing Water System	26.000 EACH	_____.____	_____.____
0578	SPV.0060 Special 051. Abandon Water Valve Box	16.000 EACH	_____.____	_____.____
0580	SPV.0060 Special 052. Abandon Water Valve Access Structure	2.000 EACH	_____.____	_____.____
0582	SPV.0060 Special 053. Furnish and Install Insulation	11.000 EACH	_____.____	_____.____
0584	SPV.0060 Special 054. Adjust Water Valve Box Sections	4.000 EACH	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0586	SPV.0060 Special 055. Furnish And Install Anode	1.000 EACH	_____.____	_____.____
0588	SPV.0060 Special 056. Clay Trench Plug	7.000 EACH	_____.____	_____.____
0590	SPV.0060 Special 057. Interceptor Sewer Manhole, (6-Foot Diameter)	5.000 EACH	_____.____	_____.____
0592	SPV.0060 Special 058. Interceptor Manhole Lining System	5.000 EACH	_____.____	_____.____
0594	SPV.0060 Special 059. Adjust MMSD Special	2.000 EACH	_____.____	_____.____
0596	SPV.0060 Special 060. MMSD Manhole 02-048 Flat Top Replacement	1.000 EACH	_____.____	_____.____
0598	SPV.0060 Special 061. Rock Excavation for Concrete Bases	6.000 EACH	_____.____	_____.____
0600	SPV.0060 Special 062. Electrical Pull Box Type I	34.000 EACH	_____.____	_____.____
0602	SPV.0060 Special 063. Electrical Pull Box Type III	5.000 EACH	_____.____	_____.____
0604	SPV.0060 Special 064. Electrical Pull Box Type V	19.000 EACH	_____.____	_____.____
0606	SPV.0060 Special 065. Electrical Pull Box Type VII	12.000 EACH	_____.____	_____.____
0608	SPV.0060 Special 066. Concrete Bases Type G	16.000 EACH	_____.____	_____.____
0610	SPV.0060 Special 067. Concrete Bases Type LB-3	39.000 EACH	_____.____	_____.____
0612	SPV.0060 Special 068. Concrete Bases Type LB-8	15.000 EACH	_____.____	_____.____
0614	SPV.0060 Special 069. Concrete Bases Type P	5.000 EACH	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0616	SPV.0060 Special 070. Concrete Bases Type G Spread Footing	1.000 EACH	_____.____	_____.____
0618	SPV.0060 Special 071. Transformer Base 16-Inch Steel	13.000 EACH	_____.____	_____.____
0620	SPV.0060 Special 072. Pole 20-Ft 7 Gauge	6.000 EACH	_____.____	_____.____
0622	SPV.0060 Special 073. Pole 30-Foot, 7 Gauge Single Mount	2.000 EACH	_____.____	_____.____
0624	SPV.0060 Special 074. Pole 30-Foot, 7 Gauge Twin Mount	3.000 EACH	_____.____	_____.____
0626	SPV.0060 Special 075. Pole 30-Foot, 11 Gauge Single Mount	37.000 EACH	_____.____	_____.____
0628	SPV.0060 Special 076. Pole 30-Foot, 11 Gauge Twin Mount	9.000 EACH	_____.____	_____.____
0630	SPV.0060 Special 077. Monotube Pole, Type 9	4.000 EACH	_____.____	_____.____
0632	SPV.0060 Special 079. LED Luminaire and Mounting Bracket Type V	5.000 EACH	_____.____	_____.____
0634	SPV.0060 Special 080. Monotube Arm, 25-Foot	2.000 EACH	_____.____	_____.____
0636	SPV.0060 Special 081. Monotube Arm, 30-Foot	2.000 EACH	_____.____	_____.____
0638	SPV.0060 Special 082. LED Luminaire And Mounting Bracket Type I	17.000 EACH	_____.____	_____.____
0640	SPV.0060 Special 083. LED Luminaire And Mounting Bracket Type II	24.000 EACH	_____.____	_____.____
0642	SPV.0060 Special 084. LED Luminaire And Mounting Bracket Type III	8.000 EACH	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0644	SPV.0060 Special 085. LED Luminaire And Mounting Bracket Type IV	11.000 EACH	_____.____	_____.____
0646	SPV.0060 Special 086. Traffic Signal Trombone Arm Aluminum 12-Foot	1.000 EACH	_____.____	_____.____
0648	SPV.0060 Special 087. Traffic Signal Trombone Arm Aluminum 15-Foot	3.000 EACH	_____.____	_____.____
0650	SPV.0060 Special 088. Traffic Signal Trombone Arm Aluminum 18-Foot	2.000 EACH	_____.____	_____.____
0652	SPV.0060 Special 089. Traffic Signal Trombone Arm Aluminum 20-Foot	3.000 EACH	_____.____	_____.____
0654	SPV.0060 Special 090. Traffic Signal Trombone Arm Aluminum 22-Foot	2.000 EACH	_____.____	_____.____
0656	SPV.0060 Special 091. Traffic Signal Heads 12-Inch, 3-Section Vertical	71.000 EACH	_____.____	_____.____
0658	SPV.0060 Special 092. Traffic Signal Heads 12-Inch, 4-Section Vertical	7.000 EACH	_____.____	_____.____
0660	SPV.0060 Special 093. Traffic Signal Heads 12-Inch, 5-Section Vertical	2.000 EACH	_____.____	_____.____
0662	SPV.0060 Special 094. Traffic Signal Heads 16-Inch Pedestrian with Countdown	39.000 EACH	_____.____	_____.____
0664	SPV.0060 Special 095. Backplates Signal Face, 3-Section 12-Inch	71.000 EACH	_____.____	_____.____
0666	SPV.0060 Special 096. Backplates Signal Face, 4-Section 12-Inch	7.000 EACH	_____.____	_____.____
0668	SPV.0060 Special 097. Backplates Signal Face, 5-Section 12-Inch	2.000 EACH	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0670	SPV.0060 Special 098. NEMA TS2 Type 1 Traffic Signal Control Cabinet	4.000 EACH	_____.____	_____.____
0672	SPV.0060 Special 099. Traffic Signal Controller	4.000 EACH	_____.____	_____.____
0674	SPV.0060 Special 100. Optical Signal Preempt	4.000 EACH	_____.____	_____.____
0676	SPV.0060 Special 101. Traffic Signal Ethernet Switch	4.000 EACH	_____.____	_____.____
0678	SPV.0060 Special 102. Malfunction Management Unit (MMU)	4.000 EACH	_____.____	_____.____
0680	SPV.0060 Special 103. Lighting Control Cabinet	2.000 EACH	_____.____	_____.____
0682	SPV.0060 Special 104. Vehicular Detection System Programming Unit	4.000 EACH	_____.____	_____.____
0684	SPV.0060 Special 105. No Right Turn Blank Out Signal	4.000 EACH	_____.____	_____.____
0686	SPV.0060 Special 106. Temporary Traffic Signals (Hill)	1.000 EACH	_____.____	_____.____
0688	SPV.0060 Special 107. Temporary Traffic Signals (Ridge)	1.000 EACH	_____.____	_____.____
0690	SPV.0060 Special 108. Temporary Traffic Signals (Farley)	1.000 EACH	_____.____	_____.____
0692	SPV.0060 Special 109. Temporary Street Lighting System Maintenance and Operations	1.000 EACH	_____.____	_____.____
0694	SPV.0060 Special 110. Temporary Wood Poles	37.000 EACH	_____.____	_____.____
0696	SPV.0060 Special 111. Temporary Lighting Arms	18.000 EACH	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0698	SPV.0060 Special 112. Temporary Luminaires Utility	18.000 EACH	_____.____	_____.____
0700	SPV.0060 Special 113. Reconstruct Bench And Flowlines	5.000 EACH	_____.____	_____.____
0702	SPV.0060 Special 115. Salvage Hydrant	4.000 EACH	_____.____	_____.____
0704	SPV.0090 Special 001. Concrete Curb And Gutter 24-Inch Type D Special	14,010.000 LF	_____.____	_____.____
0706	SPV.0090 Special 002. Concrete Curb 24-Inch Type D Special	205.000 LF	_____.____	_____.____
0708	SPV.0090 Special 003. Pedestrian Railing	550.000 LF	_____.____	_____.____
0710	SPV.0090 Special 004. Sign Post	276.000 LF	_____.____	_____.____
0712	SPV.0090 Special 005. Reflective Sign Post	238.000 LF	_____.____	_____.____
0714	SPV.0090 Special 006. Loop Detector Lead-In Cable Special	8,886.000 LF	_____.____	_____.____
0716	SPV.0090 Special 007. Concrete Curb and Gutter 24-Inch Type A Special	240.000 LF	_____.____	_____.____
0718	SPV.0090 Special 008. Temporary Asphaltic Curb	6,800.000 LF	_____.____	_____.____
0720	SPV.0090 Special 011. Storm Sewer Pipe Reinforced Concrete Class IV 96-Inch	92.000 LF	_____.____	_____.____
0722	SPV.0090 Special 012. Storm Sewer Pipe Reinforced Concrete Class IV 96-Inch Rock Cut	900.000 LF	_____.____	_____.____
0724	SPV.0090 Special 019. Remove Pipe Sanitary	144.000 LF	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0726	SPV.0090 Special 020. Sanitary Sewer Lateral	423.000 LF	_____.____	_____.____
0728	SPV.0090 Special 021. Sanitary Sewer Pipe PVC, 8-Inch	563.000 LF	_____.____	_____.____
0730	SPV.0090 Special 022. Sanitary Sewer Pipe PVC, 10-Inch	1,079.000 LF	_____.____	_____.____
0732	SPV.0090 Special 023. Sanitary Sewer Pipe PVC, 12-Inch	460.000 LF	_____.____	_____.____
0734	SPV.0090 Special 024. Select Fill for Sanitary Sewer	2,755.000 LF	_____.____	_____.____
0736	SPV.0090 Special 025. Furnish And Install Watermain Pipe & Fittings, 6-Inch	272.000 LF	_____.____	_____.____
0738	SPV.0090 Special 026. Furnish And Install Watermain Pipe & Fittings, 8-Inch	340.000 LF	_____.____	_____.____
0740	SPV.0090 Special 027. Furnish And Install Watermain Pipe & Fittings, 12-Inch	216.000 LF	_____.____	_____.____
0742	SPV.0090 Special 028. Furnish And Install Watermain Pipe & Fittings, 16-Inch	2,268.000 LF	_____.____	_____.____
0744	SPV.0090 Special 029. Furnish And Install Watermain Pipe & Fittings, 10-Inch	160.000 LF	_____.____	_____.____
0746	SPV.0090 Special 030. Select Fill For Water Main	3,256.000 LF	_____.____	_____.____
0748	SPV.0090 Special 031. Interceptor Sewer, 30-Inch	1,363.000 LF	_____.____	_____.____
0750	SPV.0090 Special 032. Trenchless Casing Pipe, 48-Inch Steel Minimum	45.000 LF	_____.____	_____.____
0752	SPV.0090 Special 033. Fiber Optic Cable 12-Count	3,867.000 LF	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0754	SPV.0090 Special 034. Fiber Optic Cable 288-Count	2,923.000 LF	_____.____	_____.____
0756	SPV.0090 Special 035. Electrical Wire Lighting, 14-3 Grounded	2,079.000 LF	_____.____	_____.____
0758	SPV.0090 Special 036. Temporary Overhead Span Wire	3,769.000 LF	_____.____	_____.____
0760	SPV.0090 Special 037. MMSD Sanitary Sewer, 36-Inch	167.600 LF	_____.____	_____.____
0762	SPV.0090 Special 041. Railing Steel Pedestrian Ornamental	311.000 LF	_____.____	_____.____
0764	SPV.0165 Special 001. Wall Concrete Panel Mechanically Stabilized Earth R-13-360	3,810.000 SF	_____.____	_____.____
0766	SPV.0165 Special 002. Wall Concrete Panel Mechanically Stabilized Earth R-13-361	3,610.000 SF	_____.____	_____.____
0768	SPV.0165 Special 003. Wall Modular Block Gravity Landscape	435.000 SF	_____.____	_____.____
0770	SPV.0165 Special 004. High Friction Colored Surface - Bike Box Green	710.000 SF	_____.____	_____.____
0772	SPV.0170 Special 001. Pavement Cleanup Project 5992-11-31	82.000 STA	_____.____	_____.____
0774	SPV.0195 Special 001. Stabilization Clear Stone, 3-Inch	100.000 TON	_____.____	_____.____
0776	SPV.0195 Special 002. Granular Backfill, Interceptor Sewer	4,000.000 TON	_____.____	_____.____
0778	SPV.0195 Special 003. Excavation, Hauling, and Disposal of Petroleum Contaminated Soil	4,250.000 TON	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0780	SPV.0195 Special 004. Excavating, Loading, Hauling, and Landfill Disposal of Cinder-Cntmated Soil	2,125.000 TON	_____.____	_____.____
0784	204.0120 Removing Asphaltic Surface Milling	8,660.000 SY	_____.____	_____.____
0786	504.2000.S Precast Concrete Box Culvert (ft X ft) 003. 15FT X 6 FT	50.000 LF	_____.____	_____.____
0788	628.7560 Tracking Pads	8.000 EACH	_____.____	_____.____
0790	642.5401 Field Office Type D	1.000 EACH	_____.____	_____.____
0792	644.1420 Temporary Pedestrian Surface Plywood	1,365.000 SF	_____.____	_____.____
0794	SPV.0045 Special 001. Temporary Crosswalk Access Shorewood Blvd/Hill Street	247.000 DAY	_____.____	_____.____
0796	SPV.0045 Special 002. Temporary Crosswalk Access Marshall Ct/Ridge St	247.000 DAY	_____.____	_____.____
0798	SPV.0045 Special 003. Temporary Crosswalk Access University Bay Drive/Farley Ave	247.000 DAY	_____.____	_____.____
0800	SPV.0060 Special 008. Construction Staking Project 5992-11-32	1.000 EACH	_____.____	_____.____
0802	SPV.0060 Special 038. External Sewer Access Structure Joint Seal	2.000 EACH	_____.____	_____.____
0804	SPV.0060 Special 047. Private Storm Sewer Connection	8.000 EACH	_____.____	_____.____
0806	SPV.0090 Special 037. Sanitary Sewer Pressure Pipe (C900), 10-Inch	13.000 LF	_____.____	_____.____
0808	SPV.0090 Special 038. Sanitary Sewer Pressure Pipe (C900), 12-Inch	237.000 LF	_____.____	_____.____

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0810	SPV.0200 Special 002. Construct Inside Drop 10-Inch	2.300 VF	_____.____	_____.____
0812	531.2036 Drilling Shaft 36-Inch	90.000 LF	_____.____	_____.____
0814	531.5310 Foundation Single-Shaft Type TC-I (structure) 001. S-13-589	EACH	_____.____	_____.____
0816	531.5310 Foundation Single-Shaft Type TC-I (structure) 002. S-13-590	1.000 EACH	_____.____	_____.____
0818	531.5310 Foundation Single-Shaft Type TC-I (structure) 003. S-13-591	1.000 EACH	_____.____	_____.____
0820	531.5310 Foundation Single-Shaft Type TC-I (structure) 004. S-13-592	1.000 EACH	_____.____	_____.____
0822	531.5310 Foundation Single-Shaft Type TC-I (structure) 005. S-13-59	1.000 EACH	_____.____	_____.____
0824	532.5310 Truss Cantilever 2-Chord Type I (structure) 001. S-13-589	1.000 EACH	_____.____	_____.____
0826	532.5310 Truss Cantilever 2-Chord Type I (structure) 002. S-13-590	1.000 EACH	_____.____	_____.____
0828	532.5310 Truss Cantilever 2-Chord Type I (structure) 003. S-13-591	1.000 EACH	_____.____	_____.____
0830	532.5310 Truss Cantilever 2-Chord Type I (structure) 004. S-13-592	1.000 EACH	_____.____	_____.____
0832	532.5310 Truss Cantilever 2-Chord Type I (structure) 005. S-13-593	1.000 EACH	_____.____	_____.____
	Section: 0001		Total:	_____.____

Total Bid: _____.____

Wisconsin Department of Transportation

March 7, 2022

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

NOTICE TO ALL CONTRACTORS:

Proposal #09: 5992-11-31/32/33, WISC 2022233
City of Madison, University Avenue
Shorewood Blvd to University Bay Drive
Local Street
Dane County

5992-11-32
City of Madison, University Avenue
Shorewood Blvd to University Bay Drive
Local Street
Dane County

5992-11-33
City of Madison, University Avenue
Shorewood Blvd to University Bay Drive
Local Street
Dane County

Letting of March 8, 2022

This is Addendum No. 03, which provides for the following:

Schedule of Items:

Revised Bid Item Quantities					
Bid Item	Item Description	Unit	Old Quantity	Revised Quantity	Proposal Total
531.5310.001	Foundation Single-Shaft Type TC-I Structure S-13-589	EACH	0	1	1

Schedule of Items
Attached, dated March 7, 2022, are the revised Schedule of Items Pages 28.

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

END OF ADDENDUM

Proposal ID: 20220308009 Project(s): 5992-11-31, 5992-11-32, 5992-11-33

Federal ID(s): WISC 2022233, 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
0810	SPV.0200 Special 002. Construct Inside Drop 10-Inch	2.300 VF	_____.____	_____.____
0812	531.2036 Drilling Shaft 36-Inch	90.000 LF	_____.____	_____.____
0814	531.5310 Foundation Single-Shaft Type TC-I (structure) 001. S-13-589	1.000 EACH	_____.____	_____.____
0816	531.5310 Foundation Single-Shaft Type TC-I (structure) 002. S-13-590	1.000 EACH	_____.____	_____.____
0818	531.5310 Foundation Single-Shaft Type TC-I (structure) 003. S-13-591	1.000 EACH	_____.____	_____.____
0820	531.5310 Foundation Single-Shaft Type TC-I (structure) 004. S-13-592	1.000 EACH	_____.____	_____.____
0822	531.5310 Foundation Single-Shaft Type TC-I (structure) 005. S-13-59	1.000 EACH	_____.____	_____.____
0824	532.5310 Truss Cantilever 2-Chord Type I (structure) 001. S-13-589	1.000 EACH	_____.____	_____.____
0826	532.5310 Truss Cantilever 2-Chord Type I (structure) 002. S-13-590	1.000 EACH	_____.____	_____.____
0828	532.5310 Truss Cantilever 2-Chord Type I (structure) 003. S-13-591	1.000 EACH	_____.____	_____.____
0830	532.5310 Truss Cantilever 2-Chord Type I (structure) 004. S-13-592	1.000 EACH	_____.____	_____.____
0832	532.5310 Truss Cantilever 2-Chord Type I (structure) 005. S-13-593	1.000 EACH	_____.____	_____.____

Section: 0001 Total: _____.____

Total Bid: _____.____